LAND AND SOCIETY
THE BRONZE AGE CAIRNFIELDS AND FIELD SYSTEMS OF BRITAIN

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ABSTRACT

This thesis considers the archaeological remains of field systems and cairnfields as evidence for changes in the relations between land and society during the second millennium BC. The theoretical argument aims to demonstrate that the relations between land and society were complex historical processes constituted through the mediation and transformation of structural conditions by social agents. The argument considers ideas, prevalent in critiques of modernity, that break down distinctions between modern and nonmodern, and between culture and nature. These ideas are applied to a theory of practice, which, it is argued, can best be served by allowing for the existence of nonhuman agency as a folk concept within nonmodern ontologies. Based on this theoretical framework and using ethnographic examples, it is argued that the concept of 'land tenure' is a sociological term that equates closely with agency.

The changing forms of land tenure that characterise the Bronze Age can be shown to have distinctive and regionalised historical trajectories. This is demonstrated in two case studies. (1) A study of the structural sequences of excavated cairnfields in northern England reveals that a clear distinction cannot be made between burial cairns and clearance cairns. There are many examples of formalised structural and depositional elements in the latter. This is interpreted as evidence that tenure was negotiated within wider collectives made up of a community and their ancestors. (2) Three studies, at varying chronological and geographical scales of analysis, were made of the coaxial boundaries on Dartmoor. In contrast to northern England, the ontological ties between small social groups and places emerged during the earlier Bronze Age. Therefore, the tradition of formalised boundaries, or 'reaves', developed in a landscape characterised by a fragmented and localised sense of place, which was integrated within wider social networks rather than displacing them.

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1

INTRODUCTION

... Peer and see
a moor; a waste; stretches of green and grey
marked by faint tracks, rough slopes where great trees stand;
or an old man — no hedge, wide road to break
this land of mist, space: silence. It was England
unenclosed. That space was never ploughed.

from Breaking Ground, Brackenbury 1984

When he stripped off blanket bog
The soft piled centuries

Fell open like a glib:
There were the first plough-marks,
The stone-age fields, the tomb
Corbelled, turfed and chambered,
Floored with dry turf-coomb.

A landscape fossilized,
Its stone wall patternings
Repeated before our eyes
In the stone walls of Mayo.

from *Belderg*, Heaney 1975

1.1 Why fields?

The inspiration for Alison Brackenbury's poem was the 19th century poet John Clare's reaction to the post-medieval enclosure of the English countryside – a long-term process that began in the 16th century, and resulted in large areas of open arable fields being appropriated by landowners, enclosed and turned over to pasture. Clare was embittered by what he perceived to be the immoderate destruction of nature, and the subsequent 'demystification' of landscape that resulted from this early onset of modernisation:

Fence now meets fence in owners little bounds
Of field and meadow large as garden grounds
In little parcels little minds to please
With men and flocks imprisoned ill at ease
from *The Mores* (Robinson and Summerfield 1966)

The 'Enclosure Movement' that John Clare decried has served as an historical model for the widespread construction of boundaries and field systems during the second millennium BC and after. In a seminal paper, Peter Fowler used the evidence for post-medieval enclosure to suggest that

considering the contingency and the complexity of this process during historical periods we should expect its prehistoric equivalent to be similarly intractable (Fowler 1981b). What Fowler lacked in his analysis of the archaeological evidence was a sense of the social and cultural implications of boundaries and *ownership*. He was, instead, drawn to suggest that the overriding reasons for and consequences of enclosure were economic. John Clare, on the other hand, a contemporary observer of the Enclosure Movement, did not see beyond the cultural impact of the boundaries. For Clare, they were an affront to the idyll and a metaphor for the 'ideology and psychology of human boundedness and freedom' (Goodridge and Thornton 1994, 103).

By simplifying their respective views, I offer Clare's emotive pleas and Fowler's reasoned interpretation as caricatures for how land enclosure might be perceived. They oppose one another as culture against environment. In the former case, the fields redefine the social world: they transform people's identity, and they prevent free access across the land. In the latter, they offer a means to intensify the production of resources, and more efficiently arrange and control animals and crops. Yet *my* categorisations are internally inconsistent. The fields only redefine the social world by virtue of their transformation of society's relationship with nature – Clare repeatedly emphasised how a pastoral idyll was lost, and people were culturally impoverished as a result. While, from an economic perspective, the innovation of new technologies of production engenders changing social roles – intensive cultivation of the same plot of land enables forms of tenure that would not be possible or indeed necessary if the field was to be left fallow for long periods of time. I could carry on weaving this argument into ever more obtuse and tautological patterns – nay, 'knots' – and it might seem to make no point other than that semantic confusion can be created with terms such as 'society', 'nature', 'environment' and 'culture'. But there is another, more interesting, issue to be raised: society and nature are not simple oppositional categories; they intertwine, one through the other, such that we can identify the relations that exist between them but rarely isolate them as categories in themselves. Taking field systems as an example: they are cultural constructions in that they are built, cultivated and tended by humans; yet they are also natural environments in which plants grow, or animals graze. The biological processes of plant and animal growth have profound implications for the human social world, and as such they have a part to play in society and social change. It is possible to separate the natural from the social but in doing this we destroy the relations that make the whole process understandable. To interpret field systems and to make sense of how they came about and what roles they had in the social world, it is necessary to perceive them as a set of relations that are together nature and society.

That is a difficult task when the fields we seek to understand are, at first appearance, no more than the 'stone wall patternings' that Seamus Heaney recognised both buried beneath the Belderg peat (*cf.* Caulfield 1978) and spread out above ground in the present day County Mayo landscape. The ancient

boundaries were exposed as a timeless, two dimensional plan that paradoxically lay smothered by four millennia of history. The synergetic quality of the prehistoric boundaries is illusory, as is the impression of the 20th century landscape as unchanging. These material worlds were – and are – lived in, and in the process of that living they were transformed. This was not a one-way process, because the fields themselves had an influence on the manner of their inhabitation. They were the conditions *for* and the conditions *of* social practice. They gave practices meaning and they were themselves given meaning by practice. Such practices were the actions of knowledgeable agents – those with the power to act. By their actions, intentional or otherwise, agents were responsible for history. So, the 'stone wall patternings' are not a mute record of past lives, they are the 'surviving fragments of those recursive media through which the practices of social discourse were organised' (Barrett 1988, 9).

In gathering together these thoughts I am attempting to frame the approach that I have taken in researching and writing this thesis. Following John Clare, I can see the intensity with which people might live with the land. Yet I do not wish to be drawn towards an enculturated theory of the world that denies the power of nonhuman processes. Somehow fields must be interpreted as a part of both culture and nature. The means to making that connection is a theory of the material and social worlds that interprets them as media through which people lived their lives. The relations between land and society that are given meaning through practice are, therefore, elemental to our understanding of the fields.

1.2 Inhabiting the landscapes of Bronze Age Britain

The 'fields' to which I have just referred include a broad variety of archaeological features. They vary from roughly built stone banks that mark the edges but do not enclose small plots of land, to extensive patterns of well constructed boundaries that appear to have divided the landscape into complex systems of fields and territorial units. I also mean to include the groups of small cairns, banks of field cleared stone and terraces that characterise later prehistoric archaeological remains in many upland areas of Britain. The unifying feature of what, on close inspection, is a rich and diverse range of evidence, is that with few – but notable – exceptions these fields first become a part of the archaeological record in Britain during the Bronze Age (c.2500-750 BC).

Fields are made more distinctive in some regions of Britain, notably southern and eastern England, by their relatively abrupt appearance from about 1500 BC in combination with evidence for substantial domestic structures and settlement enclosures (e.g. Brück 1997, 19-25; Evans and Knight 2000; Yates 1999). In sharp contrast to this rather dramatic increase in evidence for agriculture and settlement, there is a noticeable decline in the use of, for want of a better word, 'ritual' sites such as henges and barrows. Elsewhere these changes in the balance of emphasis between 'ritual' and 'domestic' sites are

much less marked, though still present. In particular, traces of agricultural stone clearance and the construction of field boundaries can be dated to the first half of the second millennium BC and before (e.g. Barber 1997; Jobey and Tait 1966), and therefore contemporary with the use of monuments such as stone circles. The reasons for this variability are complex. There must be a primary assumption that they reflect contrasting regional social trajectories that were brought about because people inhabited these areas in different ways. There are also more prosaic reasons why southern and eastern England seems to show a greater definition between the earlier and later Bronze Age[1]: there are many more relevant radiocarbon dates from these areas; and there is a larger and better understood ceramic record.

Leaving these difficulties aside for the moment, and taking a broad, and rather coarse, geographical and chronological perspective, the appearance of field systems and cairnfields during the Bronze Age appears to mark a fundamental shift in the ways that people occupied the environment. Substantial and permanent structures were no longer built for human burials and ritual purposes, and instead, effort was expended in the construction of domestic buildings and features of the agricultural economy. The social implications of these changes have been studied by archaeologists since the first half of the last century.

These changes were sufficiently well understood by the 1940s for Childe to write of a late Bronze Age 'agricultural revolution' (Childe 1940). The revolution he envisaged involved the migration and invasion of 'land-hungry peasants' who transformed the warrior society of the early and middle Bronze Age into one of 'settled ploughmen'. The archaeological evidence for this event was to be found in the appearance of a new pottery type, Deverel-Rimbury ware, which at that time was thought to have originated from central European forms, and the field evidence for later prehistoric agriculture and settlement. The latter included the systems of lyncheted fields, termed 'Celtic fields', and enclosed settlements that had been identified on the chalk downland of southern England (e.g. Curwen 1927; Hollyman and Curwen 1935; Stone 1937).

A late Bronze Age date for the settlements and field systems remained acceptable up until the 1970s, as did the 'invasion hypothesis', though in a less histrionic form. By this time earlier indigenous precursors had been found for Deverel-Rimbury pottery, and following the increased interest in

[1] The Bronze Age has been divided into early / middle / late and earlier / later. The former scheme was based on the metalwork and ceramic evidence, while the latter was defined primarily from the perspective of changes in settlement practices (Barrett and Bradley 1980). The most recent studies re-examining these distinctions have offered several different perspectives: either supporting the tripartite scheme, with revision and further subdivision, for the whole of Britain (Needham 1996); arguing for its relevance to southern England (Brück 1997); or, based on the evidence from the Peak District, discarding altogether the notion of a change in settlement practices during the second millennium BC (Kitchen 2000). Another alternative, Burgess' rather complex scheme of divisions named after specific sites, may lend itself to metalwork and pottery sequences but it is a little pedantic and inclined towards culture history (Burgess 1980a).

landscape archaeology, the field systems and settlements were dated to the middle Bronze Age. In terms of fresh analyses of the evidence, the culmination of this work can be seen in the proliferation of important publications in the late 1970s and early 1980s. A revised chronology for the ceramics, redating Deverel-Rimbury ware to the middle rather than the late Bronze Age, was presented by Barrett (Barrett 1980b), while Bradley used the settlement evidence to offer a revised bipartite chronological scheme distinguishing between an earlier and a later Bronze Age (Bradley 1978b). Outside lowland southern England, excavations in upland areas were to confirm the presence of later Bronze Age settlements, such as those in southern Scotland (Jobey 1980; Jobey 1981a) and on Dartmoor (Wainwright and Smith 1980). Earlier Bronze Age settlements and fields were also identified, for example, at Gwithian in Cornwall, Scord of Brouster in Shetland, and on Arran (Megaw 1976; Whittle 1986; Barber 1997). As a consequence of these and other discoveries, it seemed that so-called 'marginal' areas were being occupied and farmed from the earlier Bronze Age, and in many areas there were attempts to intensify agricultural production from the later Bronze Age with the widespread construction of field systems.

Various models were proposed to explain the colonisation of marginal areas of land and the intensification of agricultural economies (Brück 1997, 49-65). Taking a predominately deterministic stance, Burgess argued that an increase in population led to a pressure on resources that subsequently forced groups to exploit more marginal regions such as the uplands of the south-west, the Scottish Borders, and the Fenedge of East Anglia (Burgess 1980a, 234-240). The population continued to rise until the end of the second millennium when it had reached 'danger levels'. A subsequent population collapse then followed brought on by the exhaustion of the marginal soils that were being cultivated, and made worse by a sudden downturn in climate resulting in colder and wetter conditions. Burgess later placed greater emphasis on the role of climatic factors in the exploitation and subsequent abandonment of upland areas (e.g. Burgess 1984; Burgess 1995).

An alternative explanation was presented by John Barrett, Richard Bradley and others. Taking a less deterministic stance, they suggested the changes were brought about by internal factors within society, specifically a transformation in the ways that power was acquired and articulated by individuals within the community (Barrett 1980a; Bradley 1980; Bradley 1984; *cf.* Braithwaite 1984; Garwood 1991; Rowlands 1980). A transition was proposed between a social structure in which power was maintained through 'ritual authority', based on knowledge of and participation in the performances undertaken at monuments such as henges and stone circles, and one in which individuals could acquire power and standing through the acquisition of exotic forms of material culture such as fine metalwork – a 'prestige goods economy'. In the latter case, it became necessary to increase agricultural production as individuals sought to acquire greater prestige through their ability to acquire and exchange exotic objects. The communities in 'core areas', such as Wessex and the Yorkshire Wolds, were increasingly

forced to occupy more marginal land as they strove to meet the agricultural needs of a competitive exchange economy. Paradoxically, the communities in the buffer zones through which the goods were exchanged farmed more fertile land. As society in the core areas came under stress due to the deterioration of the soils, so the buffer zones prospered through their control over exchange networks and the productivity of their agricultural economy.

The concepts of core and periphery were also important in explanations of social change in regions such as Dartmoor. Fleming has argued that a ritual authority structure had existed within the communities that lived around the edges of the moorland, as evidenced by the ceremonial complexes, made up of stone rows / circles and cairns (Fleming 1994). As the second millennium progressed these groups were challenged by inter-commoners who grazed their animals on the higher slopes of the moor during the summer months. This competition for land amongst the groups who settled along the margins of the moor led to the formalising of territories, the construction of large-scale land boundaries, and the laying out of coaxial field systems.

As power within increasingly more stratified societies was based upon control over the production of resources, so the landscape became dominated by agricultural rather than ritual monuments. This was effected as techniques of intensive agriculture were introduced, more marginal areas of land were occupied, and land became a valuable resource. The importance of this period in terms of long term changes in prehistoric society has grown due to the re-assessment of fourth and third millennia occupation practices (Brück 1997 e.g. Thomas 1991; Richmond 1999). The Neolithic is no longer interpreted as a period when human groups became settled agriculturists. Rather, in contrast to the permanent settlements and field systems of the Bronze Age, varying degrees of mobility and non-intensive forms of agriculture were practised. In recent syntheses, the second millennium BC is identified as the time when a 'true' agricultural economy began to develop in Britain (e.g. Barrett 1994a, 120; Champion 1999).

John Barrett has been one of those to lay a considerable emphasis on an 'agricultural transformation in the landscape' during the second millennium BC (Barrett 1994c, 132-154; Barrett 1999). Rather than viewing this as the consequence of an evermore competitive elite seeking to maintain their authority through the control and intensification of agricultural resources, Barrett envisaged a process by which communities fragmented, and became more bounded and attached to specific places. This process involved a change in the way tenure was held. During the fourth and third millennia, people's sense of belonging existed in terms of zero- (places) and one-dimensional (paths) forms of tenure (*cf.* Ingold 1986). This experience of the world was engendered partly through the way that people moved between and within ritual sites at varying degrees of temporal density, and the practice of long fallow cultivation in which tenure over land was held at the level of the community. The second millennium

saw a change to the permanent occupation of places by smaller groups. The reasons for this fragmentation were undoubtedly complex, but Barrett suggests that an important condition for these changes was that issues of lineage and inheritance came to the fore within burial rituals. As a consequence, individuals constituted themselves within smaller, more bounded communities, with a clear sense of their past and future: 'The construction of a lineal history now situated the agent within a given past and at the head of a comprehensible future' (Barrett 1994c, 151). These smaller groups, through their greater fixedness in the landscape, and their consequent re-use of the same areas of land, were able to employ new and more intensive technologies of production, notably short fallow cultivation. Land boundaries were constructed as part of this settling down and community fragmentation. They reflected the emergence of tenure over two dimensions (the ground surface), as well as an attempt to intensify production and control its environmentally degrading effects.

Fields and boundaries were an important feature of Barrett's interpretation of social change during the second millennium, although the material conditions that they came to represent did not form a significant part of his 'archaeology of social life'. Barrett's argument did not go on to analyse the agricultural landscape with the same rigour with which he tackled the ritual monuments and burials of the third millennium. This must be seen as a significant weakness in his treatment of the changes that took place in the second millennium, for as other archaeologists have noted, the processes are not necessarily comparable with other regions (Kitchen 2000), and even in southern England, where Barrett based his analysis, the process of agricultural intensification, such as the evidence for soil erosion (Bell 1992) and tillage practices (Lewis 1999), is temporally more complex than had been thought. The theoretical framework and the broad distinctions between the third and second millennium which Barrett established are both persuasive and challenging. But the importance of fields and boundaries in his account remains undeveloped. This research project was established with the explicit aim of addressing this issue.

1.3 Objectives and scope of this study

The aim of this project is to investigate the process of land allotment and enclosure in Britain during the Bronze Age through a study of the social and material conditions in which these changes took place. The principal themes are identified in a review of archaeological studies of prehistoric fields and boundaries (chapter 2). They are then considered in three ways: a discussion of theories of nature, society and social practice in anthropology and sociology (chapter 3); a sociological analysis of land tenure (chapter 4); and an examination of two archaeological case studies (chapters 5 and 6).

(1) *Nature, society and a theory of practice*

The theoretical issues are tackled, in the first instance, through a critique of modern frameworks that rely upon a dichotomous relationship between nature and society. This is undertaken using Latour's critique of dualisms in modern discourse, and recent anthropological debates that have drawn upon examples of nonmodern forms of knowledge. These ideas are used to challenge the prevailing assumption in sociological thought, that nature exists apart from social life:

> Going beyond dualism opens up an entirely different intellectual landscape, one in which states and substances are replaced by processes and relations; the main question is not any more how to objectify closed systems, but how to account for the very diversity of the process of objectification.
>
> (Descola and Pálsson 1996a, 12)

Explaining diversity, it will be argued, is possible through a theory of practice that fully implicates material resources into social life and social change. While this is a relatively under-studied area in sociology, it can be tackled through archaeological and anthropological theories of nonhuman agency (e.g. Boast 1997; Gell 1998; Tilley 1999).

The theories of practice that I have sought to include have, for some time, been the subject of discussion amongst archaeologists (e.g. Barrett 1988; Dobres 2000; Yates 1989; Shanks and Tilley 1987). The distinction I wish to make in my approach is that the material conditions in which people dwell cannot be organised within a dichotomous scheme of nature and culture that sets them apart from social life. Instead, the nonhuman world, made up of animals and objects, may have coagency with humans in social life.

(2) *Tenure and agency*

The broad conclusions of this theoretical discussion are then applied in a review of anthropological approaches to land tenure. The core of my argument is that tenure is primarily a sociological category that is employed to make sense of the varied interactions between land use, kinship and community. It equates closely with agency in that it is the power to make use of resources. A study of tenure is, therefore, an analysis of agency. This argument becomes important because unlike anthropology, archaeology has generally held the concept of tenure to be unproblematic (*cf.* Alder 1996; Barrett 1994c; Bintliff 1982; Chapman and Shiel 1993; Fleming 1985; de Hingh 1998; Hodder 1990; Lyons 1998; Roymans and Kortlang 1999).

Though I do not see the need to apologise for this disciplinary transgression, it is worth repeating the often made assertion that the ethnographic record is not meant to be presented analogously; it is primarily an intellectual environment in which to work through ideas. While one cannot help but identify comparisons between the archaeological past and the ethnographic 'present', these merely

help to highlight the fallacy of enforcing boundaries between disciplines that share an interest in the study of human social life.

(3) *Land and society in northern and south-western Britain*

The implications of 1 and 2 are tackled in a study of the relations between land and society in northern England and on Dartmoor during the Bronze Age. The case studies were chosen because they appeared to represent different sets of relations between land and society. In northern England, the evidence consists mainly of groups of small cairns (cairnfields) and occasionally partially enclosed plots, both constructed from stone cleared from the surrounding fields. The cairnfields have been included because, as will be argued, they represent some of the earliest evidence for the material expression of tenurial rights through day-to-day agricultural practice. In contrast, on Dartmoor, a formalised and extensive system of land divisions was constructed in the middle of the second millennium BC. This appears to have divided up the moor into large territorial units, that were themselves subdivided into a complex pattern of fields. Dartmoor was chosen because I felt it was important to tackle the more general arguments regarding land enclosure through a study of the region that has come to epitomise this process in both Britain and north-west Europe (e.g. Parker Pearson 1992, 97-98; Harding 2000, 155-159).

Although the value of a regional perspective has long been recognised, there is a temptation to generalise from better quality data in order to construct long-term narratives for the whole of Britain. The case studies lay out regional social trajectories that are not universally applicable. The theory and method of their research does, on the other hand, offer an approach that might elucidate similar processes elsewhere.

2

ARCHAEOLOGIES OF PREHISTORIC FIELDS AND BOUNDARIES

2.1 Introduction

The traces of prehistoric agriculture, such as field systems and cairnfields, have, as discussed in 1.2, been employed as evidence for fundamental changes in society during the Bronze Age. The enclosure of land was interpreted as an economic decision to improve productivity and allow more intensive farming, and as a political process involving an increase in the control of land, and with it the establishment of more permanent forms of tenure. The evidence for prehistoric fields is now recognised as being widespread throughout Britain, and the processes of intensification and increased tenurial control are central elements in interpretative accounts of the Bronze Age. Yet this has not always been the case. The archaeological traces of field systems were not systematically studied until the 1920s, the bulk of the important surveys and excavations were only instigated in the last 30-35 years, and the social, economic and environmental context of field systems was not addressed until the 1970s. This chapter offers a summary of these developments. The conclusion presents two case studies that together embody elements of contemporary approaches to prehistoric land enclosure, and which also illustrate the themes that will be addressed in the following chapters.

2.2 An historical summary of research on prehistoric fields and boundaries

When future reviews of the archaeological study of prehistoric field systems and agriculture are written they will no doubt emphasise a few distinct periods in the twentieth century when research on the subject proceeded apace (*cf.* Fowler 1981b, 11). One of these periods will be the 1920s when O G S Crawford and Cecil Curwen revealed, in the clearest possible terms, the extent, date and archaeological value of prehistoric field systems. Another will no doubt be during the 1960s and 1970s when a sustained programme of research began to define what was to become 'landscape archaeology'. The following period of intensive activity, in the late 1980s and 1990s will be associated with the major surveys undertaken by the various Royal Commissions, and the abundance of sites

excavated by commercial units in regions such as the Thames Valley, East Anglia and the Scottish uplands. These three episodes are not isolated from one another. Crawford and Curwen were not the first archaeologists to recognise field systems, nor were they the first to recognise their prehistoric date. The landscape archaeologists worked in a tradition of topographical study and fieldwork that emerged in the nineteenth century, and the issues they addressed were first raised in the early years of the century. While the scale of the surveys and excavations undertaken in the 1980s and 1990s was pre-empted by the landscape approach.

Meres, dykes and covered ways (1500s to 1923)

Ancient boundaries and fields were recorded in Britain from as early as the sixteenth century. On Dartmoor a 16th century document makes reference to 'a long conger of stones called Le Rowe Rew' (Crossing 1912, 378), later recognised as one of the long Bronze Age boundaries known as 'reaves' (Fleming 1978b, 100). In 1747, John Burton and Francis Drake described the various long and impressive dykes that cross the Yorkshire Wolds (Mortimer 1905, 366). Elsewhere, William Stukeley, writing in the first half of the eighteenth century, provided one of the earliest published descriptions of an early field system, near Blandford in Dorset:

> I frequently observed on the sides of hills long divisions, very strait, crossing one another with all kinds of angles: they look like the balks or meres of ploughed lands, and are really made of flint over-grown with turf: they are too small for ploughed lands, unless of the most ancient Briton.
>
> (Stukeley 1776, Iter VII, 188-189)

His reluctance to accept that the earthworks were field systems may be partly due to his own experience of the pre-enclosure landscape of open fields that made the small rectangular prehistoric lynchets seem so unfamiliar (Piggott 1950, 73). Similar accounts can be found in a range of sources, including descriptions of buried walls uncovered by peat cutters in Ireland (Briggs 1999). The identification of the earthworks by topographers and early antiquaries was not undertaken in a systematic and inquisitive manner. There were no plans published, and aside from occasional speculations the commentaries did not discuss the date or function of the earthworks. Undoubtedly the banks and ditches would have held little attraction to the romantic imagination of the seventeenth and eighteenth century.

It was not until the nineteenth century that prehistoric boundary earthworks were really discovered in a knowledgeable sense. In Wessex, the survey plans commissioned by Sir Richard Colt Hoare were in places crossed by fine lines that represented extensive systems of what are now recognised as later prehistoric linear ditches (Colt Hoare 1812; *cf.* Bradley et al. 1994). Again in Wessex, though slightly later, General Pitt Rivers' fieldwork at Bokerley Dyke and at South Lodge Camp included both the excavation and survey of prehistoric boundary earthworks (Barrett et al. 1991, 144-146; Toms 1925).

Pitt Rivers also excavated in the Yorkshire Wolds where John Mortimer was in the process of recording over 80 miles of 'entrenchments'. Mortimer's approach reflected the new perspective taken by nineteenth century antiquaries: 'A knowledge of the position and extent of old earthworks is of assistance in picturing the appearances of the neighbourhood in early times, and aids our perception of the manners and customs of the former occupants of the land' (Mortimer 1905, 365). The date of the boundary dykes which Mortimer surveyed was disputed. Greenwell and Pitt-Rivers believed them to be contemporary with the Bronze Age barrows, the latter finding flints in an excavated section of a dyke. However, E M Cole observed that in a number of cases the dykes were diverted in order to avoid barrows, thus making the dykes later. They were not Roman, as Cole also wryly commented: 'there is not a straight line amongst the whole lot' (Mortimer 1905, 368). This dating was supported by Mortimer's excavations on the fourteen separate occasions where the dykes were shown to post-date the barrows, and at several locations where he observed that the dykes were overlain by Roman roads. Mortimer also investigated the 'covered ways', so-called because they were believed to be ancient sunken paths dug in order to conceal those who walked along them. The sections he made through the ditches produced Romano-British pottery from their upper fills.

This noteworthy work in the chalklands of the Wolds and Wessex was not peerless. For example, during his investigations of the cairns at Barnscar, Dymond surveyed the small clearance features, ephemeral boundaries and trackways (Dymond 1893). While in Devon, the establishment of the Dartmoor Exploration Committee was the beginning of a concerted campaign of investigations into prehistoric settlement remains on the moor (Timms 1994). Although the members of the Committee did not excavate boundaries, as Mortimer and Pitt-Rivers had done, their published accounts show that they recognised the surrounding archaeological context, notably the field boundaries – or as they were attributed at the time, 'tracklines' (see section 6.1) – of the settlements they excavated (e.g. Baring-Gould 1897, 151).

Ancient boundary systems were recognised, recorded, and relative to the level of understanding of other types of monument, the pre-twentieth century archaeologists and antiquarians did not leave the study of early land enclosure in the barren interpretative state that some commentators have implicitly suggested. Instead, it can be convincingly argued that, to the extent that records were made and that the pre-Roman date for some of the earthworks was recognised, early work was important in establishing a basis for the intensive fieldwork undertaken in the 1920s and 1930s. The lynchets that Crawford photographed and the Curwens surveyed (see below) had already been recognised as features of the ancient landscape, and been described as 'fields' by Reginald Blaker (Blaker 1902) and Herbert Toms (Toms 1911). The early published work of archaeologists such as Mortimer and Pitt Rivers is often the only surviving evidence of earthworks that have now been destroyed. Furthermore, the arguments they employed to date the boundaries – e.g. their relative association with barrows and

Roman roads, and the presence of Roman pottery in the upper sections of the ditches and lynchets – were revisited many times over throughout the subsequent century. Interestingly, it was in the same areas of 19th century pioneering work that later innovative projects would be undertaken: e.g. Salisbury Plain, Dartmoor, and the Yorkshire Wolds (Bradley et al. 1994; Fleming 1988; RCHME 1997a).

Despite the positive aspects of 19th century studies, the context and function of the boundaries was not really appreciated. The large dykes were mostly considered as defensive works, their function as territorial boundaries being a secondary feature of this. While the long linear ditches and banks were misinterpreted as paths and 'covered ways'. The terraces and lynchets that Stukeley had described, and which were a common feature of upland pasture areas of England and Scotland (Christison 1898, 373), had not been accepted as being of human origin. Though in the pages of the Geographical Magazine there was some argument to the contrary: Poulett Scrope disputed the interpretations of D. Mackintosh who had suggested that lynchets and terraces were raised beaches caused by the action of an ancient sea (Poulett Scrope 1870). Using his observations of terraces forming on the modern-day downland, Poulett Scrope suggested the lynchets had formed against ancient field boundaries. While he had appreciated the lynchets were agricultural remains, at no point was the unity of fields systems, boundaries and settlements properly recognised.

'Celtic fields': aerial photography and survey (1920s to 1940s)

> Those who have walked over the chalk downs of Southern England cannot fail to have observed certain low grass banks and narrow shelves of soil which are to be found there. A closer inspection shows them to be arranged in a chess-board pattern of squares and rectangles and other figures ... These shelves and banks have many local names; that which is most generally adapted is 'lynchets'. There are two kinds which are not contemporary and which belong to two radically distinct systems of agriculture. The first kind is that which has just been described, arranged in chess-board fashion. This kind I shall, in anticipation, call the Celtic type.
>
> (Crawford 1924, 3)

'Celtic fields' is a term that came to dominate discussions of early land enclosure. Even when 'Celtic' was deemed to be inappropriate, archaeologists persisted in using it as a category despite their reservations. The importance of 'Celtic fields', and the reluctance to give up the terminology, has its basis in the fact that it was their recognition and naming which arguably marked a watershed in studies of early land enclosure. Since their first published mention in 1923 (Crawford 1923) there was an increased awareness of the importance of lyncheted earthworks, and also an awareness of what kinds of information could be gleaned from their study (e.g. Curwen and Curwen 1923).[1]

[1] There has been some discussion over the years as to who first coined the term 'Celtic fields' (Fowler 1981a, 269). While both O G S Crawford and the Curwens were independently coming to the same conclusions about the date and function of the earthworks, only Crawford used the term 'Celtic' to apply to the lynchets (Crawford 1923), while the Curwens use 'Celtic' in association with the 'fieldways' or in other words tracks found running

O G S Crawford's air photographs and maps showing the earthworks on Salisbury Plain and the ploughed out lynchets on Windmill Hill and the surrounding countryside north of Winchester were the first images of *extensive* systems of fields to be published (Crawford 1924, Plates III and VI, and end maps). Crawford chose to use the term 'Celtic', associating them with the La Tène period, because the earthworks could be dated on the basis of their relationship with Roman roads and Neolithic flint mines. Their association with round barrows was more problematic, with some barrows being incorporated into the field systems and others apparently overlying the fields. Lynchets were directly associated with settlement sites such as South Lodge and Martin Down which, Crawford argued, were part of a package introduced by Celtic invaders in the earlier half of the first millennium BC.

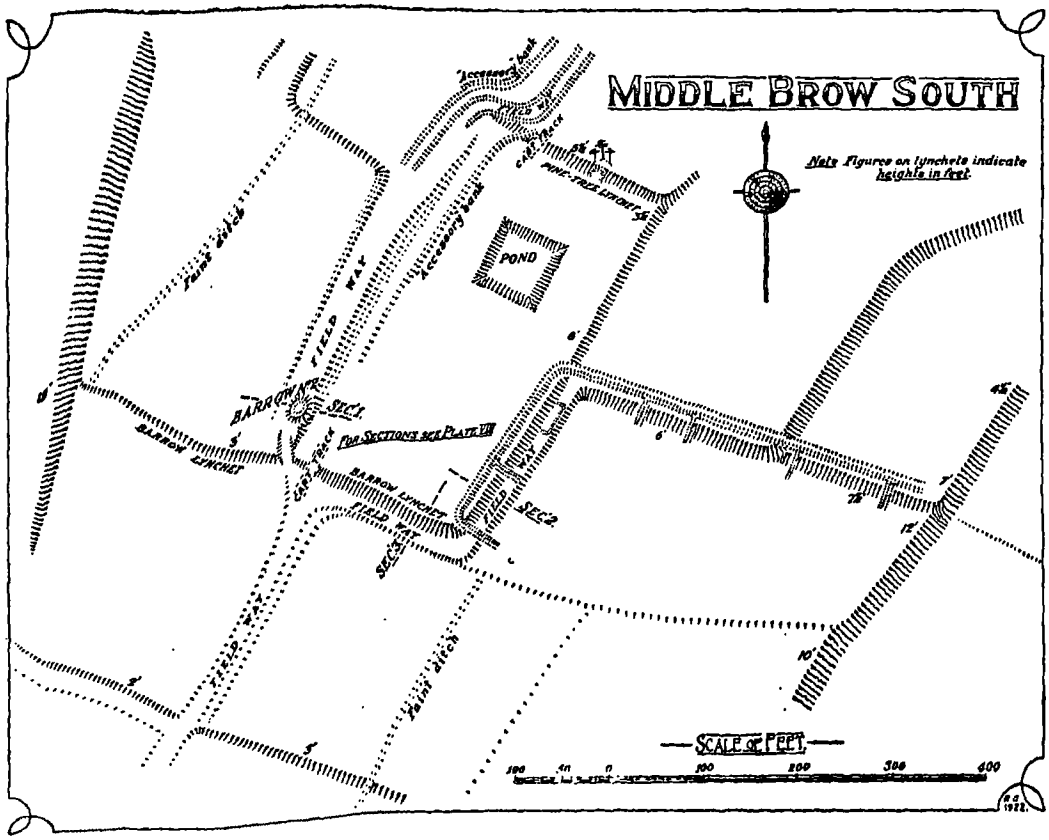

Fig 2.1 Survey of the lynchets and trackways at Middle Brow Hill, Sussex (reproduced from Curwen and Curwen 1923).

At about the same time, though independent of Crawford, Eliot and Cecil Curwen were surveying similar remains in Sussex and coming to much the same conclusions regarding their date and function (Crawford 1953, 96; Curwen and Curwen 1923). In their detailed survey and analysis of the

between the fields (Curwen and Curwen 1923, 64). Eliot Curwen was, in any case, in the audience during Crawford's lecture to the Geographical Association when the term 'Celtic' was first applied (Crawford 1923, 364-365).

earthworks on the south slope of Kithurst Hill near Starrington in Sussex (Fig 2.1), the Curwens set out to explain the date, function and construction of the lyncheted fields and trackways. Their contribution concentrated on the agricultural practices that had caused the formation of the lynchets. It is an indication of the state of knowledge that still prevailed at this time that they felt it necessary to state, regarding the formation of the lynchets: 'Manifestly this postulates human agency' (Curwen and Curwen 1923, 3).[2] Other theories, that the lynchets were naturally formed by factors such as water action, the slipping of clay slopes, raised beaches or earthquakes (Curwen 1932, 399), were clearly disproved by the Curwen's description of the means by which soil eroding from the fields or turned down the slope by ploughing in only one direction eventually built up into small scarps against a boundary or similar obstruction. Cecil Curwen went on to broaden his studies (Curwen 1927; Curwen 1932; Curwen and Hatt 1953). In his first paper dealing with the wider remit of 'prehistoric agriculture', he discussed, more fully than before, the date of the earthworks. He suggested, in agreement with Crawford, that the majority of the surviving remains were early Iron Age in date, with only limited examples from the late Bronze Age (notably in Cranborne Chase). Only on Dartmoor, to where Curwen had extended his survey work to include the boundaries around Kestor (see section 6.4), and Bodmin Moor did he believe there was evidence for surviving Bronze Age agricultural remains.

It is interesting to compare the approaches taken by O G S Crawford and Cecil Curwen. They both appreciated the importance of field systems as the remains of prehistoric agriculture by recording their extensive character and dating them to the earlier half of the first millennium BC. Yet while Crawford coined the term 'Celtic fields', it was Cecil Curwen who researched the remains in the context of prehistoric agriculture. He realised that field systems could not be studied apart from the subsistence practices that had produced them (Curwen 1932, 189). On balance, Crawford took an aerial perspective which, quicker than any other, transformed the view of ancient fields. While it did not offer the minutiae of detail which enabled the Curwens to explain the formation of lynchets, the air photographs did reveal the considerable scale and complexity of these landscapes, as well as exposing the extent of the destruction of many fields through ploughing.

The syntheses of British prehistory that were written in the 1940s drew on the restricted range of survey work that had been undertaken by this time (Childe 1940; Hawkes and Hawkes 1948; Piggott 1949). Their focus was on the culture-historical associations that the fields embodied, although some interest was expressed in the social context of their use: 'On Dartmoor it is easy to detect how the

[2] Christison argues that the impressive hill terraces found in the uplands of Northumberland and southern Scotland, which some had argued were natural, were in fact humanly constructed and were associated with the nearby forts (Christison 1898, 373).

women, as they turned the shallow soil with their hoes, gathered into heaps or threw to the edges of their plots the stones with which they were cluttered' (Hawkes and Hawkes 1948, 77).

The importance of agricultural practice, the problematic dating of fields, the close association between fields and settlements, and the distinction between linear ditches and 'Celtic fields' have remained at the core of some of the recent studies of early land enclosure (Ford 1991; Crosby 1989; Spratt 1989; Bradley et al. 1994). The dating of the first appearance of fields to the early Iron Age was incorrect; but this was the result of broader mis-interpretations of the material record. The methods and the interpretations, which emerged most clearly in the 1920s, set up the framework within which fields were recognised and recorded, and which was not revised again until Henry Bowen's study in 1961 (Bowen 1961).

Landscape and economy (1950s to 1970s)

In the years that followed Crawford's introduction of the term 'Celtic fields', a body of fieldwork was rapidly built up, most of it published in local and national journals. Surveys were undertaken across southern England, in Wales, East Anglia, northern England, including Derbyshire and Yorkshire, and Scotland (Bowen 1961, 71-74). Yet it was in Wessex where the majority of the work was concentrated (e.g. Hollyman and Curwen 1935; Mills 1948; Rhodes 1950). The date and function of the fields remained the focus of most studies, in many cases attempting to make distinctions between prehistoric and Roman fields. This local perspective was partly the precursor for 'landscape archaeology', an approach that was to form a distinctive part of of the British archaeological tradition.

Landscape archaeology did not emerge suddenly, in fact it was manifest in several different strands of theory and practice that came together in the fieldwork undertaken in the 1960s and 1970s: field archaeology and air photography, a geographical or topographical perspective, the local history approach, and the study of economy and environment. Landscape archaeology was an attempt to engage in holistic studies, and field systems of whatever period were invariably a component of the histories that were written. They were a crucial part of the palimpsest metaphor through which landscape change was explained. The linear character of boundaries, as with tracks and roads, made them important when establishing a relative history of the development of an area. Furthermore, their association with agricultural processes made them an important source of evidence for reconstructing the prehistoric economy and environment.

Field archaeology is closely allied to landscape studies (Aston and Rowley 1974, 19; e.g. Crawford 1953), and the importance of fieldwork in the early study of field systems was briefly alluded to above. The other methodological advance which encouraged a landscape approach was the introduction of air photography and the recognition of its value in identifying and recording extensive

field systems (e.g. Crawford and Keiller 1928; Bradford 1957). The theoretical underpinning of landscape archaeology was partly defined in the work of Cyril Fox: 'one whose greatest achievement has been the study of mankind as a thinking animal deeply-rooted in his landscape' (Wheeler 1963, 1). Fox's topographical study of the archaeology of the Cambridge region was not innovative in its use of distribution maps, or in its concentration on a particular area of the countryside – in this case, the area within a comfortable day's cycling from Cambridge (Fox 1923). Where it did differ was in its interest in the environment of the past, and the context this provided for understanding prehistoric human behaviour. Fox developed his approach further when he defined Britain in terms of a highland and a lowland zones (Fox 1932).[3] Although he did not include field systems in either of his studies,[4] Fox's 'economic history' and environmental perspective was supported by a scientific interest in the study of palaeo-environments which developed over the 1930s, also in Cambridge.

Local history was the paradigm within which fieldwork, air photography, a knowledge of environment and economy, and the use of topographical or geographical analysis could be subsumed. In his seminal work on English landscape history, Hoskins studied the historical evolution of the landscape using fieldwork and documentary sources. He recognised the development of the landscape 'much as though it were a piece of music, or a series of compositions of varying magnitude, in order that we may understand the logic that lies behind the beautiful whole' (Hoskins 1985, 20). It was a material artefact formed by the actions of nature and, most importantly, human history. The form and history of field systems were recognised as an important part of the English landscape and they featured prominently in Hoskins' account. He relied on the evidence for field systems in his brief summary of the pre-Roman landscape, and they were fundamental to studies of the medieval and post-medieval landscape (*cf.* Baker and Butlin 1973; Taylor 1975).

From about this time, a number of large-scale landscape projects developed, in many cases from relatively small beginnings (e.g. Barrett et al. 1991; Bowen 1990; Gingell 1992; Woodward 1991). One of the earliest such projects, begun in 1959, which studied the prehistoric, Roman and medieval remains on the Marlborough Downs (Fowler 2000). Excavation at selected sites was combined with fieldwork, the study of air photographs, documentary research and, vitally, environmental analysis (e.g. Fowler and Evans 1967. The project was conceived as a 'local study' where a distinctive historical sequence could be appreciated in isolation and not solely as a micro-version of the national picture (Fowler 1969, 124). The study of prehistoric boundaries was an important element in the project, and so lynchets were excavated within an Early Iron Age settlement and at several locations in the surrounding fields (Fig 2.2). The lynchets were shown to have built up above low stone walls or

[3] The division of Britain into a highland and lowland zone remained the framework for future studies (e.g. Evans et al. 1975; Fowler 1983; Limbrey and Evans 1978)
[4] Fox had studied and excavated at some of the Cambridgeshire dykes (Fox 1923, 121).

banks, and the agricultural soils that these slight features had trapped became an important source of environmental samples.

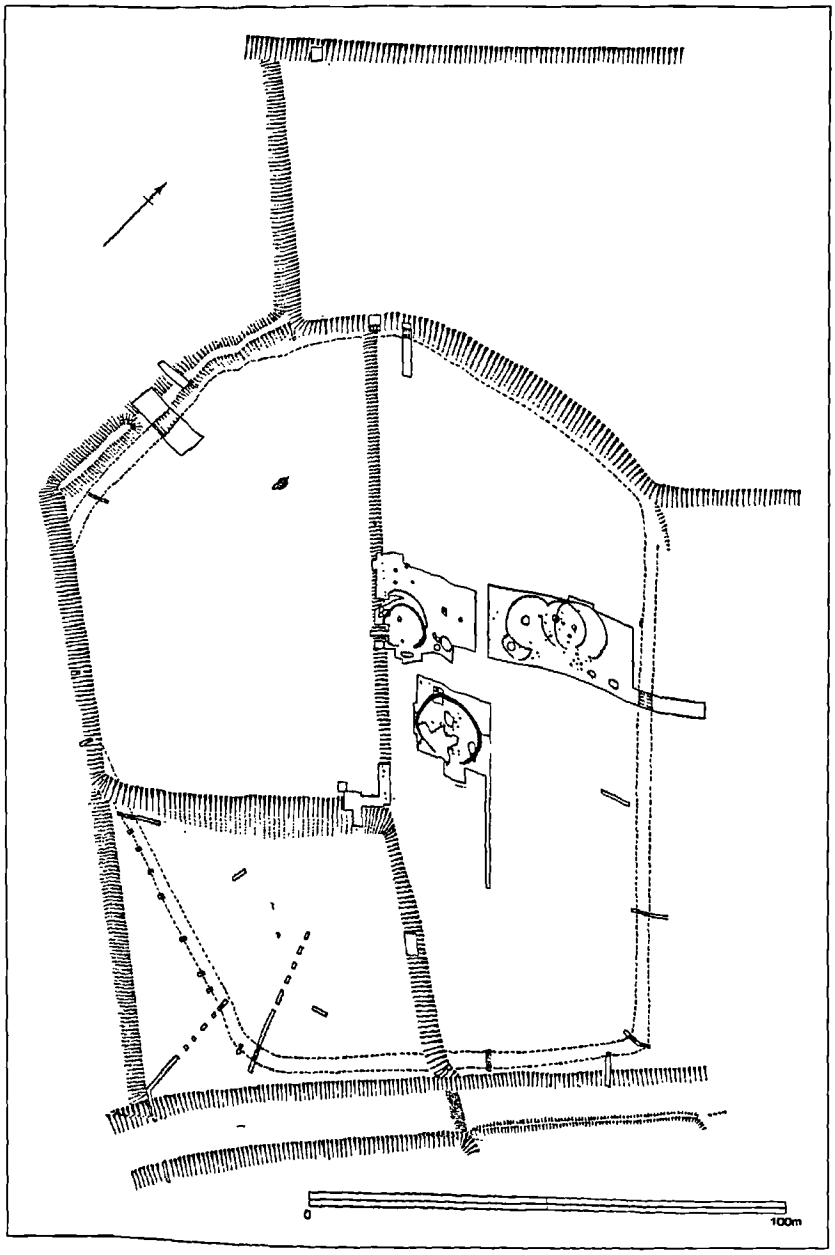

Fig 2.2 Overton Down site X/XI: the early Iron Age settlement and enclosure was incorporated within a group of 'Celtic fields' (reproduced from Fowler 2000).

The incorporation of environmental fieldwork into landscape studies was partly a continuation of Fox's idea of a prehistoric geography in which human activity should be seen in the context of the environment. Though it more properly reflected a discernable increase in explicitly economic and environmental studies, which was itself symptomatic of the transformed role of science in archaeological method and theory (e.g. Higgs 1972, Higgs 1975; Butzer 1972). Just as the Cambridge school of palaeoeconomists directed much of their efforts towards understanding the development of

early agriculture, so in Britain the agricultural economy became a particular concern (e.g. papers in Barker 1981; Burgess and Miket 1976). The role played by field systems during later prehistory was one of the central themes of this work. Fowler, for instance, in his contribution to *The Agrarian History of England and Wales*, drew to a large degree on the evidence of field systems (Fowler 1981a). The analysis of palaeoenvironments was developing rapidly, and here again excavated field boundaries proved to be an important source of evidence (Evans 1972). Encouraged by the economic and environmental perspective, and motivated by the practical aspects of farming practice, experimental studies were initiated into all aspects of agricultural practice (e.g. Reynolds 1979). In broader syntheses, written during this time, the economic and environmental perspective was shown to be important, and the archaeological traces of fields were again an important source of evidence (Barker 1985; Bradley 1978b).

By the late 1970s the study of landscape, economy and environment had become the established means by which to undertake the archaeological project. It had transformed the view of ancient fields by putting them in the context of the evolving landscape, subsistence practices and the surrounding environment. Landscape archaeology, in particular, consolidated the medley of techniques and theories that had emerged over at least the previous half century. This was an exciting time as the binds of a culture-historical perspective were released. Though in many ways it also narrowed the framework within which field systems were studied. They became a material component of the economic system in which people had lived, so consequently the social implications of their construction were rarely acknowledged (though note Fowler 1981b; and references to Fleming listed below). The methodology of the early landscape approach was highly flawed. At the core of the problem was a rather static perception of landscape change. However much Hoskins may have used terms such as evolution or process, it is clear that in all accounts the sequence is carefully periodised. Whether it was the 'Celtic fields' of the Marlborough Downs, the reaves of Dartmoor or the field plots of the Cheviots, they were all identified with an isolated settlement phase. As a consequence, excavations tended to be limited to discrete locations, often around settlements, suggesting that researchers believed that the chronology of the landscape could be established by studying just one of its components.

Survey and excavation (1950s to 1990s)

The survey of field systems continued throughout the century. Although localised and patchy at first, from the 1950s a greater emphasis was placed on the systematic survey of particular regions primarily through the work undertaken by the various Royal Commissions and the Archaeology Division of the Ordnance Survey. While the latter were only required to record the extent of the fields (though with exceptions, see below), the work by the Royal Commissions did involve the detailed survey of groups of boundaries. The RCHME inventory for Dorset has become justifiably famous for its treatment of

the 'Celtic fields' in the region (RCHME 1970, 318-346). The increased extent of the surveys demonstrated the coaxial, planned character of the field systems. The importance of the survey work was most apparent in upland areas where extensive areas of prehistoric boundaries and cultivation remains survived as upstanding remains. While destruction of field systems continued apace in southern English lowlands, as was acknowledged in the subtitle to Bowen's important study[5] and in Piggott and Fowler's lamenting preface to *The Agrarian History of England and Wales*, a seemingly inexhaustible number of sites were coming to light.

The uplands had always been of interest to researchers, but as large tracts of lowland fields were lost under the plough, the extensive upstanding remains preserved on moorland and mountainside became a resource of growing importance. In north-west Wales, for instance, the RCAHMW recorded many examples of later prehistoric settlements and the networks of plots and boundaries with which they were associated (e.g. RCAHMW 1960; Bowen and Gresham 1967). In northern Britain, a project undertaken by the Archaeology Division to establish the function of the many groups of small cairns that were being discovered in upland areas (Bowden and Mackay 1999) resulted in Feacham's paper reviewing the evidence for stone clearance features (Feacham 1973). Previously, most of the research into upland prehistoric fields was concerned with sites that could be compared to the 'Celtic fields' of elsewhere (e.g. Fox 1954a); yet it was clear that a further often more extensive phase of settlement was lying unrecorded. Despite the extent of this work, it is noticeable that studies of upland field systems were among the minority of papers heard at a conference on 'Early Land Allotment' held in Bristol in 1976, indeed there was only one contribution from Scotland (Bowen and Fowler 1978). By 1983, at a conference dedicated to the uplands, it was evident that a great deal of new work was being instigated (Spratt and Burgess 1985).

The scale of survey projects grew larger, principally during the 1980s, with the acceptance that an archaeological site could be better understood in terms of the landscape in which it was situated. The 'Environs' projects around Stonehenge and Danebury remain classic examples of this work (Palmer 1984; Richards 1990). The principal method for recording the traces of prehistoric field systems was air photographic mapping, and a more recent project in the Yorkshire Wolds is a model of what can be achieved, albeit in the favourable conditions of heavily cultivated chalkland (RCHME 1997a). The potential of aerial photography was also realised for upland areas, where the vast extent of the areas to be covered made traditional survey techniques too costly. The Archaeology Division of the Ordnance Survey had frequently used air photographs to identify sites, particularly in the more remote areas of northern Scotland (Bowden and Mackay 1999). Though this technique contributed more to the seminal project on Bodmin Moor (Johnson and Rose 1994), and the as yet unpublished work by the

[5] *Ancient Fields: a tentative analysis of vanishing earthworks and landscapes* (Bowen 1961).

RCHME in areas such as the Cheviot Hills. On Dartmoor, Butler's systematic, extensive survey of the entire moor was undertaken using air photographs (see Butler 1997). In Wales and until more recently in Scotland, the production of 'county' inventories was maintained: ground surveys of prehistoric fields and boundaries form an important part of the survey work in Brecknock (RCAHMW 1997), Perth (RCAHMS 1990) and Dumfriesshire (RCAHMS 1997).[6]

A widely recognised problem with all this work is the difficulty with dating, even at a coarse level, any of the archaeological remains that were surveyed. Typological analysis formed the mainstay of researchers approach to this problem: from Crawford's divisions of the fields into a Celtic and a Saxon type (Crawford 1923), through Bowen's distinction between Celtic fields and strip lynchets (Bowen 1961), Bradley's threefold categorization (Bradley 1978a), and finally Fowler's much more intricate scheme that dealt with both lowland and upland field systems (Fowler 1983, 128-144). The basis for these typologies was partly technological determinism in that the more regular, enclosed fields were thought to be later. But in the main the sequence rested on the close observation of the relationship between boundaries and other features in the landscape. The close association of Bronze Age barrows and field boundaries was raised perpetually. However, this relationship was never clear cut, and while there seemed to be plenty of examples of boundaries laid out with respect to barrows, there were still a few cases where the sequence was the other way round (e.g. Fowler 1971). The association between Deverel-Rimbury settlements and small areas of field systems was also helpful in assigning a middle Bronze Age date to some of the examples on the southern chalk downland and the Thames Valley, while an early Bronze Age origin for a few of the fields found in the 'highland zone' (first suggested by Cecil Curwen in 1927) was confirmed by the excavations at Gwithian (Megaw 1976) and a reassessment of the settlements on Dartmoor (Radford 1952). Sustained programmes of excavations quickly revealed the fragility of the typological dating. Ford carried out a number of excavations on the field systems of the Berkshire Downs, and showed that a great number of them were Roman (Ford et al. 1988). While the linear ditches, which had long been thought to be later than the 'Celtic fields', were, on Salisbury Plain at least, demonstrably late Bronze Age and earlier than the field systems (Bradley et al. 1994). Such chronological depth has also been recognised for upland areas. Rescue projects on Arran and at Lairg demonstrated that the cairns, irregular plots and field systems spanned over two millennia of occupation and land use (Barber 1997; McCullagh and Tipping 1998).

In recent years the quantity and quality of the survey and particularly the excavation record has improved almost exponentially. The greatest problem is now one of access. The resources are not available to publish major surveys such as those undertaken by the RCHME in the Cheviots or on Dartmoor. While an increasing amount of excavation is developer-funded and again remains poorly

[6] Again in Scotland, the programme of Afforestable Land Surveys are an important adjunct to the evidence presented in the inventories (e.g. RCAHMS 1994).

publicised and can occasionally be difficult to access. The potential of these sources is evident in Yates' study of middle Bronze Age field systems in the Thames Valley (Yates 1999). Undoubtedly there are many avenues for future research following collation of this and similar data, not to mention the potential to be found in the results of major open area excavations such as those undertaken at Raunds, Yarnton and Over (see below).

Interpreting fields and boundaries (1970s to 1990s)

The majority of early research into prehistoric fields and boundaries was directed towards recording the extent of the remains, assessing their date and attempting to understand the means of their formation. Both Reginald Blaker and Herbert Toms had considered the mechanics of how lynchets were formed, and Cecil Curwen and others wrote extensively on the agriculture of field systems. Beyond a few speculative attempts, there was little in depth understanding of the wider socio-economic context in which fields developed. As data on economy and environment became available, as more fields systems were recorded and excavated, and as archaeology itself went through a major paradigmatic shift, so the analysis of fields focused on how they functioned in society.

To take a well used example, Peter Fowler at first explained the motivation for the construction of field systems in basic terms: to keep animals in or out, to improve the land, to protect the crop, to define property, and for convenience; they were 'simply trying to be better farmers' (Fowler 1981b, 29). For Fowler, as for others, field systems and other cultivation remains were only one element of a distinctive agricultural system made up of the environment, the technologies of production, the material resources that were employed and society itself. Victoria Crosby set out the elements of an agricultural system in much clearer terms: technology, plant and animal species, fertility maintenance methods, population and labour requirements, level of investment in agricultural production, relationship between subsistence and surplus production, economic demands or constraints, and the decision framework (Crosby 1989, 4). Although she argues early in her discussion that the main function of field systems is to maintain the fertility of terrain, she goes on to suggest that the character and function of field systems are the essence of the socio-political system (Crosby 1989, 546), following Peter Fowler, who had remarked: 'well-farmed land ... always gives more than income: it gives power' (Fowler 1981b, 47).

The socio-political role of field systems which Crosby identified had first been discussed at length by Andrew Fleming with regard to the systems of reave-type boundaries on Dartmoor (Fleming 1984). 'Reave' was a name given to the long stone banks or walls that were built across Dartmoor during the second millennium BC (see chapter 6). While Fleming initially believed boundaries to be a key category of evidence in socio-economic model building (Fleming 1978b, 98), his later interpretations focused on field systems as evidence of socio-political processes (e.g. Fleming 1985; Fleming 1989b;

Fleming 1989a). Fleming believed that the boundaries were essentially for the management of land but the question remained as to why it was possible for such boundaries to be built, and who made the decision for their construction. The choice was between individuals, communities or hierarchical power networks (Fleming 1987a, 197). The size, uniformity and apparent terrain-oblivious layout of the boundaries made them comparable to Neolithic ceremonial structures such as cursus monuments. Like the Neolithic monuments there was an ideological dimension to the coaxial fields; they were structures which acted 'as mnemonics and reference points in the landscape, helping to perpetuate the belief systems which gave rise to them' (Fleming 1987a, 199). Field systems, as an expression of land tenure, were rooted in power networks. Land was held on a communal basis, and in response either to a perceived pressure on resources or as a sanction against individual action, a community-wide decision was made to impose the boundaries upon the people and the agriculture as a means of making land tenure explicit (Fleming 1989b. Fleming, in his explanation of coaxial boundary systems, put land tenure at the centre of the socio-political stage in the Bronze Age.

The move towards an 'archaeology of practice' (e.g. Barrett 1988; Barrett 2001), in which the material and social networks through which people live are interpreted as both structuring and structured by human experience, has contributed to a rethinking of the role of boundaries in the landscape. In a reconsideration of the linear ditches on Salisbury Plain, and following an intensive programme of fieldwork, it was concluded that the network of boundaries that crossed the study area were not constructed solely for any utilitarian reason, as had been suggested by their earlier categorisation as 'ranch boundaries' (Bradley et al. 1994, 137-152). Nor were they necessarily a response to specific pressures on resources. The ditches appear to have formalised the existing extents to community territories, marking out the limits of domesticated land. This was not, it would seem, necessarily a gesture of exclusion. Instead, the ditches were located so that they could best be seen from within the territories they defined (*cf.* Llobera 1996).

In recent years the interest in social practice has been maintained, though with more emphasis being placed on the social and material conditions that people inhabited. In her micromorphological analysis of cultivation soils, Helen Lewis argued that soils could not be thought of as purely natural, but rather as a mixture of nature and culture – soil processes both affect and are affected by tillage techniques (Lewis 1999, 47-48). Kitchen has laid similar stress upon land use and its effect upon human-land relations (Kitchen 2000). In a study of the context in which cairnfields were inhabited, Kitchen argued for more mobile, transitory and heterogeneous occupation of the landscape in the Bronze Age than had previously been suggested (Fig 2.3) (Barnatt 1999; Barnatt 2000 *cf.* Edmonds and Seaborne 2001):

> In order to understand the nature of the cairnfields found today on the East Moors, we must necessarily attempt an assessment of the quality of their inhabitation, broadly gauged in terms of the longevity and intensity of their use, and the exclusivity with which they may have been held by discrete social groups.
>
> (Kitchen 2000, 48)

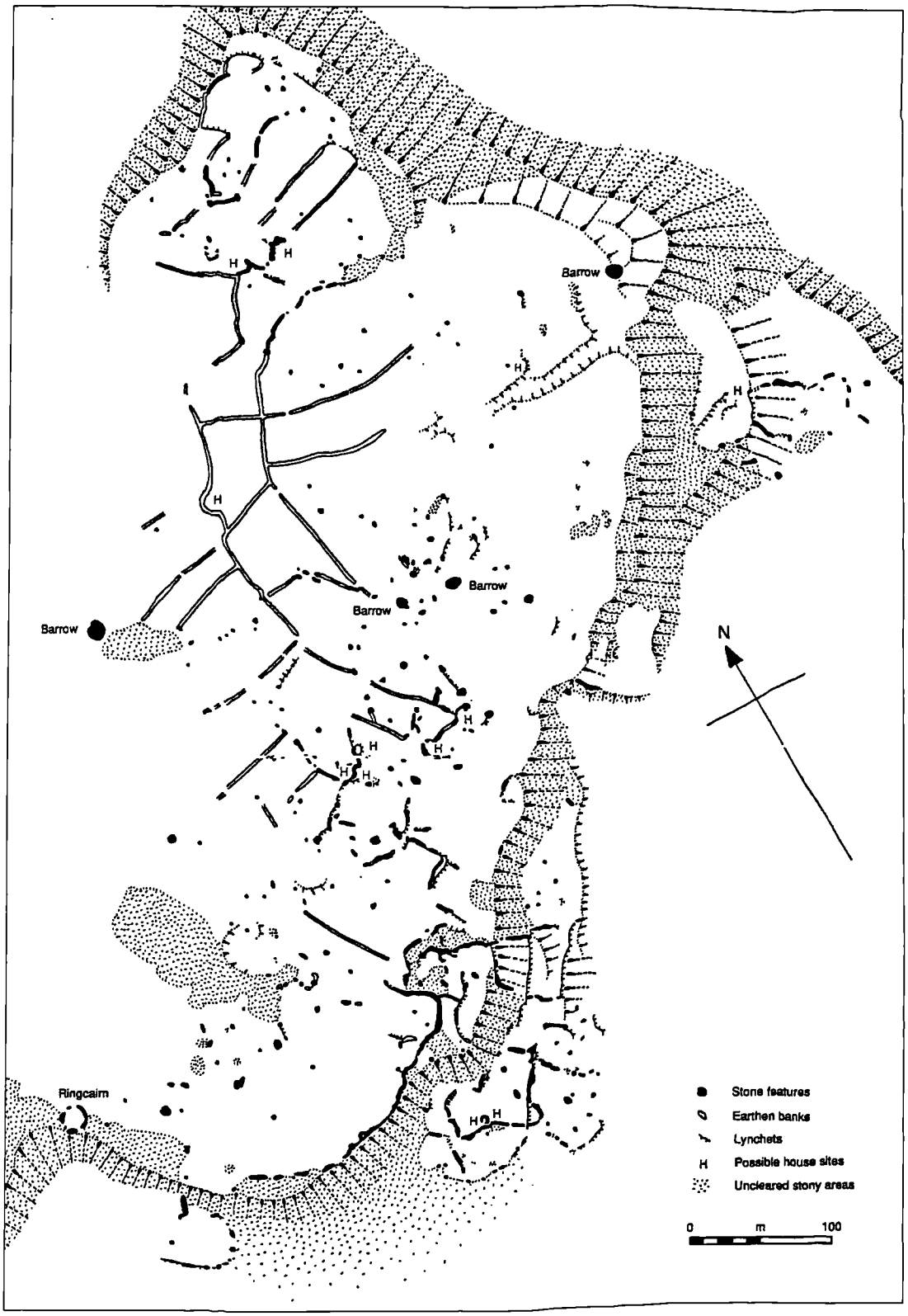

Fig 2.3 The prehistoric field system on Big Moor, Baslow, the Peak District (reproduced from Barnatt and Smith 1997).

Despite these more recent developments, the momentum of field system studies has diminished considerably from its heyday in the late 70s and early 80s. Fields were an important source of evidence for reconstructing prehistoric economies, and as such they were of interest to archaeologists at this time. As fashions in theory changed, and the focus shifted to issues of power, symbolism and ideology, so the interpretations of fields became marginalised. In recent years, with a renewed interest in the manner in which everyday practices draw upon and reproduce the social and material world, so issues of subsistence and agriculture have again come to the fore. Past confusion over whether to explain field systems as an economic or a socio-political phenomenon have largely been resolved. Instead of 'bracketing off' agriculture from other social institutions, such daily practices are seen as vital in sustaining and generating the ontologies people lived by.

2.3 Two short case studies

This brief review has highlighted the central role developments in both fieldwork and interpretation had in gradually changing our understanding of prehistoric fields and boundaries. Fields are now interpreted as the context for both social and economic processes, and they therefore lie at the interface between culture and nature. In advance of discussing these themes further, and pre-empting the main studies on northern England and Dartmoor to be presented in chapters 5 and 6, two short examples of recent research on prehistoric fields and boundaries will be examined. They are contrasting in almost every way: (1) upland irregular plots, cairnfields and hut circles in western Scotland; and (2) lowland coaxial field systems in the Fenland of eastern England.

Cairnfields on Arran, Scotland

It is rare for archaeological investigations in upland areas to involve a great deal of excavation. Among the exceptions to this was the fieldwork undertaken on the Isle of Arran, Scotland. During the late 1970s and early 80s, surveys, excavations and a programme of environmental analysis were carried out in three areas on the west of the island – Tormore, Kilpatrick, and Machrie North – in order to ascertain the archaeological character of landscapes at risk of afforestation (Barber 1997). A particular focus of this work was the evidence for later prehistoric settlement represented by house platforms, field boundaries and so-called clearance cairns. The investigations demonstrated that the relatively uncomplicated surface remains disguised a long history of human occupation.

Field boundaries and cultivation areas were uncovered dating from the third and second millennia BC. The earliest convincing traces of early boundaries were uncovered at Machrie North. A series of stony 'rickles' or banks partially enclosing rectangular strips about 200m long and 50m wide were dated by association with a pit containing Grooved Ware pottery. Other small terraces and traces of cultivation (ard marks) were also attributed dates in the late third millennium BC on the basis of their spatial

association with early features. This evidence contrasted with that from the second millennium BC, when a series of longer boundaries were constructed, and, suggested the excavators, there was a shift in subsistence practices from predominately arable to pastoralism. The boundaries were shown to have long and complex histories, in some cases being made up of a sequence of different elements that varied along the length of the boundary.

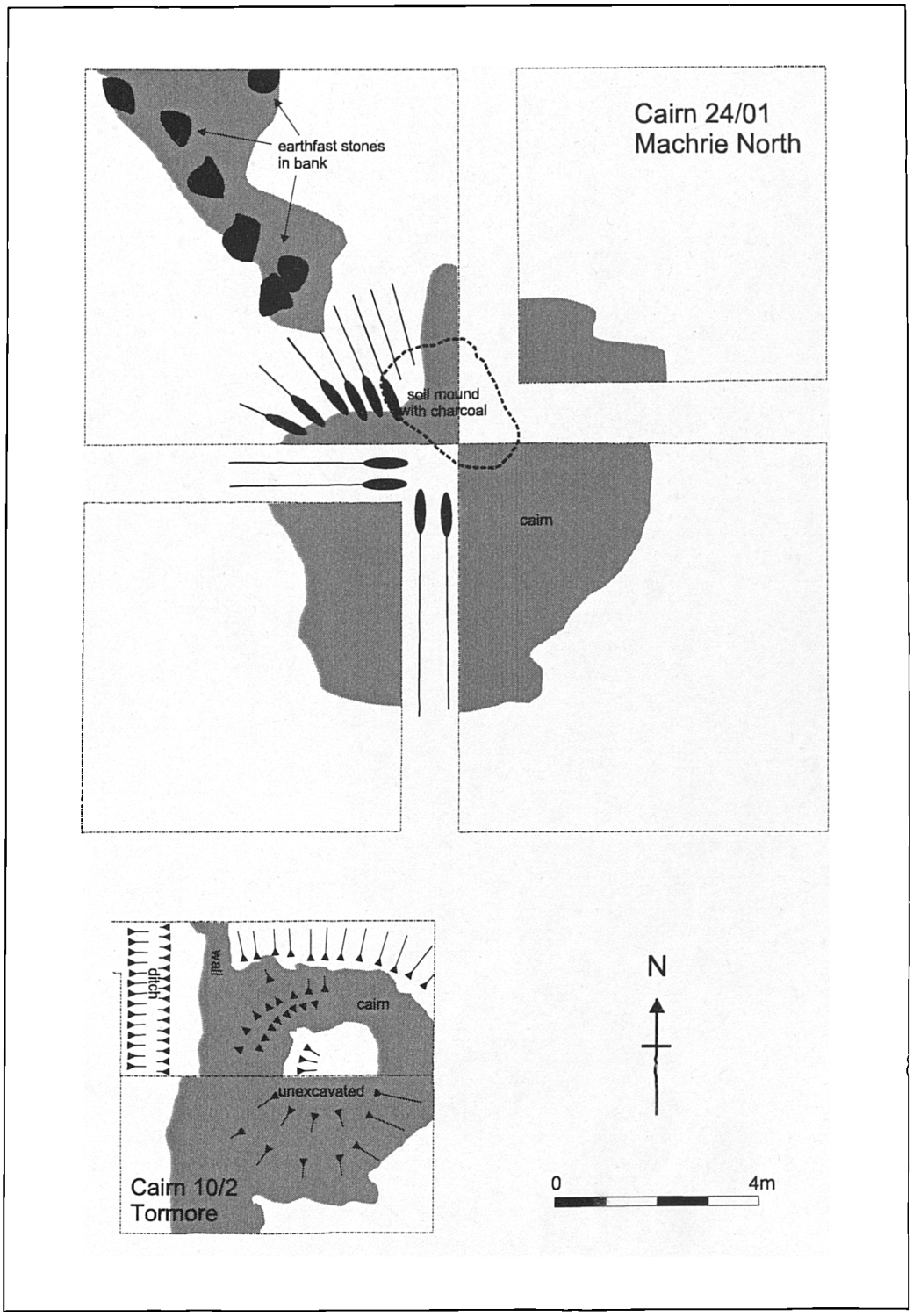

Fig 2.4 Simplified plans of cairn 24/01, Machrie North, and cairn 10/2, Tormore, Arran (based on Barber 1997).

A total of ten cairns were excavated during the project, the majority being chosen on the basis that they were probably 'clearance cairns'. Although the cairns would seem to have been associated with agricultural activity, their structure was rarely straightforward (Fig 2.4). At Tormore, cairn 10/3, situated close to a hut circle and a boundary, consisted of a low mound of tightly packed boulders and stones constructed at the break of slope on the edge of a level terrace. An assemblage of 22 pieces of flint were recovered from within the cairn material; all but four of the pieces were scrapers. In particular, a discrete collection of 16 flints was recovered from amongst the stones on the western side of the feature. Also at Tormore, cairn 10/2 appeared to have been built around an *in situ* feature, possibly a tree, and next to a earthen bank and ditch. The cairn and boundary provided the context for a series of deposits of cleared stone. A group of three cairns was excavated at Machrie North. One of these consisted of a compact deposit of small stones placed around some large earthfast boulders. Sealed beneath the cairn was a fresh flint core that had been placed within a rich lens of charcoal and sand. Another cairn close by had been robbed but it also produced lithics, in this case a pitchstone blade. The third cairn, similar in size and composition to the others on the surface, revealed a small stone cist containing a broken Beaker together with some fragments of bone. The interpretation of the cairns was minimal, and did not extend beyond proposing a distinction between cairns for burial and cairns for field cleared stone. While the distinction between burial and non-burial cairns is the most readily recognised, it is clear the non-burial deposits were also important in the establishment of the 'monuments'. Structured, or formal elements in the construction of the 'clearance' cairns included their association with pre-existing features such as earthfast boulders or a tree, the deposition of charred deposits or flint, and possibly more tenuously by the mimicking of burial monuments in the manner of their construction.

Coaxial fields on the Fenedge, East Anglia

A substantial area of Bronze Age field systems have now been excavated in the Fenland of East Anglia and Lincolnshire. The region is a flat, low lying basin on the fringe of the Wash in eastern England. Modern impressions of the Fenland mean very little, as changes in climate and consequently sea level, as well as seasonal incursions, and the complex depositional sequences of peat and alluvium mean that the landscape was never static. Yet within this flux, areas of substantial and long-lived Bronze Age settlement have been identified (e.g. Evans 1993).

The first major investigations of Bronze Age boundaries on the Fenedge were undertaken in the 1970s at Fengate in Peterborough (Pryor 1980; Pryor 1991, 52-73).[7] Open area, rescue excavations revealed a extensive pattern of ditches, all following a rough east-west alignment (Fig 2.5). Some of these

[7] Francis Pryor has recently excavated a comparable system of field boundaries at Welland Bank Quarry in Lincolnshire (Pryor 1998, 109-123).

ditches were parallel to one another, and were interpreted as droveways for controlling the movement of animals; others were sub-divided into paddocks or fields. The ditches were radiocarbon dated to the middle of the second millennium BC (Evans and Pollard 2000). The most complete pattern of boundaries was excavated at Newark Road, where two groups of paddocks were situated on either side of a wide droveway. The ditches varied considerably in size, and many showed evidence of frequent recutting. Settlement areas were situated close to or within the fields. Although none of the excavated structures could definitely be interpreted as a house, a large number of pits and post holes were excavated, and a range of ceramics, lithics and a little metalwork was recovered from within the features and the ditches. When first published, a long chronology of nearly 1000 years was proposed for the field system, and consequently the excavator suggested there had been a sequence of land

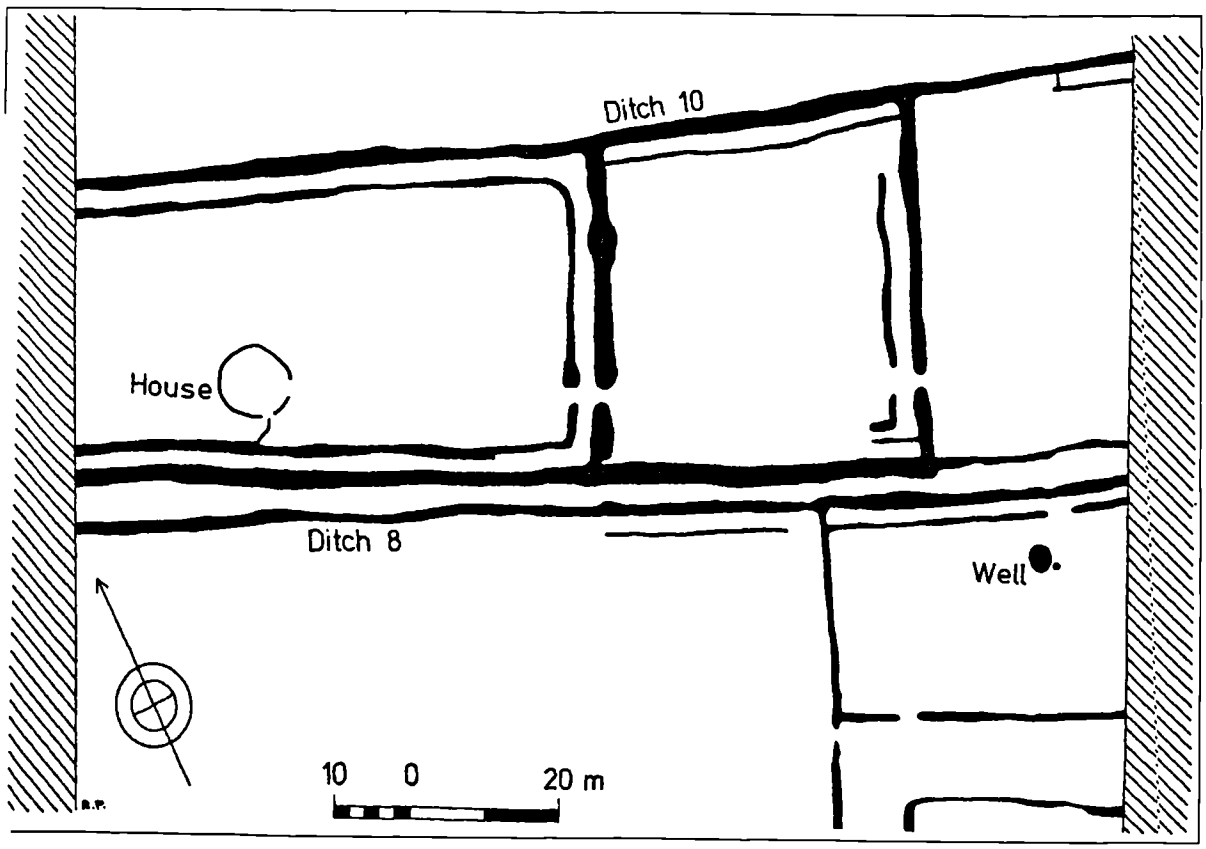

Fig 2.5 Plan of second millennium BC field ditches and associated features, Newark Road subsite, Fengate (reproduced from Pryor 1980)

divisions that were constructed as new ground was incorporated into a system of 'land management' organised between a dispersed pattern of farms (Pryor 1980, 179). With the establishment of a shorter chronology for the boundaries, Pryor later suggested that they represented the remains of a carefully planned and centralised stock control system (Pryor 1996). The paddocks formed part of a communal stock yard in which sheep could be gathered from the Fens where they had grazed during the summer months, then sorted and perhaps exchanged between groups. These gatherings served both ritual and

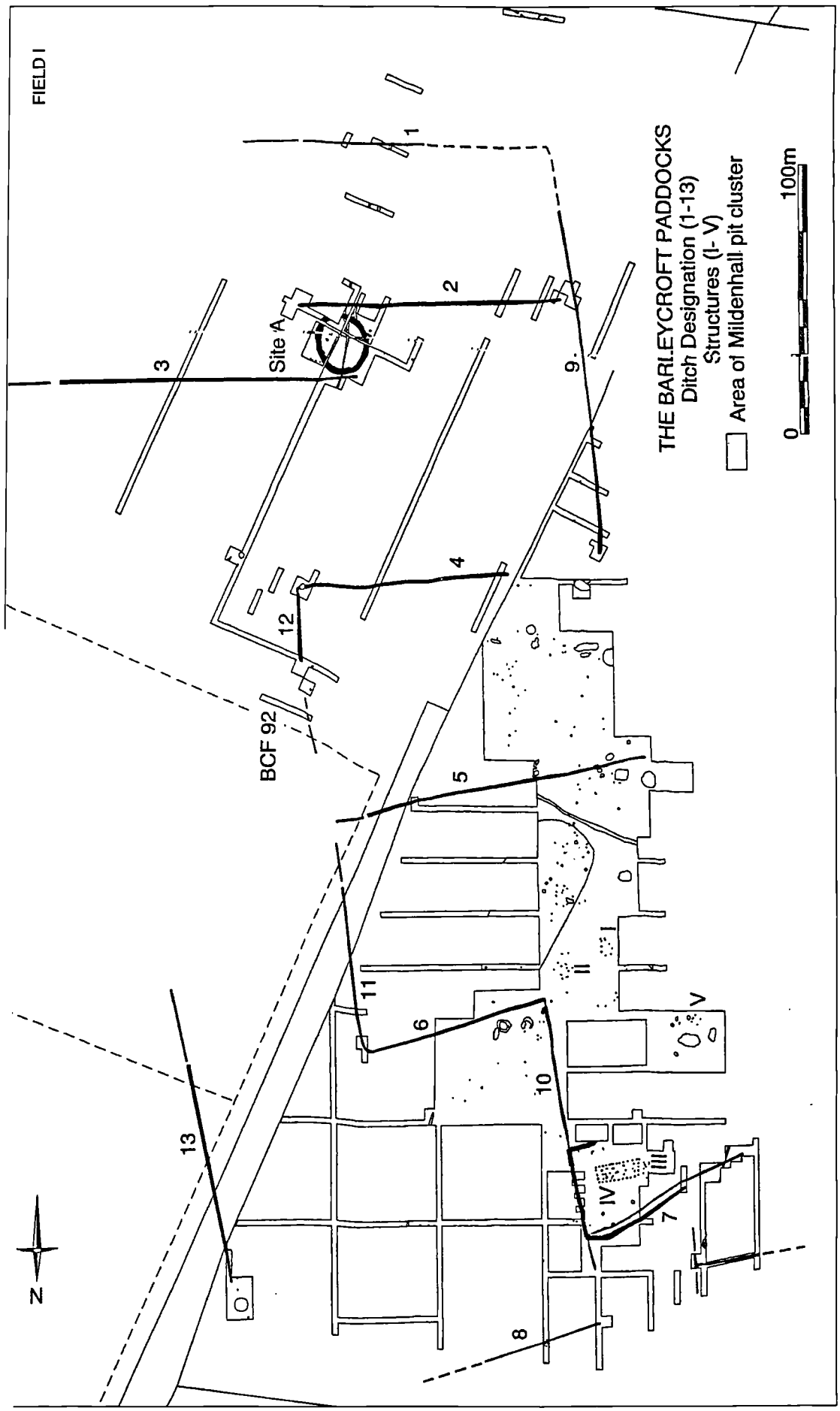

Fig 2.6 Bronze Age field boundaries and ring ditch, Barleycroft (reproduced from Evans and Knight 2000).

utilitarian functions, and they therefore fitted within the breaking down of such distinctions between sacred and profane thought to have characterised later Bronze Age society (see section 1.2).

Another large area of second millennium BC coaxial boundaries has been uncovered on either side of the lower reaches of the River Ouse, at Barleycroft and Over (Evans and Knight 2000). A series of parallel ditches were revealed, closely aligned upon a ring ditch (Fig 2.6). The ditches ran close to the ring ditch but they did not abut it. There was no evidence for droveways nor stockyards as had been found at Fengate. There were, instead, dense areas of settlement, including round houses, pits, wells and areas of industrial activity, notably metalworking. A large, almost monumental, rectangular building was excavated amongst this settlement. Built some time after c.1500 BC, the fields and settlement have provisionally been interpreted as evidence for permanent, hamlet-based settlement along the banks of the Ouse. Evidence for earlier settlement consists, in the main, of large spreads of lithics and occasionally clusters of pits, suggesting persistent occupation of locales but without the various material trappings associated with permanent settlement (Edmonds et al. 1999). While people did still 'go out into landscape' during the later Bronze Age, in the Fenlands as elsewhere, there is 'an expansion across landscape to enclose, manage, and effectively ensure access to resources – water: wells and processing pits; wood: coppice stands; pasture and crops: droves and field systems' (Edmonds et al. 1999, 77).

Discussion

The archaeological study of prehistoric boundaries and fields in Britain has shown them to cover a broad date range, and to occur in a variety of types that often defy strict categorisations. An increasing number of surveys and excavations have demonstrated that fields, boundaries and cairnfields often have complex structural sequences. Interpretations of this material evidence have linked the appearance of substantial agricultural remains in the archaeological record to important social processes that may have begun towards the end of the third millennium BC, and become obvious and identifiable during the second millennium.

The cairns, fields and boundaries that were investigated on Arran were the traces of agricultural activity spanning over 1000 years on what are now marginal areas of upland rough grazing. The dating evidence that was used to attribute a number of the boundaries to the later Neolithic was debatable, though not without parallel (e.g. Caulfield 1978; Pilcher 1969; Whittle 1986). Nevertheless, it is most likely that a number of the small cairns and terraces marked areas of third millennium BC cultivation. As the landscape was occupied over the longer term, the inhabitants had to contend with the process of soil podsolisation and eventually encroaching blanket peat. These processes may not have happened sufficiently rapidly to be apparent to those that lived on the hillside, and in any case much of the settlement evidence is suggestive of intermittent rather than continuous occupation. Yet people still

returned to cultivate these increasingly poor soils in a way that suggests they understood the constraints of their environment and sought ways to live within those limitations. Other aspects of the evidence suggest that the relationship between land and society was not solely utilitarian. The so-called clearance cairns that were dispersed amongst the plots of land, and probably representing the remains of stone removed from fields as they were cultivated or cleared for pasture, contained formalised elements in their construction. These included deposits of charcoal and lithics, and the construction of the cairns around pre-existing features such as trees and earthfast boulders. There is little doubt that in some cases these features were factors of convenience or chance, but other examples seem more difficult to explain. As will be explored more fully in chapter 5, the cairns are partly an attempt to maintain a link between the people who cleared the land and the ancestors of their community whose cremated remains were enclosed within cists located nearby. Both these issues – the environment as a constraining and enabling resource, and the close ties between people and the land – were linked through the daily lives of those who inhabited the upland landscapes on Arran.

The systems of coaxial boundaries in the Fenland of East Anglia present an interesting contrast to the plots and cairns on Arran. The long parallel ditches that divided paddocks and flanked droveways covered many hectares of the flat, Fen landscape. Yet they were not consistently built for the same purpose. If the differing interpretations of Pryor and Evans are accepted, then the boundaries at Fengate were a communal project for the management of livestock, probably on a seasonal basis, while those excavated at Over and Barleycroft were the traces of fields surrounding permanently occupied farmsteads. These explanations overlap in their assertion that such large-scale enclosure indicate intensive land use practices. This supports the idea of a middle Bronze Age transformation in the relations between people and land. Such an explanation may not be disputed, but there is a more complex picture that cannot be ignored. Whatever the final form of these 'managed landscapes', they were never constructed as a pre-defined plan on a 'blank', unoccupied region. There is a considerable quantity of archaeological evidence for the increasingly persistent use of places, and by implications the paths between them, during the centuries leading up to the middle of second millennium BC. The construction of the coaxial boundaries was therefore a process that reproduced as much as it transformed the material traces and the memories of these earlier inhabitations. Once dug, the ditches continued to structure future occupation as their identity was sustained with episodes of recutting and deposits of human remains and metalwork. Despite their regularity, the coaxial boundaries can only be understood in terms of the social and material conditions that they reproduced, transformed and generated.

These two examples, drawn as they are from very different areas of Britain, embody similar issues of interpretation. For one, fields are not solely a cultural construct; they are settings in which culture and nature are inextricably linked. The soils, crops, grasses and animals both enable and constrain human

lives, and people in turn affect and are affected by these various resources. Earlier attempts to understand field systems fitted them within an economic model that dichotomised nature and society, seeing the two domains as, respectively, restricting and exploitative. The corollary, a synergy of humans and environment, can only be realised in terms of the practices that people undertook during their daily interaction with the world around them. Further to this, the extent to which patterns of apparently interdependent boundaries were *planned* should be rethought with reference to the theory that such 'systems' emerged as a consequence of existing material and social conditions as much as they were also responsible for generating new conditions. The relations between people and the land were realised within these complexes of past and present conditions and future intentions. Nature and society, social practice, and social and material conditions will form the major themes that will be explored in chapters 3 and 4. A further issue evident in the preceding examples, that of regional difference and the emergence of localised social trajectories, will frame the case studies that follow the theoretical chapters.

3

SOCIETY AND NATURE

THEORIES OF ENVIRONMENT, SOCIAL LIFE AND TIME

3.1 Introduction

The changing relations between land and society form a central issue in the interpretation of Bronze Age fields and boundaries. The economic and political perspectives on the subject have remained dominant, despite broader theoretical developments within archaeology. Fields and boundaries are still viewed as either part of an agricultural system, and therefore economically motivated, or social boundaries that distinguish levels of tenure within and between communities. In order to question these ideas at a fundamental level it is necessary to consider the theories of environment and society around which they are based. There are five themes that are important:

(1) The externalising of environment (natural) and the enculturation of landscape (social) represents a world-view that is relatively recent in origin. It may be, as some commentators have argued, a false view of the world at any time, and it is definitely an inappropriate way to conceive of human-environment relations in the past.

(2) Ontologies are constituted through an everyday, practical engagement in the world. Social practices are, therefore, relevant to explanations of human-environment relations as well as to studies of social life.

(3) Social action cannot be studied apart from the environment in which it is set and with which it interacts. Agency is usually restricted to social collectives or individual human beings, but it is also perceived in the actions of nonhuman animals and objects.

(4) There are structural conditions of society that are recursively implicated in social practice and which extend beyond the time-space of an individual's life. The environment, as both a resource and as a source of symbolic and physical constraint, along with social institutions such as kinship, are examples of these structural conditions.

(5) A theory of time is implicit in any study of social life. It becomes manifest and problematic when we attempt to combine what are perceived to be different time-scales and time-concepts in the same

explanations for process and change. The discord that emerges is hermeneutic rather than expressing any real characteristics of time. A fact that is evident when the distinctions between 'social' and 'natural' time are critically examined.

This chapter will address these issues, first, through an account of recent efforts to 'break down' the dualism between nature and culture. While there has been an awareness of this western-centric viewpoint in a broad range of disciplines, the most sustained and effective critiques are to be found in the sociology of science and technology where the dualism is associated with the creation of a modern social order, and in anthropology where the challenge of interpreting 'other' perceptions of society and nature has encouraged researchers to go beyond a modern antithetical framework. The perspectives from the sociology of science and technology and anthropology will be considered. The problem remains how we advance from these critiques. Two alternatives will be offered. The first of these, Philippe Descola's 'schemata of praxis', defines cross-cultural cognitive templates around which human-environment relations are organised. The second, Tim Ingold's 'dwelling perspective', proposes 'dwelling' as a concept we can use to describe the primary engagement that both humans and nonhuman animals experience in their surroundings. The two ideas, schemata of praxis and dwelling, are not necessarily mutually exclusive. They do, at least, emphasise the importance of practice and agency in accounting for human-environment relations.

Theories of practice, agency and structure make up the second section of the chapter, following on from the observations that ontologies are constituted and reproduced through practices, and that humans and nonhumans can interact, as agents, in the same social world. The theories of society that describe social life in terms of practices and the structural conditions which they generate and reproduce tend to externalise the environment in contrast to other so-called social structures. Bringing these theories together with a non-dualistic dwelling perspective, it is possible to represent the environment as both enabling and constraining and as both rule and resource. There is then a place for humans and nonhumans in a social world with structure, agency and practice. The model for social life which I have used is well enough documented elsewhere (e.g. Bourdieu 1977; Giddens 1984), and it has been used by both archaeologists and anthropologists in interpretative analyses of social life. While there are fundamental problems with aspects of these 'grand theories', they remain important due to their attempts to internalise structures in social practice while still recognising and attempting to explain social order.

Time is crucial to the descriptions of society used in section 3.3. Yet a distinction is made between subjective time – the past, present and future around which memory, experience and intentionality is organised – and objective time – the sequential ordering of events which allows for the states of past, present and future to exist. These contrasting experiences of time are most often evident when we

compare measured time with social time, or when different time-scales are used, as for example, when social and natural processes are mediated. Overcoming these problems requires a return to the antithesis of nature and culture explored earlier in the chapter. There are differences between scientific and social time perspectives but these are not as well defined as is often suggested. The emphasis has shifted from a classical view of time as prior and external to action, to one where time is in events and action. Alfred Gell has objectified the relationship between social and natural time through a consideration of the philosophically defined A- and B-series concepts of time (Gell 1992). These roughly correspond to time-consciousness as experienced by human subjects and 'real' time as measured and recorded scientifically. Only one of these time concepts can be true time, and Gell argues for a B-series perspective while still explaining how A-series experiences are possible. Using this argument it is possible to extend the synergy of society and nature to include a theory of time which allows for subjective and natural time to be described within the same explanatory model.

In bringing these three strands of argument together – a synergy of nature and culture, a theory of environment as structure, and a converging of social and natural time – the overall aim of the chapter is to develop a theoretical description of nonmodern society which embeds social life in nature. Behind this aim is the recognition that archaeology, through its intellectual 'relationship' with the past, is in a position to positively affect the sociological principles that it relies upon in order to explain that past. In contrast, sociology is a discipline that has given much attention to defining and describing late modernity. The writers who set out the theories of social life which have directed this essay have gone on to apply their ideas to interpretations of the late modern social order (e.g. Giddens 1990). There is, nevertheless, an argument for breaking down the distinctions between modern and nonmodern. If we accept the argument against a nature-culture dichotomy then should we not also entertain the notion that distinctions between nonmodern and modern are also unhelpful? This, I feel, could only be a positive move for archaeology. In a discipline where the divide between us (the archaeologists) and the other (past lifeways) is at its most extreme, the current trend in modernity to further isolate itself from the pre-modern is worrying. The end of tradition, as predicted by so many commentators on the modern project, refers indirectly to a severing of the past. The definition of late modernity as an opposite of the pre-modern makes that severance absolute and unassailable. In such a world, the archaeological project has lost its relevance. In a public domain, the study of the past has mere curiosity value – the stuff of theme parks and chimerical representation. Archaeology is archaeology because it breaks down the distinctions between now and then, it takes the past into the contemporary world (and vice versa) and it has the potential to close the divide between modern and nonmodern, culture and nature.

3.2 Society and nature

> The real dwelling plight lies in this, that mortals ever search anew for the nature of dwelling, that they *must ever learn to dwell.*
>
> (Heidegger 1975, 161)

The relations between humans and the environment are central to archaeologists' interpretations of social change in the past. The relationship is generally expressed as a world divided between society and an externalised environment. The dominance of this perspective has profound implications for the relevance of our archaeologies when we consider that human societies in the past may well have had very different conceptions of their place in-the-world. Naturalism – the nature-society dualism that characterises the modern social order – is only one of many possible world-views. Attending to these issues has implications for archaeology in three ways. At one level, an awareness of other ways of perceiving humanity's place in the world should not be compromised through an over-simplification of human-environment relations. Overcoming this involves a practical and methodological engagement with the problem of how we interpret and represent past ontologies. Following on from this, by understanding and communicating the past in nonmodern terms, archaeology can contribute to the debate on the relevance of the past in the contemporary world. The past and the present are not exclusive domains; they are part of an ongoing dialogue for which archaeology has the role of interpreter and mediator. There is, then, an ethical dimension to our non-acceptance of the modern framework for understanding past human-environment relations. Not only in the sense that we have a responsibility, inherent in the archaeological project, towards those whose ontologies we are seeking to represent; but also because there are people, in the present, 'listening' to what archaeologists say (Barrett 2000; see also Bauman 1995 and Battaglia 1999).

The practical tasks of investigating and presenting archaeology have, at their core, an explicit opposition between nature and culture. Archaeologists are purifiers. That is to say they untangle the enmeshed relationships between human and nonhumans. During an excavation the cultural remains – the contexts – are distinguished from the sub-soil and other 'natural' features. During a survey, the cultural features are identified, recorded in detail and much effort is spent analysing and interpreting their significance, while the environment is often treated as unproblematic, providing a background for the cultural record. A problem often encountered during fieldwork is distinguishing between what is cultural from what is natural: 'is this subsoil or is it redeposited?'; 'is that a natural scarp or is it a lynchet?' Finally, purification is evident when the results of fieldwork and interpretation are communicated to professionals and public alike: archaeologists divide the cultural and environmental remains at every level of dissemination, from the fieldwork archive to the all-weather display board. Only when preparing an interpretation of the results are the exclusive domains of society and nature permitted to interact, and only then in terms specified by the interpreter. This final process of re-translation is far removed from the original context of recovery, and it is more often undertaken in a

strict naturalistic fashion, so that there is no longer any sense of the contingency and complexity of human-environment relations.

The aforementioned broad statements do not hold true in every case for in recent years efforts have been made to combine environmental and archaeological evidence so that they inform one another. At the same time, the interpretation of environment-human relations by archaeologists has moved from a predominantly materialist stance whereby cultural features are an adaptive response to the environment – nature shaping culture – to one where the dialectical character of the relationship between people and the environment is more freely accepted (e.g. Evans 1999; Moore 1997). Contrasting with this, the 'symbolic' role of nature is still explored in structural archaeology: culture is perceived to be a parasite feeding on nature as a source of symbols to incorporate within cosmological schema. These two approaches were recognised in a recently published reader of archaeological theory. A section devoted to nature and culture acknowledged the schism between the two terms, distinguishing between ecological approaches which saw the environment as an external influence upon people, and an experiential approach which emphasised the human experience of the environment through perception (Preucel and Hodder 1996, 23-38).

The complex ways in which animals and people have interacted and the role of elements, particularly stone and water, have been core to recent interpretative and landscape archaeologies (e.g. Bradley 2000; Evans et al. 1999; Jones 1998; Richards 1996; Tilley 1994; Whittle et al. 1999). These studies have been predominantly concerned with Neolithic societies, and in the context of ritual activity where the relations between humans and the environment are often formalised and made explicit. In contrast, archaeological studies of later Bronze Age and Iron Age communities show less concern for the processes by which the environment is 'socialised', preferring instead to focus on its exploitation as a resource, and its constraining properties as a limit upon settlement and subsistence practices (recent exceptions being Hill 1995; Tilley et al. 2000). Whatever the case-study or period, the problem of integrating nature and society is perpetual.

Critiques of the nature-culture dualism

Critical approaches to a nature-culture dualism can be recognised in numerous sources dating back to Raymond Williams and R G Collingwood (Collingwood 1945; Williams 1973). But it is only in recent years that the critique has been both sustained and effective. A characteristically post-modern discourse in the form of an internal critique of all established Cartesian dualisms is partly responsible for this (Latour 1993). But other disciplines, such as sociology, have also explored the possibilities offered by a non-dualistic world (e.g. Dickens 1992; Hirst and Woolley 1985; Portugali 1985; *cf.* Durkheim 1982; Giddens 1976; Giddens 1994, 76; and Thomas 1998; for archaeology see Hodder 1999; Shanks 1992, 42). In many respects taking an initially parallel track, practitioners in

anthropology have made explicit the specificity of western discourse with the recognition of *other* ways of knowing (e.g. Ellen and Fukui 1996; Descola and Pálsson 1996b; Ingold 1996c), the impetus for this coming from a feminist perspective (MacCormack and Strathern 1980). Our renegotiation of nature is also a product of contemporary political agendas, particularly those associated with the Green movement (Croll and Parkin 1992).

The most intensive and successful critical commentaries have come from both the sociology of science and technology and from anthropology. In the case of the former, what might be called an internal critique tackles the modern ontology from either a post-modern or a non-modern perspective. The latter is an external critique, and stems from an understanding of 'other' ways of knowing recorded in studies of non-western communities throughout the world.

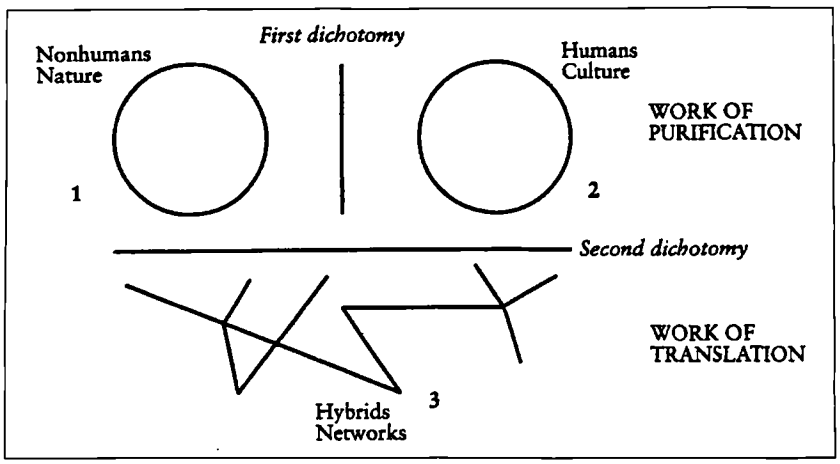

Fig 3.1 Purification and translation (reproduced from Latour 1993).

The internal critique asserts that the great divide between society and nature is at the core of what it is to be modern. The division is enforced in almost all aspects of contemporary western discourse, and is manifest in the antithetical institutions of politics and science. The mechanics of this division are expressed in two distinct sets of practices: *translation* and *purification* (Latour 1993) (Fig 3.1). The first of these, translation, is the creation of entirely new objects and beings which are mixtures of nature and culture: genetically modified crops, artificial hearts, and virtual landscapes all mix the allegedly incommensurable worlds of humans and nonhumans. In the second process, purification, 'the moderns' create two exclusive ontological zones, one for humans and the other for nonhumans. Purification represents, for Latour, the modern critical stance, and its existence ensures the perpetuation of hybrids or 'quasi-objects' and the process of translation: '*the modern Constitution allows the expanded proliferation of hybrids whose existence, whose very possibility, it denies*' (Latour 1993, 34 – original emphasis). At the same time as the core dichotomies are being created, reproduced and enforced, we are breeding more and more hybrids of nature and culture which must,

through a work of purification, be assigned into one or other realm, otherwise the entire modern project will have failed. The subsequent conflict – ideological, ethical, ontological and at times physical and violent, internalised in individual consciences and exposed in public and media debate – exists because the modern constitution cannot, and never could, represent the reality that it is partly responsible for creating. If we recognise this, Latour goes on to argue, and become equally aware of the processes of both translation and purification, then we stop being wholly modern.

Simply put: if we accept the process of purification then we are modern; if we see nature and culture as indivisible then we are not and have never been modern. It is difficult to accept the idea that modernity is illusory (there are significant developments in the arts, technology etc. which are different, *but not isolated*, from what went before); but it is possible to accept the notion that there is a sense of being nonmodern, in that a line is not drawn between us and the past, and we accept the contingency of our own predicament and recognise our responsibilities to the past. Latour does not offer us any answers as to how we escape from being modern except in the most abstract sense. His suggestion that we use ethnographic methods as a means of objectifying modernity is interesting but unfeasible, while remaining a part of the modern milieu. We can, however, turn to anthropologists for some help as they have struggled with their relationship with other ways of knowing for much longer than most (and certainly longer than archaeology).

The recognition of *other* forms of knowledge – as expressed in the taxonomies of non-western communities throughout the world, 'where the distinctions between living kinds, artefacts and chimeras appear fuzzy, and where non-humans seem to share many specificities of humankind' (Descola 1996, 82), provides another means of critiquing the universality of the nature-culture dualism. The *explicit* use of a nature-culture dualism in anthropological interpretation has its origins, along with other 'universal' opposites such as male-female and individual-society, in the structuralist ideas of Lévi-Strauss and others. The universality of these pairings was emphasised by the suggestion that there were certain related pairs – for example, nature:culture: :female:male – forming a coherent symbolic system. In her study of the Hagen in Papua New Guinea, Marilyn Strathern demonstrated that the distinctions between wild (*rømi*) and human (*mbo*) among the Hagen did not follow the strict patterning that might be expected from the structuralist models. Plants such as the sweet potato fit into a system in which a 'train of association links together the ground in which crops grow – the consumption of food – the creation of substance – and the development of human beings attached to territory' (Strathern 1980, 195). While it is true that men have access to the spirit world and are not tied to the cultivated land, women, despite their attachment to the home, are not rooted to place as they do not have the strict clan associations which tie men to the social world. The strict dualistic pattern of male:wild female:tamed does not therefore work. The recognition that there are other ways of knowing has meant that anthropology 'must rethink its domains and its tools to embrace not only the

world of *anthropos*, but also that part of the world with which humans interact' (Descola and Pálsson 1996a, 14).

The synergistic relationship between humans and the environment is best expressed in actual ethnographic examples. For the Huaorani, a group of Amazonian hunter-gatherers, successful hunting requires a knowledge of the nonhuman world which is gained by *walking*. This is not simply a biomechanical progress from A to B, for it entails a slow and sentient movement through the forest: 'One's body takes the smell of the forest and ceases to be extraneous to the forest world. One learns to perceive the environment as other animals do. One becomes a "dweller" deeply involved in a silent conversation with surrounding plants and animals' (Rival 1996, 148). In order to understand the nonhuman world it must be observed and experienced practically. The manner in which the Huaorani hunt arboreal animals demonstrates the complex social relations between humans and parts of the nonhuman world mediated through action and technology. People are considered to be closest to arboreal animals – monkeys and birds – distinguishing them from ground dwellers such as pecarry, which are associated with the foul smell and decay of the forest floor. Blowpipes are the only weapons used to hunt tree species. The animals are approached openly, and when occasionally the victim pleads for its life by exposing its soul through eye contact with the hunter, it is spared. The prey is not killed (an action involving the violent use of spears, and reserved for human enemies and peccaries), instead it dies from the currare poison on the end of the darts. This process may take some time – up to 12 darts and 30 minutes for a spider monkey – emphasising the deliberate but impersonal quality of the hunt. The use of blow pipes is important as they are also closely associated with social relations among humans: they are freely lent, their production is a social activity, a technology of inclusion: 'Associated with the continuity of *huaomoni* groups and of peach palm groves, they help perpetuate an endogamous and autarkic social world based on sharing rather than on reciprocal exchange' (Rival 1996,158). The technological choices made by the Huaorani are not cross-cultural, nor are they deterministic – blowpipes are not necessarily more efficient than say shotguns. While the choice of a blowpipe and the arboreal animals that it is used to hunt could be explained in terms of cosmological schema and the relations between animality and humanity, it seems, according to Rival, to be more obviously informed by a 'direct and practical relationship to the world' (Rival 1996,158).

From this example we can seen how there is interaction between the nonhuman and human world, mediated through artefacts, i.e. the blowpipe, and through a practical engagement with the environment encountered during hunting and *walking*. Human-environment relations are clearly oriented around practical action and social performance, and mediated through technology (*cf.* Dobres 2000).

In Papua New Guinea there are strong associations between mythological narratives and nonhuman objects and places (Kahn 1990). Stones, in particular, are perceived as petrified ancestors and commemorated as the equipment used in mythologies. The stones vary in shape and size; they are found individually and in groups, set in clearings and amongst bushes, near the villages and in the surrounding forest. These special stones are not solely elemental: 'each stone has a name, a history, a life, we might even say a personality, resulting from the spirit enclosed within it' (Leenhardt quoted in Kahn 1990, 52). Some of the stones are capable of intentional action: they have the power to act just like human agents (see below). Proof of their agency is in the ability of the stones to move from place to place, as demonstrated in the story of the stone, Tauribariba, the ancestral leader of the Maibouni lineage (Kahn 1990, 55-59). The stone is only 15cm long, and originally formed part of a large circle of stones located in the centre of a hamlet on the Wamira coast. The stone circle surrounded Tauribariba's sister, Tauanana, a larger boulder, 0.5m in diameter. The remainder of the circle consisted of numerous small stones, Tauanana's children, whose numbers varied as some left the circle and other children were added when, on occasions, they appeared from the sea. Tauribariba was removed from the circle in 1936 by missionaries and cemented into the pulpit wall of a new cathedral built at Dogura. That night the stone walked back to the circle of stones at Irere. The following day the priest returned, collected Tauribariba, and cemented him back into the wall upside down and facing inwards. This physical and symbolic inversion was designed to ensure that the power of the stone was emptied and he could not look out towards Wamira. Tauribariba did not walk again, and as a result his sister, Tauanana, returned to the sea with her children, grief-stricken. It was not until 1974, so the story is told, that she resurfaced and the inhabitants of Irere could help her back into the circle where her children slowly began to rejoin her.

In Wamira the stones are not personified, they are persons in themselves. They interact socially, and they have the power to act. The stones are, therefore, agents in social life with people. A dualistic concept of nature and society, that is one which attributes culture to humans alone and excludes and externalises the nonhuman world, can only represent such phenomena as the walking stones at Wamira through a process of purification: the stones do not move, they are merely natural elements that have been enculturated through their incorporation into mythical narratives. The literal truth of this statement may be unproblematic but from the perspective of understanding how it is that the stones anchor myths and narratives spatially as well as temporally it is necessary to appreciate the stones as agents who can play a part with humans in social life.

The internal and external arguments against employing a nature-culture dualism with which to interpret the past are therefore multidisciplinary. The internal critique has relevance for the application of archaeological interpretations to debates on the value of tradition and history in modern society, and the external critique offers a commentary on the applicability of the nature-culture dualism outside a

western ontology. Together they challenge the theory and method of researching human-environment relations. Whether or not we accept the idea that we have never been modern, we can at least perceive the fallacy of ignoring Latour's hybrids and quasi-objects. Archaeology, in its study of past material cultures and conditions of inhabitation, can identify more hybrids with which to enforce both the internal and the external critiques. Furthermore, the recent concerns of archaeologists have been with social practice and agency partly in order to explain how ontological frameworks, constituting the relative classification of humans and nonhumans, are generated and reproduced during daily life. This problem will now be addressed in the following section by taking two different ways of interpreting human-environment relations without recourse to a nature-culture dualism.

Two answers to the problem: schemata of praxis and dwelling

The recognition of other ways of knowing may not preclude the existence of cross-cultural patterns or schemes by which the relations between humans and nonhumans are organised. Phillippe Descola has termed these 'schemata of praxis': 'objectified properties of social practices, cognitive templates or intermediary representatives which help to subsume the diversity of real life under a basic set of categories of relation' (Descola 1996, 87; *cf.* Bourdieu and Passeron 1990, 35; Bourdieu 1994, 130). This symbolic ecology achieves the forms of intra-societal classification developed in structural anthropology (Lévi-Strauss 1966) without enforcing the reification of universal dualisms drawn from a western ontology. The schemes are not reducible to cognitive universals as they emerge through a day-to-day, practical, lived-in engagement with the world. They are contextual, and are not independent of human action. They are not entirely relative, however, as it is possible to envisage a *finite* set of cultural invariants that may be used in the expression of a 'symbolic ecology'. Descola breaks up his symbolic ecology into three levels: (1) the types of categorisation which are used – *modes of identification*; (2) the forms of interaction, or social practices, that reproduce the types of categorisation – *modes of relation*; and (3) the means by which categories are formed through practice – *modes of categorisation* (summarised in Table 3.1).

MODES OF IDENTIFICATION	MODES OF RELATION	MODES OF CATEGORISATION
totemic	reciprocity	metaphoric
animism	predation	metonymic
naturalism	protection	

Table 3.1 The elements of a 'symbolic ecology' (based on Descola 1996, 87-92).

There are three dominant modes of identification: totemic, animism and naturalism. Under a totemic scheme, the empirically observable differences between species are used to create a conceptual order of social units. In animism, nonhuman beings are endowed with human, social characteristics. Naturalism, the mode of identification common to modern western thought, endows nature with an

ontological reality; it defines a domain in which events exist outside the realms of chance and human will (i.e. the laws of nature, science etc.). Since naturalism is our own mode of identification it appears commonsensical: 'Viewed from an unprejudiced perspective, however, the very existence of nature as an autonomous domain is no more a raw given of experience than are talking animals or kinship ties between men and kangaroos' (Descola 1996, 88).

Descola suggests three modes of relation: reciprocity, predation and protection. The first two are closely allied with animism. Reciprocity is identified with a strict principle of equivalence between humans and nonhumans. In predation, nonhumans are personified, thereby sharing humanly derived ontological attributes. While protection is a mode of relations that recognises nonhumans as being dependent upon humans for their continued existence and welfare. These relations are realised in many different forms. Among the Tukanoan Indians of eastern Columbia the reciprocity between humans and animals is evidenced by their intra-divisibility within a fixed meta-system of ecological relations: human souls return to the 'Master of Animals' after death and are returned as game animals. Death in the animal world is reciprocated by death in the human world. Predation is the dominant value among the Jivaroan tribes of eastern Ecuador and Peru: nonhumans may have human-like values, but there is no need to offer a counterpart for taking their lives. Humans and nonhumans are not involved in a network of exchange; instead, plants and animals may punish humans, for instance, manioc sucking the blood of women and children, or snakes biting hunters. The identifiers which Descola observes – totemic and animism – do not exist discretely, that is to say in isolation from one another, while the modes of relation and categorisation are also in many cases interdependent:

> Each culture, each historical *épistémè*, articulates these two classificatory schemes to produce specific combinations, the nature of which vary according to the dominant type of scheme, to the number of levels encompassed by this scheme, and to the type of classificatory mode privileged by each of the schemes at each level of classification.
>
> (Descola 1996, 93)

The aforementioned schemata of praxis outlined by Descola rely on two methods of categorisation: metaphor and metonym. These function between two domains: that of humans as intentional agents (as either a comparative or contrastive referent) and the domain of nonhumans as objects (to which meanings are attached). Such a perspective requires an ontological duality of the human world and the nonhuman environment, the latter being explained in terms of the former. The process by which one relates to the other, Descola's modes of relation, are a form of environmental construction or modelling: 'actions that in the sphere of human relations would be regarded as instances of practical *involvement* with the world come to be seen, in the sphere of relations with the non-human

environment, as instances of its metaphorical *construction*' (Ingold 1996b, 125-126 – original emphasis).

The idea of constructing or building onto the environment is a part of what Tim Ingold has termed the 'building perspective' (Ingold 1995). That is a view which assigns humans a unique place in the world by virtue of their ability to imagine a project prior to its construction. From a 'building perspective' humans live a split level existence between a perceived world and a real world. Events undertaken in the real world have to be first imagined or planned in the perceived world of the imagination. This interpretation of environmental perception is comparable to the idea that the defining feature of humanity is culture. In other words humans are cultural agents and they are culturally formed subjects of experience. Culture is the *pre*-knowledge through which humans experience the world around them, and human beings are '*body-plus...*' (James 1996, 112) – corporeal receptacles to which culture is added. In order to understand why it is that different peoples understand nature in different ways we first have to disengage our argument from any distinctions between humans and nonhumans, and focus instead on the cultural constructions of humans themselves. In other words, the cultural component of humanity distinguishes it from the nonhuman world. From this perspective, the project, generated through cultural knowledge, must precede the actual living in-the-world. That is to say, the form of the world – as constructed through metaphor etc. – exists before the process of experience. However, how do we think constructions without already living? How can we prioritise form (the plan) over process (the project)? The building perspective achieves this by relying on a dualism between the real world and the perceived world. Humans being the only animals who can manage this feat by virtue of culture, or 'body-plus...'.

Yet, if we do not accept the mind-body dualism, and instead human beings experience a direct, embodied engagement with their surroundings, then *building* compels us to already be *living*. In order to construct our worlds we must already inhabit them. This perspective requires humans to experience their surroundings, initially at least, in the same manner as nonhuman animals. Thus we can posit that humans are not 'body-plus...' but embodied agents in a world of humans and nonhumans alike. Ingold develops this 'dwelling perspective'[1] from Heidegger's thinking on the relationship between building and dwelling (Heidegger 1975). Heidegger uses a house as an example. We build a house in order that we might dwell in it, and we build other structures that may or may not be used as dwellings. Although, at first, we might see dwelling and building as related, as end and means, it is possible to argue that 'to build is in itself already to dwell' (Heidegger 1975, 146). The apparent confusion between building and dwelling is further illustrated by the etymology of the German word *bauen*

[1]Ingold has outlined this perspective in Ingold 1995, although the origins for such a search for a synergy of person and environment are apparent in Ingold 1992. The argument is continued in Ingold 1996a and Ingold 1996b, and most recently in Ingold 2000.

meaning building. Its origins lie in the High German and Old English *buan* meaning 'to dwell'. The meaning of *buan* is preserved in the High German and Old English for neighbour: *nachbar* and *neahgebur* respectively – a combination of *neah* (near) and *gebur* (dweller). The general meaning of dwelling might seem at first superficial but there is a further derivative of *buan* which means 'I am'. As such, the 'way in which you are and I am, the manner in which we humans *are* on the earth, is *baun*, dwelling' (Heidegger 1975, 147).

The 'dwelling perspective' is a means of challenging the uniqueness of the human experience when compared to animals, and of representing the relationship between humans and the environment. Rather than seeing humans as distinct from animals in their ability to build *onto* the nonhuman world, Ingold identifies a state of being that is broadly comparable between both humans and animals. He stresses the importance of dwelling as prior to any cognitive construction. It is this dwelling which links humans and nonhumans within the environment and lies at the centre of any attempts to understand the relations that humans have with their surroundings. Furthermore, dwelling is never complete; unlike building and constructing which proceeds to plan and has a definable end, dwelling is 'work in progress', it is an historical process (Ingold 1995, 57; Ingold 1996a, 116). In summary, the human condition is that

> of a being immersed from the start, like other creatures, in an active, practical and perceptual engagement with the constituents of the dwelt-in-world. This ontology of dwelling, I contend, provides us with a better way of coming to grips with the nature of human existence than the alternative western ontology whose point of departure is that of a mind detached from the world and which has literally to formulate it – to build an intentional world in consciousness – prior to any attempt at engagement.
>
> (Ingold 1996b, 120*ff*)

Dwelling is something akin to Steven Feld's explanation for the Koluli word *dulugu ganalan*, literally translated as 'lift-up-over sounding': 'visual, motional and sonic (musical, verbal, natural) dimensions of style are conceptually and practically united through active engagement and participation, linking feelingful experience and everyday knowledge and action' (Feld 1996, 71). The Koluli live in the forests of Papua New Guinea where there is an incredibly rich soundscape composed from the calls of birds, frogs and insects, and the ever-present resonance of waterfalls and brooks. These natural sounds are the basis for the Koluli understanding of their world, and they are incorporated as the framework, model and inspiration for Koluli musical performance. The synergy of natural and cultural sounds, achieved as it is through a practical engagement with the world, is the essence of a dwelling perspective.

The dwelling perspective represents a means by which we might understand humans as living in a world of humans and nonhumans alike. The relationship between humans and the environment takes

the form of an embodied engagement that does not require predetermined dichotomous distinctions between nature and culture. Dwelling is an historical process. It takes us away from the mind-body duality in which humans construct, or build, the world around them. The dwelling perspective is an appealing way with which to view later prehistoric lifeways: the complex inter-relations between humans and nonhumans that do not conform to modern frameworks; the lack of clear symbolic schemata through which we might identify a 'world view'; the flexibility allowed by a relativist perspective (i.e. there are an infinite number of ways in which to dwell).

Discussion

One of the five themes to be considered in this chapter is the externalising of the environment in contrast to an enculturated landscape, otherwise represented by the dualism of nature and society. This dichotomy is core to archaeological practice and theory, and it is rarely challenged as an appropriate framework for interpreting prehistoric ontologies. More often, researchers have either taken the environment to be a constraining and external influence on social change, or made it a passive source of symbols for cosmological schema.

There are substantial critiques of the nature-culture dualism both from 'within' modernity itself, and as a consequence of studying human-environment relations among nonmodern communities. Archaeology has something to add to both these debates. As a discipline that crosses between the past and the present, between the nonmodern and the modern, archaeology can be the mediator between worlds from a nonmodern perspective which critics such as Bruno Latour are seeking. This role is given added importance when we consider that the continued definition of a modern order has the potential to threaten archaeology's relevance in contemporary society by disassociating the nonmodern past from the current historical process. Only by actively debating its relevance can archaeology counter this view of the past. The means to enter this debate are through the particular perspectives on modern and nonmodern forms of knowledge that a study of the past offers. Intrinsic to this 'internal' critique is the recognition of hybrids, objects that do not fit neatly into the categories of nature or culture. Just as modernity is itself negating its own project by producing more and more hybrids, particularly through high technologies and genetic manipulation, so archaeology can recover hybrids from the past – evidence of the commeasuring of society and nature by other communities. Just as anthropology has defined an external critique by recording and then attempting to explain nonmodern ontologies, archaeology also has a perspective on the 'other'. This approach is perhaps more important than the one offered by anthropology because it has the potential to break down the boundaries between the nonmodern and the modern in our own past, so contributing to the internal critique.

The two theories of human-environment relations described in this section, Descola's 'schemata of praxis' and Ingold's 'dwelling perspective', both result from the external critique and they are directed 'out' towards understanding 'other' forms of knowledge. They approach the same problem in very different ways. Descola is attempting a taxonomy of taxonomies, not in order to discover universals of human behaviour but to make the myriad of possible knowledge frameworks intelligible and cross-culturally comparable. Roy Ellen expressed a similar desire when he defended the use of nature and culture as abstract terms to ensure the continuation of intellectual communication (Ellen 1996). Though he went further than Descola when he expressed such categorisations as an intrinsic part of human cognition, not as universalised cognitive oppositions but as objective analytical categories. At a superficial level, Descola's schemata comes very close to this objectification, but he is able to avoid simply reordering nature and culture as a duality by his emphasis upon practice as the crucial element of any attempt to explain nonmodern knowledge frameworks. Whether or not we accept the categories that Descola offers does not matter. The key thing is the ordering of human-environment relations in complex ways based on a theory of practice: 'Human social experience is the appropriation of specific percepts by general concepts: an ordering of men and the objects of their existence according to a scheme of cultural categories which is never the only one possible, but in that sense is arbitrary and historical' (Sahlins 1987, 145).

The dwelling perspective does not oppose the stance taken by Descola, instead it seeks to explain the differences between humans and nonhumans at a deeper, almost transcendental level – a variation on existentialism. It situates humans and nonhumans not only in the same world, but provides them with the same elemental engagement with their environment. That engagement entails living in the environment *before* we can plan and make decisions on how we live. The relations between humans and nonhumans are therefore commeasurable rather than antithetical. The danger with this critique is that by breaking down the boundaries between human and nonhuman worlds we take a socio-evolutionary agenda that characterises the environment as a constraining influence upon human society. This is a misconception; dwelling is not independent of social life. By taking a sociological perspective, by studying humans as active, practically oriented agents who are, in a sense, at-home-in-the-world, we can incorporate an objectified view of human-environment relations – independent of a nature-culture dualism – while distinguishing the particular historicity and reflexivity which human agents and human societies possess.

In both a dwelling perspective and schemata of praxis, the emphasis is upon a practical engagement with the world realised during day-to-day life. The anthropological examples that were used in the discussion also stressed the role of social practice as the basic context for the mediation of society and nature. For the Huaorani, knowledge of hunting and the relations between humans and arboreal animals that it actuated was only expressed during the process of *walking* in the forest. Among the

Koluli, instrumental music was formed through an intimate, practical understanding of natural, quotidian soundscapes. In both cases, different experiences of the world are united through participation and performance. The importance attached to practical experience in these accounts is not independently established, it is more likely to be evidence that a theory of practice has come to dominate explanations in the social sciences. Nonetheless, a theory of practice can be said to have been strengthened by its success in identifying some of the complexity of human-environment relations.

3.3 A theory of society

Terms such as 'practice', 'agency' and 'structure' are now commonly used in archaeological interpretations, and I have employed them frequently in this text. They are exclusively associated with descriptions of human society. Yet, in the preceding section it was suggested that the antithetical distinction between human and nonhuman worlds restricts the interpretation of humans as embodied agents in a world of collectives all of whom have the power to participate in social life. Therefore, a social theory discourse that brackets human social life from nonhumans and the environment is fundamentally flawed. It is clear that the greater proportion of an actor's time in the environment is spent undertaking mundane, everyday activities that are routine, normative and non-discursive. The hunting practices of the Huaorani, discussed above, are constituted in this way. The ethnographer who recorded the activity had great difficulty in getting her informants to verbalise their knowledge of animal behaviour: '[it] cannot be explained or taught; it must be observed or experienced practically' (Rival 1996, 149). Dwelling helps us to conceive of levels of engagement among collectives where a distinction is not made between human and nonhuman worlds. Schemata of praxis set out the tacit 'rules' for practice which structure that engagement and are themselves the result of the practices, but it is not clear how these schemata fit into other aspects of social life – an important point when we consider that the nonhuman environment is such a crucial aspect of the social life of small-scale farming communities. This section begins with a summary of the main ideas associated with practice, agency and structure. The following argument aims to show how the theories of agency and structure can incorporate nonhumans and the environment in descriptions of social life.

The theory of society discussed below is popular among archaeologists presenting interpretative studies but it is clear that the level of abstraction employed by these writers, and the intellectual 'density' of the work, has obscured the value of these ideas for other researchers. So while some authors have criticised aspects of structuration and habitus for their evident flaws (e.g. Meskell 1999) – problems which one might expect in any attempt at a grand theoretical discourse – there are many avenues for enquiry that are still, as yet, unexplored. The following account makes use of a few key sources (Craib 1992; Giddens 1984; Mendoza 1996a); they have not been cited exhaustively as in

many cases there is a lot of overlap. If what is said is distinctive, or is directly quoted, the appropriate reference is provided.

Social practice

Throughout the previous section, the term 'social practice' was used to refer to human action, specifically human action on a 'day-to-day', non-discursive basis. The context, the generation, and the continuation of these actions is what makes social practices important because it is through practices that actors are constituted in the social world. Practices are thus perceived to be the proper means by which we can understand social life: 'Sociology is not concerned with a pre-given universe of objects but with one which is constituted or produced by the active doing of subjects' (Giddens 1976, 160).

Practices are defined, in more precise terms, as those actions which are not rule-led, and which are rarely if at all a focus of discursive thought:

> the uncertainty and the 'fuzziness' resulting from the fact that they have as their principle not a set of conscious, constant rules, but practical schemes, opaque to their possessors, varying according to the logic of the situation, the almost invariably partial viewpoint which it imposes, etc. Thus, the procedures of practical logic are rarely entirely coherent and rarely entirely incoherent.
>
> (Bourdieu 1990, 12)

Practical logic, or practical consciousness, encompasses all the things an actor needs to get on in the world. The everyday tasks of living and interacting as a social animal demand an extensive stock of practical knowledge, otherwise referred to as *knowledgeability* (see below), which exists beyond the discursive consciousness of the actor. There is a distinction between this tacit, practical consciousness, which provides the means to get on in day-to-day life and is essentially motiveless, and discursive consciousness, which represents a knowledge of action which can be discursively articulated – the ability to put things into words. Apart from the discursive and practical consciousness, the unconscious is defined in terms of cognitive processes such as memory and perception. These domains of being – the practical, discursive and unconscious – are not independent: for example, an actor may when asked describe the logic of his or her everyday actions; and aspects of the unconscious such as memory or perception are closely implicated in the reflexivity of practical consciousness.

'Action is *knowledgeability* and *capability*' (Mendoza 1996a, 248). During practice the actor draws on a 'reservoir' of knowledge – rules and resources which make action possible. At the core of our understanding of practice is therefore the recognition that actors are knowledgeable, and that this knowledgeability, although generally unspoken and motiveless, is vital to the enablement of action. The mutual knowledge and conventions that make up an actor's knowledgeability are the basis of structures. The distinction still must be made between the practical consciousness where the

knowledge essentially lies implicit to getting on, and discursive consciousness where the knowledge is brought to the fore and explained. These two levels are permeable but when explanations are sought of routine practices whose knowledge lies in the practical consciousness any motive will have to be realised in the discursive domain.

Social practices are routinely practised. They are repeated time and again in the generation and reproduction of social order, so that routine becomes central to the recursive nature of social practice. Actors have a generalised orientation towards the maintenance of routine (Mendoza 1996b, 273). Routinised practices might then be seen as basic and in fact crucial in the link between action and structure since it is the materiality of routinised practices which ensures that the structures of social life are recreated out of the resources which constitute them. The importance of routine is evidenced by its more deeply felt role in maintaining the personality of the actor, that is to say in controlling the unconscious. A break from routine can have profound psychological effects when it is associated with dramatic events such as births, deaths, rites of passage etc. In extreme cases, these *critical situations* cause a disjuncture within normal daily life. Routine practice is seen as a way of schismatising anxiety and potentially debilitating aspects of the unconscious from daily life, thus creating a sense of trust or of *ontological security* during routinised practice. To break from routine is perfectly feasible and may be used to affect deeply set structural principles and expose critical contents of the unconscious. However, actors repeat practices out of an inherent orientation to maintain routines, and preserve a sense of ontological security based on an '*autonomy of bodily control* within *predictable routines*' (Giddens 1984, 50).

The central importance of ontological security and routine to the reproduction of social order is of greatest significance in nonmodern societies where there is an emphasis upon communal practices and where face-to-face interaction is of importance during day-to-day conduct (Giddens 1990). Nonetheless, it is possible to overemphasise routinised practice as an explanation for social order (Craib 1992, 158*ff*). Whereas it can be said that routine constitutes structure it is more difficult to see how the relationship acts in the other way without reducing the possibility for change. For Ian Craib the problem lies in Giddens idea that routine makes structure, when a more helpful idea might be to think of routine as giving structures meaning, as the structures and systems are often much more complicated than mere routines. However, I still wish to accept the basic idea that routinised practices are important in generating and reproducing long-term, deeply set structures and institutions. Nevertheless, as discussed below, there is the potential, in the sense that structures are both enabling and constraining, for routine to be transformed.

Agency

Practices are reproduced by social agents, and *agency* refers to the means of knowledgeable action. Agency requires power: the power to change or influence people and things, and the power to change the conditions of practice. 'For an individual to possess agency is for her to possess internal powers and capacities, which, through their exercise, make her an *active* entity, constantly intervening in the course of events ongoing around her' (Barnes 2000, 25). An agent is not necessarily an individual human subject since communities and collective mutual effort and intention may be involved. This 'decentering' of the subject – in other words focusing on social practice and agency rather than solely on the individual – may be seen as vital to integrating the kinds of supra-human ontologies that may have operated during prehistory.

Since most day-to-day action is monitored through practical consciousness it is motiveless, yet it is purposeful in the context of the knowledgeability of the actor and in the perceived outcomes of the action. Agency is traditionally associated with intentional action. That is to say, practices are only undertaken with an intended outcome in mind. Nevertheless, it is also true that actions have unintended outcomes, most obviously in the reproduction of existing or future networks or structures. People in the past did not leave refuse in pits or build barrows in order for archaeologists to study them and write interpretations of past actions. If actions can have intended and unintended outcomes, what then is agency? Agency refers to the capability of the agent to undertake actions that in turn have intended and unintended consequences. Agency is the power to act.

Agency requires practical knowledge, skill and experience – the knowledgeability discussed above. Agents draw upon the rules and resources of social life in order to act, and in this sense agency is restricted by social structure. Yet, as has already been mentioned, the majority of actions are undertaken on a routine basis. Since routinised actions are the basis for arguing that practices create structures, then agency is also crucial – as the power to act – in explaining the generation of structures. Agents are both enabled and constrained by structure, and agency is the producer of structure.

Where history is the conditions of human action, and the continuation of those actions over time, agency is, in a sense, history (Giddens 1987a, 220). Agency can therefore only be studied in the situated context of the structures – rules and resources – that action draws upon and reproduces, the pre-existing knowledgeability of the actor, and the time-space in which action is taking place. The study of history is the study of these structural conditions including the presence of human agency (Barrett 2000, 62).

The picture of agency that has been presented above is similar to the theory of action that preceded it, in that agency is normative, habitual behaviour that generates and reproduces structures as a

consequence of its routinised character. Bourdieu, in defining a theory of practice similar to that already discussed, was reacting to a concern that structuralism lacked agency. His response was to introduce strategy (having the knowledge and power to act) into social life instead of rule (being constrained to act in a particular way) (Bourdieu 1977, 9). Giddens too has emphasised the crucial importance of agency to his theory of 'structuration', when social life is exclusively the actions of bodily subjects, in tandem with structures, and in the context of the time-space regionalisation of practice. Despite the assertions of both these authors, critics have suggested that the creative and unpredictable aspects of agency are, in part at least, incommensurable with a structural approach to social life (e.g. Barnes 2000; Craib 1992, 166-179; Meskell 1999). The view of agency that these critics present is one centred on the embodied thinking subject who has the capacity to make irrational and unpredictable choices resulting in actions which do not conform to existing structural principles. That theories of practice do not engage constructively with the 'individuality' of the social agent is not altogether a fair criticism: Giddens has explicitly analysed the role of the individual self in the context of modernity (Giddens 1991), and Bourdieu's concept of habitus exists through the early socialisation of individual actors. Where Giddens and many of his critics fail is that they attempt to give the human agent an exclusive role in social life *apart from* rather than *embodied in* the nonhuman world.

The assigning of agency to nonhuman entities, whether they be animals, plants, objects etc. is not the fundamental misconception that it might first seem. For although the definitions of agency presented above require the embodied subjectivity of the human agent, they do not account for the sorts of agency that are attributed to things and nonhuman animals. The walking stones of Wamira, described above, are an example of just such agency, though we might also include the birds and monkeys hunted by the Huaorani who also show the capacity for will and purpose, thus making their actions appreciable and interpretable. In a modern context, it is quite common to attribute agency to everyday objects that have some effect upon our lives. These objects may not be defensible as social agents in strict philosophical terms, but as folk concepts they have a reality which informs everyday social life. The introduction of 'things as agents' creates a problematic paradox since the definition of agency proper is only possible if there is a contrast between the actions of human, thinking, doing subjects and the effects caused by passive things – for instance, the physical consequences of strong winds or rock falls. This can be resolved by proffering a secondary agency: 'via the proliferation of fragments of "primary" intentional agents in their "secondary" artefactual forms' (Gell 1998, 21). Things cannot be philosophically true agents but they can demonstrate agency in the sense that they act with respect to a counterpart, a patient, that is affected by the agent's actions. In this sense, humans can be patients to nonhuman agents in that they are affected by what are perceived to be the actions of an object or nonhuman animal, and in the same sense an object is embedded in action as the counterpart of human agency. This theory of agency is not meant to be context-free and classificatory; it is context-dependant and relational (Gell 1998).

Through the idea of agency we can combine the various attributes of practice in an embodied, intentional subject in the context of time-space, structure and history. Furthermore, agency is an important means of bringing all collectives together within social life because nonhumans and objects may have, or may be perceived to have, agency. All collectives can be agents with a knowledgeable, active and empowered role in social life. This is one perspective on the metamorphosis of people into birds and the importance of rock and rocky places (e.g. Jones 1998; Tilley 1996).

Structure and society

Practice makes up the majority of actions that take place in our lives, but to focus solely on practice does not explain the rules and resources which make action possible and which seem to guide our conduct in informal situations:

> Society, social interaction, is clearly 'structured' in some sense or another. It is not a process of pure, *ad hoc* creation; there are features of social life that are more or less widespread and that endure for a shorter or longer time and these cannot be explained in terms of the inherent properties of action.
>
> (Craib 1992, 41)

At the broadest level, rules of speech could be thought of in this way: when, for instance, is an interjection in a conversation considered an interruption? Likewise, such rules are evident in the way we dress: it is acceptable to wear a brightly coloured tie to a wedding but not to a funeral. There are no formal rules setting out the conduct of everyday speech or the correct tie for a wedding, instead, there is an understanding of how to proceed in the correct manner within the cultural norm. The reasons for this are incredibly complex, yet it is rarely something we are aware of because the actions are generally neither discursive nor consciously motivated. These *structures*, rules and resources, make practice possible and are themselves generated and reproduced by practice.

Structures are the *rules* and *resources* of social practice; they are the enduring aspects of social systems. Structures are not a component of social practice; they emerge from action and are distinct from it. Agency cannot operate without the knowledgeability and the resources to do so. In this sense, structure, as *resource*, is the medium through which actions are realised.

The idea of *rules* does not refer to the laws that morally govern our actions, such as those against theft, rape or murder. Such laws are the literal manifestation of what are often normative aspects of social behaviour: 'Social rules are implicit, taken-for-granted procedures, the "know-how" of carrying on in established ways which can be applied in a range of different contexts' (Craib 1992, 46) (Table 3.2). The clearest example that Giddens provides of what he means by a rule is a mathematical formula. Taking as an example the formula attributed to the sequence of numbers 0, 2, 4, 6... (i.e. $x = n+2$)

(Craib 1992, 45-46). This relates to the idea of rule in structuration theory in two ways: first, by knowing the formula (rule) we are able to proceed forward in a routine way; secondly, the rule need not be explicitly formulated – we can work out the next number in the sequence without defining the rule. Following on from these comments: 'many seemingly trivial procedures followed in daily life have a more profound influence upon the generality of social conduct' (Giddens 1984, 22). Rules incorporate aspects of knowledgeability and routine. Routinised practice does not in itself constitute a rule, but rules do impinge upon aspects of routinised practice.

RULE	LAW
intensive	shallow
tacit	discursive
informal	formalised
weakly sanctioned	strongly sanctioned

Table 3.2 A comparison of rules and laws (based on Giddens 1984, 22).

Resources are defined in terms of relations of power. They are not necessarily physical: they may be raw material, artefacts or the means of producing artefacts (allocative resources); or they be constituted by the organisation of human beings in and across time-space, including the monitoring of lifeways (authoritative resources).

To bring these rather disparate ideas together we can group structures under the headings of significance, domination and legitimation; these are the main structures that emerge from social practices. (1) Structures of *significance* are the interpretative schemes actors use to understand and communicate with one another. In this sense symbolic schema, such as writing, are based on existing structures. That is to say, the rules of language are not themselves structures, they are the literal manifestation of structure, and therefore the modality or means through which structure and action are mediated. (2) Structure of *domination* refers to the capacity, inherent in action, to transform resources through the exercise of power. (3) Structures of *legitimation* are the normative characteristics of conduct. They are conventions that develop as a consequence of consensus and normative behaviour, and which are mediated through a society's norms – 'The normativity of practice is established *within practice itself*' (Mendoza 1996a, 221). Structures of significance and legitimation refer to rules, while structures of domination refer to resources.

At the core of structures are *mediations* and *transformations*:

> The structures of significance, legitimation, and domination, are ordered in terms of the mediations and transformations which they make possible in the temporal-spatial constitution of social systems. *Transformation* and *mediation* are the two most essential characteristics of human social life.
>
> (Mendoza 1996a, 253)

Mediation denotes the ways in which interaction is possible across time-space: from the face-to-face interaction of actors in a context of co-presence to the interaction of institutionalised practices which bind together large expanses of time-space. Transformation refers to two ideas: the inherent capacity of agents to transform resources; and as a property of rules to produce schema through which we communicate and interpret meaning.

Giddens situates structure with social practice in what he terms the *duality of structure*: 'the structural properties of social systems are both medium and outcome of the practices they recursively organise' (Giddens 1984, 25). The rules and resources are not solely the constraining or enabling context for practice, they are also the outcome of the practices themselves. Essentially it relates to the conditions and resources of action as they are reproduced through practice. These structures are the virtual patterning of social relations across time and space; virtual in the sense that they are non-physical, and patterning in the way that they are reproduced through social practice. The structures are therefore both the conditions for and the outcome of social practice. This recursive relationship is the duality of structure. Structures are in practices, they do not have an independent presence:

> those structures which thus 'cause' the action of a single agent or a group of agents, again, do not operate by themselves *qua* structures but rather as implicated in *agency* of *other* purposive agents in whose *knowledgeability* these structures are recursively implicated. The 'externality' of structure in this context must be interpreted in terms of the lop-sided *distribution* of rule and resources among agents in society.
> (Mendoza 1996a, 237)

Bourdieu has taken this further by suggesting that structure is not visible to the actors because it is constructed by the social scientist (Swartz 1997, 57). There is a distinction between everyday practical knowledge as experienced by actors and scientific knowledge employed in the analysis of social life.

Structure is presented as constraining and enabling. Structural constraint derives from the context of action, since it is within the character of structure that it provides the conditions for the actions of actors.[2] When we speak of structure constraining it is preferable to speak of structural principles, that is to say deeply embedded structural properties (Giddens 1984, 17). This should not be confused with either material constraint, primarily of a physical and biological nature, or with sanctions, which are forms of constraint imposed by other actors.

Throughout the discussion of structures presented so far it may seem that structures are in the main constraining, for example: routines are easier maintained than broken with and action is only possible in the context of rules and resources. However, if we remember that according to the duality of

[2] An aspect of both material and structural constraint is the time-space regionalisation of practice. In material terms two bodies may not occupy the same space, similarly practices are themselves limited by their time-space frameworks. Movement in space is also movement in time – the sequential ordering of practice.

structure, practices both *create* and are conditioned by structure, then enablement is implicit in the idea of structure. Enablement is also implicit in agency as the *power* to act.

Up to now we have dealt entirely with actions and their structural principles that only exist in the instantiations of day-to-day conduct. Yet at the beginning of this section we recognised that there are aspects of social systems that are both widespread and endure for longer or shorter periods of time. These *structural properties* exhibit the characteristics of structure in their relationship to practices but they extend beyond the immediacy of day-to-day conduct. This is, from a structuration perspective, illusory. For while the structural properties of a society are not in themselves structures, they should not be isolated; once they 'are treated as having their own "inner dynamics", as functional necessities rather than as continually reproduced conditions, the activities of historically situated individuals do indeed seem rather redundant' (Giddens 1984, 192). In turn, *institutions* are the ordering and extension of structures through time-space. The 'levels' at which structure operates has been summarised by Mendoza:

> [1] As integrated into the *durée* of day-to-day life, structural properties stand as the formulae of skilled, competent action. Structural properties are not external but internal to action, action which has a range of intended and unintended consequences. [2] From the point of view of the irreversible time of *dasein*, structural properties are aspects of *dasein's* facticity. He/she *finds* them. *Dasein* is an embodied as well as historically situated being, realizing his possibilities only within the context of the circumstance in which he finds himself. [3] Seen from the vantage point of the *longue durée* of institutions, structural properties are passed on from one generation to another, surviving the coming to be and the passing away of individuals. The externality of structure therefore relates only to the *temporality of dasein* but not to *action*.
>
> (Mendoza 1996a, 232)

Discussion: the material world and social life

The relations between collectives, objects, the environment and history are constituted in practices, where practice is the everyday, routinised, non-discursive actions of knowledgeable and capable actors. These actors draw upon existing stocks of knowledge and their actions have intentional and unintentional consequences. Taken together, the knowledgeability and capability to act form the essence of agency, and it is in the actions of agents and the conditions in which the actions are undertaken that history is constituted. The conditions that actions draw upon and reproduce are structures – the rules and resources of social life. Rules are tacitly organised; they are the taken-for-granted procedures and know-how for living. Resources are the physical environments and objects drawn upon during daily life, and the power networks used to control the exploitation of resources through the organisation of agents. Structures do not exist independently of practices, they are both the medium and the outcome of practice. As such, structures are both enabling and constraining. The time-space regionalisation of practices is a form of structural constraint. Agents, as embodied subjects, are limited in terms of the space they can occupy and the sequential ordering of practices. The

extension of structures across time-space, a factor of the routinised and normative character of practices, accounts for deeply embedded structural properties and institutions.

This summary offers a useful reminder of the importance of the theory of social life presented in this section. There is the primacy of practice: social life is constituted in the actions of agents. Structure is internalised within social life: it does not have an independent existence externalised from the practices through which it is generated and reproduced. Time is crucial both as the sequencing of practices in time-space and as history.

There are problems with this theory, leaving aside criticisms concerning the impoverishment of social agency and individuality. Structuration internalises structure in a way that is helpful to our understanding of how environment may be internalised in dwelling and practice. Despite this fundamental theoretical insight, most of social theory still externalises material resources from the social project. The theory of structuration suffers from a confusing of material and social worlds rather than a fusing of these domains. Sociology follows the modernist agenda in which society is distinct from nature; it cannot conceive of a social world which includes nonhuman beings, artefacts and the material environment.[3] Although nonhumans may be included in the same schemes as allocative resources, sociologists continue to set the environment apart from human beings as subjects. As has already been discussed, such a view does not reflect either the forms of knowledge which nonmodern communities express in any formalised world-view or in the knowledgeability they employ in day-to-day life. A revision of structuration theory must then be offered in the light of the breaking down of boundaries between the modern and nonmodern worlds.

Leaving aside the environment and nonhuman animals for the moment, it is possible to illustrate this problem by considering how material objects, or things, are incorporated into social theory. Strictly speaking, objects are allocative resources: raw materials and the means of transforming those materials. An uncomfortable paradox is apparent when we follow this idea a little further: if objects are allocative resources they are structural, and as things they also have a physical presence independent of human action. Structure is meant to be internalised in practice but allocative resources, for instance objects, can have an independent and physical existence. Can objects only be considered structural conditions during the time when they are directly implicated in social practices? Part of the reason for this dilemma is in the restricted interpretation of resources solely as structures of domination; it is as if physical things are merely raw material for human needs. This is born of a modern perspective that prioritises the transformative impact of human beings on the environment. The converse of this situation, when the environment changes the course of human lives, through

[3] Barrett has noted that Bourdieu is an exception to this since, through habitus, he interprets the material world as 'a potentially powerful system of signification' (Barrett 1988, 9; *cf.* Bourdieu 1977, 110; Graves 1989).

severe weather for example, is considered a physical constraint and is therefore not structural. Yet objects, and environments for that matter, are not only implicated in structures of domination, they also have an important role in symbolic systems and ontologies (structures of significance), and in establishing routines and normative behaviour (structures of legitimation). In a modern social order, where things, nonhuman beings and the environment are entirely distinct from humans, this is not a problem. In a nonmodern world where hybrids function within a collective social life, and humans *dwell* in a world of humans and nonhumans alike, this paradox or dilemma is a real problem. The elements of an important and useful social theory are there but they do not quite meet our implied description of the nonmodern world.

It is possible to overcome these problems and carry through our description of social life by replacing 'human' with 'collective', thus including all manner of humans, nonhumans, objects and environments. The difficulty comes with the concept of agency. The key to understanding how nonhumans and environments have a role in social life is in the idea of secondary or nonhuman agency. Secondary agency is not meant to replace the philosophically correct version of an agent as a thinking, embodied subject. It is an attempt to incorporate folk concepts of agency that ascribe intentional actions onto things and nonhumans as a consequence of the influence many nonhumans have within social life. In accepting this definition of agency objects can display the properties of an agent in their ability to act upon a counterpart, or patient. Humans can be the patients when they are affected by the actions of nonhumans as agents – the form of agency, which is vital to re-scribing a nonmodern social theory. Contrary to this, objects are embedded in social life by being patients for human agents – the form of agency that a modern social theory best accommodates.

Robin Boast has dealt with similar themes in his 'critique of style' (Boast 1997). Boast suggests that the idea of style as the bit that is 'added on' to an object to make it cultural is rooted in the Cartesian object/subject divide – the dualism which forms the basis for the antithesis of nature and culture. Drawing largely on the work of Richard Rorty (Rorty 1979), he sets out a revised interpretation of the relations between humans and things which is much akin to a dwelling perspective:

> interpretation and meaning is not something that is thought and then inscribed onto the world, but is something that is coming into being through interaction between active social agents ... We come to know ourselves, our peers, our things and our world because we are all, the *us* and the *its*, subjects and objects within the same being – the same discourse ... Human beings and the material world together are the ontological setting in which purposeful action takes place – the settings in which meanings, subjectivity, objectivity and tradition come into being.
>
> (Boast 1997, 182-184)

Following this approach there is no place for 'style' as the socialised component of an artefact because the social meaning and value of a thing is neither passive nor static. Objects have agency: 'Once made

the object becomes an actor in its right, being delegated identities, roles and social status dependant on its constitution within the heterogeneous network' (Boast 1997, 188). The link between a theory of nonhuman agency and a social theory which considers humans and things in the same social world is clearly demonstrated in Boast's argument. The inclusion of nonhuman beings and the environment in social theory forms the basis of the argument so far presented in this chapter.

3.4 Social and natural time perspectives

The concept of time is crucial to the theories of society presented in section 3.3. Ideas of routine, knowledgeability, and the time-space settings of interaction all require a social theory of time. Implicit in a theory of agency is the idea that practices have outcomes that extend across time, and which, through their reliance upon existing structures, require time as expressed in memory, temporality and history: 'In short, because it is entirely immersed in the current of time, practice is inseparable from temporality, not only because it is played out in time, but also because it plays strategically with time and especially with tempo' (Bourdieu 1990, 81). For social theory, and structuration theory in particular, time and temporality are intrinsic to the model. Time permeates at all levels of social analysis.

Social theory is primarily concerned with subjective time perspectives, choosing to ignore the time-frameworks employed in the physical and human sciences. Prehistorians, on the other hand, have not had this option as they work within chronometric frameworks assayed by scientific dating techniques, while still taking account of the implicit subjectivity of time as a concept associated with social history and change. Incorporating the different time frameworks has not been a problem while environmental processes are externalised from social life, and the temporalities and tempos of society and nature are understood apart from one another. If, however, humans are embodied agents in a world where nonhuman animals and objects play an active role in social life then the temporalities of society, identified by social theory, and the temporalities of nature, identified by the physical and human sciences, should in theory be commeasurable, 'one and the same'. It is therefore of consequence that I wish to argue that the apparent discord between human and natural time is hermeneutic rather than a real characteristic of time. Arguments for the convergence of human and natural time will be considered in the following section with the aim of achieving a convergence of society and nature in a social theory of time and practice.

Time and social theory

Anthony Giddens recognised the importance of theorising time in social theory at the level of practice, rather than on a transcendental level which had been the approach adopted by previous theorists, particularly Emile Durkheim (Giddens 1987b). According to Giddens, there are four elements to time in social theory. (1) Time is inherent in action; it is not a passive 'environment' in which activities

take place. (2) Different cultures experience time in different ways. A contrast may be drawn between the types of formalised, 'machine' time that predominate in modern, western communities, and the less-formal modes of time reckoning used by some nonmodern groups who, for instance, may not recognise a distinctive past or future. (3) Linear time should be complemented with reversible time, associated with repetition and temporality, as defined by Lévi-Straus. (4) Social activities should be seen in the context of the time-space settings of interaction. From these four conditions, Giddens goes on to suppose three inter-related temporalities that enter into social life: the *durée* of day-to-day life, the *durée* of the life-span of the individual, and the *durée* of institutions. These three aspects of socially experienced time are inseparable except in analytical terms. Nonetheless, the emphasis in structuration theory is upon the playing out of practices in time-space settings of interaction through the *durée* of day-to-day life. As has already been discussed, institutions, and consequently institutional time, have no external existence outside the practices of which they are both mediator and outcome.

The levels of time that Giddens describes do not include any reference to nonhuman temporalities and tempos such as the habits of animals, the growth cycles of crops, or the rhythms of the seasons. Yet all of these impact upon human social experience. The contrast between the apparent incommensurable times of the environment and society has for sometime been a matter of concern for archaeologists (Bailey 1981; Bailey 1983). Processes that are intimately connected, such as the cultivation of a field and the changing micromorphology of the soil, are explained in terms of different time-scales. Depending on our perspective, we might recognise the role of cultivation in changing soil properties, or from a longer-term perspective, the impact of soil type upon particular subsistence strategies:

> what appears to be a cause at one time-scale may turn out to be an effect at another time-scale. For example, over a short time span, the morphology of a river channel may appear to be a relatively fixed and independent feature, which determines the hydraulic properties of the river water. Over a longer time span the nature of the river flow will affect channel morphology. What appears relatively constant at one time-scale becomes highly variable at another, an independent or a dependant variable according to the spatial and temporal frame of reference.
>
> (Bailey 1981, 107)

These distinctions between environmental time and social time, between *long durée* and the *durée* of day-to-day practice do not fit into our accumulated theoretical description of society and nature. In the first instance, to which I have already briefly alluded, if we support a theory of practice then the only comparable timescales in science and social theory are the *long durée* of institutions and the environment. Yet, the argument at the beginning of this chapter aimed to dispose of this hierarchical structuring of the natural and social world. We have argued for a synergy of society and nature. Time in social life must at least in part have a corollary or basis in the natural world and vice-versa.

Barbara Adam has attempted to break down the distinctions that are thrown up between scientific time and social time with the aim of accounting for time's coherence in society and in nature (Adam 1990). Her response is not to turn to the philosophical basis for the distinction between 'natural' and experienced (social) time, rather to study science's conceptualisation of time. The assumption that 'scientific time' relies on a simplistic concept can no longer be justified when we compare time as expressed in Newtonian physics and the theories of time used in Quantum physics at a subatomic level:

> Non-temporal time, motion of inert matter, causality, truth, and objectivity have had to give way to temporality, fundamental uncertainty, the relevance of the future dimension, becoming and extinction, the fusion of action, energy and time, and the mutual implication of observer and observed.
>
> (Adam 1990, 60)

There are also contrasts between Classical physics and thermodynamics in the way in which time is either external or internal to the event: in the former '*events occur in time*', while in thermodynamics '*time is in action and events*' (Adam 1990, 68). In biology, as well, much thought has been given to the concept of time in living organisms with the conclusion that the sorts of qualitative experiences we attribute uniquely to human beings are characteristics of all living things. Important in this is the notion of *rhythmicity*. That is to say, the natural rhythms, particularly of the sun, and their role in synchronising the roles of the body whose life experience is at the core of social time: 'In the rhythms of nature we thus find variant repetition, past and future penetration, and context-dependence: time characteristics that are traditionally preserved for the socially constituted rhythmicity of human social life' (Adam 1990, 75). An example of the synchrony of social and natural processes is evident in the concept of reversible time employed by Lévi-Straus in his study of ritual (Lévi-Strauss 1966). The cyclical character of time which he was attempting to express, Adam suggests, is comparable to theories of biological time. Time in this context is irreversible and linear, its apparent circularity results from the folding back of these linear processes upon one another, like a series of intersecting spirals. The rhythmic cycles are of the environment within which, of course, human dwelling takes place, and it is the concept of rhythmicity with its 'cycles, structure and processes with variation' which Adam feels is more useful than the concept of reversible time (Adam 1990, 88-89).

The A-series and B-series theories of time

The arguments presented above demonstrate the extent to which theories of time in social theory and science are not altogether different. The argument is, nonetheless, qualitative. While it is clear that there are obvious parallels, and theories of time may be commeasurable, it is not obvious where, theoretically speaking, the similarities lie. By subjectifying 'scientific time' we may well make it easier to relate it to social time, but it does not explain why different equally viable versions of time, one objectively measurable and the other not, can exist at all. An indication of the problem is evident

in social theory. The ontological security of the agent is maintained through routine, and all actions are generated from the structural conditions that the routine actions of agents reproduce. Yet it is still possible for an agent to have insights which enable them to make strategic decisions that have consequences in the long term: 'one cannot derive the strategic insights ... from habitual practices, even though, for their effective implementation, they depend on exploiting the habitual attitudes of others' (Gell 1992, 279). This apparent transcendence of different time-scales, from the *durée* of day-to-day life into the *long durée* of institutional time is problematic if the experience an agent has of time is the past, present and future of their own becoming. If they can count in days, weeks and years ahead and visualise the consequences of their own actions then an agent is drawing on forms of objective time that are not accounted for in social theory. They are reaching into a 'material', unsocialised future that by all accounts should be separate from social life.

Another example of this difference lies in the time-space setting of practice. The importance of time-space to a theory of practice has already been referred to in the preceding discussions, but how we objectify and explain patterns of time-space interaction has not been addressed. The human experience of time and space has been the subject of a great deal of thought by social scientists, philosophers and others, and the most successful attempts to integrate these ideas into social theory has been undertaken by time-geographers (e.g. Carlstein 1982; Pred 1986). Nevertheless, this time-geography relies on the Cartesian derived four-dimensionality of time-space in order to record and analyse the human use of space-time. Rather than negating this approach, I would rather suggest that the success of time-geography, despite the apparent incommensurability of subjective and objective times, relies upon deeply theoretical and substantive links between social and natural time. By understanding these similarities we can avoid the incomparable time-scales that weaken any theory of practice of society and nature.

The crux of this argument is the recognition of two philosophically distinct 'versions' of time: the A-series and the B-series (Table 3.3) (Gell 1992). These two versions of time were identified by McTaggart in the early twentieth century as part of an attempt to show that time was unreal on the basis that the coexistence of the A- and B-series resulted in an irresolvable paradox. The final logic of McTaggart's argument was not widely accepted, but his division of theories of time into the A- and B-series has since been formalised, and philosophers of time can be broadly divided on the basis of which theory, the A or B-series, they believe to be 'true' time. In A-series time, events are distinguished on the basis of pastness, presentness or futurity. All events will have one of these attributes at any moment: they are in either the past, the present or the future. The A-series theory describes the human subjective experience of time as in a state of change – *becoming* – since an event comes from the future to become present, and subsequently be the past. In B-series time, events are

categorised according to whether they come before or after one another. The 'time' of an event therefore does not change; it remains in strict relation to events which went before and after.

A-THEORY	B-THEORY
Time = Future → present → past	Time = Before versus After
Basic ideas: 'passage', 'becoming'	Basic ideas: 'being', 'four dimensional space-time'
Time is dynamic.	Time is not dynamic.
Truth is time-dependant.	Truth is not dependant on time.
Pastness, presentness and futurity *sui generis* characteristics of events.	Pastness, presentness and futurity are not real characteristics of events but arise from our relation to them as conscious subjects.
There are basic (ontological) differences between past, present, and future events.	There are no basic (ontological) differences between past, present, and future events.
Human subjective time consciousness (of passage of time) provides appropriate schema for understanding time. Subjective temporality reflects 'becoming' as an objective phenomenon of the universe.	Human subjective time consciousness inadequately reflects the 'real' nature of time. 'Becoming' is not an objective phenomenon.
Change results from 'becoming'.	Change is concomitant variation between the qualities of a thing and the date at which these qualities are manifested by that thing.

Table 3.3 A summary of A-Series and B-Series theories of time (based on Gell 1992, Table 17.1).

Placing this in the context of the problems raised above, there is a sense in which social theorists want the best of both worlds: they want to talk about social time as if it is real, yet measure, describe and record things in B-series time and use that as real also. There is an argument that says that this paradox is hardly of consequence, the theory is at too high a level to impinge upon the sorts of interpretations that archaeologists, for example, might offer. Taking a lead from Gell, I would argue that time is more like the B-series than the A-series. It is not to say that there isn't an A-series temporal experience, simply that that experience relies upon B-series temporal principles in order for it to work:

> A-series temporal considerations apply in the human sciences because agents are always embedded in a context of situation about whose nature and evolution they entertain moment-to-moment beliefs, whereas B-series temporal considerations also apply because agents build up temporal 'maps' of their world and its penumbra of possible worlds whose B-series characteristics reflect the genuinely B-series layout of the universe itself.
>
> (Gell 1992, 154)

A distinction is therefore to be made between temporal facts (B-series) and our cognitive experience of those facts (A-series).

One argument for supporting the existence of B-series time is an agent's awareness of temporal relationships between events. This 'date-specificity', which is not necessarily a calendar but is a culturally derived schema for structuring events in sequence, cannot be explained by A-series time.

The categories of past, present and future 'cannot represent temporal relationships between events in an unambiguous, non-contradictory way. Events either are or are not before or after other events ... But events are not unambiguously past, present or future' (Gell 1992, 165). If we accept that the underlying temporal essence of events is of B-series form then how do we account for the subjective experience of time as a dynamic interweaving of pastness, presentness and futurity? The passage of time is a consequence of the fact that we create 'tensed belief-tokens' which must be continually updated in order to keep them current. This process of updating is what constitutes the phenomenon of temporal passage:

> [A-series time] is not in the final analysis a kind of 'time' at all, but a particular process which goes on in time and which is intrinsically temporal, namely, perception or more generally cognition, the active exploratory activity of the mind which goes on in time and through which times impinges on us subjectively.
>
> (Gell 1992, 231)

Discussion

An interpretative understanding of time is crucial to social theory. Generally, time is managed at different scales, some of which are incommensurable and others that are nested together forming multiple temporalities that infringe upon agency in different ways. The debate presented here attempts to demonstrate that there are similarities between the different concepts of time, particularly comparing those found in the social sciences with current ideas in the biological and physical sciences. Furthermore, these differences are hermeneutic rather than being real characteristics of time, a point made clear in Alfred Gell's treatment of the distinction between A- and B-series time. In comparing the two approaches, it could be said that Adam and Gell argue two different things: for Adam scientific time is becoming more like social time, while for Gell social time has it basis in the theory of time that science recognises. But it is possible to conflate these ideas because they have tackled the problem from different perspectives. Gell has defined how our two versions of time are linked in subjective experience, and Adam has explored how those experiences relate to similar observations in the sciences.

A concern with chronology, sequence and measurement informs an understanding of subjective time. But this is not achieved by imposing a rigid chronometric framework upon material and social change, it requires the bringing together of temporalities and tempos from the material and living world within reflexive interpretative schemes. There are enough examples of this having been done already, notably by environmental archaeologists, but it does not fit within a social theory that 'uses' the material record. The importance of these ideas surely lies not in providing a new theory of time but in substantiating current methods, such as critical variations on time-geography, which perhaps loose their perceived relevance when compared against other approaches such as phenomenology. It is, as

with the critique of nature-culture discussed earlier, a matter of 'striking a balance' between long established domains in archaeological discourse and practice.

3.5 Summary and conclusions

This chapter dealt with some issues that archaeology has tackled over the last fifteen years, such as social practice and agency. It examined others that have only recently being recognised by the academic establishment, I am thinking particularly about the nature-culture dualism; and it introduced ideas that have yet to be properly debated by archaeologists, specifically the intellectual and public threat that high modernity poses by way of isolating the modern world from the past. There is no way that I can claim this is a comprehensive, or even sufficient, review of what are broad, multi-disciplinary themes. Instead, I see it as an attempt to examine the issues that seem most relevant to the five statements with which I began this chapter. To briefly summarise the five statements: the dualism of nature and culture is an inappropriate way to conceive of human-environment relations among nonmodern communities; social practices are crucial to an understanding of human-environment relations because ontologies are constituted through a practical engagement with the world; agency cannot be separated from its time-space setting, and as a folk concept it is not restricted to human actors; the environment is structural, and is therefore a core factor in any understanding of social life; the discord between the different concepts of time employed in the social and natural sciences that results in incommensurable time-scales is a hermeneutic problem rather than a characteristic of time.

The arguments in support of these statements have been drawn from a wide variety of sources. The critique of a nature-culture dualism is a well-established theme in critical studies of modernity and in anthropological research on nonmodern societies. The resulting approaches are all aimed at transcending an antithetical framework, although perhaps unsurprisingly this is tackled in different ways. I have not prioritised one 'model' over another in this chapter. Instead, a number of recurrent themes have been highlighted: ontologies, as the knowledge frameworks that structure human-environment relations, are generated and reproduced in social practice; nonhuman animals and material objects, including the environment, play an active part in social life; humans and nonhumans – collectives – *dwell* in the world. These ideas fit comfortably in a social theory that recognises the 'primacy of practical reason' (Bourdieu 1985, 13), and internalises structures in social practice rather than making them real and independent of agency. Unfortunately, the theorists who have developed these approaches have not dealt well with the material world, as both environment and objects. For example, Anthony Giddens' opinions do not seem to have changed since he wrote:

> The difference between society and nature is that nature is not man-made, is not produced by man. Human beings of course transform nature, and such transformation is both the condition of social existence and a driving force of cultural development. But nature is not a human production; society is.
>
> (Giddens 1976, 15)

Despite this, there is the potential in theories of practice to incorporate collectives and the environment in social life. This can be achieved by recognising nonhuman agency, which although not philosophically defensible is a more accurate portrayal of ontologies where other communities, such as animals or ancestors, have an active part to play in the social life of humans. Social theory requires a theory of time, as both a setting for practices and a feature of process and history. But the temporalities described by Giddens are difficult to reconcile with temporalities of the material world and the environment. Drawing on the arguments put forward by Barbara Adam and Alfred Gell, it has been suggested that these temporalities are commeasurable, and this commeasurability is vital to any theory that ventures a synergy of society and nature.

It is evident from the above summary that these different strands of theory are related to one another. The nonmodern experiences of the world described in the examples of the Huaorani and the Koluli were formed through a practical engagement in the world. Social practice was central to the explanations of how people have a different understanding of society and nature to our own. In order to understand these ontologies we need to appreciate social practice as routinised, tacit and knowledgeable. A further characteristic of nonmodern nature-society relations is nonhuman agency. The acceptance of nonhuman agents and the incorporation of a theory of agency that includes objects and the environment are crucial if we wish to empower the material world in social life. This leads us to consider the environment as structural, not in the passive sense that is presented by some modern social theorists but as an active force in society (e.g. Dickens 1992). The material world is not restricted to structures of domination; it is active in networks of significance – such as schemata of praxis. A study of nonmodern social life takes account of this material world as structure and practices, the medium through which structure is generated. It follows what John Barrett has termed 'an archaeology of inhabitation', which 'considers the various possible structuring principles which agents practised in their movement through time / space, given the structural conditions which were available to them' (Barrett 2000, 67).

A theory of society and nature made up of practices, rules, resources, structuring principles and conditions, agents, actors and time/space settings of interaction does not seem as though it represents the contingency or the embodied experience of social life:

> The logical relationships constructed by the anthropologist are opposed to 'practical' relationships – practical because continuously practised, kept up, and cultivated – in the same way as the geometrical space of a map, an imaginary representation of all theoretically possible roads and routes, is opposed to the network of beaten tracks, of paths made ever more practicable by constant use
>
> (Bourdieu 1977, 37)

A dwelling perspective, in some ways, answers this need for an embodied agent with a practised knowledge of the world (Gosden 1999, 127-129). It also closely impinges on a theory of time because dwelling recognises a duality of social and natural temporalities. Humans are a part of a world made up of humans and nonhumans alike. Dwelling, time and agency, together, give human beings a coherent, embodied, temporal engagement in a world of society and nature.

Time, history and process remain weak elements in this theory, largely due to the problem of representing change in abstract discourse. The elements are in place: agents and the environment are implicated in history, and the transformation of structures during practice enables change. In the remaining chapters we will take these ideas and consider not only practices and structures, but also look at change through time, at process and history. The relations between nature and society have been developed in the preceding argument, and in what follows I will specifically consider land as the changing structural conditions of social life.

4

LAND TENURE

A SOCIOLOGICAL PERSPECTIVE

4.1 Introduction

Land tenure, as an abstract bond between humans and resources, cannot be isolated from the web of practical and ontological relationships that make up social life. Yet in the majority of archaeological accounts, it is perceived as independent of practice; the equivalence of land use and practice rarely being acknowledged. The result is a definition of tenure that presents an 'essentially static equation between people, social organisation and land' (Kitchen 2000, 25).

This prescriptive and often irreducible model for land tenure can be contrasted to the theory of social life outlined in chapter 3. Agents inhabit a socialised world consisting of humans and nonhumans organised within ontological frameworks that are generated and maintained through practice. Material resources are experienced as a part of the dwelt-in environment and are fundamental to social life. They are transformed by the actions of everyday life, and they enable such actions to take place. A plot of land, for instance, is cleared and the soil broken up in order to plant crops. The soil, as a resource, enables cultivation to take place, and it is transformed both physically – broken up and planted with crops – and symbolically – its 'value' increases, and it may become 'owned' during the time that it is under cultivation. The knowledge of how to cultivate a particular crop and the usufruct of a plot of land are mediated through practical, routinised tasks. The material world is, therefore, a structural condition of social life.

Resources may also be assigned agency in social life. Plants, animals, earth, air, sun and water contribute to the maintenance of the human world. The myths and rituals that explain and are perceived to influence or ensure the continuation of these contributions often represent resources as coagents through their personification as deities or spirits. As an example, one of Descola's 'Modes of Relation' discussed in 3.2 was *reciprocity*: where the taking of life in the animal world is balanced by

the loss of a life in the human world, the soul of the deceased then entering the body of an animal in the forest – so maintaining the cycle. Among many nonmodern cultivators the successful harvesting of resources cannot be undertaken without recompensing the earth or its supernatural equivalent. Assigning agency to resources is therefore crucial in making sense of the co-reliance of humans and nonhumans.

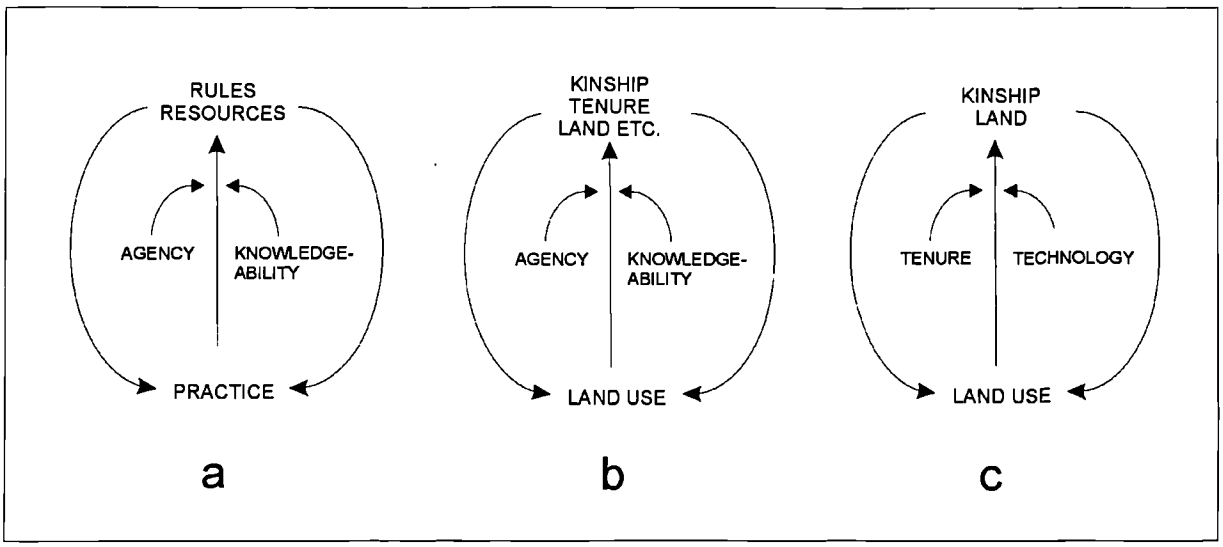

Fig 4.1 Diagrammatic representation of the theoretical framework outlined in chapter 3 (a), with tenure shown alternatively as structure (b) and agency (c).

Tenure, too, may seem to reside in either structure or agency. It is possible to conceive of tenure as structural as it constitutes part of the social conditions that enable agriculture (land use) to take place – in other words, it enables practice (Fig 4.1b). Moreover, tenure has time-space extension. Having tenure over a resource means having access or rights of use over a period of time. It also has a spatial component inherent in the resource over which tenure is held, and potentially in the extent over which the resource is used and transported. On the other hand, the idea of tenure as structural is most applicable when used in the context of the *ownership* of property by individual actors, as in the modern legal sense. In order to describe the forms of property holding and usufruct apparent within nonmodern communities, tenure is 'worked back' from this modern sense. There is a difference between property ownership in which spatial and temporal boundaries of property are clearly defined, and tenure in a nonmodern context where rights of access and use can be considerably more complex. To account for this, we could, alternatively, think of tenure as both the power to make use of resources, and the history of resource use. As such it comes closer to our understanding of agency rather than structure (Fig 4.1c). If 'tenure', as a social analytical category, relates most closely to agency then this has all kinds of implications for among other things the existence of nonhuman tenure and the connections between property and power.

Tenure might either be structure or agency. It either serves as a condition of social action, or it is a modality of the power to act. Rather than extending this argument further in the abstract, the discussion through the remainder of the chapter will consider the definition and the application of land tenure within nonmodern societies. Land tenure will be defined, and models for long-term changes in tenure will be reviewed. The concept of multi-dimensional land tenure will subsequently be introduced and explored in a series of short case studies including examples from Papua New Guinea and East Africa. The proceeding discussion assesses the possibilities offered by studying land tenure as either rules and resources that mediate and transform practice, or as agency where tenure is most closely associated with power, knowledgeability and time.

4.2 Land tenure: definitions and theories

The subject of tenure has long been of interest to those studying the relations between humans and the land. Practitioners in the fields of ethnography, anthropology, history and jurisprudence have left a substantial record of the many different forms of land tenure identified throughout the world. A central catalyst for this research has been the conflict between indigenous, otherwise known as customary or traditional, systems of land tenure and those of the colonial nations. The land rights cases in Australia, New Zealand, North America and West Africa which have had prominence recently are not unusual. Similar conflicts between indigenous and colonial tenure systems occurred throughout this century across Africa, south-east Asia, the South Pacific and America. As a result there are many sources through which to study the great variety of land tenure systems. While there is an obvious bias in many cases towards communities that have undergone significant changes as a result of contact with western societies, the emphasis upon history and process is in contrast to the rather ahistoric representations of human social life that can be found in other ethnographic accounts written in the first half of this century. The fact that this approach is not so common among studies of land tenure is almost certainly a factor of the dynamic, eristic context in which the research was undertaken. Of course, the study of tenure is not limited to ethnographic studies of marginalised societies, as the discussion of the poetry of John Clare in the introduction to this thesis showed. Land, enclosure and tenure are also a significant aspect of the recent European past.

A study of land tenure is a study of the rights to land and the rights to farm or work the land held by groups or individuals. The legal connotations that are associated with the term 'tenure' are somewhat distractive since in most respects, and crucial to the argument developed later in this chapter, rights of use often have little in common with modern western attitudes to property and ownership (*cf.* Elias 1951; Meek 1948). It is better to think of tenure as polysemic, including in its definition not only property but also concepts such as obligation, attachment and usufruct. Describing tenure in terms of holding / ownership / entitlement to *rights* to land rather than owning the land itself is core to most

ethnographic accounts. Ownership and individuation of land rights mark out a very different socio-political context. At the broadest level, tenure makes up the bundles of rights which people hold over the land: 'it is the relation of man to the soil in the widest sense' (Malinowski 1935, 319).

A feature of land tenure that is adjudged to be of significance by a number of commentators is its role as a mediator between the social and the natural world: '[it] is a system of patterns of behaviour that specifically serve to control a society's use of environmental resources' (Crocombe 1974, 2). Tim Ingold was referring to this relationship between social and natural worlds when he defined tenure as 'an aspect of that system of relations which *constitutes* persons as productive agents and directs their purposes' (Ingold 1986, 130 – original emphasis). Tenure is, therefore, not simply the relationship between people and the soil, it represents the appropriation and transcendence of the natural world by humans: '*tenure engages nature in a system of social relations, territoriality engages society in a system of natural relations*' (Ingold 1986, 136 – original emphasis). The social dimensions of tenure are integral to the definitions offered by other researchers. A social perspective recognises that 'rights to land' presupposes relations between people as well as between people and the land (Digim'rina 1995, 3). Robert Netting, for example, uses tenure to represent the rights to private property (including resources) held by individuals and families (Netting 1993, 157). Defining tenure in terms of the social world does not limit at what scale tenure is structured; for some it is almost solely a local concern operating and changing at the level of the family or village, for others tenure is affected by broader socio-political, demographic and technological factors (e.g. Ward and Kingdom 1995). The variety in these definitions is chiefly related to the context of the studies in which they were employed; the concept of tenure is, therefore, contextual. Furthermore, the potential range of rights and resources makes tenure multi-dimensional, as it represents the 'nested rights of use and access to land and or specific resources' (Rocheleau and Edmunds 1997, 1352).

As suggested above, there is a clear historical dimension to the study of land tenure. This is vividly evident in the dominant model of land tenure systems which conceives of a continuum, at one end of which are hunter-gather territories and at the other end are western concepts of alienable property and ownership (Fig 4.2). In between, types range from pastoral to communal agriculture in both swidden and fixed field farming. Such an approach does suggest an evolutionary progression but, as later examples will show, changing tenurial relations are neither solely progressive nor determined. There are, nonetheless, categories of society which are, among other things, often used to pigeonhole varying types of land tenure: hunter-gatherers, pastoralists and farmers / cultivators.

Furthest to one end of the notional continuum of tenure are the rights to resources expressed within hunter-gatherer groups. The flora and fauna that constitute the ecological niche occupied by such societies are of the same world as the humans themselves. In such a case the land is rarely seen as

being held by the people who live off its produce. Instead, land is owned by the ancestors of those who occupy it. Boundaries are loosely marked, and people's historic attachment to the land is expressed through places and their mythical associations. Tenure, that is to say the appropriation of the environment, exists through places, and often on the paths that link them. The Australian Aborigines are a well-used example of this *zero-* and *one-dimensional* tenure (Ingold 1986; e.g. Myers 1986). The geographical extent over which communities gather resources and the extent of their knowledge of the environment has been referred to as 'tenure of territoriality' (Chou 1997), and for the Evenkis, reindeer hunters in south-eastern Siberia, 'territoriality tenure': 'Intimate knowledge of the land, coupled with requisite respect for the spirits of the place and beings which they inhabit (animal, plants, rocks etc.) entitle indigenous obshchinas to use the land and its resources' (Fondahl 1998, 34).

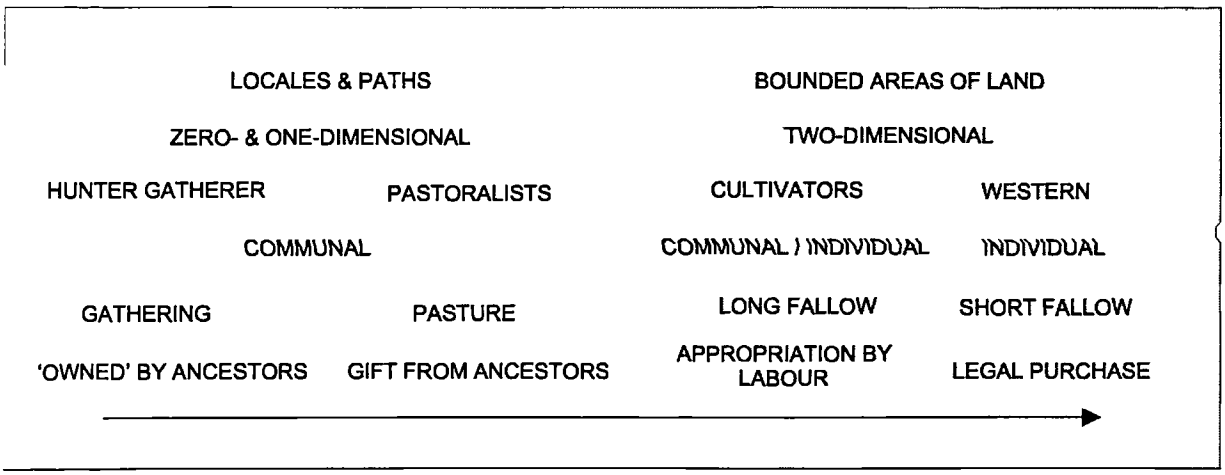

Fig 4.2 The land tenure continuum.

Pastoralists, as with many hunter-gatherer groups, lead a mobile lifestyle that enables an extensive knowledge of the environment. Although pastoralism is in no way a natural progression from hunter-gatherer occupation practices, the forms of tenure associated with both types are very similar. There is an emphasis upon the tenure of places, particularly those associated with critical resources such as water (e.g. Shoup 1990) and the paths that run between them – the same as the zero- and one-dimensional tenure described above. Somewhat contrary to this, animals are grazed over extensive geographical areas or territories, within which the appropriation of important resources, such as watering holes, may be clearly defined. The association between land and the ancestors is strong. Although, unlike many hunter-gatherer groups, pastoralists do not belong to the land, rather the land is considered as a gift from the ancestors or is still owned by the ancestors. It is perhaps an obvious point that the interpretations of land tenure among both hunter-gatherer and pastoralist groups tends to emphasise the extensive appropriation of the natural world through a mediation between humans and nonhumans.

Groups practising forms of small-scale agricultural production may occupy the environment differently to hunters and pastoralists. Tenure is directly related to *two-dimensional* forms of land holding where the acquisition of a resource involves some form of prolonged effort, for example cultivation. The nature of that holding may vary depending on the form of agriculture practised. Among swidden farmers rights to land are not fixed at a particular locale. Instead, a type of 'farm tenure' operates in which a family has rights to cultivate an area of the community's land (Ward and Kingdom 1995). The plot is farmed for a few years, and during that time it will be held in tenure by the family using it. Once cultivation of the plot has ceased, it again becomes the property of the group. Usufruct is not fixed spatially but rather in a genealogical map that records a right to farm based on kinship but not a right to a specific plot of land (Bohannan 1963). Fixed field farming is associated with a shift to increasingly permanent types of land tenure that are linked with more intensive agricultural practices such as short fallow periods and the physical delimiting of boundaries. The description of such systems as communal is often a misnomer; although land may be owned by a village or community grouping, the plots are frequently held by individuals and families. Such two-dimensional tenure is distinct from the zero- and one-dimensional forms of tenure mentioned above; yet we know, particularly from studies of prehistory, that agricultural practices were slow to change, allowing plenty of opportunity for the overlap of contrasting subsistence strategies such as gathering and cultivation. It is not surprising to find that the types of communal tenure found in small-scale farming communities in Africa, for example, were adopted as a result of origins in pastoral forms of tenure (Ward and Kingdom 1995, 28). So-called fixed fields and intensive agriculture may appear familiar to north-west Europeans, but the social structures which brought them about and through which they are maintained have their origins in the context of nonmodern human-land relations.

At the furthest end of the continuum is the exclusive ownership of land. Often linked to intensive agriculture, the introduction of a market economy and increased pressure on resources, the ownership of land becomes economically valued and potentially alienable. This is comparable to the western concept of property.

Land tenure and agricultural intensification

The representation of tenure along a continuum is a useful device for synthesising the range and variety of anthropological studies, but it has also acted a cross-cultural model accounting for long term changes in land tenure systems. A central concern of many studies has been to explore the dynamic nature of such systems, often graduating from the parcels of nested rights of resources associated with communal forms of tenure to the direct ownership of land found among westernised communities (e.g. Damas 1994; Migot-Adholla and Bruce 1994; Spear 1997). Such an historical perspective on ownership and tenure is first found in the models inspired by nineteenth century evolutionists such as Lewis Henry Morgan who believed the move to the private ownership of property was a sudden and

dramatic change that marked the commencement of civilisation (Netting 1993, 168; *cf.* the ecological rationale of Fredrich Engels 1972, 202).

One of the most influential attempts to generalise a model for agricultural intensification was produced by Ester Boserup. In her study, *The Conditions of Agricultural Growth*, she dealt explicitly with land tenure, suggesting that it was not, as had been argued up until then, too variable to submit to generalisation – the differences were 'more verbal than real' (Boserup 1965, 78). Land tenure, she argued, was directly related to land use and to the different ways in which the Europeans adapted systems of land tenure to the colonial economy. Her model for changes in land tenure systems postulates a causal relationship between population, land use and land tenure: an increase in population leads to agricultural intensification, thus changing land use strategies, which in turn results in changes in land tenure. With an intensification in agricultural strategies comes an increased attachment to land, and so a development towards closer forms of control and eventually individuation of ownership: 'the attachment of individual families to particular plots becomes more and more important with the gradual shortening of the period of fallow and the reduction of the part of the territory which is not used in the rotation' (Boserup 1965, 81). Her study, drawing mostly on historical sources from Europe and India, dismisses the complexities of various forms of communal land tenure. Instead, Boserup defines her model on basic principles, suggesting these apparently complex society-land relations can often be resolved into customary practices being controlled by an external landlord or feudal class (*cf.* Tronvoll 1998). The influence of Boserup's model has been evident in archaeology. This is largely because agricultural intensification and an increase in the control over land have visible material traces, and therefore the appearance of boundaries, field systems and the exploitation of previously unoccupied regions can be presented as evidence for pressure on land and agricultural intensification (section 1.2).

A later and more advanced analysis of strategies of agricultural intensification has been written by Robert Netting (Netting 1993). He is in agreement with Boserup as regards the causal relationship between land use and land tenure, accepting that the scarcity of land induces a greater degree of control over resources. He does not, however, accept a necessary link between the individuation of land holding and the introduction of a market economy, as proposed by Boserup and other researchers. Research undertaken by Netting in Africa demonstrated that private land holding with patrilineal inheritance developed without the pressure of a market economy: 'Where land is a scarce good that can be made to yield continuously and reliably over the long term by intensive methods, rights approximating those of private ownership will develop' (Netting 1993, 158). Moreover, the conditions of intensification which Netting presents are more sophisticated than those set out by Boserup. Intensification is not a straightforward reaction to population pressure, though this may be a causal factor. Rather than resulting from specific technological advances, it above all requires an in-depth,

practical knowledge of the local environment in order to maximise and maintain the productivity of the land. This local knowledge is acquired through the detailed ecological experience of place associated with smallholder families. The farming household is the unit of organisation most suited to agricultural intensification because of the close association between the family, the medium for knowledge and property transfer, and the land that is farmed:

> Members of a household may share a long attachment to a farm, and the fund of ecological information so vital to the agricultural endeavour is transmitted through observation, imitation, and instruction that accompanies more general processes of socialisation and enculturation in the family.
>
> (Netting 1993, 63)

The control of property is well developed within smallholding groups. Land inheritance is an important issue, and the emergence of unilinear descent groups is related to an increased need to control land in order to intensify resource use. The concurrence of changes in settlement organisation with kinship, land inheritance and an intensification in land use is in broad agreement with Boserup's model for change. Netting's focus on the smallholder family as the vital context through which these processes can be mediated is a further elaboration of the model. The linking of tenure, intensification, resource pressure and sedentary smallholder society is an important one, and it only goes to highlight the need to reassess any assumptions regarding tenure, or usufruct, among groups practising non-intensive, potentially mobile forms of subsistence.

Multi-dimensional land tenure

The use of 'communal' and 'individual' as antithetical systems of land tenure is a simplification that helps to synthesis the variety of forms of tenure that are practised throughout the world. They also serve as convenient categories for the origin and inevitable final evolution towards the individuation of land holding outlined in historical studies. Despite the influence of these ideas it is certainly not appropriate to suggest than any such scheme has a practical reality. Groups will tend to undertake a varied range of subsistence practices, for instance, the coexistence of gathering and fixed field farming. In such examples it is usual to find a diverse range of practices, with various types of tenure associated with different resources and the means of acquiring them. Within cultivating communities the range is impressive. Tenure can, for example, be viewed in three dimensions. Trees are often an important resource, and yet each tree may provide a variety of products over which different members of a group have access. This may be split along gender lines, with women having rights over deadwood and leaf litter, and men having access to trunks for foundation beams and beehives located in the trees (Fig 4.3) (Rocheleau and Edmunds 1997). These 'nested' rights of use are also temporal: cultivated land is held by a family for growing crops but when the crop has been harvested the stubble is a resource that any member of the community can use for pasture. In the Pearl River Delta of South

China, these rights are taken a stage further: different levels of usufruct are conferred upon topsoil and 'bottom soil' (Siu and Faure 1995). Communal ownership is often resolved into 'clusters of specific rights which groups and individuals hold over a piece of land, its uses, and its products' (Gluckman 1943, 27).

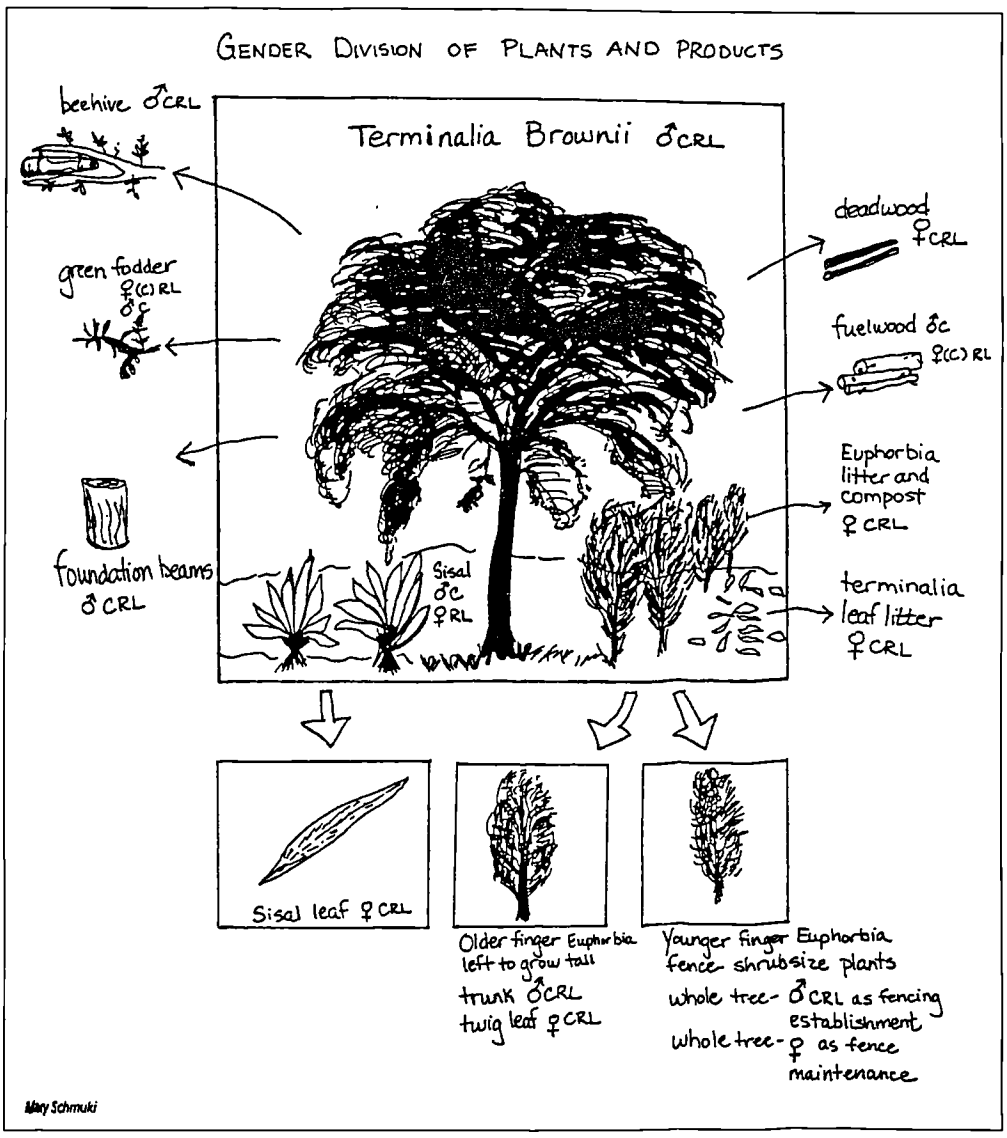

Fig 4.3 'Gender division of plants and products' (reproduced from Rocheleau and Edmunds 1997).

Time is another variable quality of systems of land rights. Historically, land is enmeshed in the biographies of subjects and within the trajectories of groups (Ingold 1986, 137). As the words of a Nigerian herder quoted by Lane illustrate: 'land belongs to a vast family of which many are dead, few are living and countless members are still unborn' (Lane 1998, 1). The herder mentions three temporally distinct groups, but they remain part of the same family, and they hold equal rights to the land. Time, therefore, is a crucial aspect of tenure as social relations. The past and future land holding have a potent relationship with the present. Time is also a feature of the everyday reworking of land

tenure relations. In Mai Weini, Eritrea (see below), time is the measure of space, and it cannot be disassociated from the practices undertaken in that space. The villagers measure the size of a plot in *tsimidi* – the amount of land a pair of oxen can plough in one day (Tronvoll 1998, 241). This varies with the quality of the soil, the relative difficulty of the local climate for working (hot weather will require a longer mid-day break) and the distance of the plot of land from the village (the day lasts from when the farmer reaches the field in the morning until he stops in order to get home before dark). Aside from time and temporality, tenure is also linked with tempo: the rhythms of the seasons, the growth of crops and the regeneration of gardens. Swidden fields, for example, have life-cycles around which resource use and land tenure are organised.

The dimensions of space and time make up the multi-dimensionality of land tenure (*cf.* Kelly 1992, 60; Riddell 1987, 2). The rights to resources are governed by historical precedents of access and use, identity, social relations of power, daily patterns of use and management, and the long term investment of labour (Rocheleau and Edmunds 1997, 1352). Considering this variety it is clear why descriptions of land tenure often reveal 'complex parcels of divergent practices' (Ward and Kingdom 1995, 8). Although it does not explain how studies of long term change tend to come to similar conclusions about themes such as the individuation of land holding and the impact of agricultural intensification. The categories that have been set up in order to enable the synthesis of land tenure systems is partly responsible for this, but these categories should not be seen as infallible:

> Tenure is not either private or communal; property does not parse neatly into open access, common, and private; groups are not either closed-corporate or open-atomistic. Rights in the same physical field may be partitioned among private owners, temporary cultivators, possessors of trees or buildings on the land, those with rights of easement to travel across the land, and a whole community permitted to graze their animals on the crop stubble. Where private property rights have great importance, as they do among smallholders, they can become legally complex and richly diversified. The several types of property use, holding, inheritance, transfer, and administration that are actively present, known and enforced in a community of intensive cultivators (as opposed to the laws on the books and the official regulations of the state) represent a careful adjustment of social rules and practices to ecological facts.
>
> (Netting 1993, 182)

4.3 Land and society in Papua New Guinea and Eritrea

The models put forward by Boserup and Netting did not follow Malinowski's statement, quoted in 4.2, that land tenure was the relations between people and the land in the widest sense. Tenure has most often been interpreted in more specific, legalistic terms as the rights to 'own' or use an area of land or a resource. In a multi-dimensional land tenure it is more difficult to separate the rights to land from the social and ecological relations that make such rights both necessary and possible. The relationship between people and the environment that is expressed in tenure is implicitly acknowledged by Boserup. In her model an increase in population affects land use strategies, which results in changes in land tenure systems. Netting places more emphasis on the social consequences of these changes. The

emergence of the smallholder family is the social manifestation of intensive agriculture. Both Boserup and Netting recognise that tenure is only one part of the relations between land and society.

Bearing this in mind, how is tenure explained in sociological terms? Or put another way, where might tenure be constituted in a theory of social life? These may not seem difficult questions when applied to tenure relations among small-scale, intensive farmers where land tenure is comparable with western concepts of ownership. However, among non-intensive farming groups or pastoralists it is harder to separate rights to land from other aspects of social relations and land use. This is because the definition of tenure is worked back from the modern prototype of ownership, where land is viewed as passive, alienable property. Outside this rigid definition the distinctions between tenure over land, rights to resources and land use are much less clear. It has already been argued in the previous chapter that this separation of land from society is neither representative of a nonmodern view of the world nor of a theory of society that embeds land, as a resource, in social life. If humans *dwell* in the environment then land and the rights to use or work the land are rooted in social experience. An attachment to land can be deeply felt, as the words of the Nigerian herder quoted earlier testify; land may have a long history and a long future both of which are the responsibility of the entire community. In another context: 'The land is the most important factor in our life. Our land is our life' (statement by Mai Weini villager: Tronvoll 1998, 231). The concept of 'tenure' has a limited role in explaining this engagement with the environment. There may be particular use rights over pasture that could be isolated and described by an outsider, but it is arguable whether these bear any relation to the sense of belonging which the Nigerian herder or the Eritrean farmer expressed.

The bond between a group or individual and their land is generated and reproduced through the practices they undertake 'on' the land. As previously mentioned, there is a multi-dimensionality to agricultural practice that is reflected in the range of resource use through time with which it is associated. None of the general models take account of the diversity of practice, and consequently they find it easy to isolate and universalise land tenure. The specific examples that show a multi-dimensional land tenure take a full account of the practices associated with resource use but they do not contextualise the practices in social life. In order to do that effectively and make a study of land-society relations comparable it is necessary to identify land as structural.

According to the definition of structures as rules and resources, land is an allocative resource: raw material that is transformed by human action and the transformative powers of those actions. Up to now, 'land' has been used as a loosely defined category for the nearly infinite variety of soils, plants and other resources, such as water or rock, over which communities hold tenure. However, each of these elements of the environment are transformed in different ways, and the structural conditions in which they are implicated can, therefore, also be different. Tenure, as the right to use resources, should

be considered in the context of each of the resources with which it is implicated and, following on from above, the practices associated with the transformation of those resources. In this way we can not only account for the multi-dimensionality of tenure, but also for the patterns and apparent cross-cultural comparability of tenure systems.

The sequential ordering of practices in time-space and the extension of structures across time-space are important to our understanding of why structures matter. This is a mute point it would seem until we consider that time is a component of the environment as much as it is a part of the social world. The resources that are implicated in tenure have temporalities and tempos that affect the way they are appropriated and transformed. These in turn have an influence upon the *durée* of day-to-day life since practices are orientated around the rhythms of the environment, such as the growth cycles of crops and the changing seasons. Extending this still further, tenure is also historical since history is the conditions of human action and the continuation of those actions over time.

These abstract statements place tenure in a world of human agents and virtual structures that is generated through the appropriation and transformation of physical resources. It cannot be overstated that this is an important framework to account for the multi-dimensionality of tenure. Yet, even though it internalises resources in social life it still restricts the range of collectives that can participate in land tenure, as we shall see below. In societies where land is 'owned' by the ancestors or where the actions of supra-human beings such as gods affect the growth of crops, there is a place for nonhuman agencies in the reproduction of tenure.

Taken together the rather disparate issues outlined above reflect quite closely those presented in the previous chapter: the synergy of society and nature, the importance of a theory of structure that properly accounts for the influence of resources, attributing agency to human and nonhuman actors, and the intrinsicality of time and temporality within social processes. It also reveals a little more clearly the growing potential for a confusion over where tenure lies within such a theoretical project. While land and its associated products can, following the definition of a multi-dimensional tenure, be categorised as a resource, tenure is neither an obvious rule nor resource. Of course the term 'systems' is often applied to land tenure, and this does indeed reflect the extensive time-space extension of regimes of usufruct that extend beyond the lives of individual actors through mechanisms such as inheritance. However, tenure embodies history in a way that the term cannot hope to express. It is also closely identified with power invested at the level of the agent, again a concept that 'system' does not convey. May we then take it that tenure is a sociological category that comes closest to defining the power to use resources through time, and is therefore best equated with agency? The following two case-studies offer a closer examination of the facets of this debate while also offering some further consideration of the link between tenure and land use.

Gardening and magic in Papua New Guinea

One of the major, early anthropological monographs on agricultural practice and land tenure is Bronislaw Malinowski's detailed study of a village community on the Trobriand Islands (Malinowski 1935). Gardens are felt to be socially important among the Trobriand Islanders because there is a close ontological connection between the soil and human beings: the origins of humanity are in the soil, and the ancestors of a sub-clan or local group emerged from the ground bringing their knowledge of garden magic with them. The location where this first emergence took place becomes the hereditary territory of the group. As a consequence of the value attributed to gardens, the work that is undertaken is not confined to everyday behaviour; it is linked to a complex suite of rites and small-scale ritual performances that are classified as 'magic': 'The two ways, the way of magic and the way of garden work – *megwa la keda, bagula la keda* – are inseparable' (Malinowski 1935, 76). There is a strict sequence to the activities that are undertaken in the main yam gardens or *leywota* – carefully tended plots that are representative of gardens in general. In the first instance, the individual plots are allocated to families by the chief or headman. These ceremonial and strictly formal components are then superseded by small-scale rituals performed by the garden magician. Clearance of the plots can only be undertaken once these rites have been performed. Individual families are responsible for clearing the vegetation and stone from their respective plots, resulting in a series of cleared gardens, often subdivided with linear heaps of stone. The final process of garden preparation is the construction of a fence around the outside of the plots. The preparation of gardens is a complex, meaningful activity that is concurrently a part of day-to-day life and a formalised expression of people's origins and place in the world.

In his study, Malinowski does not separate land tenure from social life. The headman of the village, the garden magician, the owners of the plots and those who use the soil all 'intertwine into a complex economic and social network which constitutes the land-tenure of the natives' (Malinowski 1935, 56). Only briefly, towards the end of the work, does he attempt to untangle these social relationships in order to explain the ownership of land and the native 'laws' that affect its inheritance. The initial claim to land by a local group, based around the principle of first emergence mentioned above, is the primary attachment between a community and place. This claim is maintained through the matrilineal inheritance of land that links a man to his mother's territory. In most cases, this is over-shadowed or complicated by other issues, notably marriage, magical organisation and social rank. Tenure is, therefore, legitimated through social identities and relationships.

Lawrence, during his research among the Garia in the Madang district, Papua New Guinea, also observed a close connection between gardening and magic (Lawrence 1955). The key figures involved in the preparation of the Garia gardens are the garden leaders. They hold a monopoly on ritual knowledge which they use to regulate the stages of garden production. Lawrence considered land

tenure to be closely related to social structure, and taking a functionalist position identified a irrefutable relationship between kinship, economy and ritual:

> Ultimately, therefore, religion is the cornerstone of land tenure, for it validates the system. On the one hand, fear of retribution from the spirits of the dead induces respect for both personal and patrilineage land rights, and rationalises the complex of relationships which they promote. On the other, ritual beliefs and practices justify traditional agricultural techniques and set in motion the system of land use by co-ordinating the activities of heterogeneous clusters of fellow cultivators.
>
> (Lawrence 1955, 45)

The stress that Malinowski and Lawrence both place on social relations rather than land use as a determinate of land tenure is supported in Digim'rina's study of the Basima, Milne Bay Province, Papua New Guinea (Digim'rina 1995). He accepts that the availability of land is relevant but argues that the main determining factor is social relations, characterised by group and individual claims to land (Table 4.1). The contradictions between group and individual rights come into being when the two become interwoven:

> The social complexities of 'ownership' are sometimes such that paradoxes and contradictions in man-property relations are revealed whenever there is disputation over land and the rhetorical, ideological claims of the group are woven into the pragmatic claims of individuals.
>
> (Digim'rina 1995, 194)

Land is part of the social geography that encompasses the relations within a group as well as external contacts between communities. The identity of the group is manifested in the various types of land which it holds: the area around the hamlet centred on the hole of emergence, cultivated land, foraging and hunting ground, and *susu-* or community-owned land. Together these form a community's identity, primarily through the historical attachment to place articulated in ancestral myths and continued in existing social relationships: 'a group's special relationship to the land it calls its own is immutable, non-transferable, and inalienable, for it is principally from the group-land relationship that the *susu* derives its identity, belonging, power and prestige' (Digim'rina 1995, 199).

GROUP	INDIVIDUAL
ideological, rhetorical & sentimental	pragmatic
ahistoric	historical
broad areas of land	small plots of land

Table 4.1 Contrasting group and individual rights to land among the Basima, Papua New Guinea.

A strong relationship between people and the land is represented in the examples from Papua New Guinea (for a broader review see Clarke et al. 1994). Neither Malinowski, Lawrence or Digim'rina relate this to the practicalities of food production; it is for deeply embedded reasons allied to a

community's origin myth. The link between a group and its local area is centred on the hole of emergence where the founding ancestors left the soil in order to establish the village. The formality of the society-land relations that this expresses is maintained in the small-scale rites that accompany the allocation of gardens and the clearance of the plots for agriculture. This magic is a visible and no doubt at times discursive means of maintaining the ontological basis of the villagers' attachment to place. Although not discussed above, it is also closely related to the fertility of the soil and the growth of crops – another and more quotidian aspect of the relations between humans and the land. Practical, non-discursive actions such as the clearance of stone from the fields and formal activities such as garden magic are bound together in the generation and reproduction of the same structures. To what extent the latter can be said to be discursively motivated is not clear from the functional studies of Malinowski and Lawrence, but it would seem that routine everyday actions are combined in quite complex ways with so-called ritual practices, and together implicated in the long-term maintenance of the ontological link between a community and the soil.

Not one of the three studies, knowingly or otherwise, agrees with Boserup's link between land tenure and land use. In each case the system of rights to land and inheritance is interpreted as a consequence of social relations, almost entirely independent of the type of agriculture practised. This poses a problem if we are to establish whether or not tenure relations are structural, and therefore generated and reproduced in agricultural practice. It is fair enough to argue that social relations are implicated during day-to-day conduct, as Lawrence rightly recognised: the relations of kinship and land tenure were 'further reinforced by daily contact' (Lawrence 1955, 44). Nonetheless this entirely socialised world would seem to lack an explicit materiality that must certainly have existed. The evidence for this is 'hidden' in both Malinowski's and Digim'rina's accounts. In the latter, the plots and gardens have different land tenure regimes associated with each of the various classes of land use. A distinction is made between rights over hunting grounds and rights to cultivated land close to the village. The Trobriand Islanders also have different categories of gardens, with the formal rites of garden magic used in the main yam gardens or *leywota*. The way in which this evidence was interpreted depended on whether or not precedence was given to land use or to social structure.

Land tenure in Mai Weini, Eritrea

Moving on from the examples presented above, Tronvoll's study of a highland village in Eritrea provides a useful historical perspective on land tenure (Tronvoll 1998). There has been considerable social upheaval during the last few centuries within Eritrea. Tronvoll suggests that despite the changes brought about by the formation of new elite groups, whether the church, the state or colonial powers (in the case of Eritrea this was Italy), the minutiae of peasant life remained relatively unchanged; it is as if people's attachment to land was so important or basic to day-to-day existence that it was resistant to change. To say that human-land relations resist change does not mean that they are ahistoric. In fact,

contra the studies in Papua New Guinea discussed in the preceding section, the immediate past is a vital component in any assertion of land rights.

The types of land tenure recognised by Tronvoll did not conform to western concepts of ownership, even though they operated in what was effectively a market economy. Instead, individuals and groups held rights over land or the use of land. The types of tenure can be broken down into three types: individual (*tselmi*), that is to say, at the level of the individual family, or individual family heads; family (*resti*), the kindred or kinship group; and village (*shehena*) (Nadel 1946). The *resti* system of tenure is the most important. *Resti* land is held collectively by the kinship group (*enda*) from where it is passed on to the individual families within the group. Following its use the land is returned to the group. *Resti* land comes closest to the sorts of communal land discussed above with reference to Papua New Guinea. Families do not own land, but rather they have a right to a certain portion of land without fixed boundaries. The right to land is permanent and inalienable and is derived from original first occupation; this gives it an important social significance (Nadel 1946, 9; *cf.* Gilkes 1975, 102). *Resti* tenure is interwoven with kinship and descent groups, and it is notable that this form of land holding is the most significant and has greatest prestige within the community.

There are clear differences between this generalised model of land holding developed by Nadel and the specific tenure relations recognised across the region, particularly those observed by Tronvoll at Mai Weini. The specific system in operation in Mai Weini is known as *meret shehena* – 'land in common' or 'land of brothers'. In essence, all of the land is held by the village, and any male who has habitation rights in the village may have a share in the land or *gibri*. Although this system is relatively fluid, people's attachment to the land is still expressed in strong terms – less so with increased pressure on land, which has resulted in stricter controls on who may acquire rights of habitation in the village. The close connection between individual identity and land is important: 'Their identity builds on a relationship to land, and they have difficulties in comprehending a way of life without it' (Tronvoll 1998, 232). The acquisition of rights to land provides a sense of belonging both to a community and to a definable place. This sense of belonging is expressed through descent ties to the founding fathers of the village, and it is these kinship links which should be proven before a newcomer may acquire *tisha* – a right to land based on rights of habitation associated with the construction of a house.

In contrast to the Papua New Guinean case studies, which largely ignored the recent historical context of the relations between land and society, Tronvoll presents a case for land tenure being resistant to change on the basis of the strong bond that existed between people and the land. The rights to land that are most rigidly maintained are, like those in Papua New Guinea, based on social identity. Land is inalienable and closely linked with kinship. In spite of this rigid scheme there is a degree of fluidity;

inheritance, residency, and marriage all have an effect on how land is held. It is a mediator for these aspects of social organisation. The continuation of social traditions requires the long-term maintenance of stable human-land relations. The perpetuity of these structural conditions is historical, and its inherent stability and resistance to change is a consequence of the importance of land to the community.

Discussion

The case studies presented thus far offer good examples of multi-dimensional land tenure. The variability of resources in time-space ensures that in no case is there a consistent template for tenurial relations amongst a range of communities. A fact made clear in Tronvoll's assessment of the applicability of Nadel's scheme for land tenure relations in Eritrea. Furthermore, a higher degree of importance is attached to social structure by all of the authors. If anything, the studies emphasise social identity as a factor in determining land tenure above all else. Though, as I have suggested, this is at variance with the obvious correlation of agricultural regimes and systems of tenure. There is a distinction between those who view land tenure as determined by land use (e.g. Boserup 1965; Brown and Podolefsky 1976; Guillet 1981; Migot-Adholla and Bruce 1994; Netting 1993; Stone 1996; *cf.* Hogan 1991, 146-162), and those who see it as being determined by social structure (e.g. Digim'rina 1995; Kieniewicz 1969; Lawrence 1955; Malinowski 1935), though a broader range of factors are presented by many authors (e.g. Crocombe 1974; Rocheleau and Edmunds 1997; Ward and Kingdom 1995).

The importance of social identity in forming the rules by which land is held, used and inherited is one of the recurring themes that has been discussed in the case studies. Identity works at two main levels: in the first instance, the (village) community acts as an agent for the control and distribution of resources; while at another level, kinship relations prove crucial as the right to benefit from resources is maintained by families or individuals – the latter, through their social position, represent the family. It is here, in kinship and identity, that we find the clearest structural rules that complement land as a resource. Interestingly, subversion of these frameworks is always possible. Access to usufruct may be acquired by newcomers seeking residency; such rights can to all intents be similar to those established through traditional means.

Social identity is linked with a further recurrent theme, that of legitimation. Tenure is legitimated by reference to its historical precedence either in group memories or an ancestral occupancy. For the groups in Papua New Guinea this was manifest in the importance attributed to the community's 'hole of emergence' from where the ancestors first occupied the locality. A considerable effort was spent employing the garden magic that had been passed on to the community from the ancestors. In Eritrea the acquisition of tenure requires an individual to demonstrate lineage with the 'founding fathers' of

the village. Even then, while rights are conferred on an individual, they reside with the family whom the individual represents. From these examples it can be seen that the power to use resources is enabled by the existence of the resources themselves, the rules of kinship and a mythical narrative that links the community to its territory. Usufruct is constantly under negotiation to varying degrees, since none of these structures of legitimation are fixed, and in every case they are maintained and reproduced through practices undertaken during daily life and as part of more formal ritual performances.

These core themes of social identity and legitimation do not engender a consistent interpretation of land tenure. Malinowski, for example, discussed tenure in legal terms, unable it would seem to associate it directly with local categories of authority and usufruct in use amongst the Trobriand Islanders. Digim'rina equated land with identity as a baseline from whence tenure could be derived. Tronvoll also categorised rights of access to resources according to categories of social identity. Tenure represented a further sociologically defined layer, an interpretative scheme if you like, that relied upon modern legal nomenclature and overlay the ethnographic narrative. Consequently I would suggest that tenure is solely a sociological category, a device for making sense of the varied interactions between land use, kinship and community. If anything, it represents agency in that it is the power to make use of resources through knowledgeability and social position. Any study of tenure is primarily an analysis of agency, and most importantly the interaction of agency with structures such as land and kinship.

4.4 Conclusions: land, kinship and community

The proposal which introduced this chapter was that tenure could not be isolated from the web of practical and ontological relationships that make up social life. This statement was balanced by the suggestion that it was unclear whether tenure could be studied as structural or whether, as the power to use resources, it was more properly to be viewed as agency. A selective review of the literature on land tenure discussed the dominant model for change in tenurial regimes towards the individuation of land holding. These models, exemplified by that presented by Ester Boserup, relied upon relatively straightforward categories of land use that did not include the complex myriad practices that make up a community's subsistence strategy. This was contrasted to the evidence for a multi-dimensional land tenure that accounted for the spread of rights of access and use between different resources located in space and time. The case studies set out to explore this complexity in a little more detail and consider where land tenure might be situated in the remit of human-land relations. From this it was suggested that tenure, while identifiable as structural in the context of the legal individuation of land holding, is not so straightforward in the context of nonmodern communities. Rather, tenure is a sociological operator that describes both the network of interrelated structures and, crucially, agency.

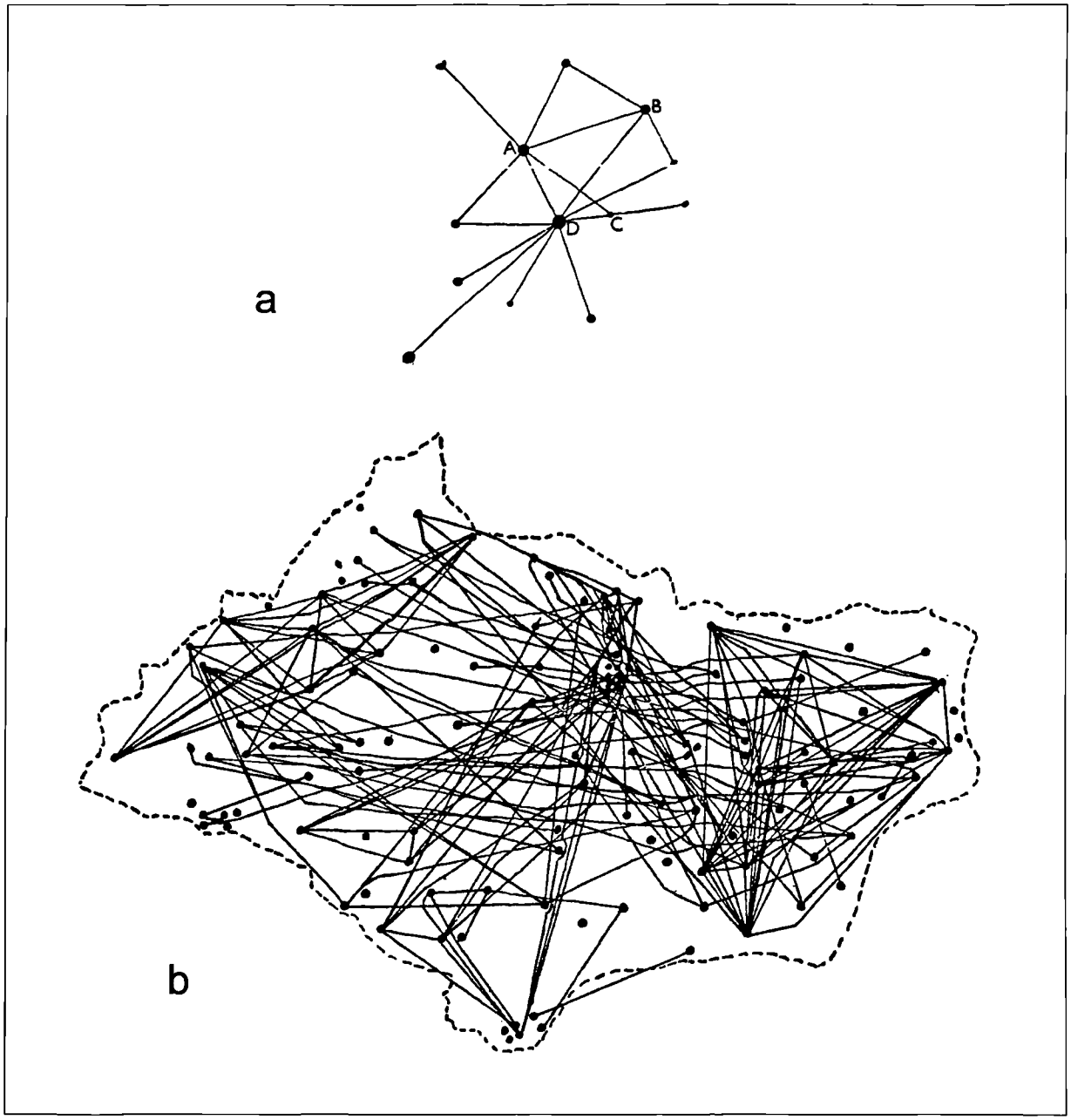

Fig 4.4 Ties of cooperation and kinship, Llanfihangel: (a) 'A and D are large farms which co-operate with six or nine other farms'; (b) map of households related to one another in the 'first' or 'second degree' (reproduced from Rees 1996).

A study of tenure is a study of agency since tenure is best equated with the power to transform or utilise resources. As the power to act, tenure can be seen as one of the critical elements in agricultural practice, the other element being knowledgeability. Nonetheless, an emphasis upon human agency should not be at the expense of the duality of structure and the coagency of nonhuman animals and objects. The structures associated with tenure such as land, plants, kinship, inheritance, culinary customs and so on affect practice just as they are themselves generated through practice. The fact that resources such as the soil appear to both enable cultivation to take place, and of course place limits on

the extent and character of cultivation, will mean that the soil may be perceived as a coagent with humans in the process of agriculture. Plants too may participate in social life either in explicit ways, perhaps through their healing properties, or in a less obvious manner, personified as evil spirits that are guilty of causing illnesses.

To take one final example, the structural elements discussed above, particularly land and kinship, are prominent in accounts of tenure during the distant and more recent past in Europe. Broad historical studies such as that undertaken by Goody (Goody 1983), ostensibly dealing with issues of kinship and inheritance, rely upon an analysis of how land rights were organised and transformed during the period of study. At another scale, the value of land to European communities in the past has been addressed through approaches as diverse as the historical study of early medieval law codes and the archaeological survey of relict field systems. Such fertile comparative material has been employed by prehistorians of early fields (e.g. Fleming 1985; Fowler 1981b). The variety and volume of this material precludes its inclusion within this thesis. However, still of interest and more in keeping with the anthropological theme of this chapter are the ethnographic studies of rural communities in Britain. These studies were first initiated in the 1940s with two independently conceived projects, one in County Clare in the west of Ireland (Arensburg and Kimball 1968) and the other in the parish of Llanfihangel yng Ngwynfa in east Wales (Rees 1996).

These accounts of the relations between people and land in Wales and west Ireland are contrasting. Rees, for instance, in his study of Llanfihangel, notes that land is not considered an inheritable resource, and it is consequently alienable from the bonds of kinship and the family (Rees 1996, 71). In contrast, Arensburg describes in detail the elaborate negotiations that a father goes through to ensure the 'proper' marriage of his eldest son and consequently, but in advance of the actual marriage, the inheritance of the farm and land by the son. The life of the family is interwoven, and in the minds of the people embodied within, the life of the land: 'A particular ancestral line is inseparable from a particular plot of earth. All others are "strangers to the land"' (Arensburg 1959, 83). The origins of these attitudes to the land and the ways in which the community is identified and reproduced with the family is of interest in both cases. In Wales, the attitudes to land may be traced back at least as far as the middle ages. The extreme boundedness of the community and the importance of neighbourhood networks devoted to mutual support may have something to do with the rapid and debilitating effects of depopulation (the population decreased steadily from a high in 1841 of 1041 residents to only 498 in 1940, Rees 1996, 171 n. 3). Indeed, it is of interest that the more recent resurgence of interest in community studies has found the epitome of the community, that is to say with unequivocal boundedness, within impoverished or otherwise marginalised groups. Rees' search for the meaning of Welsh community did not so much identify a material culture as a network of interpersonal relations based on kinship and practical obligations (Fig 4.4). In the west of Ireland, Arensburg claimed to find

a community with long held traditions, and one that he portrayed in much more idyllic terms to those used by Rees. The continuation of tradition in Banner was founded on the habitual relationships of its inhabitants, which were preserved, materially at least, in the patrilineal inheritance of land: the Irish countryman's 'activities, incentives and rewards take shape within the habitual expectancies and mutualities which make up the pattern of his family. A great deal of his activity beyond the farmhouse door derives from the reciprocities of his system of kinship' (Arensburg 1959, 71); and elsewhere: 'The mothers and fathers who order farm life are themselves sons and daughters. They have or have had (before their creation of a family of their own upon the farm) much the same relationships with their parents as their children have with them' (Arensburg and Kimball 1968, 76).

These examples demonstrate, quite neatly, the links between kinship, inheritance and land. Together they structure contemporary rights of land use, and the continuation of such rights across generations. Interestingly, an important influence on Rees was Tönnies' *Gemeinschaft und Gesellschaft* (1963), in which *gemeinschaft* (community) consisted of the characteristics intrinsic to the traditions of small-scale local groups – blood, place and mind – and *gesellschaft* (society) represented the large impersonal populations of industrial society (Carter in Rees 1996, 3). The villages in Llanfihangel epitomised *gemeinschaft*, where the bonds of kinship were strong, and they structured much of what went on during people's daily lives. Through an understanding of such structures, the practices (e.g. land use) that they structure and are structured by, and agency (or the power to employ resources – tenure), it is possible to define land-society relations.

Themes in land-society relations

- Tenure is the right and power to practise the use of resources, and it cannot be separated from the conditions in which such action takes place (Fig 4.1). In order to explain tenure we must consider the structural conditions and principles that enable agricultural practice.

- The resources over which tenure is held are many and varied, and they are distributed multi-dimensionally in both space and time. Examples of such resources are the soils, plants and animals that are typically associated with agriculture, and also the access to labour, the technology and the various manifestations of tenurial control, such as field boundaries.

- Rules – or in less laden terms, *social conditions* or *networks* – are crucial to enabling and controlling the use of resources. Among others, kinship, inheritance, and agricultural strategies form the often negotiable basis for resource use.

- These structures cannot be isolated from the practice of resource use, nor should they be seen as solely constraining. According to the duality of structure, structures are both the medium and outcome of practice. Growing crops and managing herds of animals are actions that rely upon resources being available and rules being in place to constrain the limits of such activity. But the actions of grazing and cultivation are also responsible for the existence of resources, and through their extension in time-space they create and modify the patterns of behaviour that make up rules. These structures are both enabling and constraining: resources can become depleted, and therefore constraining, either through misuse or by virtue of their finitude.

- A distinction cannot always be made between human agents and nonhuman resources. In the case of the Trobriand Islanders studied by Malinowski, the ancestors of the group emerged from the soil. The land and the people were as one, albeit in a temporality far removed from the present. The connection between human origins and earth or clay has resonances in myths from a variety of cultural contexts.

- Resource use occurs through time, and as suggested earlier, time is one of the dimensions through which resource use may be controlled. This is not exclusively a social temporality because it is influenced by nonhuman tempos such as the natural rhythms that affect plant growth. It is not necessary to find ways of synchronising these temporalities since, following the argument presented in 3.4, they are based in B-series time, and can at least be measured according to established principles even if their phenomenological description is open to argument.

- The patterns of resource use through time are often equated with tenure, since to hold tenure over a resource is to have usufruct for a period of time. Yet tenure is more properly a sociological term roughly equating with agency, or in other words, the power to make use of resources.

- An agent is empowered through their knowledge of how to make use of resources and to understand social rules. Such knowledgeability is controlled within the family, it is linked with an acute experience of place, and it is reproduced through mechanisms such as inheritance and socialisation. The development of permanent bonds between family and place is, by virtue of the increased knowledgeability and control over the transfer of knowledge as suggested by Netting for smallholder families, a form of intensification. The same might be argued for the increased inter-family co-operation in Llanfihangel. In this latter case such forms of intensification were a reaction to the economic stress caused by a rapid decline in population (*cf.* Rees 1996, 31).

- Agency makes history, and histories are frequently used to legitimise resource use. Where an historical attachment to land is deeply felt within a community then the land can become inalienable: 'objects act as a vehicle for bringing past time into the present, so that the histories of ancestors, titles or mythological events become an intimate part of a person's present identity' (Weiner 1985, 210).

5

'BREAKING GROUND'

FIELDSTONE CLEARANCE IN NORTHERN ENGLAND

> These mounds, which are almost invariably wanting in any signs of an interment beyond pieces of charcoal and burnt stone ... are usually found associated in groups, sometimes in very considerable numbers. They are of small size and slight elevation, and frequently have one or more of much larger size placed amongst them, these latter being generally found to contain cists. They are clearly artificial, and are sometimes very carefully constructed, with stones overlapping one another in a regular series commencing from the centre.
> (Greenwell 1877, 420)

5.1 Introduction

In upland areas from the third millennium BC people cleared stone from the soil in order to improve the land for cultivation and pasture. The stone was used first to build cairns and later in the construction of field banks that survive today as a durable signature of extensive human occupation in what are now agriculturally marginal environments. This activity marked a variation in the way upland areas were inhabited, and it is often presented as evidence for the widespread changes in agriculture and settlement that distinguish third from second millennium BC occupation. The boundaries and clearance cairns are, in broad terms, accepted as evidence for a change in the way that rights to resources were articulated within and between communities. While it is evident when considering archaeological remains such as the 'Celtic fields' on the Marlborough Downs, the linear ditches on Salisbury Plain or the field systems on the Fenedge that tenure over land was of critical concern to the groups occupying these regions, it is not so obvious how tenure was articulated amongst the houses, plots and small cairns in the uplands. Nonetheless, people did exercise power over resources as they cleared the land, and therefore tenure, using the definition established in the previous chapter, was expressed. The following short examples of stone clearance around settlements and cairnfields will off a starting point for this argument.

At the Bronze Age settlement of Standrop Rigg in Northumberland, investigations were undertaken in the area of six huts associated with numerous banks and lynchets (Jobey 1983). Some of the hut

platforms were surrounded by low banks of stone. These were formed during the life of the houses, but in at least one case they continued to be the focus for the deposition of stone even after the house had fallen out of use; the shape of the original house was respected and remembered in the ring of stone (Fig 5.1). The field system that was constructed around the buildings at Standrop Rigg was in a number of places attached directly to the rings of stone. The field banks did not differ in composition from the rings of stone; they never stood as walls, nor was there any evidence for there having been a hedge or a row of posts. The low banks would seem to have marked out areas of land in the same way as the rings of stone delimited the house.

At Standrop Rigg *fieldstone* was deliberately placed around the exterior of domestic structures. The building was incorporated within the field system, and therefore included within the material network that defined resources for the purpose of initiating or asserting usufruct. The evident symbolism of such an act – relating the domain of the family (the house), associated with structures of kinship and inheritance, to the field, associated with agricultural production, fertility and subsistence – can, now, only be crudely represented. The connections between these social domains were embodied within daily tasks undertaken in both house and field. Such settings were informally bounded by deposited fieldstone. Once the stone had accumulated, however, it would have contributed to any structuring or negotiation of land tenure since both house and field were demarcated in stone.

Such unenclosed settlements are often located close to and in association with cairnfields. These small cairns, while ostensibly the context for Bronze Age agricultural practices, provided the context for a range of formalised or perhaps ritual deposits. There is little doubt that in the majority of the cases stone was informally heaped onto the cairns, and in this sense the cairns unintentionally structured future attitudes to the locale just as in the settlements. However, unlike the fieldstone collected around the outside of the houses, the cairns often incorporated formal components: they occasionally covered human burials or token deposits of cremated bone; they included caches of material culture, usually lithics; and they incorporated formal structural elements such as an outer kerb. The site of Birrel Sike in western Cumbria will serve as an example for the moment. Of three excavated small cairns, two had evidence for a kerb of larger stones (Richardson 1982; and below 5.3). One of these cairns was built around two earthfast boulders, and deposited within the mound were 12 pieces of worked flint and a polished shale blade. The other cairn overlay a large stone slab that was placed on top of a deposit of charcoal. These structured elements would seem to reflect formalised 'events' in the life of the cairn. Such minor rituals betray a discursive aspect to the construction of what are otherwise heaps of fieldstone, and as such they offer the possibility that small cairns were deliberately employed as tenurial markers designed to identify usufruct over a plot of land.

Differences can be observed in the way stone is deposited in cairns and around fields. Each affords a distinctive time-space setting for agricultural practice, and as structures – rules and resources – they afforded different possibilities to agents. Consequently, tenure – as agency – was articulated in different ways in cairnfields and field systems. These variances are chronologically separable (Fig 5.8): cairnfields are generally earlier that field systems and unenclosed settlements, although the construction of cairns has a long currency and there would have been some overlap in their use. Nonetheless, by considering the deposition of fieldstone in terms of structures of significance and domination I hope to explain how tenure might have been articulated in the differing settings of cairnfields and settlements, and how it structured future practices within the same locales. The chapter begins by briefly discussing the clearance of fieldstone around buildings and fields, and then goes on to focus on the transformation of fieldstone into cairnstone. The concluding section attempts to resolve the distinctions between tenure within cairnfields and tenure amongst the houses and fields.

5.2 Rings of stone: fieldstone and unenclosed settlement

There are only a few excavated, unenclosed settlements in northern England similar to the site at Standrop Rigg, and they would all seem to have been occupied during the middle to late second millennium BC and into the early centuries of the first millennium BC – though the settlements with the greatest number of radiocarbon dates have yet to be fully published (i.e. Hallshill and Houseledge, see below). In each case, the excavated houses were surrounded by a loose and unstructured bank of stone similar in construction to the nearby field boundaries. This pattern is not maintained at unenclosed settlements located in lower lying areas, such as at Kennel Hall (Jobey 1978), Lookout Plantation (Monaghan 1994) and Murton High Crags (Jobey and Jobey 1987). However, if these buildings had a substantial stone component it would have long since disappeared following later agricultural clearance.

A settlement similar to that at Standrop Rigg was excavated at Houseledge on the slopes of Black Law located towards the north-eastern limit of the Cheviot Hills (Burgess 1980b; Burgess 1981; Burgess 1982). The building at Houseledge was also post built and surrounded by a bank of stone, 1m high and 3m in width (Fig 5.1). The bank partially overlay the ring groove of an earlier circular building that had itself been constructed on what was considered by the excavator to be an existing field terrace. Similar unstructured banks of stone formed the edges of the surrounding field plots and the horseshoe shaped 'sheep stells'. There were numerous finds of pot sherds and lithics from within these stock shelters and, in greater concentrations, distributed across the terraced area on which the buildings were located.

	Site Name	Calibrated Date[1]	Sample Description	Uncalibrated Date	Reference
1	Green Knowe	1390-1000 BC	burnt wattle from wall groove, house 2	2975±63 BP	Jobey 1981a
2	Green Knowe	1300-990 BC	burnt wattle from wall groove, house 3	2934±45 BP	Jobey 1981a
3	Green Knowe	1690-1310 BC	carbonised wood from wall groove, platform 5	3220±75 BP	Jobey 1981a
4	Green Knowe	1080-780 BC	carbonised wood from stakeholes, platform 8	2731±75 BP	Jobey 1981a
5	Hallshill	1220-830 BC	spelt chaff from 'early' context	2840±70 BP	van der Veen 1992
6	Hallshill	1310-890 BC	spelt grain from same context as #5	2895±70 BP	van der Veen 1992
7	Hallshill	1080-790 BC	spelt grain from 'early' context	2750±70 BP	van der Veen 1992
8	Hallshill	830-410 BC	emmer grain from 'late' context	2560±70 BP	van der Veen 1992
9	Standrop Rigg	1430-1000 BC	wood charcoal overlying subsoil in Area 2	3000±80 BP	Jobey 1983

Table 5.1 Selected radiocarbon dates for prehistoric unenclosed settlements discussed in section 5.2.

At Hallshill, Redesdale, a ring groove house, 9m in diameter, was surrounded by a loose bank of fieldstone that had been deposited during the life of the building (Gates 1982, 7). A small section of a nearby field boundary was excavated and it too was of the same construction as the bank surrounding the building. Fieldstone had been cleared to the edges of the plot and around the outside of the building. Also of interest, a barbed and tanged arrowhead found within the ring groove structure was suggested by the excavator to have come from a grave that had been disturbed when the building was constructed. So as at Houseledge, the building was located upon a pre-existing feature.

The 'type-site' for all of the settlements discussed above was excavated at Green Knowe in Peebleshire (Jobey 1981a). The timber buildings at Green Knowe, constructed on roughly circular terraces on the hillside, were surrounded by a bank of stone originating from the surrounding fields. As the fields were farmed the stone was cleared and piled up around the wall with only a slight gap left for the entrance. On one of the platforms (platform 2), where there had been at least two structures built on the same terrace, the bank of stone was particularly large (Fig 5.1). Amongst the stones, by the entrance, there was a substantial quantity of refuse: broken pottery, fragments of two shale objects and numerous stone rubbers. The amount of stone around platform 2 increased during the life of the building that it surrounded, as evidenced by the interleaving of midden layers and stone. As at Houseledge and Hallshill, the surrounding field banks consisted of little more than a loose bank of fieldstone (Fig 5.2).

[1] Calibrated using OxCal v3.5 (Bronk Ramsey, 2000), atmospheric data from Stuiver et al. 1998.

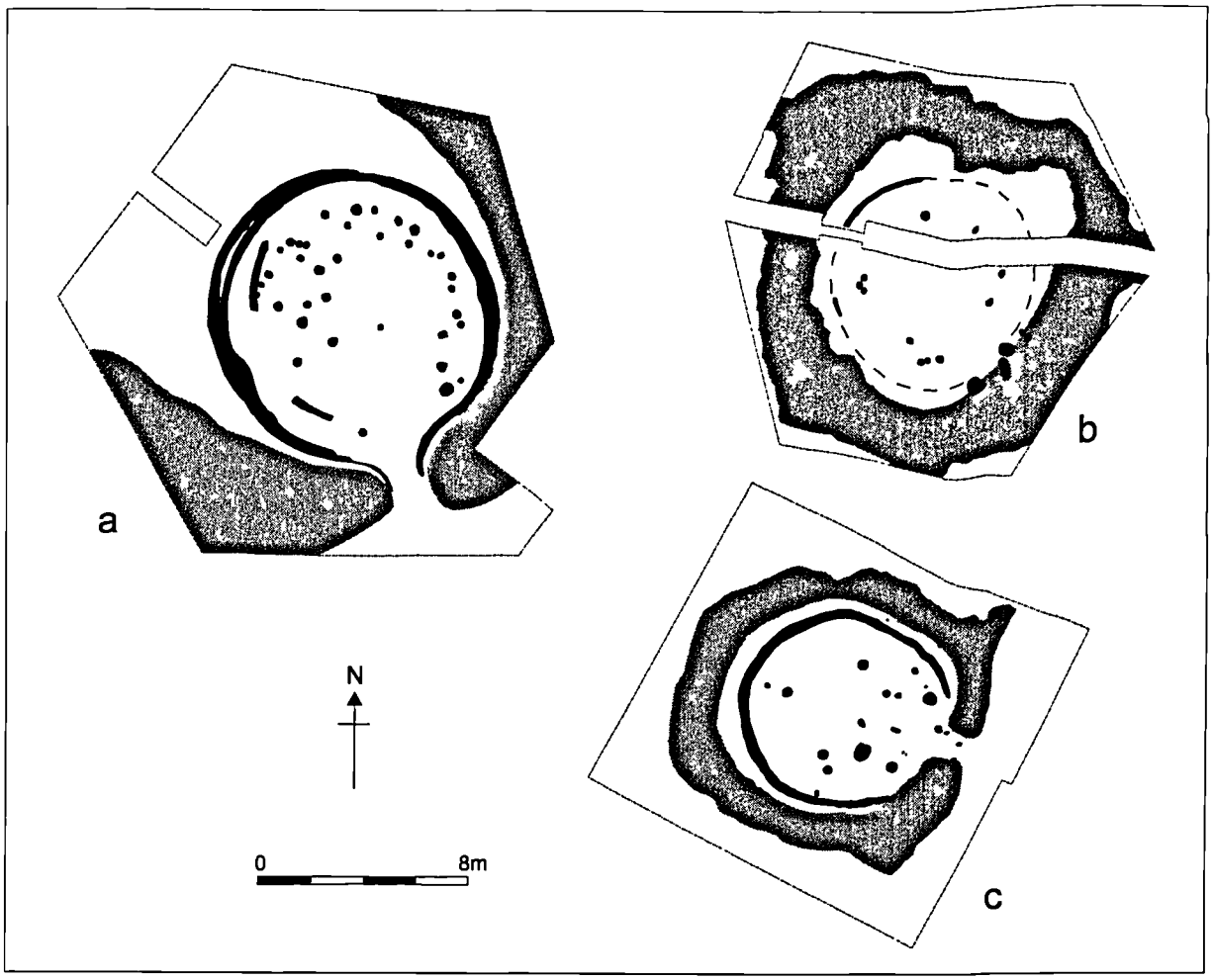

Fig 5.1 Simplified plans of round houses with outer 'rings' of fieldstone (shaded); a: Green Knowe, platform 2; b: Standrop Rigg, hut 4; c: Houseledge (based on Burgess 1980b; Jobey 1981a; Jobey 1983).

In each of the five examples presented above, the impermanent building is enclosed within a durable ring of fieldstone. When occupation of the building eventually ceased, the ring of stone would have remained to fossilise the shape and size of the house. It is not known whether the bank of stone served a purpose in the architecture of the building. Unlike examples of buildings that have low walls sufficiently substantial to add support to the roof timbers, these banks were unstructured and only consisted of loosely placed fieldstone. In support of this, where it can be determined, the stone was not deposited until the building had been constructed. At Standrop Rigg and Houseledge the bank of fieldstone respected the line of the building in such a way that the walls must have been constructed before stone began to accumulate around the exterior. While at Standrop Rigg the fieldstone continued to be heaped onto the bank even after the building had gone out of use and either collapsed or been dismantled. It would seem, therefore, that buildings became at the very least a convenient place around which to dump fieldstone, though perhaps there was an intentional effort to enclose the house in the same manner as the boundaries enclosed the neighbouring fields.

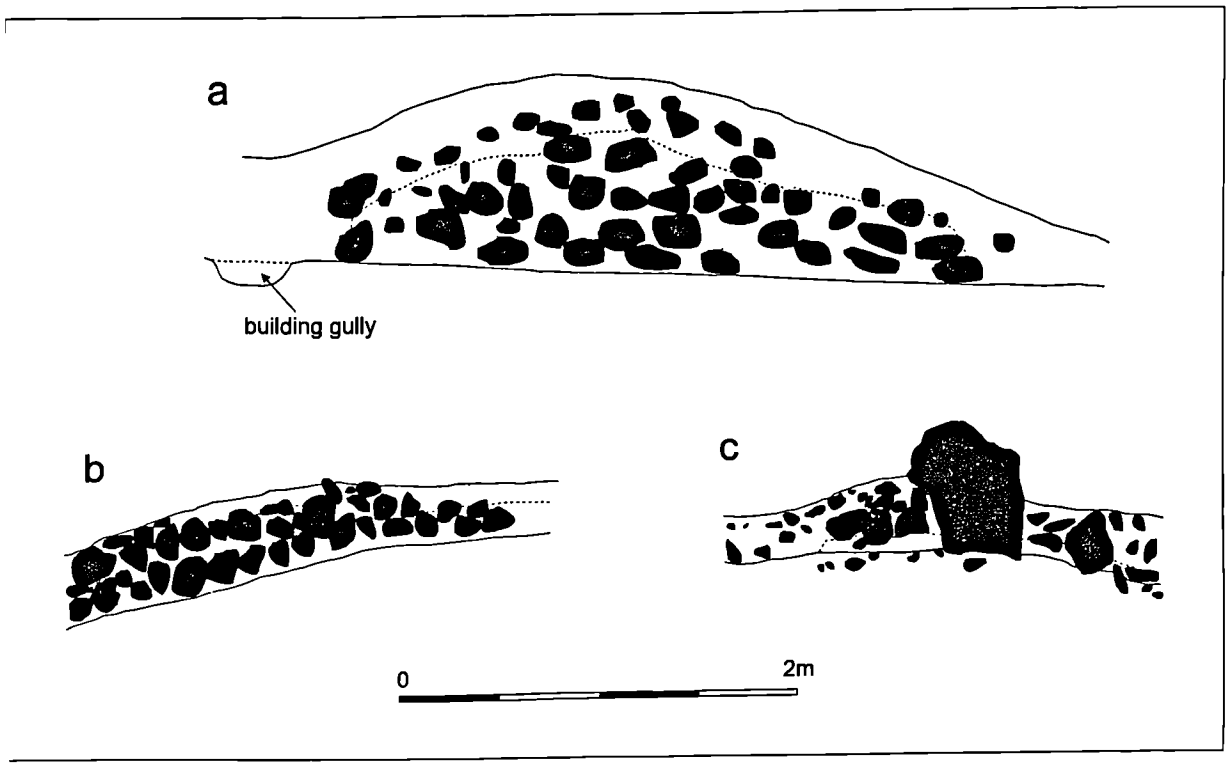

Fig 5.2 Simplified sections through banks of fieldstone deposited around buildings and along a field boundary: (a) Green Knowe platform 2; (b) Standrop Rigg house 2; (c) Green Knowe clearance bank (based on Jobey 1981a; Jobey 1983).

The fact that similar banks of fieldstone were used to enclose the plots of land that lay beyond the buildings offers some support for the latter suggestion, but again there are two ways of interpreting this phenomenon. The stones may have been placed along the side of the fields as a means of effective disposal with the minimum possible effort. On the other hand, the position of the stone around the exterior of the field may have been a deliberate attempt to create a boundary, even if it would not have acted as a barrier. Let us for the moment take the conservative interpretation and suggest that the piling up of fieldstone around the edges of fields and the outside of buildings was for convenience sake. Unintentionally people began to create a durable stone plan of the settlement – a signature of their occupation where before those traces had been ephemeral. So even if the functional reason for dumping stone around buildings and fields is accepted, we cannot escape the implications of such an action in structuring future occupation of the settlement. In this sense it does not matter whether the initial intention was simply to dispose of fieldstone efficiently or to create a boundary, the result *was* a boundary, intentional or otherwise.

Fieldstone is a resource that structures contemporary and future inhabitation within the settlement and amongst the surrounding fields. As a product of agriculture it binds together, encloses, defines and slowly fossilises the traces of occupation. It also serves to structure further inhabitation of time-space in the settlement. In this case, the power to occupy and exploit space, tenure if you like, is constrained

by the deposition of fieldstone. Correlatively, the power to deposit fieldstone enables an agent to control the edges of spaces that had hitherto been limited by the time-space extension of practice.

The role of fieldstone remains ambiguous in such an interpretation since is not clear what it represented or meant to those who gathered it from the fields. However, the agricultural clearance of stone had been practised for several centuries before it became incorporated within settlement architecture. Cairnfields, although they have a long chronology, seem to be the earliest context in which fieldstone began to be valued as a means of materialising tenure.

5.3 Maintaining traditions: fieldstone and cairnfields

Cairnfield is a generic term for the groups of small cairns that are found in greater or lesser concentrations in most of the upland areas of Britain. They are characterised by heaps of stone, roughly round or oval in plan, often less than 5m in diameter, and also frequently in linear and sometimes ill-defined spreads, numbering from several to many hundreds in any one location (e.g. Cherry 1961; Fleming 1971; Jobey 1968). Where studies have been undertaken, they are predominately located on flat or gently sloping southerly facing sites. They are associated with large, more elaborate cairns, ring cairns and cists. In Northumberland, the cairnfields are on occasion found in association with irregular boundaries and within small field systems; settlements are also commonly situated nearby.[2] In Dumfriesshire, the cairnfields are located on predominately southerly facing slopes at altitudes between 183-305m OD (Yates 1984, 220-223). They also occur in a discrete concentration well apart from other agricultural remains such as cord rigg, enclosure systems and linear earthworks (RCAHMS 1997, 46 and Fig 41). On the North York Moors the cairnfields are similarly found on flat or south facing, well-drained land at altitudes below c.300m and above the limits of enclosed, improved pasture (Fleming 1971, 21). This patterning is undoubtedly the result of many different factors. Nonetheless the commonsense observation that the cairnfields are situated in places more suitable for cultivation cannot be avoided.

Cairnfields are not characteristic of one particular period since stone clearance has been practised in Britain for monumental and agricultural purposes from the Neolithic up until the present day. A group of stone heaps on a hillside above the South Tyne in the North Pennines includes, juxtaposed, prehistoric burial mounds and cairns built by a local eccentric in the mid-20th century. Elsewhere the palimpsest may be less extreme, as cultivation and funerary activity took place intermittently at a locale over two millennia or more. On Dartmoor, for example, the majority of clearance heaps are

[2] 56% of a total of 117 cairnfields are directly associated with field boundaries, cultivation remains or settlements – data based on information held by the Northumberland Sites and Monuments Record. The 'true' proportion is likely to be much higher as the presence of slight boundaries and house sites can only be established after intensive survey under favourable conditions.

found within medieval fields, there are only a small number of cairnfields which may be prehistoric in date (Fleming 1980). At Callaly Moor in north Northumberland (discussed in more detail below) both prehistoric and medieval clearance features were excavated (Cowley and Edwards 1988). The date of cairns was distinguished partly by their association with other, datable, archaeological features; but it should be sobering to realise that apart from these associations there was very little to distinguish between later prehistoric and medieval cairns.

	Site Name	Calibrated Date[3]	Sample Description	Uncalibrated Date	Reference
1	Large Cairn, Chatton Sandyford	2140-1820 BC	oak charcoal from stake holes, stakes made from 'branches of a few inches in diameter'	3620±50 bp	Jobey 1968, 30
2	Cairn E, Chatton Sandyford	3800-3350 BC	residual? charcoal of unspecified species recovered from central pit	4840±90 bp	Jobey 1968, 40; *cf* Feacham 1973, 339
3	Cairn 2, Millstone Hill	2300-1700 BC	oak charcoal sealed beneath stones of covering mound	3640±90 bp	Jobey 1981b, 35
4	Cairn/cist, Callaly Moor	1520-1210 BC	not published	3115±60 bp	Macklin et al. 1991, 226
5	Cairn/cist, Callaly Moor	1880-1520 BC	not published	3390±70 bp	Macklin et al. 1991, 226
6	Enclosure 1, Kellah Burn	2580-2200 BC	charcoal sealed beneath re-deposited subsoil and associated with initial clearance of the monument	3940±60 bp	Unpublished
7	Ring cairn, Birrel Sike	2400-1750 BC	charcoal in hollows in centre of structure	3680±100 bp	Richardson 1982, 13
8	Cairn 13, Birrel Sike	2350-1700 BC	deposit of charcoal covered by a large slab under the cairn	3650±100 bp	Richardson 1982, 17
9	Cairn A, Crawley Edge	1880-1430 BC	spread of oak charcoal (small branch size or smaller) on mineral soil beneath the cairn	3350±90 bp	Young and Welfare 1992, 34
10	Cairn A, Crawley Edge	1880-1490 BC	charcoal rich soil abutting primary arrangement of stones	3370±80 bp	Young and Welfare 1992, 39

Table 5.2 Selected radiocarbon dates for prehistoric cairnfields discussed in section 5.3.

Despite these qualifications, which are on every occasion raised when the dating of cairnfields is discussed, there is clear and unambiguous bias in both the radiocarbon dates and the structural evidence towards a second millennium BC date for many of the sites. In northern England the radiocarbon dates from six excavated cairnfields all calibrate to the end of the third millennium BC or the first half of the second millennium BC (Table 5.2). With the exception of the early date from cairn E at Chatton Sandyford (which is possibly residual, see below), and the late second millennium BC date from one of the cists at Callaly Moor, they all lie within the first half of the second millennium BC. The material culture recovered from the cairns also supports an earlier Bronze Age date. The

[3] Calibrated using OxCal v3.5 (Bronk Ramsey, 2000), atmospheric data from Stuiver et al. 1998.

majority of the lithics and pottery are undatable except in general terms, but there are sufficient examples of beakers and urns together with diagnostic lithics to concur with a date range in the earlier Bronze Age. Earlier Bronze Age ceramics were recovered from one to several of the cairns in the majority of cairnfields excavated in the region. Invariably the pottery is found in the more complex 'burial' cairns, although the same pattern does not hold true for the lithics. Nonetheless, the structural and depositional characteristics of the smaller, unsophisticated cairns and the ring cairns places them in the same typological tradition as the larger, more complex mounds. Together with the association between cairnfields and second millennium BC settlement and burial remains, the radiocarbon dates, the artefacts and the typological affinities all combine favourably in suggesting a date range somewhere in the earlier Bronze Age.

To further support this view, the environmental record of the upland areas where the cairns are situated demonstrates that there is an increase in 'patchy clearance' towards the close of the third millennium BC and in the early centuries of the second millennium BC, that is to say contemporary with the formation of the cairnfields under discussion. In recent reviews of the evidence, Richard Tipping has argued for an increase in anthropogenic clearances from c.2500 BC (Tipping 1996; Tipping in RCAHMS 1997). Comparison can also be drawn with studies undertaken on the north-western valleys of the Cheviot Hills, where an increase in woodland clearance along with evidence for cereal cultivation in upland areas occurred during the first half of the third millennium (Evans 1999). There are two environmental sampling sites within close proximity to the cairnfields discussed below. Analysis of a pollen core at Camp Hill Moss, located in the vicinity of the cairnfields at Chatton Sandyford and Millstone Hill, revealed evidence for limited woodland clearance indicated by an increase in pasture during the second millennium BC (2030-1120 BC, 3510±70 and 3110±80 BP, Davis and Turner 1979, 799; Jobey 1981b, 35). While at Callaly Moor, sediment and pollen analysis was undertaken on a sampling column taken from an eroded section in the valley fill next to a minor tributary of Coe Burn located 650m to the south-west of the excavated cairnfield (Macklin et al. 1991). The section exposed a burnt mound: a deposit of dark sand with burnt stones and charcoal (2580-2190 BC, 3920±70 BP) that filled an anthropogenic cut with a stepped profile. Overlying this burnt material was a layer of colluvium, that was in turn overlain and partly truncated by an alluvial deposit (sealed by organic soil: 900-390 BC, 2540±110 BP). An assemblage of pollen was recovered from the alluvial deposit. The lowest layers of the assemblage were characterised by partially cleared mixed woodland (oak, birch, alder and hazel) with some open heath, grassland and evidence for cereal (Gramineae >40μm). There was a distinctive rise in the concentration of cereal pollen followed by a decline associated with an increase in grassland and 'ruderal taxa' along with further reductions in woodland. Two further episodes of woodland regeneration were then recognised, interspersed by a period of increased grassland.

Taken together, the environmental evidence, material culture and radiocarbon dates support the claim that cairnfields were constructed during the late third and early second millennia BC. There was an increase in the clearance of woodland during the latter half of the third millennium BC, coinciding with the construction of small cairns from field-cleared stone that incorporate structural and depositional practices similar to those found in mortuary monuments.

'Burial mounds' or 'clearance cairns'

While the dating of cairnfields has, to a large degree, been accepted, a central concern for over fifty years was the validation of a distinction between cairns with a sepulchral function and those built as a consequence of agricultural activity (e.g. Ashbee 1957; Barber 1997; Barnatt 1994; Feacham 1973; Graham 1959; Yates 1984; Young and Welfare 1992). Cairns without burials had been excavated yet they were not recognised as resulting from agricultural activity. The excavation of small 'empty' cairns are recorded by several well-known nineteenth century antiquarians. Canon Greenwell makes frequent but unfortunately brief references to cairns and barrows that, upon excavation, provided no evidence for a burial. For Greenwell the overriding reason for the lack of a burial was because the bones had long since decomposed beneath the mound. He did, nonetheless, recognise that another interpretation was possible:

> It has been held by some ... that these now empty and tenantless barrows are cenotaphs; that, in other words, no interment has ever taken place within them. Such a practice surely belongs to an age wherein the state of culture must have been much more artificial both in sentiment and habits than any by which we can imagine the people who have erected these barrows to have been influenced.
>
> (Greenwell 1877, 340 *ff*)

Greenwell only seldom excavated at what are now recognised as cairnfields, otherwise he targeted, as with his contemporaries, more prominent, substantial barrows for investigation. Canon Atkinson, in the late 1800s, explored several of the mounds in the large cairnfield at Danby Rigg on the North York Moors (Elgee 1930, 104; *cf.* Harding and Ostoja-Zagórski 1994). He too found 'empty' cairns though a few contained sherds of pottery and lithics. As another example, Fox and Thriepland interpreted the cairnfields they excavated in Glamorgan as Early Iron Age cemeteries (Fox and Thriepland 1943). Most of the cairns covered only ephemeral features: shallow pits, rough kerbs, occasional flat slabs laid in the centre at the base of the mound, small and large hollows occasionally filled with stones, and oblong, stone-lined pits. The prevailing assumption that all groups of cairns were prehistoric cemeteries remained unchallenged until the second half of the twentieth century.

The category of 'clearance cairn' was independently established by several fieldworkers. Making a link between the rickles of cleared stones and the small cairns with which they were physically joined was not a major interpretative step. There were, furthermore, plenty of modern parallels for cairns made up of field-cleared stone. Paul Ashbee interpreted several of the small cairns that he excavated

on Kildale Moor in North Yorkshire, and that had no significant features in their construction with the exception a couple of shallow pits and patches of charcoal, as the remains of field clearance (Ashbee 1957, 192). Graham, in his review of cairnfields in Scotland, distinguished between sepulchral monuments and 'collections of stone-heaps formed in the process of clearing land for cultivation' (Graham 1959, 8). The Archaeology Division of the Ordnance Survey undertook a project to establish whether cairnfields were burial monuments or clearance features (Bowden and Mackay 1999, 8; Feacham 1973). The distinction was therefore made between cairns for burial and cairns for clearance, even though there may be some 'overlap' in the functions. Yates, in his study of the cairnfields of Dumfriesshire, also made a distinction between burial cairns and clearance cairns. In his overriding opinion, however, the primary reason for the construction of cairnfields was to clear unwanted stone from the fields (Yates 1984). The evidence in support of this assertion was not only the general lack of burials beneath excavated cairns (6 burials in 40 excavated examples), it was also, as discussed above, the location of cairnfields on southerly slopes and within a tightly defined altitudinal range. Subsequent excavators have maintained the distinction between burial and clearance cairns (e.g. Barber 1997; Barnatt 1994; Young and Welfare 1992). Although, pragmatically, many have accepted that these functions operated together and allowed for a degree of blurring of categories (e.g. Cowley and Edwards 1988, 35-37): clearance cairns were convenient places for the disposal of the dead, and mortuary monuments were existing features around which fieldstone could be piled.

The use of this dualism has a number of implications: 'clearance' cairns are interpreted as being informal and unstructured; they are consequently discussed in collective terms – the cairnfield – and rarely if ever considered individually. The cairnfields are used as evidence for an economic activity, as demonstrated by the unsophisticated structure of the cairns, and as a result, cairnfields are isolated from socio-ritual explanations of other upland monuments such as burial mounds. These implications will be considered in the remainder of this section by breaking down the distinctions between cairns for burial and cairns for clearance, and examining the evidence for formalised practices associated with the construction of the 'unsophisticated' clearance cairns. The data will be limited to excavated cairnfields in northern England, specifically the counties of Northumberland, Cumbria, Durham and North Yorkshire (a non-exhaustive list of sites is provided in Annable 1987, 468-472).

Chatton Sandyford, Northumberland

On the fell sandstone moorland between the valley of the Till and the coastal plain in north Northumberland there are a number of large cairnfields, the three most prominent being on the higher ground of Camp Hill, Willie Law and Millstone Hill (Jobey 1981b, Fig 3). The first of these, described here as Chatton Sandyford, consists of over 150 cairns located along 1km of the flat crest of a north-south aligned ridge. Several larger cairns are interspersed with many small cairns and occasional low

stony banks, the latter forming no evident pattern with the cairns. During fieldwork undertaken in the 1960s excavations took place at one of the larger cairns and five of the small cairns (Jobey 1968).

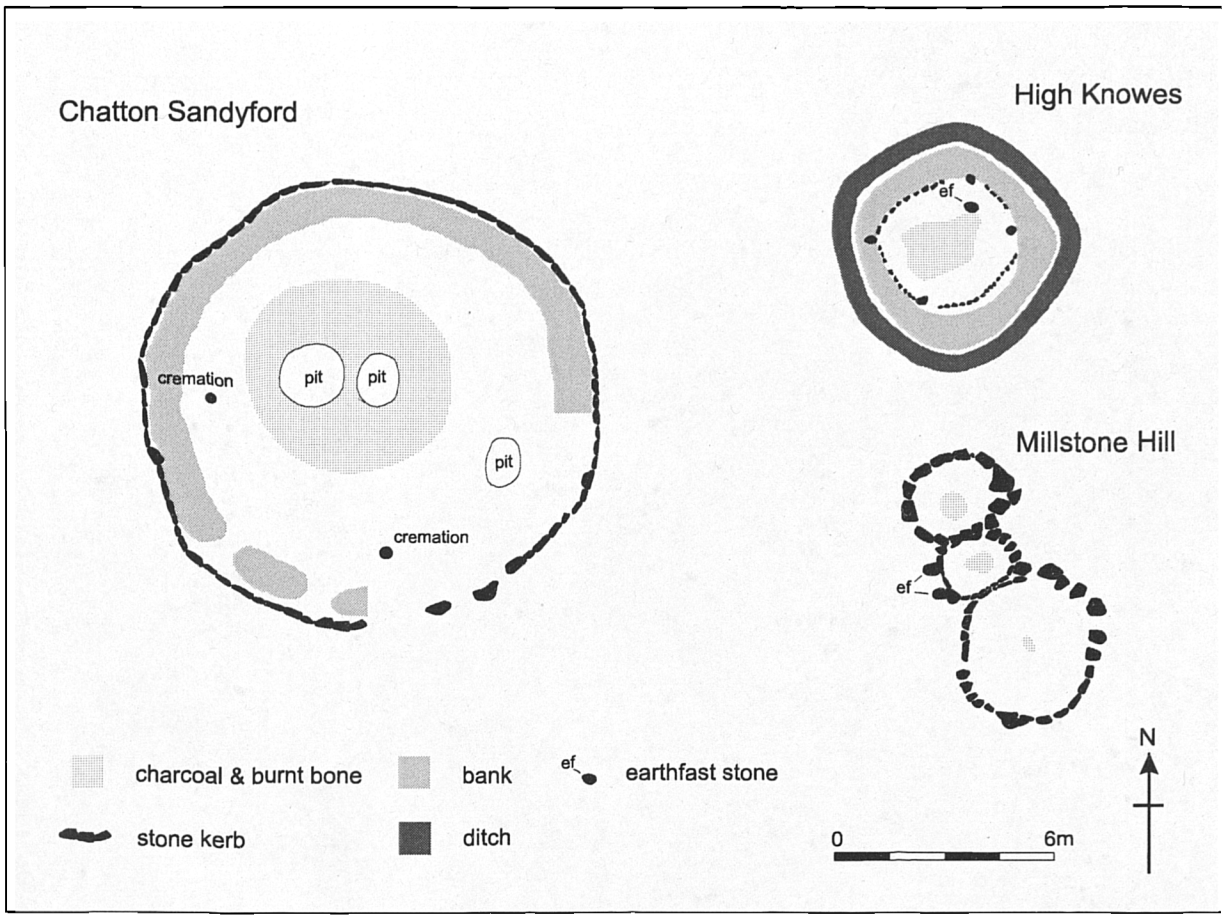

Fig 5.3 Simplified plans of large and complex cairns (based on Jobey and Tait 1966; Jobey 1968; Jobey 1981b).

Of the excavated cairns the largest and most prominent of the six was over 12m in diameter and approximately 1m high (Fig 5.3). The sequence, as recognised by the excavator, was relatively complex. Initial occupation at the site was indicated by a spread of charcoal, evidence of a burnt ground surface and four small stakes burnt *in situ*. This may have been a pyre or a deposit formed during the clearance of the ground prior to the building of the cairn. In support of the latter, the charred material was from brushwood or light scrub. There then followed a sequence of at least four burials. The first of these, a beaker, was found within a 0.25m deep oval pit. As with the other burials the excavator interpreted evidence of considerable disturbance – in the case of the first burial, the up-cast from this disturbance yielded two v-shaped jet buttons. A second burial, associated with a broken beaker, was located in a large circular rock-cut pit. There was no evidence for any significant hiatus between these two burial events. At this time the burials had yet to be covered by a cairn, although the presence of two stone holes suggests that the graves were clearly marked. Following the second burial this situation changed. Large stones were laid on top of the ground surface from the centre outwards,

leaning in, and embedded in the underlying soil. A third burial was then cut through this basal layer of stones. Unfortunately heavily disturbed by later robbing, there was evidence for there having been a third beaker in the pit. Regardless of the exact sequence, it is evident that following the final beaker interment the monument existed as a low circular spread of largish sandstone and limestone blocks. This feature was further defined and 'monumentalised' with the addition of an encircling kerb of large dressed sandstone slabs set inside a trench, and a compacted stone and soil 'platform', the latter encircled by the kerb. The cairn remained the focus for activity with additional deposits of pottery and human bone of both Bronze Age and Roman date.

Further investigations were carried out on five cairns that lay adjacent to the large monument. In each case they showed some structural similarities with the larger cairn. At cairn A, the small irregular heap of stones, c.5m in diameter, sealed a number of features: a heavily burnt area, roughly circular in shape, and two shallow interconnected pits (the contemporaniety of these features was not established) (Fig 5.4). Finds included flint flakes with and without evidence for secondary working; this seems to represent a deliberate deposit since the majority of scrapers were sealed beneath the cairn (Table 5.3).[4] Cairn B, situated about 80m to the east of the large cairn, was smaller than cairn A but of similar construction; it also lay on top of a thick layer of panning. Below the panning and cut into the subsoil was a shallow pit or hollow. A scatter of charcoal was sealed beneath the iron pan. Only a few finds were recovered from the body of the cairn, including one sherd of coarse prehistoric pottery (possibly from a food vessel or urn) and two spalls of flint. Cairn C, a larger cairn, also sealed a flint scatter of 30 pieces, although some of these lay outside the area sealed by the cairn surface.[5] The mound of cairn E sealed a rock cut pit containing charcoal which was later radiocarbon dated to 3800-3350 BC (Table 5.2); the charcoal may be residual, possibly coming from a burnt deposit located just outside the pit (Feacham 1973, 339); no finds were recovered from beneath the cairn.

	Unworked Flakes	Worked Flakes	Scrapers
Sealed Beneath Cairn	4	-	4
Within Cairn	2	-	-
Outside Cairn	8	1	1

Table 5.3 Distribution of lithics, Cairn A, Chatton Sandyford.

The cairns at Chatton Sandyford would at first seem to fall into two broad types: the large burial cairn and the smaller clearance cairns. The larger cairn is characterised by 'complete' burials together with pottery vessels and the construction of a liminal area encircling the cairn. In this example the liminal

[4] The material archive of the excavations undertaken at Chatton Sandyford, High Knowes and Millstone Hill was examined at the Museum of Antiquities, Newcastle upon Tyne.
[5] Unfortunately the material archive is not complete and it is not possible to provide details of the distribution of all the finds.

area is marked by a kerb and a 'platform'. In contrast, the smaller cairns have no evidence for 'complete' burials nor is there a liminal area. Yet there are some similarities with the larger monument, for example: pits, spreads of charcoal and deposits of lithics. At cairns B and C all these aspects are present while at cairn C there is only a covering mound of stones and deposits of lithics. Other cairns in the same cairnfield were excavated by Canon Greenwell. There again the presence of a kerb seems to be associated with a 'complete' burial – nevertheless, it is likely that Greenwell would not have recognised more subtle structural features which might also have defined a liminal area (e.g. cairn CXCII: Greenwell 1877, 412; *cf* cairn CC: *ibid*, 418-421; Hewitt and Beckensall 1996). A study of the evidence from Chatton Sandyford suggests, therefore, that the two broad types, burial and clearance, may well be evident in the archaeological record even if they do not express the subtlety of the structures particularly well. This pattern is repeated at the next example.

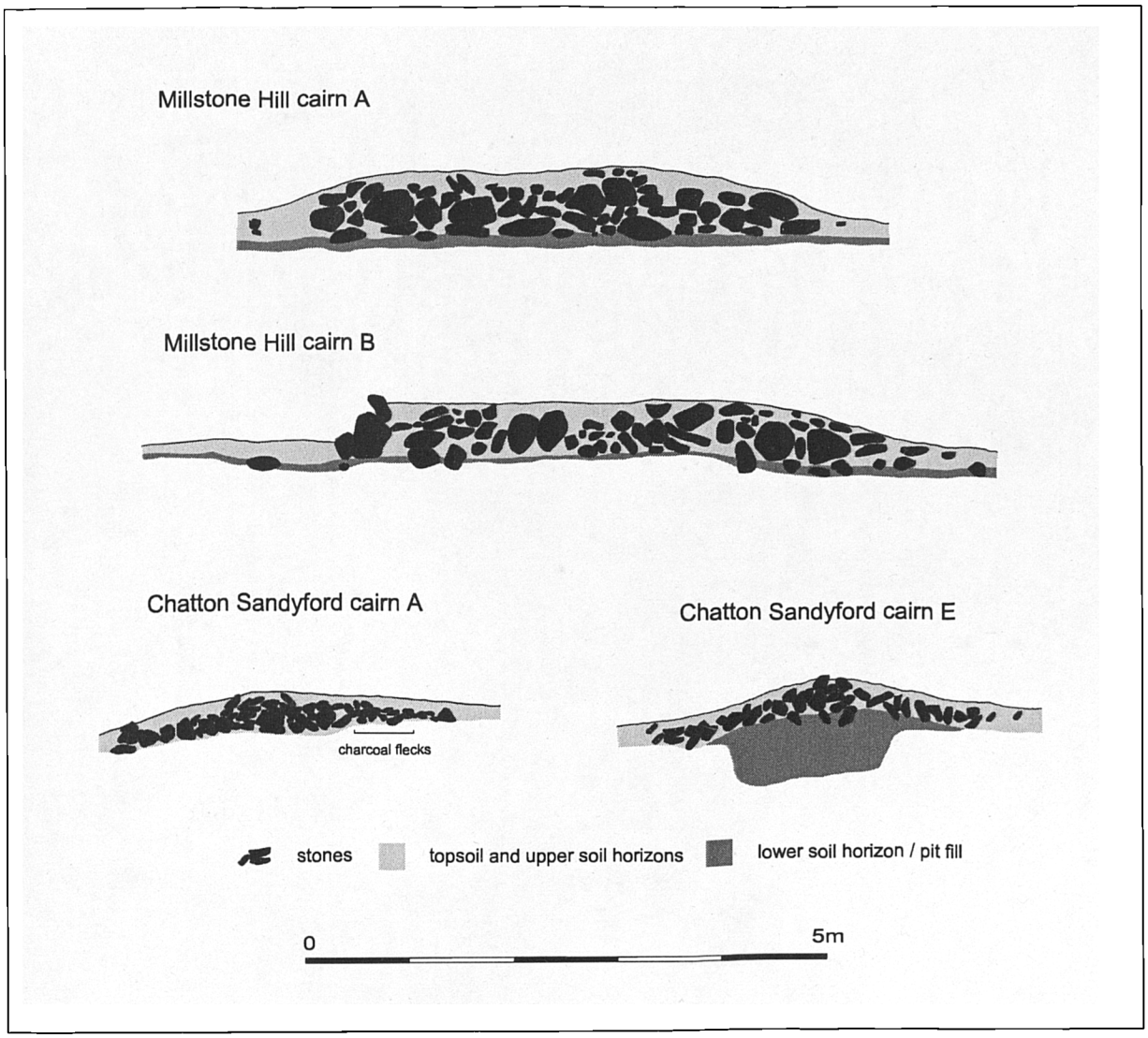

Fig 5.4 Simplified sections through small cairns (based on Jobey and Tait 1966; Jobey 1968; Jobey 1981b).

High Knowes, Cheviot Hills

At High Knowes, in the southern Cheviot Hills, a cairnfield was investigated in the early 1960s in conjunction with excavations at two Iron Age palisaded settlements located close by (Jobey and Tait 1966). The surrounding area is particularly rich in archaeological features: cairnfields, field systems, narrow rigg cultivation, enclosed and unenclosed settlements. The cairnfield under investigation is smaller than Chatton Sandyford with only 32 small cairns and five circular ditched enclosures. The majority of the cairns are situated on gently sloping ground, with steeper areas to the south-east that preserve evidence for lynchets or terraces. Two cairns and one of the ditched enclosures were excavated; one further cairn located in an adjacent cairnfield was also investigated.

The excavation of cairn 1 revealed a relatively complex construction sequence beginning with a rectangular setting of four small orthostats (Fig 5.3). A kerb was then laid between the orthostats, and beyond this a shallow ditch was cut into the rock. Overlying the area delimited by the kerb and the orthostats was a thick spread of charcoal made up of oak, birch and hazel. Found together with the charcoal were numerous small fragments of cremated human bone and, interestingly, 36 pieces of worked flint of which only two examples were burnt. A bronze ring-headed pin was recovered close to the eastern extent of the burnt deposit. The pin, broken into two pieces, was provisionally dated to the late Iron Age based on its similarity to dated examples from Ireland. This date is in contrast to the lithic evidence, which is itself secondary to the burnt deposit, and may be taken to suggest that the pin is intrusive (*contra* Jobey and Tait 1966). The burnt deposit was then sealed by a stone mound. The ditch was also deliberately back-filled at around the same time.

The second cairn was small, only 3m in diameter and 0.6m high. The body of the cairn only survived in part; the greater proportion of the structure had been disturbed down to bedrock, the activity having revealed a centrally positioned shallow pit. Finds from among the disturbed material included two sherds of pottery (one of which came from a beaker), a barbed and tanged arrowhead, the tip of another arrowhead, and a scraper. Eight other pieces of flint and some scraps of charcoal were also recovered from beneath the undisturbed portion of the cairn.

Further excavations were undertaken at a ditched enclosure situated to the west of cairn 2.[6] The site consisted of a shallow inner ditch, 0.9m wide and less than 0.3m deep, with an ephemeral outer bank enclosing a shallow deposit of stone and earth. The inner diameter of the structure was a little under 5.5m, with two gaps in the circuit aligned north-south. Only one other feature was recorded – a stone hole in the northern 'entrance' to the enclosure and adjacent to the bank terminal. Finds recovered

[6] Listed as a small hengiform enclosure in Harding and Lee 1987, 213.

from inside the ditch circuit included a fragment of worked jet, a large flint scraper and a sherd of coarse pottery.

Investigations also took place at a cairnfield to the east of the main focus of the fieldwork; only one cairn was excavated. The site proved to have been considerably disturbed. Despite this, some remains of a covering mound of earth and water rolled boulders did still remain. Underneath the cairn material and cut into the original ground surface were two 0.6m deep pits. Although robbed they still contained traces of charcoal and burnt bone. Surrounding the mound was an irregular, penannular rock-cut ditch 1.8m wide and 0.3-0.6m deep with a 1.8m gap on the south side. The ditch had silted naturally before being levelled with material robbed from the central mound. Included in the ditch fill were several large slabs that may have covered the pits or been part of a cist. Finds from within the area delimited by the ditch included several pieces of pottery, probably from a minimum of two urn-type vessels, and numerous pieces of worked flint and quartz.

The two indistinct types of cairn recognised at Chatton Sandyford, burial and clearance, may, at first, also appear to be present at High Knowes. Yet, the presence of a liminal area, such as the outer ditches at cairn 1 and the small ditched enclosure, no longer indicates a 'complete' burial: in fact none of the cairns at High Knowes produced evidence for a burial. The fragments of burnt bone from cairn 1 and cairnfield B may be no more than the remains of 'token' deposits (later disturbance is also a likely factor). Instead, it is preferable to broaden the classification to include cairns where there may only be a token burial or where there are structural aspects within the cairn which mimic those of burial monuments (e.g. a ditch or kerb). The presence of charcoal and lithic deposits in all of the High Knowes cairns further emphasises the need to bedim any strict categorisations. The links between burial monuments and other cairns is only one possibility at High Knowes as it would seem that aspects of domestic architecture may also have been incorporated within the cairns, in particular, the penannular ditches of the enclosure and cairnfield B (*cf.* Bradley 1998, 147-158; and section 6.3). The former has been reinterpreted as a hut circle during more recent surveys (NMR Record Number NT 91 SE 23), although a close examination of the excavation report would suggest this is very unlikely. A more satisfactory explanation is that although it might not have contained burials, it was recreating the context of burial through the definition of a liminal area, while at the same time drawing on structural aspects of domestic architecture. The evidence from High Knowes shows that the cairns may be complex structures with associations that were neither strictly mortuary nor agricultural. This ambiguity is confirmed by the next example.

Barnscar, Cumbrian Fells

The large cairnfield of Barnscar, located on Birkby Fell near Ravenglass in western Cumbria, consists of 400 small cairns of varying sizes and shapes spread over 25½ hectares of the southerly slopes of the

fellside (Fig 5.5). They were first recorded in the nineteenth century by C W Dymond who, uncharacteristically for the time, recognised and surveyed even the more irregular and ephemeral stone heaps and traces of stone banks: 'In ancient areas of cultivation, similar banks are frequently found: and, in many such cases, it is natural to suppose that they may have been cast up to define the limits of holdings' (Dymond 1893, 180*ff*). He went on to excavate 14 of the cairns: 'In these were found, in an inverted position, several small cinerary urns, of the type commonly called "British", a few fragments of pottery, and some burnt bone.' (Dymond 1893, 186). Two of the pottery vessels have survived, both are collared urns. A further ten cairns were investigated by Walker in the 1950s (Walker 1965). Two were structureless heaps of stones resting on the subsoil, while the other eight sealed anthropogenic deposits and features. Although individual descriptions were not published for the cairns, a general sequence of deposits was provided. Above the boulder clay and weathered brash there was a darker 'loamy' clay which was interpreted as a buried soil by the excavator. It survived in patches that were most frequently located towards the centre of the cairn; elsewhere it had been stripped before the stones were piled on top, or it had since eroded. In the areas where the buried soil had been stripped there were frequent shallow pits filled with partially burnt stones and a dark brown loam with charcoal fragments. These pits were roughly circular to irregular in plan, and less than 0.5m across. The profiles varied from shallow, dished features to steep sided, flat bottomed pits, 0.2-0.4m deep. What was to become the interior of the cairn was then sealed with a sterile layer of boulder clay that may have been the spoil excavated from the pits. The cairn material, made up of stones excavated from the pits and collected from the surrounding area, was piled on top of this spoil, although no effort was made to seal all the pits or stripped ground surface.

Pollen recovered from the mineral soil underlying the cairn was dominated by tree taxa, particularly birch, oak, alder and hazel. This led Walker to suggest that the cairns were associated with the primary clearance of the woodland, probably during the Bronze Age. He did not, however, feel that the cairns resulted from field clearance: 'The use of excavated clay in their construction, as well as the great likelihood that many of the stones were themselves obtained by excavation, suggests that the cairns were made for some particular purpose' (Walker 1965, 61). The 'purpose' is not at all obvious. There were cremations buried in several of the mounds disturbed in the nineteenth century. Yet, the cairns which Dymond excavated were undistinguished: they were neither particularly large, nor were they in prominent locations within the cairnfield. Of the other ten cairns which he examined we can only presume that they were either structureless or covered insubstantial pits or hollows, as with those dug sixty years later. The cairns without burials are nevertheless interesting. The hollows and pits may be the result of clearing tree stumps as Walker tentatively suggests (Walker 1965, 62). They may also relate to the deliberate 'quarrying' of stones from the boulder clay in order to build the cairn. At cairn 10, for example, there were four pits (Fig 5.6). Three of these were small, no more than 0.3m in diameter and 0.1m deep. Another more substantial pit, 0.3m deep, had been cut into the disturbed

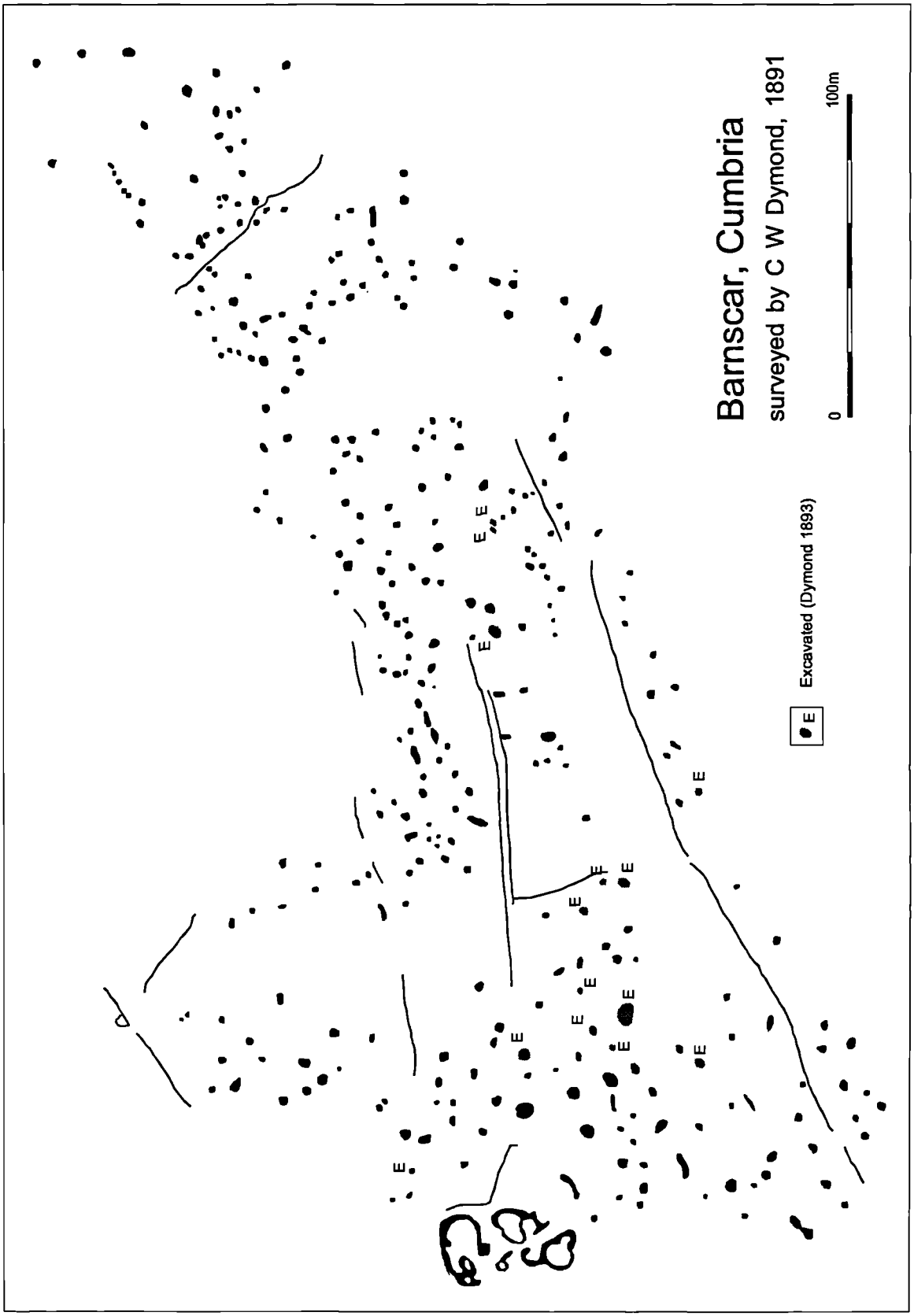

Fig 5.5 Plan of the small cairns, field banks, trackways and later prehistoric settlement at Barnscar, Cumbria (based on Dymond 1893).

boulder clay / brash 2m beyond the limit of the covering mound. If it were not for the charcoal and burnt stones in the fill of these cut features they might have been disregarded as stone holes. While that may be the means by which they were formed, the presence of a deliberate fill and the effort to seal them with a layer of clay suggests that this activity was formalised. A sequence that began with the clearance of vegetation and the breaking of new ground, was completed by the deliberate 'filling in' of burnt material, including stone, and the sealing of the 'wounds' with fresh clay and a mound of stones.

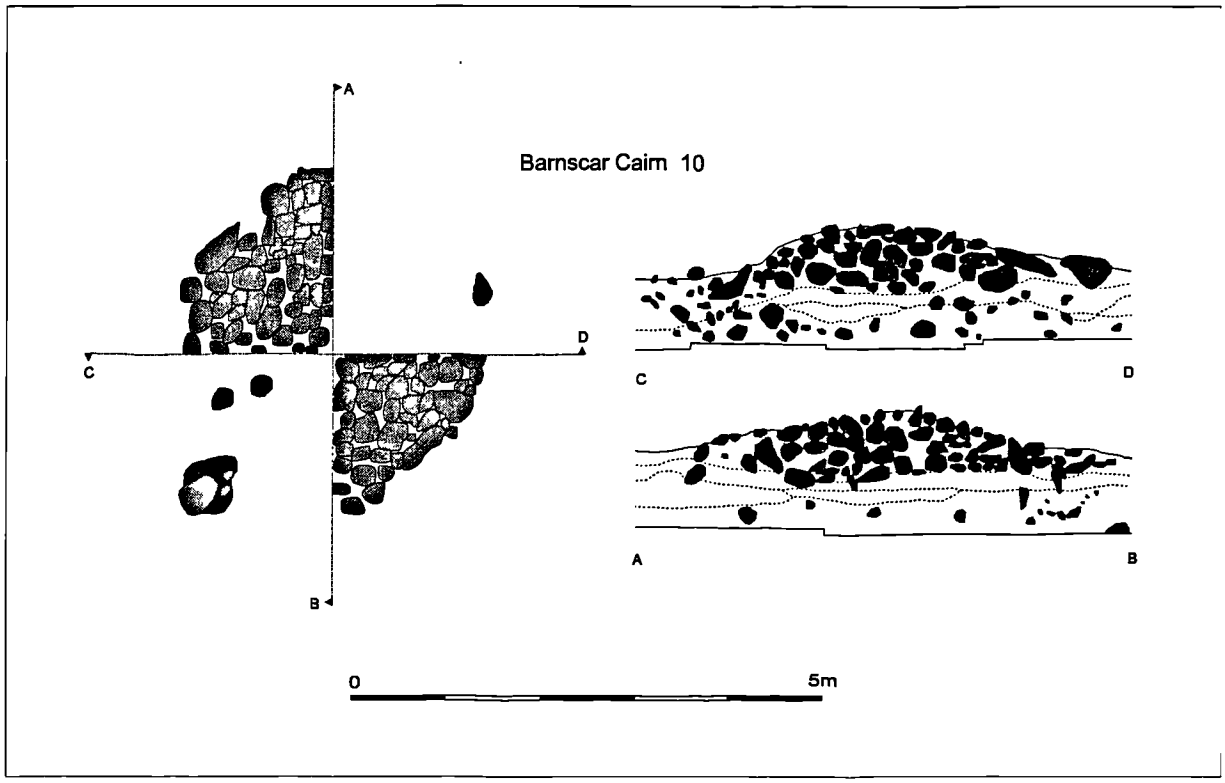

Fig 5.6 Simplified plan and sections of cairn 10, Barnscar (based on Walker 1965).

Kellah Burn, North Pennines

The cairnfield at Kellah Burn, on the northern edge of the North Pennines, was smaller than Barnscar. While the area is rich in upstanding archaeological remains, the most numerous features are some forty small cairns distributed across several hectares of south facing rough grazing, many of them mutilated during attempts to improve the pasture in the 1950s. The cairns consist of medium to large sized stones gathered together into sub-circular heaps averaging 4-5m in diameter. Located amongst the cairns are several circular embanked structures that have the appearance of either hut circles or robbed-out cairns. Additionally, three barrows, distinguished by the use of earth in their construction and the presence of a shallow encircling ditch, are situated on the limits of the distributed cairns. During fieldwork between 1996 and 1998 two of the circular features were excavated (Johnston and Pollard 1997; Johnston and Pollard 1998; Johnston and Pollard 1999).

'Enclosure 1' was visible as a sub-circular embanked earthwork c.6-7m in external diameter enclosing an uneven central area 4.5m across (Fig 5.7). The stony bank was not uniform in height all the way around, the western side being more prominent, and with a possible gap on the east. The feature proved to be a continuous low earth and stone bank enclosing a subcircular area of about 5.8 x 5.1m. The feature enclosed a raised knoll of naturally deposited sand and stones. The knoll was probably glacial in origin, and raised 0.05-0.3m above the surrounding subsoil it would have originally been in relief from the relatively flat surrounding area. The surface of this deposit was disturbed where small to medium sized gritstone and quartzite stones had been removed and then placed forming the encircling bank. The earthfast stones which were already in place around the external circumference of the knoll were left *in situ* to become incorporated into the construction of the enclosure. A patch of burnt sand and charcoal in the north-west of the interior was probably associated with the clearance of scrub just prior to the construction of the monument. A sample of the charcoal which had been sealed beneath a deposit of reworked subsoil produced a radiocarbon determination of 2580-2200 BC (Table 5.2).

The enclosure was constructed in two phases. The primary feature was a low continuous stone bank, 0.3-0.8m in width, made up of intermittently placed large stones (gritstone and occasional quartzite), between which was an unstructured deposit of medium-sized stones. This had been further 'elaborated' with a spread of medium-sized stones, set two deep, over the south-western side of the feature. While on the western side the stones were covered with a low earth bank. Around the course of the bank were a series of depressions filled with humic topsoil from which large stones had recently been removed. While most of the holes seemed to have been voids left after stones had been removed from the bank, two were deliberately cut and contained packing stones *in situ*. A second phase of bank construction took place when the western side of the monument was enlarged with deposits of sandy clay and small stones. This raised the size of the bank to 0.3m in height along 3.0m of the western side of the monument. In places, the inner face of the bank was vertical where it had been deposited against existing stone uprights situated in the interior. One of these uprights remained *in situ*. The interior surface of the monument was very irregular as a result of the removal of stones to construct the outer bank. Two artificial stone holes were found in the northern half of the enclosure. The interior of the monument was filled with a mixed stone and earth horizon 0.01-0.15m thick. Finds from this layer included several pieces of worked flint and quartz and an axe *polissoir*. A large, earthfast boulder located 1m to the south-west of the enclosure was covered in at least six separate 'cup marks'. The five cups on the upper surface of the stone were heavily weathered; but one cup mark was sealed beneath a prehistoric cultivation soil so that the peck marks were still visible on its surface.

A second 'enclosure' located only a few metres to the east of the first also made use of an existing glacially derived outcrop. The enclosure bank was 0.8-1.2m wide and 0.15-0.3m high comprising a

core of medium to large stones in a sandy clay matrix. It was constructed on the southern and eastern sides so as to accentuate the existing slope of the knoll with the effect that the height of the bank reached up to 0.45m above the surrounding subsoil. Unlike the other monument, there was a large, stone-lined sub-rectangular pit 2.0 x 1.5m across and 0.23m deep constructed in the interior of the enclosure. Although there was no evidence of a human burial, a broken plano-convex knife was recovered from the fill of the pit.

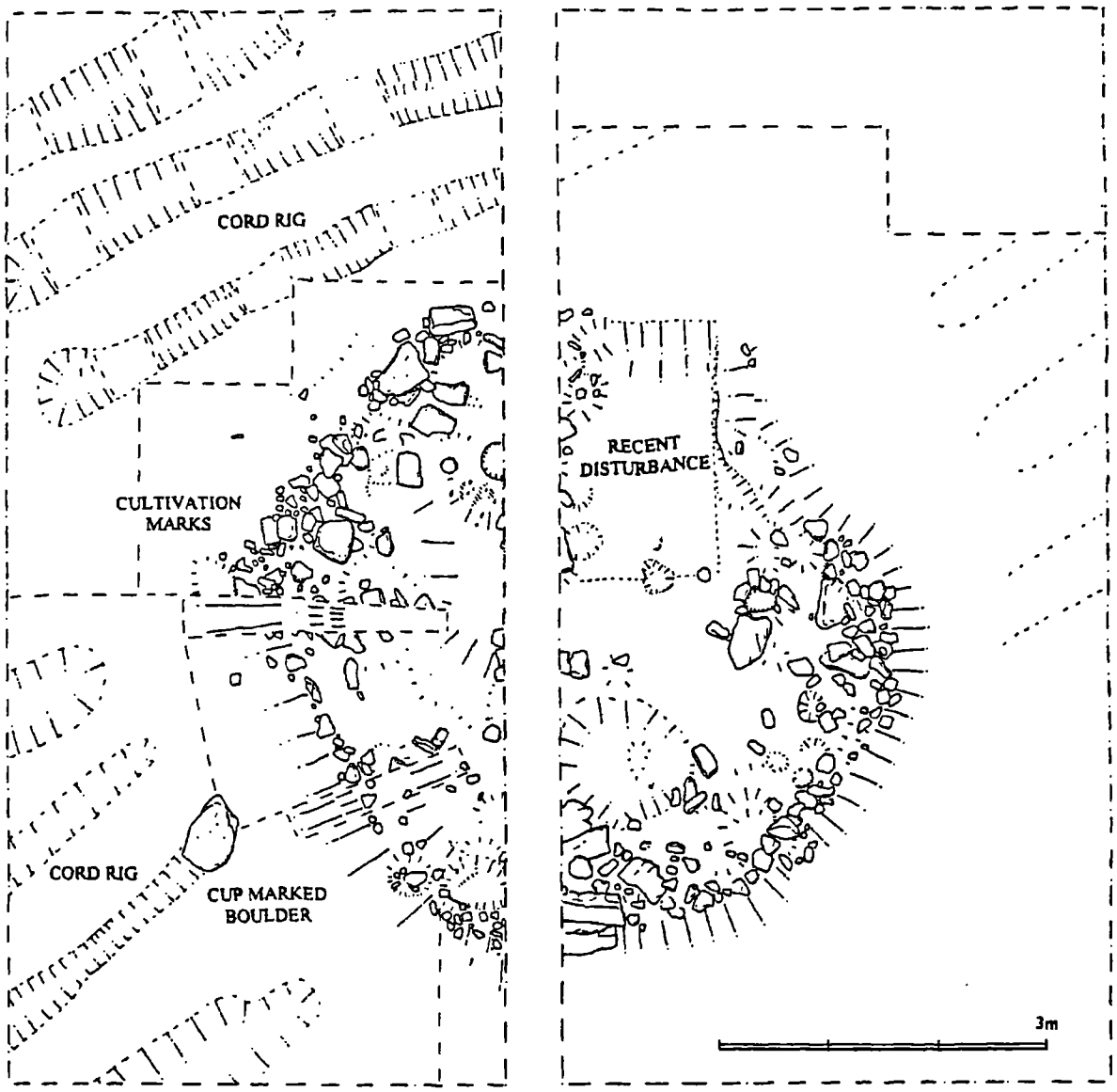

Fig 5.7 Plan of enclosure 1, Kellah Burn (reproduced from Johnston and Pollard 1998).

The 'enclosures' at Kellah Burn were not strictly cairns but yet they included many of the structural and depositional elements that were found separately at the sites already discussed above: the deposit of charcoal, the outer liminal area, a central pit, the presence of lithics deposited in the interior of the feature and the use of pre-existing features in the construction of the monument (in many respects the

pre-existing knoll served the purpose of a cairn). Considering the mid to late third millennium date for enclosure 1, then it would appear that the tradition of formal deposits in cairn-like structures had a variety of forms. Similar structures of significance could be re-worked according to the local context. As a consequence, the strict distinction between clearance cairns and burial monuments is not altogether helpful.

Excavated cairnfields in Northumberland, Cumbria, Durham and North Yorkshire

Taking the four examples together – Chatton Sandyford, High Knowes, Barnscar and Kellah Burn – it is clear that the form and typology of the cairns does not fit the dualistic interpretation of cairns for burial and cairns for clearance. The broad distinction between larger more complex monuments, often with burials, and smaller, unsophisticated stone heaps may still seem reasonable. The problem comes with defining each of these types: we cannot use the presence of a burial since token deposits or no burial at all are just as common in the larger cairns; we cannot take the presence of a kerb or similar architectural motif to signify a complex cairn as some of the smaller mounds also incorporate comparable, though sometimes crude, versions in their construction; and we cannot use the presence of artefacts or charred deposits to distinguish 'burial' monuments as these are just as common among the smaller cairns. Indeed, the only structures that seem distinctive are those cairns that appear to be nothing more than loosely constructed heaps of stone. Considering the likelihood of there being intermittent human inhabitation of cairnfields over the longer term, along with the assumed variability in the occupation practices employed, and the archetypal, multi-functional character of cairns generally, it seems reasonable to expect there to be a proportion of cairns which do not fit the broader, structural and depositional patterns already established.

By blurring the distinctions between burial and clearance cairns, I am suggesting that aspects of the formalised practices undertaken at the funerary monuments were also intrinsic to the construction of the smaller, less sophisticated structures. The evidence for formal structural motifs and deposits varies considerably, and is best identified in comparison with the components of the complex monuments. In what follows, the data from the excavated cairnfields in the region is summarised, beginning first with the larger, more complex cairns.

Larger, well-structured cairns, sometimes containing cremation deposits, are common enough as evidenced by all three of the examples described above. At a now destroyed cairnfield at Millstone Hill, located approximately 1km west of Chatton Sandyford, the largest monument consisted of three structurally similar conjoined cairns graded in size from 3.5m down to 1.6m in diameter (Fig 5.3)

(Jobey 1981b).[7] Each was defined by a well formed kerb of upright stones set in a shallow bedding trench, giving the cairns a drum-like appearance. The largest of the cairns, despite having been disturbed, produced fragments of cremated bone, charcoal and a few sherds of a coarse thick walled vessel sealed beneath a carefully constructed layer of small boulders. The two adjoining structures were less well constructed, although both also contained central deposits of cremated bone; no further finds were recovered.

Two cairns of contrasting character were excavated at Crawley Edge cairnfield, near Stanhope, in the North Pennines (Young and Welfare 1992). At one site the ground was cleared (evidenced by a spread of charcoal on the mineral soil beneath the cairn, dated to 1880-1430 BC, Table 5.2) before a pit was excavated slightly off-centre for a cremation in a collared urn. The pit was surrounded by an oval arrangement of kerbstones and one stone upright. Soon afterwards the outer ring of kerbstones was elaborated with an annexe-like arrangement of two arcs of stones linking the stone upright on the south-eastern side of the main kerb circle with an L-shaped setting of uprights abutting the south-western edge. There was a deposit of stones and earth, containing the broken lower stone of a saddle quern, within the annexe feature and piled against the outside of the kerb circle. Beneath the stones and earth and a layer of brown soil was a charcoal rich deposit containing some unburnt animal bone and three fusiform jet beads (dated to 1880-1490 BC, Table 5.2). Another, smaller cairn located close by was made up of loosely packed small stones piled up around a large earthfast boulder. The cairn had been built on top of a basal layer of flat stones laid in two definite circles. Thirty pieces of flint were recovered from the cairn.

Of three cairns excavated near Bleaberry Haws, in North Lonsdale, Cumbria, one contained at least two pits and a cist (Swaison Cowper 1888). One of the pits, 0.4m in diameter and 0.35m deep, was filled with charcoal; another, roughly the same size, contained burnt bone, pottery and a flint flake. The cist overlay a deposit of burnt bone. The complex nature of the deposits in these larger barrows is exemplified by two of the mounds excavated at Birkrigg, near Ulverston, on the western side of Morcambe Bay (Gelderd et al. 1914). In one, a circle of large stones, 3.6m in diameter, contained most of the cairn material. Underlying the mound of stones and within the circumference of the stone circle were 30 separate deposits of 'black earth': one included fragments of pottery and in all other cases they included one or two 'alien' stones (in several examples these were pieces of quartz). At another barrow there was a similarly broad range of deposits including cremated bone (deposits a-i, Table 5.4).

[7] A comparable bipartite cairn was excavated on Bellshiel Law, Redesdale (Newbigin 1936, 302). There were no finds or features associated with the structure with the exception of a flint scraper recovered from the centre of one part of the monument.

The frequent presence of ring cairns in cairnfields has already been commented upon for Derbyshire, Yorkshire and Dumfriesshire (e.g. Fleming 1971, 22; Scott-Elliot and Rae 1967), and the morphology of features such as the enclosure at Kellah Burn and the large cairn at Chatton Sandyford with its annular platform is evidence for similar structures in Northumberland. At Birrel Sike, above the Calder Valley, in the western Cumbrian Fells, a small ring cairn formed by a stone and earth bank enclosed a large central stone with a deposit of charcoal at its base (dated to 2400-1750 BC, Table 5.2) (Richardson 1982). Three flints (including a large plano-convex knife embedded in the bank), a lump of chert and an unperforated whetstone were recovered from the monument. Two other cairns situated close to the ring cairn were also structured in minor ways. One of these was built around two earthfast boulders into which had been set a ring of other large stones. Twelve flints were recovered from the mound along with a polished shale blade. The other cairn also had a 'kerb' of large stones. A slab beneath the centre of the cairn covered a 0.75m² patch of charcoal (dated to 2350-1700 BC, Table 5.2).

REF.	DESCRIPTION
1	small urn – bones and charcoal
2	small urn inverted over small deposit of bones and charcoal
3	urn beneath stone, set in deposit of black earth and charcoal – bone and lithics
a	small patch of charcoal
b	charcoal in hollow, fire-reddened – burnt flint flake
c	50-60mm thick patch of charcoal and burnt earth under a flat stone
d	pit (0.4-0.45m diameter, 0.2-0.25m deep) beneath flat stone – charcoal, burnt bone, 2-3 sherds of pot, unusual white pebble
e	fire reddened pit filled with charcoal and dark earth – piece of burnt bone
f	pit (0.6m diameter, 0.45m deep) under flat stone – charcoal, black earth, piece of unburnt bone and a white pebble
g	fire reddened pit (0.3m diameter, 0.2m deep) under flat stone – charcoal, black earth and two fragments of unburnt bone
h	'a pint of charcoal'
i	pit (0.3m diameter, 0.3m deep) lined with thin, sharp flakes of stone – black earth and charcoal

Table 5.4 Summary description of features found beneath a barrow at Appleby Slack, Birkrigg.

One of the cairns at Birrel Sike contained neither structural features nor finds. The presence of empty cairns in cairnfields is common enough, though they are most often recorded in nineteenth century accounts when the excavation techniques employed would almost certainly not have identified any insubstantial features. At Low Shield Green, near Birtley in North Tynedale, 'many small cairns' were dug into with no evidence for either finds or features (Rome Hall 1887, 242). Cairns without any evidence for burials were recorded in Cumbia at Carrock Fell (Barker 1934, 112), Bolton Wood (Spence 1937, 48) and Moor Divock (Spence 1935a); and in Northumberland at Linhope Camp (Coulsen and Clayton 1865, 38), Cartington on Debdon Moor (Dixon 1903, 149-150), Swinburne Park (Ball 1931, 75-77) and Lucker Moor (Greenwell 1877, 413-417). Nonetheless, at Swinburne Park one

of the barrows overlay a deposit of charcoal on the old ground surface. While on Lucker Moor, near Bamburgh, on the east coast of north Northumberland, Greenwell excavated six large cairns which produced a remarkable series of cists and inurned cremations. Of several smaller cairns situated close by, two produced pottery vessels and another was placed over an oval hollow 0.6-0.75m across and lined with charcoal. Two of the other small cairns also contained deposits of charcoal.

At Callaly Moor in Northumberland, cairns were excavated in two separate cairnfields (Cowley and Edwards 1988). In one of these, associated with a medieval settlement and field system, the cairns were unstructured and 'empty'. At the other cairnfield, associated with later prehistoric features including cists, the cairns showed some degree of structural complexity. Significantly, the cairnstone was sorted with small stones in the core of the cairn and larger rocks arranged around the exterior (Table 5.5, cairns 5, 10 and 54). The stones of cairn 5 rested on a thick layer of iron pan which sealed a deposit of charcoal resting on the subsoil. Comparable to these examples is the cairn examined on Corney Fell in which larger stones were found towards the centre and smaller stones around the outside and on top (Ward 1977, 1). It is such evidence for a degree of structural complexity, however slight, which is more frequent than empty, structureless cairns as these examples and those from Chatton Sandyford, High Knowes and particularly Barnscar indicate.

CAIRN / CIST	DESCRIPTION
#5 (area A)	Core of the cairn was made of small to medium sized stones resting upon a 20mm thick layer of iron pan. Larger stones were situated on top of and to the side of the stone core. Beneath the iron pan was a layer of subsoil with charcoal.
#46 (area D)	Small cairn (2.0 x 1.5m), irregular in shape consisting of loosely packed large stones set in sandy soil overlying subsoil
#54 (area F)	Sub-circular cairn (c.1.5m in diameter) consisting of medium to small sandstone blocks surrounded by larger stones – not fully excavated.
#10 (area H)	As #5 consisted of smaller stones with larger stones enclosing and on top.
#47 (area E)	Small rectangular cist cut into the old ground surface consisting of medium-sized blocks set edgeways in an annular arrangement. No fill or associated features.
#17 (area F)	Small rectangular cist consisting of medium sized orthostats set edgeways. Not fully excavated, through appeared to show evidence of disturbance.
#53 (area F)	Subcircular 'platform' made up of medium sized flat sandstone blocks set in matrix of angular sandstone fragments.

Table 5.5 Summary of cairns and cists excavated at Callaly Moor, Northumberland.

On Carrock Fell, on the north-eastern edge of the Cumbrian Fells, three cairnfields, with over 200 cairns, were investigated on several occasions. At one, an area of rammed clay with charcoal was used as the base for a ring of boulders which was in turn heaped over with stones; there were two flint flakes recovered from the mound (Spence 1935b, 174). Three other cairns produced similar results: an elliptical mound overlay a deposit of reddish earth and charcoal; a second cairn had been heaped over a 0.1m thick deposit of 'yellow earth' and charcoal; the third also overlay a deposit of yellow earth

and charcoal, on this occasion with a continuous thin layer of charcoal (Barker 1951, 201-202). Another of the cairns covered a central pit containing charcoal and burnt bone (Barker 1934, 108). Close by, an obvious circular depression proved to be a large stone lined pit with an 'entrance passage' to the south-east; the 'floor' of rammed clay was overlain by a deposit of charcoal (Barker 1934, 110).

Also in Cumbria, two cairns were examined in a cairnfield of roughly 70 cairns on Corney Fell, in West Cumberland (Ward 1977). One of the cairns (4.25m in diameter) contained no unusual deposits although the stone had been deposited in a structured manner with the larger stones at the centre and smaller stones forming the top and periphery of the mound. Another cairn, 8m in diameter, was structured with the larger stones around the outside and smaller stones towards the centre. The mound overlay a central deposit of 'pink and white ash flecked with charcoal' (Ward 1977, 1). While at Bolton Wood, a cairn had been constructed on top of a large boulder. Beneath the boulder was a 0.3m thick deposit of black earth along with charcoal, some small fragments of burnt bone and a charred hazelnut (Spence 1937, 47). At Threlkeld, northern Cumbrian Fells, three excavated cairns in a cairnfield were shown to be structured with large stones in the centre making up the core of the feature and small stones on top and around the periphery (Dymond and Hodgson 1902, 48*ff*). One of three cairns at Threepow Rise, Moor Divock (discussed above), contained 'pockets of charcoal', and a single deposit of dark earth and charcoal at the base (Spence 1935a). Five cairns were excavated at the small cairnfield at Milkingstead, in Eskdale (Hodgson 1928). All of the cairns contained at least two stone lined pits, some of which had intact covering stones. There were no finds from the structures excepting a burnt area beneath one of the mounds.

Excavations have been carried out at two cairnfields on the North York Moors. On Kildale Moor a small group of cairns set part from a larger cairnfield were investigated by Paul Ashbee (Ashbee 1957). The largest of the cairns had a definable kerb of larger stones and covered a central 'grave' pit. The other nine cairns that were examined were of much looser construction than the larger barrow, and the internal structure consisted of large stones towards the centre and smaller stones around the outside. There were additional features in three of the cairns: an area of burning 0.9m in diameter, cairn 6; a possible shallow pit, cairn 9; and a patch of charcoal flecks, cairn 7. The large cairnfield at Danby Rigg was explored by Canon Atkinson in the nineteenth century. He recorded finding 'flint chips, fragments of charcoal, and very rarely pot sherds', and in one case a flint scraper; though in most examples the cairns were found to be 'empty' (Elgee 1930, 99). More recent excavations of three of the small cairns showed that the loosely structured cairns had, in two cases, been constructed around earthfast boulders (Harding and Ostoja-Zagórski 1994, 53-57).

At Millstone Hill (discussed above), the cairns, 85 in all, were spread over an area of 1.2ha on a north-south aligned sandstone ridge close to Chatton Sandyford. The cairns were all small in size, less than 5m in diameter and no more than 0.7m high, and were in places joined together by low rickles of stone. One of the cairns, roughly 5m in diameter and 0.9m high, contained a mixture of large and small stones grouped around several earthfast boulders and sealing a few ill-defined patches of charcoal (Fig 5.4). The second cairn, similar in size and structure to the first, sealed a thin layer of oak charcoal (2300-1700 BC, Table 5.2). The cairns at Millstone Hill did not produce any 'complete' burials, while the elaborate structure and the shallow deposit of stone on the conjoining cairns (discussed above) means they were almost certainly not the focus for the deposition of field cleared stone. The smaller cairns do, structurally at least, typify 'clearance' cairns. Nevertheless, as in all the other examples, the presence of deposits such as charcoal seems to suggest they are not simply 'thrown up' without prior reference to other factors. The earthfast boulders found under cairn 1 may have been just a convenient spot around which dump stones but in all likelihood such features would have had immediate local significance to those who built the cairn.

Discussion

This long account of the archaeological evidence has demonstrated that there are a variety of structures found within cairnfields. As a consequence the categories of burial and clearance cairns do not stand up to scrutiny. The excavation reports often interpreted the presence of burials on the flimsiest of evidence because that was what was expected or desired. When burials were clearly not present the cairn was not described in any detail: 'The *true* nature of four of the small cairns was not entirely resolved and they may have been *no more than* the results of field clearance' (Jobey 1968, 5 – my emphasis). Such an attitude reflects the situation during the 1960s and 70s when the existence of *clearance* cairns was only just being established. The main difference between this approach and that of Greenwell and his contemporaries was that the latter left no record of their investigations into 'non-burial' cairns despite the many that by inference were disturbed (e.g. Ashbee 1957, 179; Greenwell 1877, 420*ff*; Joass 1866, 387). The narrow methodological perspective which has been perpetuated in the examples outlined above is complemented by the restricted interpretations that have in turn been offered with respect to cairnfields. The approach has been to assign cairns a specific function, either for burial or for clearance, and if the latter is posited, to then assume a prehistoric date and to associate the sites with early cultivation of the uplands. The data examined in this paper offers little with which to critique the second of these assumptions, it does instead highlight the problems with a binary classification of their function, itself representing the obsessive opposition of the ritual and domestic spheres of human practice in interpretative accounts.

The sites discussed above did not produce evidence for two specific 'types' of cairn. Each example was unique in a particular way even if some more general trends and structural similarities might be

recognised. The more general similarities between the monuments include: multiple burials prior to the construction of a covering mound; the presence of a kerb delimiting the cairn; and the incorporation of deposits of flint and charcoal in pits, on the original ground surface and within the stone mound. There are clearly similarities between cairns with burials and those without, as with the outer liminal area such as a ditch or kerb found at cairn 1 and the ditched enclosure at High Knowes; also the presence of pits sealed by the overlying cairn material as in the large cairn and three of the smaller cairns at Chatton Sandyford, or the deposits of charcoal and lithics excavated at cairn 2 at High Knowes and cairns A and B at Chatton Sandyford. Despite the apparent unique character of the burial cairns the so-called clearance cairns employ similar structuring practices in their construction.

Leaving aside the 'empty' cairns, and accepting the general distinction between larger, more complicated cairns and smaller, unsophisticated cairns, the distinction is not necessarily between burial and non-burial. There are larger 'ritual' monuments without burials, or with other deposits in addition to burials (e.g. Birkrigg and Crawley Edge), and there are smaller 'clearance' cairns with burials (e.g. Callaly Moor and High Knowes). There are also many clearance cairns with distinctive deposits and structural features suggesting there was a deliberate, formal element in their construction. The majority of cairns discussed above are, to all intents and purposes, clearance cairns. How far can we take the evidence for a formal element in the construction of these cairns? Must it be a negative feature such as a pit, preferably filled with charcoal and some pottery, or does a thin layer of charcoal beneath the centre of the monument represent just such activity? These questions are occasionally easily resolved where these deposits have been capped by a stone such as at Birrel Sike, or Bolton Wood. But generally the remains are more ephemeral, and the interpretation is less straightforward. This problem is most apparent with regard to the evidence for structural complexity. While the presence of a circuit of kerbstones, or a pennanular ditch or bank, is an obvious and clearly formalised structural element in a cairn, there are others which are not so manifest. The layer of interlocking stones 'sealing' the ground surface which Greenwell mentions in the epigraph to this chapter is one such example. Another is the use of earthfast boulders in the structure of the monument. Here again, an initial confidence that such pre-existing features were a convenient place for the deposition of stone must be tempered by the recognition of earthfast stones forming important architectural components of more formal structures such as ring cairns. The elemental value of stone should also be born in mind. The inclusion of cup marked stones in some of the cairns (e.g. Kellah Burn [above]; Bradley 1997, 136-150; Dixon 1892), and the apparent deliberate quarrying of stone for the sole purpose of building a cairn, is in some way evidence to suggest the complex meanings and values which stone may hold. Less structured again, and more ubiquitous, is the grading of stones in the cairn according to size. At Danby Rigg and Kildale Moor the use of larger boulders to form the initial cairn does, if nothing else, demonstrate a phase of construction in which the cairn was a marker and focus for clearance activity. The boulders must have been prepared – harvested – in order to construct the cairn.

5.4 Land and society in northern England during the Bronze Age

In the previous two sections the evidence for the deposition of fieldstone in northern England during the Bronze Age was reviewed and discussed. A broad distinction was proposed between the deposition of stone around buildings and fields, and the deposition of stone onto cairns. It was observed that the stone, as a material condition of social life, had a different role in structuring contemporary and future action in each case. The stone that surrounded the settlements bounded existing settings of action, and most importantly it was used, maybe unintentionally, to structure future inhabitation of the locale. The cairns on the other hand showed evidence for deliberate construction with formal elements within their structure. Consequently it was suggested that they represented a conscious structuring of place. These variations were tentatively related to the power to 'use' an area of land, in others words tenure. This is interesting because such upland landscapes, while compared to the more dramatic and large scale field systems elsewhere in Britain, are rarely explained in terms of the control of land. Yet by suggesting that the cairns are proof of a conscious attempt to make places, and the fieldstone banks structured inhabitation of locales, I am suggesting tenure – as the power to make use of an area of land, i.e. agency – is crucial to our understanding of these archaeological remains. Such an open-ended explanation cannot suffice, and in the remainder of this section I will discuss in some detail how the process of stone clearance structured and was structured by tenure.

The transformation of fieldstone to cairnstone

It is now commonplace to state that stone had the potential to be of deep symbolic value during earlier prehistory. Whether in the context of lithic tools (Edmonds 1999, 36-50; Taçon 1991), rock art (Bradley 1997), or monumental architecture (Gillings and Pollard 1999), the elemental qualities of stone contribute to the meaning of material culture at a fundamental level. For communities that inhabit environments dominated by stone, and where it is an almost constant element within daily life, the symbolic value of the rock does not diminish (e.g. Jones 1982; Robinson 1997). Northern England had few such monumental 'stone worlds' during prehistory; the high fells of the Lake District are perhaps the only exception. Nonetheless, people had frequent and intimate encounters with stone through everyday life and during formalised and ritual activities. One context in which stone was encountered was during the clearance of ground either for cultivation or to develop patches of grazing land. The fieldstone that was turned up in this process was dealt with in a variety of ways, and it is possible to identify change through time in the way it was treated. It is not possible to detect any structural logic to patterns of stone use since there can be little doubt that the material value of stone varied according to its context, multifarious qualities and socially derived associations. The one generalisation that can be made with some confidence for the centuries prior to the period under study is that such exposed stone was without exception incorporated into what could crudely be termed 'ritual' monuments, such as mortuary structures or petroglyphs.

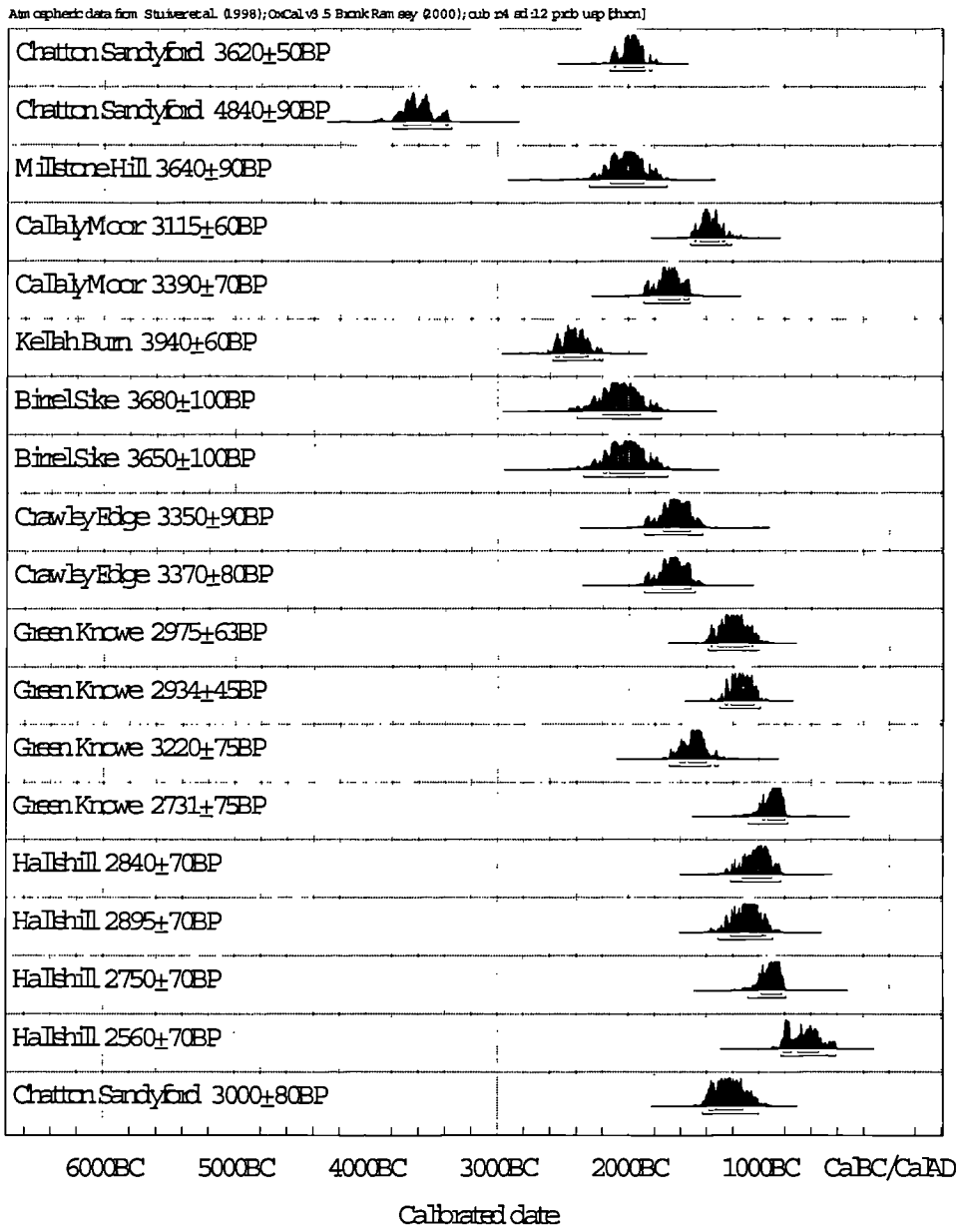

Fig 5.8 Calibrated radiocarbon dates from cairnfields and unenclosed settlements in northern England (see Tables 5.1 and 5.2).

This broad distinction is to some extent maintained into the Bronze Age when mortuary monuments remain the focus for the deposition of stone. Portable petroglyphs such as cup marked rocks are also occasionally found within mortuary structures, allowing for the interesting juxtaposition of unmodified and modified stone within the same monument. It is around this time, from the middle of the third millennium BC, that loose stone was collected into heaps within fields. The context for the deposition of stone would seem to have shifted slightly from strictly 'ritual' settings to agricultural structures. During the latter half of the second millennium BC this shift in emphasis became increasingly more evident as mortuary monuments were less common, and stone was, alternatively,

deposited around the limits of domestic buildings and fields. By putting forward this argument I am not suggesting that the meaning of monuments and settlements was solely affected by the presence or absence of stone, nor did stone only gain meaning through its structural context. The relationship between the two was dialectical in that stone acquired significance as a consequence of its circumstances of deposition, and the identity of the building or cairn was partially developed from the pre-existing qualities of the stone included in its construction.

The changes in the context that stone was deposited would seem to suggest that its value changed during the period under discussion. This process can be shown most clearly for the period after approximately 1500 BC when, having initially only been incorporated within cairns, stone becomes a feature of settlement architecture. The radiocarbon dates from the sites discussed above support this broad chronological division (Fig 5.8).[8] The obvious correlative of this observation is the shift in emphasis from ritual to the domestic sphere associated with the earlier/later Bronze Age transition (section 1.2). It is interesting and reassuring that what we might call the 'decreasing sanctification' of stone is indicative of broader social changes. Yet, to accept this outright would be to ignore the evidence for the blurring of ritual and agricultural categories that is detectable in the small cairns, and which predates the 1500 BC 'watershed'. To address this issue we need to return to the idea that stone is an element of both the natural and the social world. In the first instance stone has elemental qualities that contribute to a diverse range of metaphorically derived 'meanings'. In the second case, it is a resource, or in other words a structure, within social life, and it therefore structures and is structured by practice.

Accounts of cairnfields that label the cairns as 'clearance features' are enforcing an economic rationale for their construction, and conferring a modernist interpretation on stone as if it was a naturally derived material that had little or no cultural value. Yet stone held a variety of important associations that developed over the centuries prior to the construction of 'clearance cairns', and which, through time, contributed to the potential meanings that the stone might embody. First amongst these associations was its use within burial monuments. Of the excavated sites described in the previous section, a significant number contained complete human burials, and the primary reason for constructing the mound of stone would seem to have been to seal the ground within or upon which the burial was placed. This process of 'closure' was highly formalised in some cases, such as at Chatton Sandyford and at Millstone Hill, where the basal layer of stones was laid pavement-like upon the ground surface. In many cases the human burials were enclosed by a liminal area, for instance a ditch, a kerb made up of larger or distinctive rocks, or in some cases a ring of posts. These variations have in

[8] Samples suitable for radiocarbon dating are more likely to come from cairns with 'special' deposits. Any pattern must, therefore, be treated with some caution. The dates cannot be extrapolating to include all cairnfields, or indeed to include all the cairns in the same locale.

common the further closure of the space in which the burial was placed. In these contexts stone acted as a barrier between the remains of the dead and the experience of the living. This was not necessarily an impermeable barrier, as the frequent inclusion of further burials within the body of the monuments attests. But it was, at the least, a liminal zone formed by the stone. This liminal zone achieved an even purer exposition within ring cairns. Human burial was not a vital element within the structure. Although elements were still reproduced from mortuary monuments: an enclosing ring of stone, sometimes a prepared platform of stone, deposits of charcoal and humanly modified materials.

Some of these features are also found within the small cairns found in cairnfields. What to all intents would appear to be an agricultural feature includes elements that are ostensibly formalised and possibly ritual in character. Cairns that otherwise have no evidence for a burial may contain rough kerbs, central pits, spreads of charcoal and deposits of lithics. These elements are in no sense ubiquitous but they are sufficiently frequent, with at least one or two examples from every prehistoric cairnfield excavated under modern conditions. The suggestion made here is that the presence of these elements in the construction of the cairns is not only relevant to how the cairns were meaningfully conceived and constructed, it relates the mounds more or less directly within a cairn-building tradition. From this, it can be suggested that stone remained important even when it was no longer used in the construction of burial monuments or ring cairns.

Stone retains its potential for symbolism because in the small cairns, just as in the burial monuments, it is transformed from *fieldstone* – stone still in the ground – into *cairnstone* – stone that has been enculturated through its inclusion in a cairn. This is not a transformation from nature to culture; rather, cairnstone is a hybrid of social and natural processes. While in modern, scientific terms rock is entirely a product of nonhuman processes, the stones that make up the cairn met specific culturally-derived needs. They play a part in social life and as such are an integral part of the dwelling experience. This is possible because the ontologies through which the stone was understood assigned properties to the material that overlap the modern categories of nature and culture. Fieldstone was an element drawn from the ground yet as cairnstone, in burial monuments, it was also a liminal zone between states of being (life and death) and a marker to an individual's life. In this context the transformation could have provided one means of mediating the complex ontological crises created by situations such as death. It is relatively easy to make simplistic suggestions as to how cairnstone attained meaning in a burial monument, but in the cairns without burials the meanings of the cairnstone are more intractable.

One way in which we might interpret the meaning of the stone in the cairns without burials is to analyse the process of transformation in terms of metaphor and metonym (*cf.* Descola 1996). Metaphor and metonym are terms used to describe the figurative associations that are made between

things / beings. They can be distinguished in that metaphor is a means of imagining one thing in terms of another, while metonym is the process of representing the whole of an entity by reference to only one of its parts. The transformation of fieldstone into cairnstone was, at one level, a metonymic process. The inclusion of features commonly found within ritual monuments into agricultural features was partly an attempt to create versions of the burial monuments. Elements, both depositional and structural, that in the past were exclusively associated with burial monuments, were used in 'clearance' features. Obvious examples of this are the many deposits of charcoal, occasionally within pits, and material culture such as lithics and broken pottery. The structure of the cairns is also interesting in some cases. The presence of an outer kerb of stones is one such feature that recurs around the smaller cairns. This process is metonymic – in using parts (structural aspects) of burial cairns the builders are representing the whole (the presence of a burial). There is a more obvious unifying feature in the construction of the cairns: the cairnstone from which they are made. The smaller cairns were, above all else, still mounds of stone, or more properly, bearing in mind the evidence for formalised elements in their construction: fieldstone transformed into cairnstone. In this way they were self-referential (or autological): the use of cairnstone gave the cairn an identity within a tradition of burial and ritual monuments. As such, the metonymic process does not just provide a semantic link between different domains, it is also an important reifier of those same relationships: 'metaphor should be apprehended as a way of drawing attention to real relational unities rather than of figuratively papering over dualities' (Ingold 1996b, 133). In other words, by placing a token burial in a cairn and by transforming the fieldstone into cairnstone the cairn does not become *like* a burial monument, it *is* a burial monument.

To summarise the argument so far: cairns that were not built expressly for the purpose of enclosing human remains were sometimes still constructed with close reference to the structure and depositional sequence of burial monuments. The implication is that fieldstone was transformed into cairnstone – made sacred – within both burial monuments and in cairns without burials. The importance of this process is partly explained by the commonly presented argument that the burial of the dead during the early Bronze Age involved the negotiation of issues of lineage and inheritance. So that following the interment of the dead, these monuments continued to act not only as physical markers in memory of the individual buried within them, but also as 'statements' that recorded a community's control over the territory in which they were sited. The cairnfields were built in this same tradition of legitimating tenure by associating structures of lineage and inheritance with a particular locale. In most cases this was achieved by the transformation of fieldstone into cairnstone during the construction of 'metonymic burial monuments': cairns without human burials but with deposits and elements of architecture that mimicked those found with burials. Barrett has argued, with reference to evidence from the North York Moors, that the occurrence of burial monuments and ring cairns in cairnfields is evidence that symbols of death were used to structure the landscape: 'Rights to resources, including

other people, have to be established in relation to the dead' (Barrett 1989, 124). This argument can now be extended to include the cairns that did not include burials.

There were other more quotidian metaphors that were deliberately engendered though the construction of the cairn. One of these, to which I have already referred, is the inclusion of field-cleared stone within the cairn. While this is partly autological, it also gained meaning by its association with agricultural activity. The clearance of stone was an event, potentially ongoing, in the life of the field. That event, or those events, affected the look, texture, workability and productivity of the soil. The stone was a pure expression of infertility that was emphasised by the improved productivity that resulted from its removal from the soil. In many of the cairns, juxtaposed with this metaphor for infertility, were deposits of charcoal, occasionally found beneath flat stones or in pits, and at the very least sealed beneath the cairn material. This charcoal was also the residue of a transformative process. It some cases it was a special deposit that may have been carefully selected; on the other hand, such charred deposits were the preserved traces of scrub and trees cleared from the field. These were important events in the life of the field associated with themes of purity and fertility. It should not be read from this that the charcoal and stone formed an antithetical structural pair, rather that they usefully expressed some of the ambiguities involved in clearance: the fieldstone, as a potent symbol of infertility, could not be destroyed, but it was removed and transformed into cairnstone; the scrub and trees demonstrated the fertility of the soils and through their clearance and subsequent burning they produced an element, charcoal, that added to the fertility of the soil. Each of these metaphors was carefully managed and articulated during the construction of the cairn.

The figurative associations that are discussed above offer a relatively rigid interpretation of the meanings that the cairns may have embodied. Yet if there is one overriding impression gained from the archaeological evidence, it is the considerable variety in the forms of the cairns. An explanation for these differences lies in the idea that the structures were only given meaning, whether through a process of metonym or metaphor, during social practice. To put it another way, the metonymical and metaphorical processes were ontologically constituted and therefore they did not exist outside the practices of which they were a part. This is a point made plain in Tilley's concept of 'solid metaphor':

> Solid metaphor operates, for the most part, at the routinized level of practical consciousness of social actors. The effect of solid metaphors on social actors may often be effortless in as much as they surround persons and frame activities without the requirement of an active intentional process of listening and reading which speech and written texts require. Their solid materiality constantly presents them without foregrounding them in experience: a speech like the sound of a stream, always there and taken for granted except when it stops.
>
> (Tilley 1999, 264)

The final form of the cairn, with its many inbuilt associations both metaphoric and metonymic, remote and quotidian, was a solid metaphor. It has a potentially ambiguous array of associations relating to

death, lineage, inheritance, fertility and infertility, which were given meaning during practice; in other words the meaning or identity of the cairn depended upon the immediate context of its 'use'.

Cairnfields and field plots as time-space settings

The long term process discussed above distinguishes between the deposition of stone within cairns, where it was transformed into cairnstone within a tradition of mortuary monuments and ring cairns, and the deposition of fieldstone around buildings and boundaries, where the transformation to cairnstone did not take place. This distinction was also present in the types of metaphor associated in each case. Amongst the cairns the associations were potentially *remote* from daily life: aspects of formal practice and ritual generally linked with human burials and ring cairns. While, in contrast, the clearance around settlements appears less if at all formalised, and figurative associations had more *quotidian* links with field clearance and fertility. Since these metaphors were structural they only gain meaning as a consequence of the practices that they reciprocally structured. Such practices occurred in time-space, ostensibly the field in which clearance takes place, and they relied upon the knowledgeable actions of agents – that is to say those empowered, or with the tenure, to work the field. To understand further how cairns and fieldstone boundaries structured action in different ways, and therefore how they affected and were affected by agency, that is to say tenure, it is necessary to consider the fields as time-space settings for practice.

The manner in which cairnfields were occupied remains open to argument. It has been suggested that in the Peak District they were the remains of fields located next to permanently occupied settlements (Barnatt 1999; Barnatt 2000). As such they would have formed a regularly occupied space that was inhabited over the long term. However, in a study of the same region, though taking a different range of evidence, Willy Kitchen has argued against such models, preferring instead to interpret the cairnfields as being inhabited by more mobile groups, perhaps on a seasonal or at least periodic basis (Kitchen 2000; *cf.* Halliday 1999). Most importantly, Kitchen stresses the need to recognise land use practices as contingent, fluctuating and ranging in character and intensity. The approach taken in this thesis is sympathetic to such a perspective, and the evidence from sites such as Arran, discussed in 2.3, supports a longer-term, more episodic model for the occupation of such upland areas during the second millennium BC.

As yet there is no qualitatively suitable archaeological evidence from sites in northern England to say with any certainty whether this pattern is followed there as well. Nonetheless, we can look at the existing evidence laterally and offer some suggestions as to how the cairnfields were constructed and used. They are almost certainly 'occupied', if intermittently, over a long period of time. The juxtaposition of at least several generations of human burials, as at Chatton Sandyford, gives some indication to their longevity. In contrast, the smaller cairns seem to have been formed around a single

depositional event. These foundation deposits should be considered in the context of the ongoing tempo of the field's biography, controlled as it was by the short term cycles of land use and longer term strategies such as the use of fallow periods. Though the cairns could have acted as temporal markers to events in the life of the field, their surface structure is often quite uniform – there is not a great deal to distinguish one cairn from another. Although some of the cairns, particularly the burial monuments, would have held historical associations for the community, many others might only have been distinguished on the basis that they were either built recently or they were of the past. In such a way, the temporality of the field consisted of different layers of significance: varying from the recently constructed cairns, the burial monuments, and cairns of cleared stone that were constructed outside recent memory. The effect was one of a perceived timeless quality for some of the cairns in contrast to the ongoing tempo of the field. Such a temporality set those cairns, that were perhaps associated with the initial clearance of the ground, apart from contemporary practice.

Spatially the cairns are markers that form a focus for the field, yet they do not provide boundaries to practice. These were formed either by temporary fences, lines of sticks, or more likely the limits up to which the land has been used – the visible boundary formed by a change in the vegetation. Practices formed their own spatial limits depending upon land use. Some of the larger cairnfields known from the region sprawl over many hectares, the cairns formed in varying concentrations across the landscape. It is unlikely if not definite that such areas were not tilled or grazed all at one time. Instead, a much more fluid use of such spaces should be envisaged, no doubt further cairns being established as required. Such cairns, although unique depositional events in themselves, do not structure movement within the fields.

The cairns nonetheless had power over space-time settings that partly derived from their rather remote metaphorical associations. They not only represented the labours of those who cleared the stone, they also provided a link with dead members of the community. Such deposits may have been by way of tokens made to the ancestors or spirits that held agency over the productivity of the field. Could it then be that tenure over the plots was held outside the realm of daily life, and made remote in the community of the cairns? The cairn is a container for deposits linked metonymically within a complex tradition of cairn building, and for the transformed stone cleared from the fields during agricultural activity. These practices reach far beyond the confines of a human world. While they are broadly social, these encompass society and the land, along with the supernatural realm of the ancestors and the dead.

In contrast to the cairnfields, the fieldstone deposited around buildings and along boundaries, as at Green Knowe, Houseledge and Hallshill, was not associated with any formalised deposits. It was not transformed into cairnstone. It remained significant nonetheless; the manner it which was deliberately

placed around the exterior of buildings suggests the stone had a recognisable role in structuring settlement architecture. It is this structuring of space that is most evidently unusual about fieldstone within settlements.

The buildings and field plots were occupied in a different way to the cairnfields. It cannot be shown whether or not they were permanently inhabited, if such a concept as 'permanence' even existed at the time. However, the intensity of occupation was much greater than that found at the cairnfields. At least some of the buildings were lived-in as houses, and the fields to which they were attached would also have been settings for everyday activity. The tempos of such locales were as much influenced by the toing and froing of the human inhabitants as they were by agricultural rhythms – though both were closely interwoven with one another. The stone cleared from the fields was deposited as the 'life' of the settlement progressed so that the fieldstone became a material structure that framed and bounded space. Even after houses were abandoned and fields left fallow, the fieldstone remained as boundaries framing any later occupation. Where before, in the cairnfields, the power over land was mediated through a mythical authority, amongst the fields it was engendered and maintained by those who deposited the fieldstone. Tenure had shifted from the ancestors of the community to living members of the community.

The gradual accumulation of fieldstone around the buildings and boundaries does not suggest a conscious attempt to create spaces. Instead, a desanctified fieldstone was placed towards the limits of agricultural practice. The rigidity of the limits that were created was unintentional, though it had the effect of creating a bounded field over which the group held tenure.

Conclusion

Establishing a link between clearance and tenure is not difficult. The establishment of rights to a plot of land by clearance and by cultivation is found among many small-scale farming groups. The Ibo of south-east Nigeria and some Maori groups establish tenure through cultivation (Green 1941; Kawharu 1977). In what was Tanganyika, areas of land over which tenure was held were referred to as 'my field after clearance' (Meek 1949, 19). Usufruct may work at different levels: as a whole, the group might consider the land as a gift from their ancestors, while smaller elements within the group, such as a single family, might acquire rights to land as a consequence of clearance and maintain those rights through cultivation. It is possible to view such systems as a continuation of earlier practices; in this particular case, there is a clear link to aspects of pastoral land tenure. In Basima, Papua New Guinea (section 4.3), there are two aboriginal groups, *tutupawa*, whose claim to land is ahistoric and is based on large areas that their ancestors had 'walked upon', made tracks, laid stones, planted trees and cultivated (Digim'rina 1995, 200*ff*). There were, however, many areas of garden land over which usufruct was not held, and these were claimed by immigrant groups, *wagawaga*, who acquired rights

by clearing and cultivating or simply by trekking over them and naming specific areas. These claims are historical and called simply *gabu* meaning 'burn'. In Mai Weini, Eritrea, there were strong links between rights to land (*tisha*) and rights of habitation based on building a house (Tronvoll 1998, 232). In other words, rights of habitation in a place also meant *belonging* to that place.

These examples are a reminder that the clearance of land represents a form of colonisation through which tenure may be exercised. The result is an inalienable bond between the land and those who clear it, though this may be nested within deeply felt obligations towards the group's ancestors whose tenure was established through a mythical first settlement (e.g. Chou 1997). The relations between land and society in northern England during the Bronze Age offer an interesting comparison to this. There it would seem the agents who had the power to control land during the construction of the cairns were more remote from everyday life, perhaps embodied in a community's ancestors who had settled the area during a mythical past. Groups, possibly families, certainly held tenure over fields for at least a short period of time but these were mediated through the maintenance of a bond with their ancestors. With the desanctification of cairnstone and changes in the way fields were occupied – as they became settings for daily practices closely tied to the house – then a stronger bond became established between the field and those who cleared it. Over the long term, agency was transferred from the cairns to the people. The material history of this process has been preserved in those sites where cairns become the nodes for a network of boundaries, and as at Hallshill, where buildings reoccupy the sites of earlier monuments.

6

BEYOND BOUNDARIES

THE DEVELOPMENT OF REAVES ON DARTMOOR

> In many instances it is very difficult to be sure whether a ditch is a boundary ditch or a road or possibly both.
>
> (Crawford 1924, 3)

6.1 Introduction

The problem that O G S Crawford relates in the above epigraph is one encountered by all those surveying archaeological remains: the visible earthworks can usually be interpreted in more than one way. So it is that linear earthworks of whatever type may be ascribed a variety of functions depending as much upon the academic perspective of the interpreter as the physical attributes being recorded. A classic interpretative ambiguity has already been noted for the linear ditches on the chalkland of the Yorkshire Wolds (section 2.2), though a perhaps more infamous example can be found in the history of research into the reaves on Dartmoor (Fleming 1978a). During the early years of the 19th century these long stone banks were in the first instance accepted as 'dykes' and land divisions of a sort. Yet, within a few decades that nomenclature had changed to 'trackways' and 'tracklines' (Rowe 1848), and what were once boundaries had now become paths across the moor. While it is true that this re-interpretation of the reaves was not maintained for too long (Crossing 1912, 32*ff*), it contributed to what Fleming has termed 'a curious case of lost knowledge' (Fleming 1988, 12): remains that had at one time been recognised as ancient land boundaries became attributed to medieval or later occupation on the moor.

Following years of research and fieldwork, principally by Andrew Fleming, this interpretative ambiguity has apparently been resolved. The trackways described by Rowe are now recognised as a vast network of land divisions built during the second millennium BC. The coherent pattern and the brief span of their construction has made them a phenomenon of the British Bronze Age to rival Stonehenge in their importance and monumental scale. The reaves have come to dominate not only the

later prehistoric archaeology of Dartmoor, but to emerge as the type site for uplands field systems in north-west Europe (*cf.* Coles and Harding 1979, 251; Harding 2000, 155-158). There is apparently no single better example of the changes that took place in society at this time than the sudden, from an archaeological perspective, efforts to enclose vast areas of land on Dartmoor in the middle of the second millennium BC.

It would seem that there could not be a greater contrast to the small cairns and field plots discussed in the previous chapter than the Dartmoor reaves: the gradual, localised process of enclosing small plots of land compared with the dramatic, moor-wide organisation of the landscape into a vast 'terrain-oblivious' system. Nonetheless, tenure still existed in both these contexts, and consequently it required the structural conditions of rules and resources in which to operate. From such a perspective, the apparently rapid changes on Dartmoor could only have occurred within suitable structural conditions. So that rather than searching for a cause we should be seeking to identify the social and material conditions that allowed such an ostentatious display of agency. These conditions include the material resources available to the people who occupied the moor during the Bronze Age – material resources such as pre-existing organisational elements within the everyday environment e.g. the locations of settlements, the limits of cleared and grazed land, and the networks of paths that linked these areas. These networks of resources would have continually changed as they were transformed by those who had tenure over them. In northern England during the 3rd and early 2nd millennia BC tenure was remote from everyday life, agency was invested in cairnstone rather than in the people who farmed the land. Such a model cannot be transposed onto Dartmoor since different structural conditions operated; nonetheless, relations between land and society can be addressed through an analysis of the changing rules and resources that enabled and constrained tenure.

6.2 The context of Bronze Age settlement on Dartmoor

The archaeological record of Dartmoor is rich in prehistoric remains. The moor was occupied from at least the later Mesolithic, and the distribution maps of Neolithic monuments and lithic finds show that by the third millennium BC the southern and eastern moors were extensively occupied (Gerrard 1997). There is good evidence for the management of woodland fringes on the high moor during the Mesolithic, with the coincidence of microscopic charcoal and a gradual reduction in arboreal pollen between 7700 and 6300 BP (Caseldine and Hatton 1994, 40). The pollen record is not so good for the 4th and 3rd millennia BC. Undoubtedly clearance of woodland continued, albeit on a small scale, but there is no evidence for anything other than pastoral land use until the middle of the second millennium BC. The evidence for second millennium BC occupation of the moor has been isolated and contrasted to this perceived lack of intensive occupation in the preceding millennia (e.g. Butler 1997). Certainly the environmental evidence shows that the lower slopes of the moor were cleared of

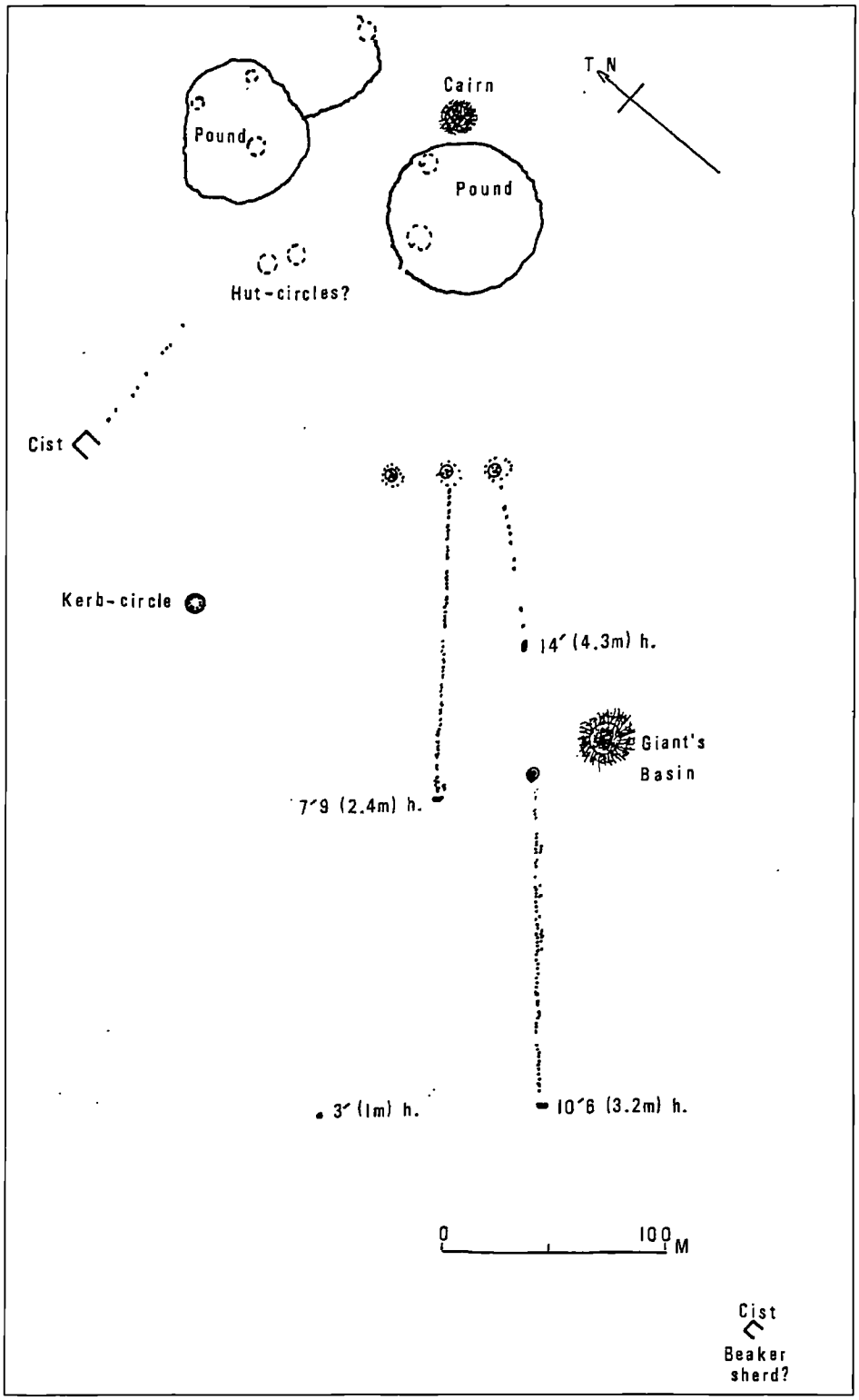

Fig 6.1 Plan of the 'ceremonial complex' at Drizzlecombe (reproduced from Burl 1993).

substantial woodland at this time. And, most convincingly of all, there is a dramatic increase in the numbers of visible settlements and monuments from at least the first half of the second millennium BC. This impression must be tempered somewhat: the main evidence for major woodland clearance comes directly from archaeological sites on the lower slopes (e.g. Balaam et al. 1982; Maguire et al.

1983), yet the pollen cores from the high moor are dominated (>50%) by arboreal pollen (Caseldine and Hatton 1994, 43); and the archaeological evidence is poorly dated except in broad terms. There is, therefore, considerable potential for extending the second millennium BC settlement record across a greater time span.

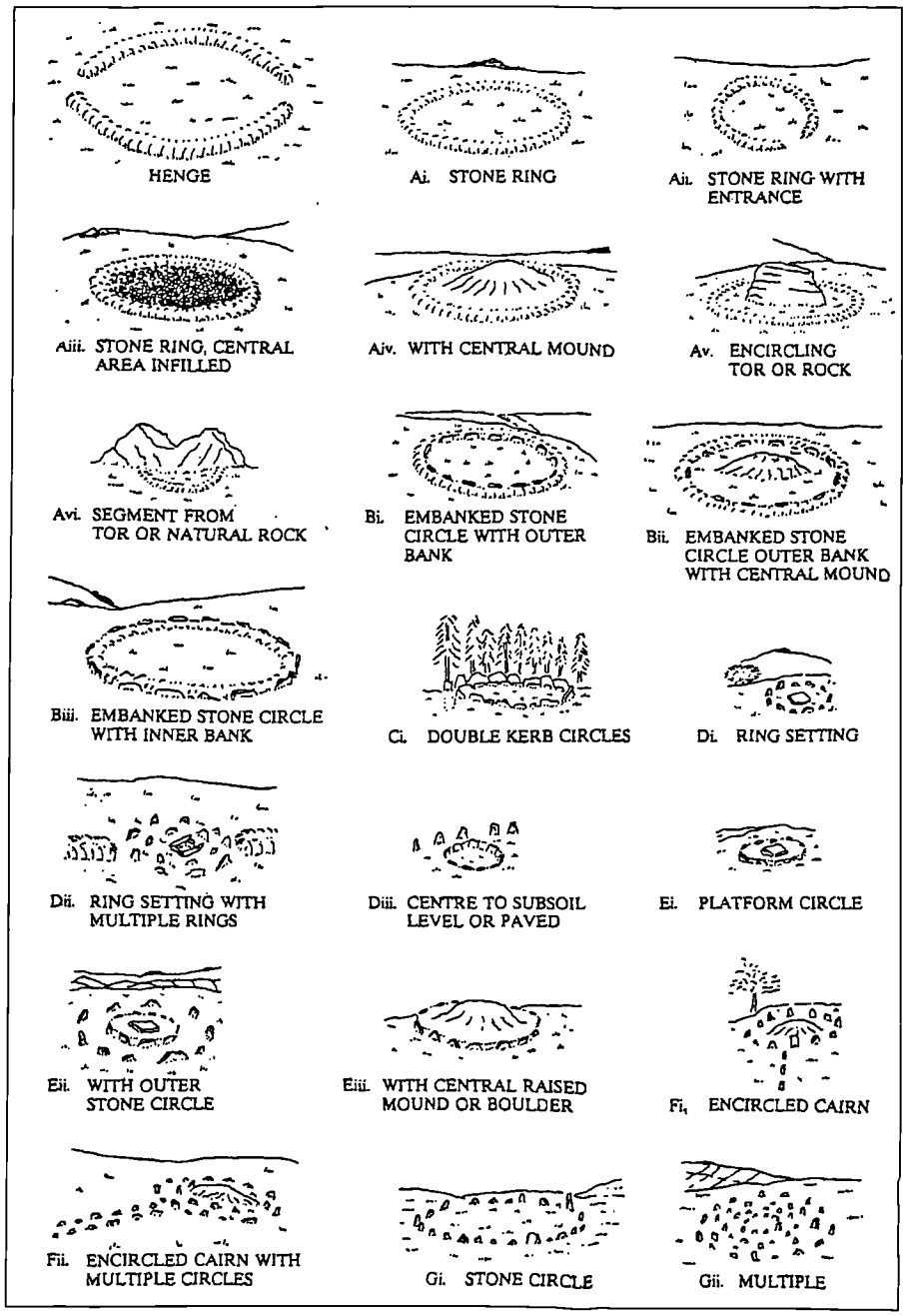

Fig 6.2 Classes of ring cairn, stone circle and related monuments (reproduced from Turner 1990).

The monuments, settlements and field systems attributed to the late third and second millennium BC occupation are among the most numerous archaeological features, along with medieval settlement and tin working, to be found on Dartmoor. Some of the monuments, such as round barrows, ring cairns, stone circles and stone rows are based on a long architectural tradition, but their construction and use

is proven on Dartmoor well into the second millennium BC. There are over seventy stone rows, fourteen stone circles and many hundreds of barrows and ring cairns. The stone rows and circles are, in several places, found in 'monument complexes' where several stone rows are found together with a stone circle, at least one standing stone and a number of cairns. At Merrivale, located towards the head of the River Walkham on the western slopes of the moor, the stone rows are set someway apart from a stone circle and numerous cairns. The impressive complex of Drizzlecombe, located towards the head of the River Plym and surrounded by higher ground to the north, east and west, does not include a stone circle but there are multiple stone rows with massive terminal stones and numerous cairns in the vicinity (Fig 6.1). These large complexes, while impressive, do not make up the majority of 'ritual' sites on the moor. Particularly interesting are the so-called 'ring cairns', a term used to account for a bewildering array of monument types including kerbed circles, embanked cairns and encircled tors (Turner 1990). These monuments, although often gathered together in the same morphological class and sharing similar architectural traditions, clearly differ considerably in their various roles. Some examples are directly associated with burials and cists, others are more akin to enclosures with a defined stony bank and at least one entrance, and a few elaborate existing rock features such as the granite, hilltop tors which are so characteristic of the Dartmoor landscape (Fig 6.2).

Despite the range and quality of the monuments, Dartmoor is most famous for its later prehistoric agricultural and settlement archaeology. The reaves represent only a small proportion of these features. There are many examples of smaller, less regular systems of plots and fields associated with settlements and in many cases incorporated into the coaxial banks of the reaves. There are at least eight cairnfields of probable prehistoric date known from north-west Dartmoor (Fleming 1980), though elsewhere on the moor small 'clearance' cairns are directly associated with medieval fields, and therefore represent a much later episode of agricultural activity. In addition, small 'stone-free' areas where stones have been cleared to the sides of small 'fields', known from Bodmin Moor to be early in date, are found at a few places on the moor (Gerrard 1997, 27). These agricultural traces are, in almost every case excepting the cairnfields and 'cleared areas', closely associated with settlements. However, there are many more settlements than field systems, and they are found independently, both unenclosed and enclosed, across much of the moor. Within field systems, individual round houses are quite common. Isolated examples are rare beyond the fields; in such contexts they tend to be part of larger settlements, some partially enclosed, others encircled by substantial walled enclosures. The round houses are of various sizes and construction, and where modern excavations have taken place there has been evidence for timber buildings either beneath the stone structures or located close by.

The dating of these settlements is problematic. They are, in the broadest sense, later prehistoric, but it is unclear either from the field evidence or from the excavated record how long that chronology might extend. The majority show evidence, as might be expected, for aggregation over time rather than being

planned. Excavations at an enclosed site on Shaugh Moor demonstrated that the surrounding wall of the settlement was not a primary feature, and the radiocarbon dated occupation spanned nearly 1000 years, during which time the architecture and layout changed a great deal (Wainwright and Smith 1980). The lack of Neolithic (excepting a sherd of possible Neolithic pottery from Legis Tor) and earliest Bronze Age settlements is a problem not peculiar to Dartmoor, and the few examples known from the south-west are certainly the exception. This situation has got a great deal to do with research strategies, the dominance of upstanding remains in the record, and the fact that current land use practices are not conducive to recovering evidence of lithic scatters.

There are a greater number of sites that are likely to date from the first half of the second millennium BC. The production and use of Trevisker style pottery from c.1700 BC until the second half of the second millennium BC has made it possible to date a small number of the more than 300 buildings excavated by local antiquarians and archaeologists during the late nineteenth and early twentieth century (Needham 1996; Parker Pearson 1990; *cf.* Radford 1952). Three different Bronze Age ceramic traditions are present in the pottery that was recovered: Trevisker ware, Wessex Biconical Urns, and Deverel Rimbury (Parker Pearson 1990). The pottery was manufactured using locally derived materials with the exception of the sherd of Deverel-Rimbury pottery recovered from the settlement of Foale's Arrishes, and a sherd of Trevisker ware made from gabbroic clay from Smallacombe Rocks. The ceramic record from settlement contexts seems to indicate contrasting traditions between the northern and southern moor. In the case of the former, Trevisker ware made from fabrics with a dolerite filler were identified at Watern Oke, Smallacombe Rocks, Foale's Arrishes, Tunhill Rocks, Raddick Hill and Legis Tor. While on the southern moor, Trevisker ware made with a greenstone filler was identified at Dean Moor, Yes Tor Bottom and Raddick Hill. Along with Wessex Biconical Urns, these wares were the most common pottery types from site 15, the excavated pound, at Shaugh Moor.

Later occupation of Dartmoor has been somewhat overshadowed by the earlier evidence, leading Gerrard to refer to the first millennium BC as a 'dark age' (Gerrard 1997). It is true that very few of the field remains can be directly attributed to the Iron Age. Nevertheless, there are hillforts, however few, with more present on the lower hills beyond the fringes of the moor. While early and late Iron Age settlements have been excavated on the moor itself. At Kestor, Lady Aileen Fox excavated several buildings dated by association with early Iron Age ceramics, and in one example, within the Round Pound, iron working debris including a small furnace (Fox 1954b). At Gold Park, Shapeley Common, the excavated buildings produced middle to late Iron Age pottery and radiocarbon dates (Gibson 1992). Taken together the evidence from all of the aforementioned sites demonstrates that the upstanding field remains have a long chronology of at least 1500 years. This does not take into account the many occupation areas that do not survive above ground and which would undoubtedly extend the duration of extensive inhabitation on the moor.

The evidence for Bronze Age settlement surrounding Dartmoor is relatively sparse. There are a significant number of flint scatters and crop mark sites in lowland Devon (Miles 1976; Quinnell 1988; Griffith 1994). The majority of the lithic scatters are dated to the Neolithic and early Bronze Age, though a long chronology and evidence for later Bronze Age flint working cannot be discounted (e.g. Parker Pearson 1981). The limestone uplands of southern Devon have produced evidence for later prehistoric settlement, including field systems and cairnfields (e.g. Gallant et al. 1985; Quinn 1995). Several cairns excavated at Dainton in South Devon overlay second millennium BC occupation deposits along with post-Trevisker pottery (Silvester 1980). A pit located close by contained an important group of clay metalworking moulds associated with the Wilburton Complex, recently dated to c.11th century BC (Needham 1996). Taken as a whole, the countryside surrounding Dartmoor was extensively occupied by the third millennium BC, and this was maintained well into the second and first millennia, though the techniques available for locating such activity are limited (aerial photography combined with excavation is an exception: Griffith 1994, 95).

The construction and use of the field systems on Dartmoor must be seen in the wider context of all this activity. The environmental history of the moor shows good evidence for human inhabitation from the Mesolithic, and by the beginning of the second millennium BC there would, as Evans has suggested (Evans 1999, 26-34), already have been an intricate patchwork of places and paths linking various locales associated with monuments and agricultural activity. The environment was dwelt in long before the reaves were constructed. The complex archaeological record from the Bronze Age is not restricted to field monuments. The material culture, particularly the pottery, demonstrates that even across the moor itself there were distinctions made on the basis of ceramic traditions. The significance of these 'boundaries' between different pottery styles is difficult to explain without considering the context of settlement as a whole (*cf.* Raymond in Bradley et al. 1994). Important in any explanation must be the relationship between the moor and the surrounding lowlands. Extending this still further, the use of Trevisker styles of pottery, but not gabbroic wares which must have passed through Devon in order to reach Wessex, reveals the potentially complex relations that existed between the communities who inhabited Dartmoor and the groups who lived elsewhere in the south-west. Untangling this material evidence is a task beyond the scope of this thesis, but these wider issues must be kept in mind when considering interpretations of the construction of field systems on Dartmoor.

Interpreting the pattern of Bronze Age field systems and boundaries

The prehistoric land boundaries on Dartmoor have been the subject of extensive surveys but only a small number of excavations. Through the work of the Dartmoor Reave Project the extent and character of the boundaries was recorded at a variety of scales (Fleming 1978b; Fleming 1983). Further survey work by Jeremy Butler has mapped the reaves and field systems across the moor, though predominantly at a small scale and principally using air photographs. More intensive ground

survey, still in progress, is being undertaken by English Heritage (and formerly the RCHME) (e.g. RCHME 1997b; RCHME 1998). There have only been a few intrusive investigations of reaves and field systems on Dartmoor, the most significant being the rescue excavations on Shaugh Moor (Wainwright et al. 1979; Wainwright and Smith 1980; Smith et al. 1981; Balaam et al. 1982), and the research project on Holne Moor (summary of excavations in Fleming 1988, 71-93). Although limited excavations were carried out at Gold Park (Gibson 1992).

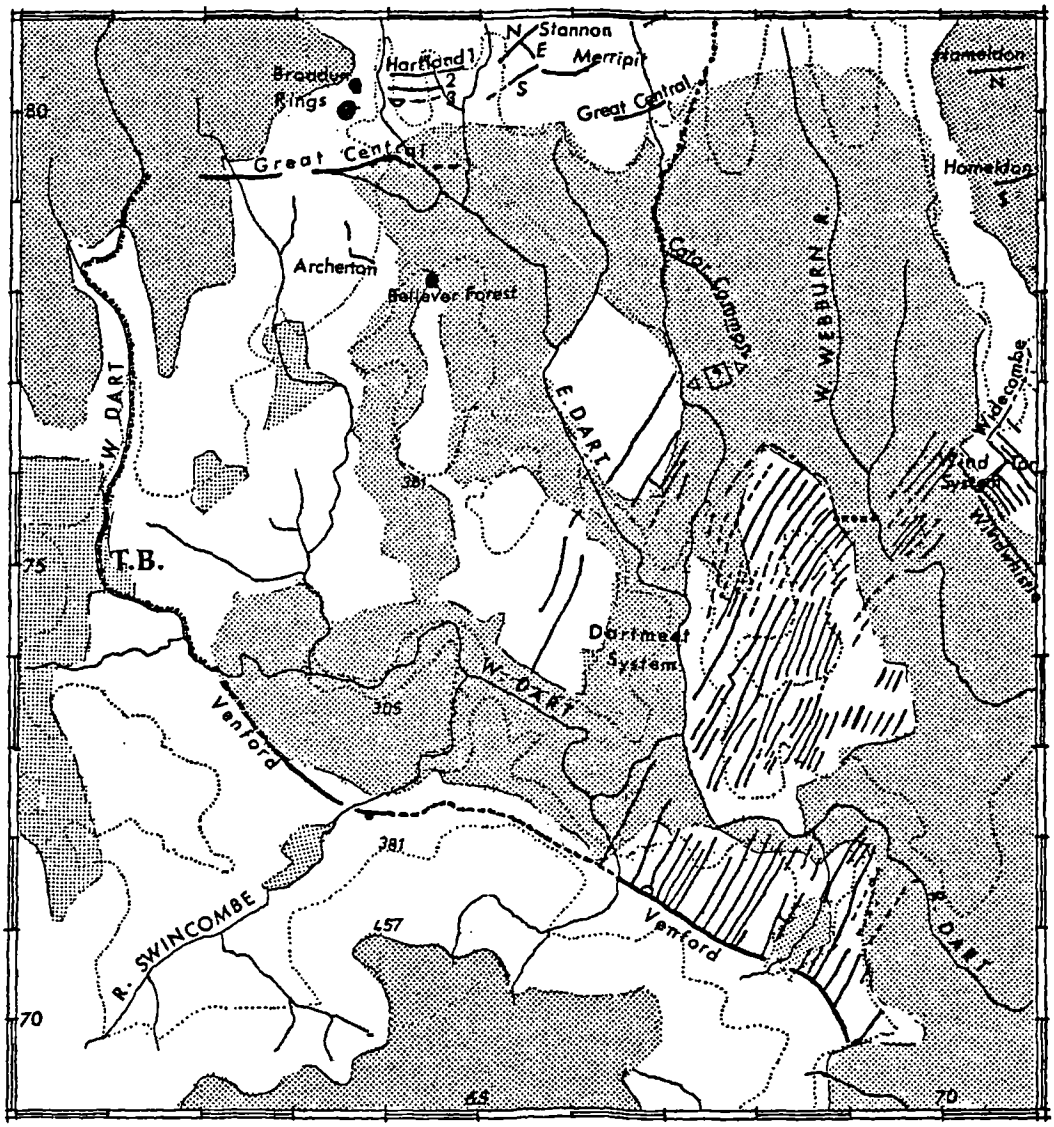

Fig 6.3 Plan of the 'Dartmeet system', showing enclosed land (light stipple) and land above 457m (dark stipple), frame graduations = 1km (reproduced from Fleming 1978b).

As a consequence of his surveys and excavations, Fleming went on to interpret the reaves as boundaries between land use zones, organised within a number of valley-based territories, laid out in a radial fashion around the moor (Fleming 1978b; Fleming 1983). He categorised the boundaries into three types according to their location and apparent function: watershed reaves, contour reaves and

parallel reaves. The first of these types, watershed reaves, are thought to be the earliest. They follow the watersheds between valleys, delimiting the large territories of distinct communities. The contour reaves demarcate the upper moorland from the parallel reave systems within these valley-based territories. The parallel or axial reaves divide up the lower slopes of the moor, below the contour reaves, into long strips which are themselves sub-divided by short, transverse boundaries perpendicular to the axis of the system. Within these parallel systems there is usually evidence for settlement, often in the form of round houses either isolated or in small groups. One of the best preserved and coherent examples of this pattern, including all the main elements of a reave system as defined above, is the 'Dartmeet system' (Fig 6.3). Situated in central Dartmoor, the boundaries cover an area of 6km by 4-5km, roughly 1500-2000ha, depending on where the limits for its extent are set (Fleming 1978b, 114-117). The main axial reaves, well over twenty in all, cross the valley of the River Dart in an impressive and cohesive fashion. They are bounded to the south-west by the 'Venford contour reave' and to the north-east by the 'Windwhistle Reave'. The northern limits of this valley territory was likely to have been marked by the 'Great Central Reave'. The grazing land used by the Dartmeet community seems to have been the southern moor to the south of the 'Venford Reave', and the sheltered valleys of the East and West Dart between the edge of the axial reaves and the 'Great Central Reave' (Fleming 1984, 8).

From this pattern Fleming posited the social structure of the society who built the reaves. There are three levels to Fleming's model. (1) *Communities* are represented by the large territories defined on either side by a watershed reave and associated with a reave system. (2) Within these communities there are individual *neighbourhood groups* defined by discrete clusters of houses, enclosures and fields. The variety between these groups situated in the parallel systems was, according to Fleming, evidence for local arrangements within a larger system into which they were attempting to fit. (3) The neighbourhood groups were made up of separate families or *households*, each kin group being associated with an individual house or group of houses located in the field system (Fleming 1984, 10).

Interpretations of the construction and use of the reaves have also been dominated by Fleming's work (summarised in Fleming 1994). His interpretations of why the reaves were built and what they represent, in socio-economic terms, has changed over the twenty years or so since his first publications on the subject. In his initial studies Fleming chose to concentrate on the overall synchrony of the boundary systems, describing them as a vast project to reorder the Dartmoor landscape. His later work is less extreme in this regard, and the pattern is interpreted with more emphasis upon its chronological and spatial context.

According to Fleming, the reave systems were a development, during one brief time span, of pre-existing territories established during the practice of inter-commoning undertaken in the Neolithic

(Fleming 1994). The evidence for this lies largely in the distribution of earlier ritual monuments such as barrows, ring cairns and stone rows, which marked early community territories, and the large territories postulated by Barnatt based around the large stone circles at Scorhill, Stall Moor, Sherberton and Brisworthy (Barnatt 1989). The reaves are a furtherance of this system and are only one short time horizon, albeit a very visible one. The evidence for this brief time span lies in a number of factors: the boundaries are interdependent, i.e. they make up a coherent system; the radiocarbon dates from the excavated sites at Shaugh Moor and Holne Moor cover only a short period in time; and the evidence for pre-reave boundaries is very slight (limited to several cross-ridge boundaries and a couple of unfinished reaves). The resultant, 'terrain-oblivious' boundary systems consist of large grazing territories, each with its own reave system.

This dramatic formalisation of territorial markers was the result of a 'Commons Dilemma' (Fleming 1985; *cf.* Lane 1998; McCay and Acheson 1987; Shoup 1990). Whether or not it was a decision made by a top-down autocratic authority, or it was mutually agreed among a collective of communities, the reason for the reaves seems to be an attempt to deal with the problem of collectively owned grazing land coming under pressure. Using medieval parallels, Fleming suggested that the reaves marked a reaction by communities to an increasingly exploitative elite who were not interested in how land was managed as long as they received the appropriate tribute. This idea of a highly stratified society with a developed sense of land ownership and obligation is elaborated in Fleming's identification of what he terms 'Large Terrains' (Fleming 1994, 66; Fleming 1998). A term used as a deliberate comparison between the territories of Bronze Age coaxial field systems and early medieval estates. The Dartmoor examples, defined by the reaves, are based on valley territories. These 'large terrains' do not include farms or villages. Instead, there is 'a pattern of dispersed settlement, unstable in the longer term; rights within clan land rather than long-term "ownership" of subdivisions within it; land use which is extensive rather than intensive and takes place in particular zones, and often in a seasonal cycle' (Fleming 1994, 67). The acquisition and maintenance of authority within these Large Terrains is based on the 'ritual authority' and 'prestige goods' models outlined for Wessex. On Dartmoor the evidence for this is in the contrasting arenas of the ring cairns, closed off and sealed, and the stone circles, arenas open to 'reinterpretation through performance'.

Discussion

The empirical and theoretical breadth of Fleming's work on the reaves cannot be over-estimated. Unfortunately, it has remained a singularly individual exercise. While many archaeologists have drawn extensively on his research, very few have attempted to offer alternatives to his explanations of the reaves. Price's assertion that Bronze Age occupation of the moor was principally for the extraction of tin represents one exception (Price 1985; Price 1988; *cf.* Fleming 1987b), as do the issues raised by the RCHME following their survey of Holne Moor (RCHME 1997b, 8), and Spratt's brief discussion

of the evidence for prehistoric territories (Spratt 1991, 444-445). It is arguable what can be gained from critiquing interpretations that were innovative in their time but now seem somewhat dated. What is needed is the recognition that a singular interpretation isn't sufficient, and that other perspectives should be explored.

The overriding difficulty is to get away from the idea that the reaves necessarily form a synchronous event in the history of the moor. Analyses have focused without exception upon the pattern of the boundaries as they were surveyed by archaeologists, and often by implication how they were *planned* by the people that built them. As a consequence the social structure of the communities that lived on the moor is inferred directly from the hierarchy of scales of territory enclosed by the boundaries. This inferred social structure is then employed within explanations of why the reaves form the pattern they do. Another effect of this synchronous perspective is to isolate the reaves as a phenomenon *sui generis*, and thus creating a class of archaeological features – the boundaries – that have their own spatial and temporal limits. The use of terminology such as 'the reave-builders' or 'the reave system' simply isolates the people and the material culture from all that went before and everything else that would follow. It has the consequence of excluding features earlier than the reave-type boundaries into a pre-reave phase, and therefore re-enforcing the periodic sequence that has for too long dominated interpretations of the region: 'There were two pulses – the plan and its variable local outcomes, followed by its more complete and standardised implementation' (Fleming 1994, 73). In fairness and as a whole, Fleming's writings on the reaves, and on coaxial systems in general, could not be said to consider the fields in isolation. Yet the dominant interpretation remains one of a planned *event*, whether that be in response to the wishes of one elite authority, or as a mutual decision made between all the communities settled around the moor. In order to understand the histories of the communities that built the reaves it is necessary to take a different perspective, and instead consider the manner in which agency operated. This would be a study of the structures that agents inhabited, where agency related to the power to make use of land, and by implication to clear, farm and enclose land.

A secondary problem, closely allied with the first issue discussed above, is that the landscape of the reaves has been textually appropriated. During his work, Fleming named each boundary broadly according to its geographical location, and having discerned what he considered to be discrete systems, he gave these names as well. The first letters of the reave names were always capitalised so that examples such as the 'Venford Reave', or the 'Eylesbarrow Reave' became placenames for an archaeological map of Dartmoor. Such textual colonisation, while a helpful shorthand, does imply that the reaves are a unitary phenomenon and that they all served a similar function within the same cultural context. The alternative, couching interpretations in modern sociological jargon, can hardly claim to be wrestling our prehistories out of the 21st century, but it does represent an effort not to colonise the prehistory of Dartmoor with placenames. Instead, places are first and foremost defined by

the conditions through which inhabitants dwelt, and the material and symbolic networks that were structured by their actions.

In order to achieve this, three separate narrations, all at different time-space scales are considered. In the first instance, the contrasting use of fieldstone is, as in the previous chapter, again considered; on this occasion, taking the entire moor as the study area, a comparison is made between deposits in ring cairns with those left in domestic structures. Round houses are also important in the second study, based on a survey of the settlement remains and boundaries at Shovel Down and Chagford Common – an area on the eastern edge of the moor. The scale then shifts towards a greater level of detail in the final case study, in which the biography of a single excavated reave is analysed. It is not my intention to offer a comprehensive study of the reaves: the scale and complexity of the material evidence requires at least a thesis by itself to deal with it, and in any case the quality of the record is changing all the time. The surveys by Butler are an impressive and essential comprehensive record, but the ongoing work by English Heritage (and formerly the RCHME) is providing the sort of accuracy and detail required as a basis for the more intensive studies that will no doubt follow.

6.3 Ring cairns and round houses on Dartmoor

As intimated in the previous section, the archaeological evidence for third and early second millennia BC occupation on Dartmoor mostly consists of lithic monuments such as barrows, rings cairns, stone circles and rows. In a number of locations these monuments are to be found in significant concentrations, such as at Drizzlecombe or Merrivale, and perhaps inappropriately termed 'ritual complexes'. Barnatt (Barnatt 1989) and later Fleming (Fleming 1994) have both suggested that these groups of monuments formed 'central places' within large valley-based territories, the boundaries of which reached to the watersheds that were themselves occasionally marked by linear barrow groups. In principle, it seems fine to suggest that formal monuments such as barrows and stone circles were crucial in linking people and places at an ontological level. For instance, stone circles are also frequently located on obvious routeways across the moor. The standing circle of stones formalises a meeting place within which, among other things, face to face contact between different groups could have taken place. In this case, the ontological links between people and place are established through practice – gatherings were crucial in structuring the stone circle as a meeting place.

The processes by which resources were formalised and given ontological value through practice was discussed in the previous chapter: in northern England the formalised act of placing deposits within small cairns enabled the transformation of fieldstone into cairnstone, and signified that tenure over the land was negotiated between the community and their ancestors. From this point of view it is the act of creating the monument that is crucial in giving it significance and building the elements of its

construction into ontologies. On Dartmoor too, the monumental cairns, especially the ring cairns, provide ample evidence for such transformations. They include a range of formal deposits, notably charcoal and material culture; they are closely associated with pre-existing features especially earthfast stones; and most interestingly of all, they encircle the prominent granite tors that landmark the highest points on the moor. The act of building the ring cairn sanctified the elements of which it was composed, and established a link between the living agents and a remote tenure over place. Yet, just as in northern England, such elements are not restricted to monuments, they are also assimilated into more quotidian contexts. In northern England these were fields, on Dartmoor that context would seem to be domestic structures, notably round houses. In the remainder of this section, the archaeological evidence for concurrent practices in ring cairns and houses is analysed, and its significance for understanding tenure is considered.

Cairns with 'eccentric cremations'

The group of cairns excavated on Shaugh Moor are a good introduction to this material (Wainwright et al. 1979).[1] They were situated on the slopes west of Saddlesborough, a low hill now surrounded by china clay pits on the south-western fringe of Dartmoor (Fig 6.17). Six monuments were investigated during the rescue excavations undertaken in 1977: three large ring cairns and three small cairns (Fig 6.4). No human burials were recovered but there were various deposits of charcoal and material culture both in pits and on the ground surface.

The first of the ring cairns was large, over 10 m in diameter. It consisted of a ring bank of stone, well-defined within the internal circumference, that enclosed, but was not centred upon, a large earthfast boulder. A pit had been dug into the old land surface just to the south of the earthfast boulder and filled with soil and charcoal. Two of the other cairns produced remains very similar to this. One of these, cairn number 4, was badly disturbed, and was possibly only constructed as a ring of stone in the same manner to cairn 1. Cairn 2, on the other hand, had a well defined stone ring that surrounded a number of earthfast boulders; at the time of excavation the boulders were interpreted as a stone circle though this view was not maintained in the published report. In the centre of the cairn, a low mound of dark loam sealed an area of burning. Beneath the mound, while not central to it, was a pit (0.4m deep and 0.4m in diameter) containing a charcoal rich soil overlain by re-deposited subsoil. Incorporated with the lower horizon within the pit were several faience beads and the base of a pot. A further charcoal filled pit was discovered beneath the south-western arc of the ring of stone and sealed by a capstone.

[1] In addition to the published report, the written archive of the Shaugh Moor Project was studied at Plymouth City Museum.

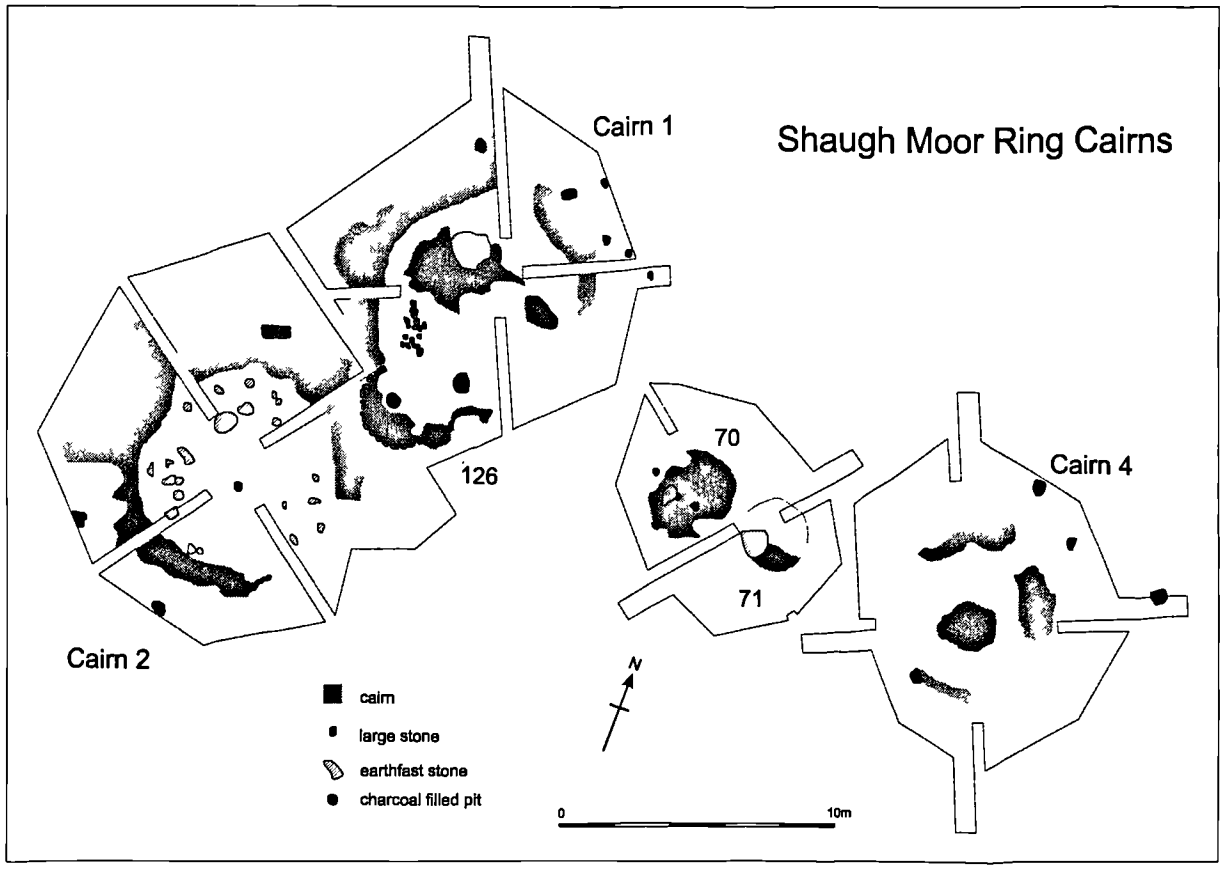

Fig 6.4 Simplified plan of the Shaugh Moor ring cairns (based on Wainwright et al. 1979).

Three small cairns were uncovered during the excavations. One of these, cairn 126, was incorporated within the stone ring of cairn 1. It consisted of a mound of stones and turves delimited by a kerb of larger stones; the mound overlay two successive pits. The first of the pits was cut into the old ground surface and was filled with a charcoal rich black loam overlain by a shallow deposit of grey soil. The second pit was no more than a shallow scoop cut into the top of the first pit, it too contained charcoal. The other two cairns were situated on an obvious platform between cairns 1 and 4. Cairn 70 consisted of a mound of stones and turves defined by an outer kerb. Beneath the centre of the mound was a bell-shaped pit filled with largish lumps of charcoal and sealed by a stone. Cairn 71 was badly disturbed but it seemed to have originally existed as a high pile of granite boulders placed around an earthfast stone and delimited by a kerb. Two features were exposed within the projected limits of the original cairn: a large spread of charcoal centred upon a shallow depression which contained pot sherds, and another charcoal filled pit situated close to the earthfast boulder.

The three large monuments excavated at Shaugh Moor were categorised as ring cairns by the excavator and compared to the examples excavated at Brenig in north Wales (Lynch 1993), though parallels can be drawn with sites in much closer proximity, notably in Cornwall (Quinnell 1988; e.g. Griffith 1984, 64; Miles 1975). On Dartmoor, the presence of charcoal filled pits within cairns is not at

all uncommon. Excavation of a site at Metheral near Chagford revealed a central pit filled with charcoal and covered by a slab; pieces of quartz and flint were found in the cairn material (Worth 1937). On Farway Hill, Farway, two adjacent ring cairns were associated with 38 pits filled with charcoal along with three cremations in a cist (Pollard 1971). Two ring cairns excavated at Deadman's Bottom near Langcombe, Shaugh Prior, were internally revetted, and had 'paved' interiors that overlay charcoal deposits and evidence for *in situ* burning (Worth 1900). Similarly the cairns or barrows excavated on Dartmoor have produced very little evidence for burials (Butler 1997, 275-277). A small cairn excavated at Broadun produced a pit, 1.2m in diameter and 1.4m deep, filled with stones overlying a mixture of charcoal and burnt bone. A possible barrow or hut circle at The Croft, Peter Tavy, had a central hollow, 0.46 m in diameter and 0.39 m in depth, filled with charcoal, 4 pieces of pot and several pieces of flint (Anderson 1906, 103). Close by, a barrow overlay burnt earth, charcoal and a flint scraper (Anderson 1906). In Grinsell's list of Dartmoor Barrows there are 14 excavated sites that overlay central or near central pits containing only charcoal (Grinsell 1978).

The cairns on Dartmoor, as with the cairns in northern England, are simply constructed, yet they embody a complex network of structures. The rings of stone, earthfast boulders, spreads of charcoal, pits filled with charcoal, deposits of flint and pottery are resources that acquire significance through their inclusion as architectural elements within the cairn. As suggested in 5.4, this process can be metonymic in that elements from mortuary monuments are incorporated into nonburial contexts to represent human burials or at least allude to the transformative, liminal time-space that burials occupy. On Dartmoor, the ring cairns would also seem to include metaphorical associations, principally with houses. This is partly evident in the shape of the stone rings: the internal edge of the ring is well-defined, as though abutting against a wall, while the outer edge is irregular, spreading out from the centre. There is a much stronger allusion to houses present in both the cairns and the ring cairns: the charcoal filled pits.

Round huts with 'cooking pits'

A substantial number of 'hut circles' were investigated during the 1890s and early 1900s by several individuals and most prominently by the Dartmoor Exploration Committee. The early archaeological interest in these sites resulted in the exploration of 34 locations across Dartmoor between 1893 and 1905 – over 300 round houses were excavated.[2] A prominent feature found within many of the huts was, what was then termed, a 'cooking hole' or 'cooking pit'. These were shallow pits filled with charcoal and 'peat ash' often situated next to the hearth in the centre of the house or against the wall facing the entrance of the structure – a location that was often marked by an abnormally large stone

[2] The written accounts of the excavations are generally no more than cursory summaries of the uncovered structures (a situation that deteriorated with time). Nonetheless, sieving of the floor deposits took place on some occasions, plans of the structures were sometimes published, and a proportion of the finds have survived.

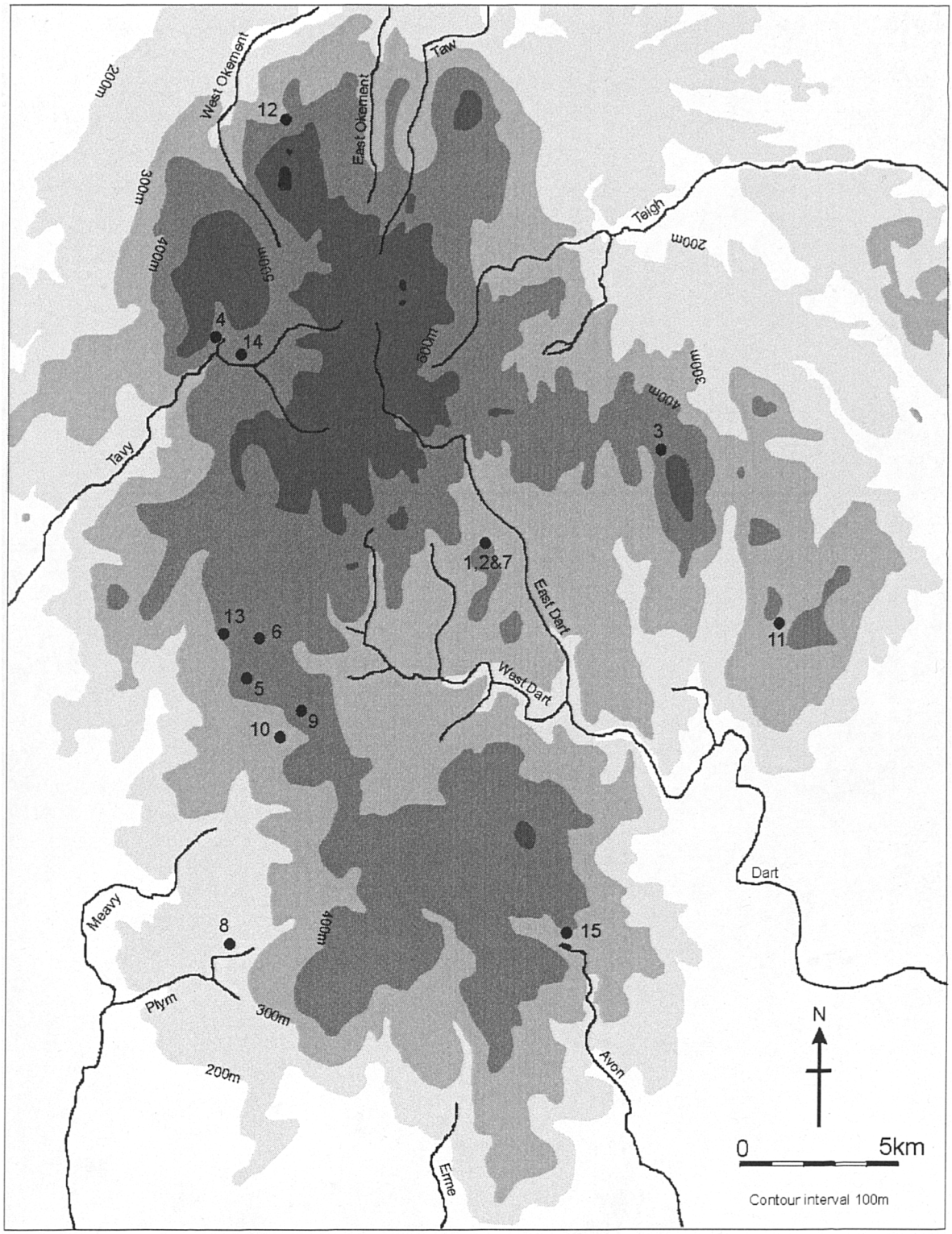

Fig 6.5 Locations of settlements with 'cooking holes'; numbers refer to Table 6.1.

built into the interior of the wall; the majority of the finds and charcoal were also recovered from these areas (Baring-Gould 1898, 102). The first examples of such pits were excavated at Broadun (Burnard 1894) and Grimspound (DEC 1894, 107). The pits at Broadun were 0.31-0.39m in diameter, 0.15m deep, and filled with 'ashes' and charcoal. At Grimspound the pits were approximately 0.5m in average diameter, 0.20-0.23m deep, and they too contained 'ashes' and charcoal; a fragment of coarse pottery was found next to the side of the pit in hut XIX (Baring-Gould 1896, 192). These 'cooking holes' were subsequently found at a majority of the settlements where the DEC undertook field investigations between 1893 and 1905 (Fig 6.5 and Table 6.1). The pits, averaging 0.4-0.45m in diameter and 0.28m deep,[3] always contained charcoal and 'peat ash', they were invariably found close to a hearth stone, and the houses in which they were found had significant deposits of charcoal spread across the excavated floor surface. The pervasiveness of these charcoal filled pits became apparent to the excavators so that dwellings, as opposed to huts for livestock or storage, were characterised by the presence of a hearth and or a 'cooking hole' together with a spread of charcoal over the floor of the structure.

REF. (FIG 6.5)	SETTLEMENT	DESCRIPTION (WITH NGR)	REFERENCE
1	Broadun Ring	Pound (near Krapp's Ring – SX 6478)	Burnard 1894
2	Broadun	Pound (near Krapp's Ring – SX 6478)	Burnard 1894
3	Grimspound	Pound (SX 7080)	DEC 1894
4	Ger Tor	Field System (SX 5483)	Baring-Gould 1894
5	Merrivale	Pound (SX 5575)	DEC 1895
6	Langstone Moor	Field System (SX 5577)	DEC 1895
7	Krapp's Ring	Pound (SX 6478)	DEC 1895
8	Legis Tor	Pound (SX 5765)	Baring-Gould 1896
9	Hart Tor	Pound (SX 5872)	Baring-Gould 1896
10	Raddick Hill	Pound (SX 5771)	Baring-Gould 1896
11	Foale's Arrishes	Field System (SX 7375)	Baring-Gould 1897
12	Yes Tor Bottom	Pound (SX 5890)	Baring-Gould 1898
13	White Tor Fort	Pound (SX 5478)	Baring-Gould 1899
14	Watern Oke	Field System (SX 5683)	Anderson 1906
15	Dean Moor	Pound (SX 6765)	Fox 1957

Table 6.1 List of settlements with 'cooking holes'.

The pits did not have a uniform structure. A lining of stones is shown on the plans of the pits at three of the houses at Grimspound (huts 3, 7 and 12) (Fig 6.6), at hut 8 Legis Tor, and at the settlement of Hart Tor, where two large stone lined pits were excavated in huts 12 and 14. Complete pottery vessels were found set in pits and filled with charcoal and ash at Legis Tor (hut 7)[4] and Raddick Hill (hut 3), but more commonly pot sherds were contained in the fill of the pits. The pottery was almost all of the same type – a decorated coarse ceramic, probably Trevisker ware, almost definitely second millennium BC. At Legis Tor, four of the eight pits contained sherds of decorated pottery in addition

[3] Based on dimensions of 26 pits excavated at the settlements of Broadun Ring, Broadun, Grimspound, Krapp's Ring, Hart Tor, Raddick Hill, Foale's Arrishes, Yes Tor Bottom and White Tor Fort.

[4] The vessel was undecorated and round based; a crack in the base had been repaired *in situ* with china clay (Baring-Gould 1896, 186).

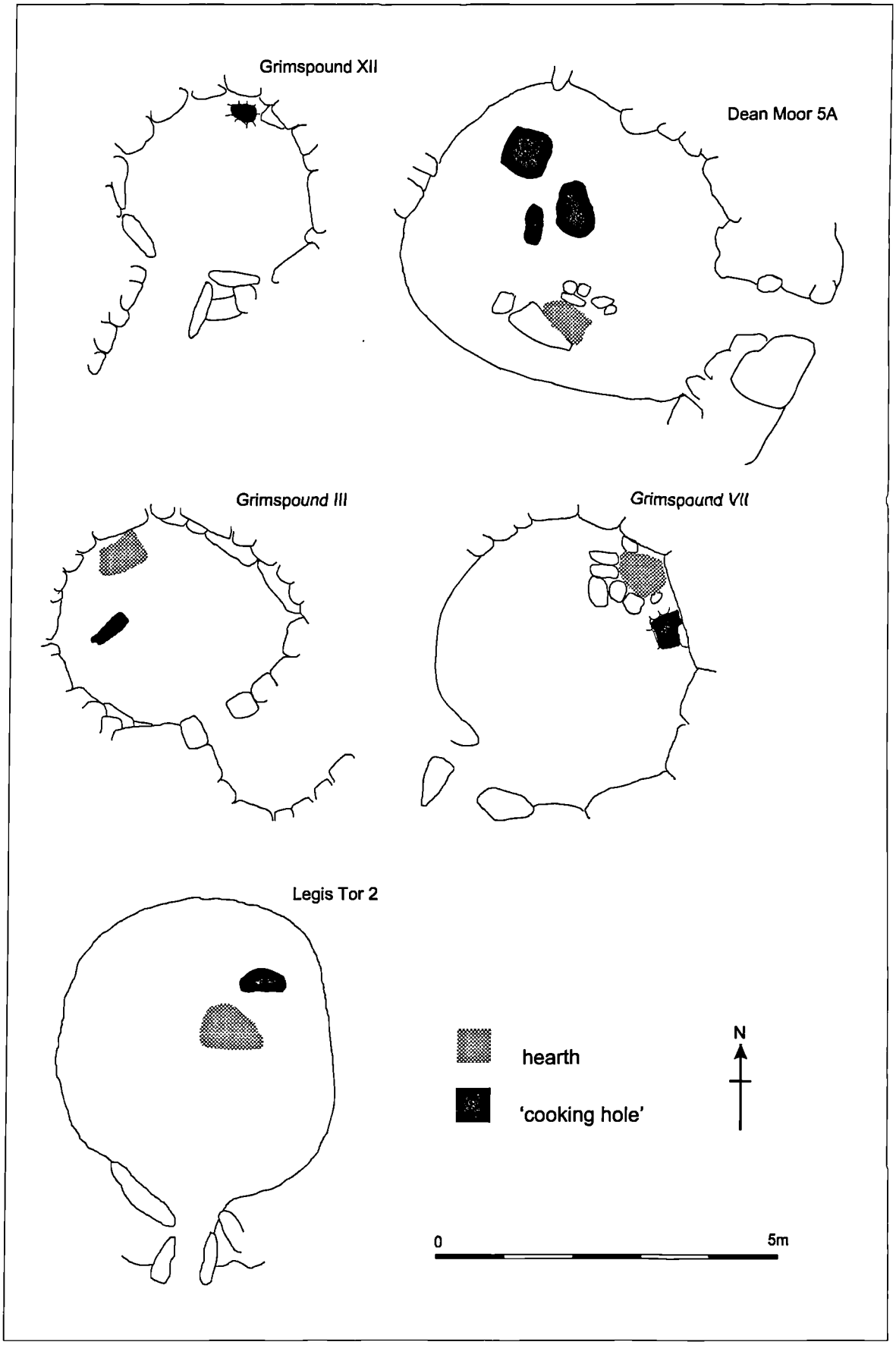

Fig 6.6 Simplified plans of excavated houses with 'cooking pits' (based on Baring-Gould 1896; DEC 1894; Fox 1957).

to the charcoal and ash. Fragments of pottery and charcoal were also found on the floor of the house along with, in huts 4 and 6, utilised flint flakes. Flint was not found in the 'cooking holes' at any of the sites, although pieces were commonly found amongst the charcoal strewn across the floor of the structures. So while the pit fills and the floor deposits were comparable since charcoal, burnt stones, pot sherds and, on occasions, complete pots were found in both contexts, lithics remain distinctive by their absence from the 'cooking holes', the only example being a worked piece of quartz from Yes Tor (hut 6). The pits were not always found singly, multiple pits were excavated at Hart Tor, Foale's Arrishes and Yes Tor. At Hart Tor, two pits, approximately 0.4m in diameter and 0.3m deep, were located close to each other towards the centre of the house; one of the pits was sealed by a layer of small stones set into the top of the fill. Hut 8 at Foale's Arrishes also had two 'cooking holes': one, containing charcoal, was located near the doorway; another, excavated against the south-east wall of the house, contained fragments of a pottery vessel and charcoal – it too was sealed, in this case by a single flat stone.

The Dartmoor Exploration Committee's investigations consisted, in many cases, of little more than clearing the deposits from the interior of the hut circle, and then reporting the results in a summary fashion. It is obvious from more recent excavations at similar sites that the archaeological features were considerably more complex. At Dean Moor, excavated in the mid 1950s, Lady Aileen Fox identified several pits which she interpreted as either 'cooking holes' or as 'soak aways' (Fox 1957). In hut 1 there were two pits located close to the hearth (no more than a concentration of charcoal). The pits were large and sub-rectangular, and they contained a dark organic rich soil along with several water rolled stones. The pits were located next to the hearth among an area of paving in the southern side of the structure, and below a cist-like niche built into the house wall. A large oval pit in the centre of hut 5A was filled with a dark, charcoal flecked soil along with numerous fragments of coarse pottery (Fig 6.6). Further pot sherds, charcoal and a flint flake were deposited on the floor between the pit and the hearth. In hut 5B, which shared its eastern wall with 5A, three shallow pits were uncovered below a cobbled floor surface and filled with an organic rich deposit which was spread over the surface between the pits and beneath the cobbles. In hut 8 there was a shallow central pit, 0.7m in diameter and 0.25m deep, containing a 'dark soil'.

The site of Dean Moor was enclosed in a sub-rectangular, almost D-shaped, enclosure. The houses within and attached to the enclosure wall were dated to the Bronze Age and early Iron Age based on the ceramics, but it is likely that there was a longer sequence of occupation at the site. A slightly fragile comparison might be made with the enclosure excavated at Shaugh Moor (discussed above, section 6.2) where occupation ranged, though neither continuously nor permanently, over a thousand years from the first half of the second millennium until the first millennium BC. The variety in the date of these enclosed sites, or pounds as they are variously categorised, is important yet it is

surprising that the distribution of 'cooking holes' is almost entirely limited to such settlements. Using the categories of settlement listed by Butler (Butler 1997, 269-274) there is a significantly greater number of charcoal filled pits within pounds than at any other settlement type: nearly 80% of the pits were excavated in pounds, yet only about 40% of the total number of excavated huts were located within pounds (Fig 6.7). The early date from Shaugh Moor may be important in assigning the inception of these occupation areas, albeit prior to being enclosed with a surrounding wall, in the first half of the second millennium BC. Such places then become contemporary with the ring cairns discussed above. Such an interpretation is supported by the presence of Trevisker ware identified from some of the sites: Legis Tor, Raddick Hill, Foale's Arrishes, Yes Tor Bottom, Watern Oke and Dean Moor (Parker Pearson 1990, 17). Of course, to espouse such a chronology is to simplify the all too obvious complexity of the settlement record. But if we are prepared to claim that the inception, the birth if you like, of these pounds was concurrent with that of the cairns, and probably also contemporary with the laying out of some of the reaves, then the 'cooking holes' might take on a different significance.

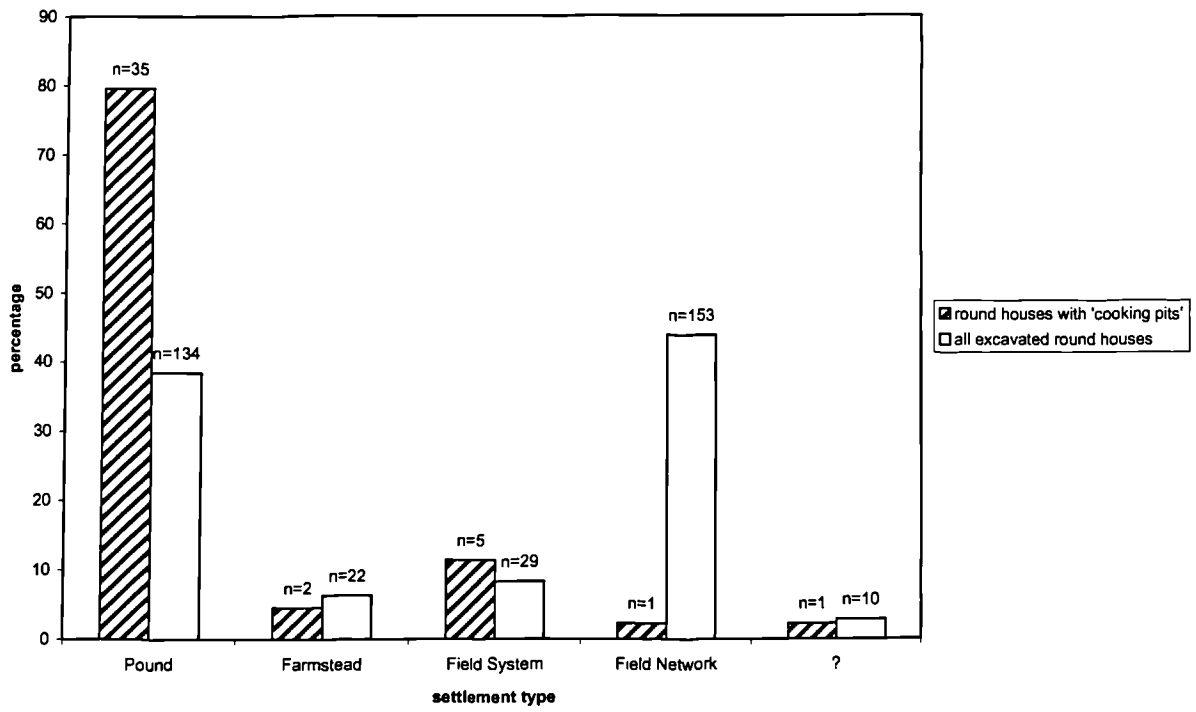

Fig 6.7 Bar chart comparing the relative distribution, between different settlement types, of round houses with 'cooking pits' and all excavated round houses (data from Butler 1997, 269-274).

Discussion

The archaeological similarities between ring cairns, barrows and houses have been recognised and commented upon (Bradley 1998, 147-164). Indeed, it can be difficult to distinguish between the two on surface evidence alone. Affinities include the outer ring of stone, which is better defined on its

internal circumference; occasionally a gap or entrance in the bank; burnt deposits and material culture deposited in the interior; and charcoal filled pits, which are often sealed by stones and sometimes stone-lined. These associations go still further when we consider that such charcoal filled pits are also found beneath barrows or large 'funerary' cairns (Ashbee 1960, 51-52). Indeed, the stone lined 'cooking pits' excavated in the settlement at Hart Tor were of a similar size and structure to the cists found within cairns on Dartmoor. The correlation of archaeological data from houses and ring cairns should not be read to mean that all houses were constructed in a monumental or formalised fashion. Only a small proportion of the excavated buildings contained 'cooking pits', and many of these show little or no evidence for formalised elements in their structure. Yet, even if these pits were dug for the purposes of cooking and then later filled with midden debris, the allusions could have worked the other way – the pits in ring cairns may have been formalised 'cooking holes'.

There would seem to be two allied ways for explaining the concurrence of similar features in domestic buildings and in ring cairns: either the cairns and houses were planned and built to look like one another, or the practices undertaken in cairns and houses were sufficiently similar to unintentionally create the same archaeological remains. In the former case, the similarity was deliberately managed, and a direct architectural link was meant to be made between houses and cairns. This would have required a structural logic to have been maintained between houses and cairns in which constructional elements had the same meaning in both cases. In the second explanation, the similarity is unintended, though it was perhaps recognised; the similarities, therefore, result from practices reproducing similar resources and structures of meaning within allied time-space settings. In that way, though the house and the cairn were contexts for different activities, they were closely linked in terms of the structural conditions in which action took place. Metaphors, forming links between the contrasting domains of the house and the cairn, would have been important in enabling such a process to occur.

It is broadly accepted that ring cairns and barrows were, among other things, places at which a community established or reaffirmed their links with their ancestors and the land that they occupied. This can be interpreted to mean that tenure over the land resided, at some level, with the community's ancestors. In northern England during the Bronze Age the ties between people, their ancestors and the land were reproduced through the formalised construction of cairns in areas that were being cleared and farmed. On Dartmoor, there was a contemporary concern to associate houses and cairns using metaphor: the outer ring of stone in the cairn became the walls of a house; the deposits of charcoal and midden material in houses became the ritual offerings made in cairns. Tenure does not seem so remote in such a context. The bonds between people, their ancestors and the land are more immediately felt within daily life. The family or household is central to the process of reproducing tenure. As land tenure is negotiated more openly among the living, so the bonds between kinship and land become stronger.

It is worth raising in response to this explanation the question of when the pits were dug into the floor of the houses. The evidence from Dean Moor helps to put in context the sparse written record left by the Dartmoor Exploration Committee. There were likely to have been numerous pits and post holes within the structures uncovered by the earlier excavations. But the prominence of the 'cooking holes' is, in that case, quite interesting for two reasons: (1) that the pits were associated with the last occupation at the site and were therefore prominent upon excavation (an inference supported by the spatial association between the pits and the spreads of charcoal and 'occupation debris'); or (2) that the excavators cleaned directly down to subsoil and, as a result, only recognised the primary features associated with the initial use of the structure (unlikely considering the frequent depiction of the hearth and the 'cooking hole' at the same level of excavation). Should the former case be more likely then the pits were excavated in areas of most intense daytime domestic activity *just prior to the abandonment of the house*. The existence of a formalised act of closing the house's life has many parallels (Brück 1999), including the burnt structures at Trethellan Farm on the Cornish coast (Nowakowski 1991). Nor does such an explanation negate the interpretation, suggested above, that tenure was openly negotiated among households and kin. The abandoned house became, like a ring cairn, a monument to those that had occupied it; fixing an association between the household and the land.

6.4 The process of enclosure: boundaries on Shovel Down and Chagford Common

The landscape within which houses were located was being intensively inhabited before, during and after the lifecycles of the buildings. The houses were places around which certain practices were focused, and they formed the point of departure for many other tasks. The time-space limits of this activity and the nature of the practices themselves contributed significantly to subsequent tenure. This tenure was, in the earlier half of the second millennium BC, linked closely with the immediate kin networks embodied in the houses and the ring cairns. Yet, shortly afterwards, the linear boundaries were used to define the limits within which tenure operated according to the locations of houses and features of the local topography. This process is evident on Shovel Down and Chagford Common (Fig 6.8 and Fig 6.9 [in rear pocket]).

The upland pasture of Shovel Down and Chagford Common is located to the north-east of Fernworthy between the high moorland of the Okehampton Ranges and the tightly enclosed farmland along the banks of the North and South Teigh Rivers. If approached from the North Teigh, Chagford Common looks like a parkland with its closely cropped grass slopes leading up to the monumental tor of Kestor Rock. The coaxial boundaries that once enclosed the land around the tor are clearly visible as parallel stony banks, made more obvious by their regularity. The interspersed clumps of gorse that disturb the uniformity are most numerous close to the road but there are also patches growing around the walls of round houses that rest covered among the fields. West from Kestor, towards the high moor, the pasture

is rough and uneven. A complicated boundary of standing stones, processing in multiple rows towards two carefully constructed cairns, marks the edge of a rising slope over which the grasses become less uneven and the subtle field-banks are again evident. This second group of coaxial boundaries, to the west of the stone rows on Shovel Down, is on the same alignment as the Kestor fields. They divide and enclose the trodden, flattish hilltop and the steep, stony slopes to the north which break abruptly in

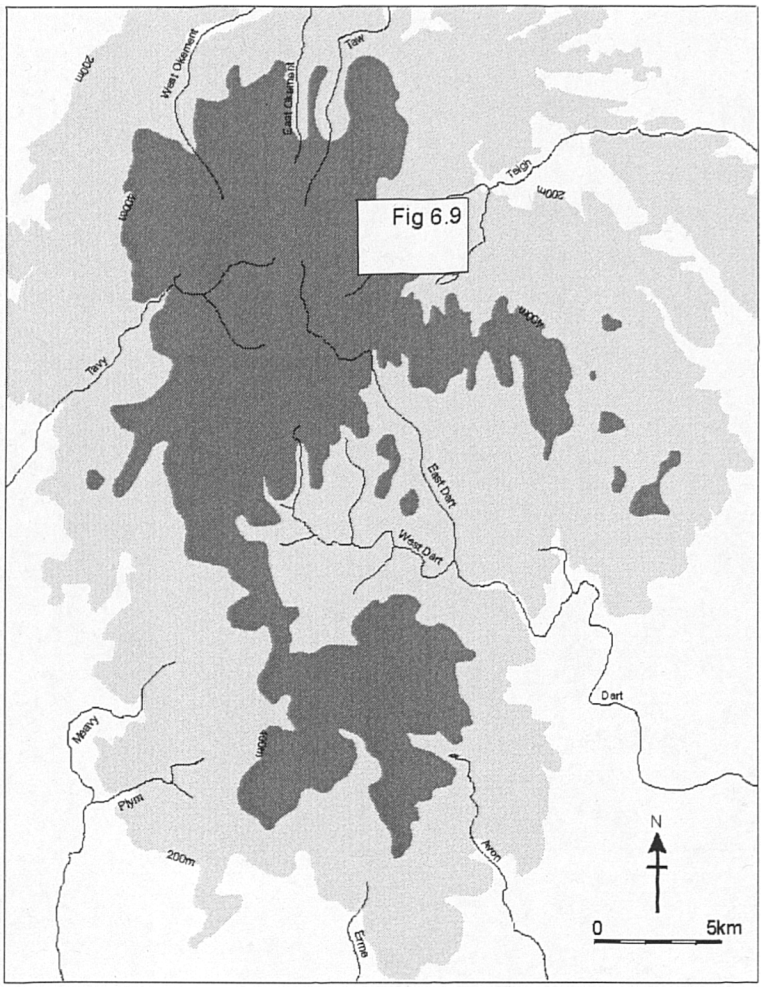

Fig 6.8 Location of Shovel Down and Chagford Common.

the wide valley of the North Teigh. The boundaries become gradually more fragmentary towards the west, downslope, where they vanish into thick, boggy reeds in a streamless depression. They are visible on the other side; one of them, aligned upon a broken little tor, it is quickly absorbed by the hill and the clitter. Beyond the tor, the landscape is different: stone strewn slopes and dense wet valleys. One of the boundaries shows up as a stone causeway crossing the marshy ground. It follows a slightly sinuous line to the head of the small valley where, only just visible among the thick heather and boulders, there is a sprawling group of small round houses, some attached to irregular plots, others

isolated on the higher ground to the north-west. Without prior knowledge of its existence it would be nearly impossible to distinguish the houses and plots beneath the thick cover of heather and disguised in amongst the roughcast clitter.

This contemporary description of the landscape of Shovel Down and Chagford Common presents the archaeological features synchronously: the coaxial boundaries; smaller systems of plots; round houses both isolated and incorporated into the systems of boundaries; tors on the higher ground, some prominent others not; the complex of stone rows, standing stones and cairns; the change in the character of the settlement as one moves progressively westwards, most obviously different on either side of the stone rows; and at its most extreme end, what now seems eccentrically located, the settlement of small houses and plots to the south-west of Stonetor Hill. Along with the stone circle at Scorhill, slightly over 1km north of the stone rows on Shovel Down, these lithic monuments – the stone rows and cairns – have been interpreted as a 'ceremonial complex'. They are the earliest visible archaeology in the area, while the latest prehistoric settlement is attributable to the Round Pound, to the north of Kestor Rock, dating to the first millennium BC (Fox 1954b). On closer analysis the boundaries and settlements of the second millennium BC can also reveal details of the sequence in which they were constructed:

> Without any natural barriers the easy slopes available between the North and South Teighs were too extensive for the requirements of any one settlement and a multi-centred field system developed. Parallel reaves and cross-banks subdivide the Down into a number of smaller blocks, each linked to its neighbours and conforming to a general north-east/south-west pattern of orientation. Altogether there are nine surviving centres on the open moorland of which the Kes Tor group was the original and by far the most important ... The Kes Tor group is also probably the oldest, confined on the moorland side by the primary reave over the Down. This reave, originating on the North Teigh opposite the Bultern Hill boundary reave, crosses the Down south-eastwards, keeping the stone circle on the moorside but unavoidably breaking through the stone row complex, to end apparently on a feeder of the South Teigh near Frenchbeer Rock. Hut groups west of this reave are in turn linked to it and must have been of later construction.
>
> (Butler 1997, 255)

> West of the rows is a pre-reave settlement and field system around 659860. This early settlement has apparently been incorporated into the extensive system of prehistoric land division lying to the west of Scorhill Reave. This appears to represent a relatively late intake of enclosed land. One of its major boundaries, Shovel Down Main Reave, must have made a T-junction with Scorhill Reave, although robbery has occurred at this point (659861). The other critical junction, at 658864, is that between Scorhill Reave and Batworthy Reave, another major boundary. Scorhill Reave is missing, probably robbed out, for a space of some 24m to the north of this junction. Looking at the junction from the south, it is possible to make out a case for Scorhill Reave being staggered by about 1.8m on Batworthy Reave, which would imply that Batworthy Reave was the primary boundary. However, since Batworthy Reave is secondary to Shovel Down North Reave, which is in turn secondary to Shovel Down Main Reave, which is secondary to Scorhill Reave, this theory would produce the archaeological equivalent of the illusionary world created by Escher ... In fact Scorhill Reave must be a primary long-distance boundary, the southern part of which probably became redundant when Batworthy Reave and the other reaves on the western part of Shovel Down were laid out. The 24m gap at the junction may result from the robbery of Scorhill Reave by the builders of Batworthy Reave.
>
> (Fleming 1983, 235)

I wouldn't suggest these accounts are directly comparable. However, they do offer differing interpretations of the development of the field boundaries in the area. Butler describes an organized pattern of settlement 'centres' which developed *after* the major land divisions had been planned and constructed, the earliest of these settlements being the huts to the east of the stone rows. The links between houses and boundaries are, for Butler, evidence that the buildings were being incorporated into the field system. Fleming has taken a different perspective on the settlements. He identifies the plots and houses on Shovel Down just to the west of the stone rows as the earliest. The system of coaxial boundaries was then constructed based on the alignment of the 'Scorhill Reave', the long earth and stone boundary which cuts through the middle of the stone rows on Shovel Down. Both authors agree about the importance of the relationship between the boundaries and the settlements, though they do not explain why such associations existed – the assumption is that they were occupied simultaneously. In the following study the associations between boundaries and buildings is examined more closely.

A survey of the 'houses' and boundaries on Shovel Down and Chagford Common

Surveys of the archaeological features on Shovel Down and Chagford Common by the RCHME have provided a more detailed record of the boundaries and house structures.[5] Using these surveys, further information on the size and orientation of the house structures and the relationships between houses and boundaries was recorded during the author's fieldwork.[6] This data formed the basis for the analysis presented below.

The five stone rows located on the eastern slope of the high ground on Shovel Down are the earliest visible 'boundaries'. Two of the rows are regular and straight, both terminating at cairns. Another two, situated slightly to the east, are less regular, with the larger of the two having a distinctive curved plan. The rows give the impression of developing as a complex. There is nothing in their relationship to one another to suggest they follow a pre-defined plan. The rows influence the nature and extent of later stone-built settlements: the earlier plots and houses are only distributed on the western side of the rows; the coaxial boundaries are found on both the east and the west. In a recent survey of Holne Moor, part of the 'Dartmeet system' also intensively studied by Fleming, the RCHME, while accepting the regularity of the main system of axial reaves, suggested that the layout of the field

[5] Unpublished 1:2500 surveys of Shovel Down, Castor Rock and Thornworthy Down; archive copies are stored at the National Monuments Record Centre, Swindon (Refs: GAM 832625, GAM 922828 and GAM 922751).

[6] 63 house structures were visited during July 1999 and February 2000. The following measurements were taken: width of bank or wall; internal dimensions of structure; entrance width and orientation (data provided in the appendix). In addition, a record was made of the form of wall construction, where visible, and any relationship(s) between the walls of the house and field boundaries. It was not possible to record the house structures to the south-west of Stonetor Hill or on Thorthworthy Down. The data was stored in a database (MS Access) which was linked to a digitised version of the RCHME surveys of Shovel Down, Kestor and Thornworthy Down using AutoCad Map. The statistical analysis was undertaken using SPSS for Windows v.10 employing methods set out in Shennan (1997).

boundaries and the settlement was structured around the earliest visible monument – the stone row (RCHME 1997b). At Holne Moor, the stone row, and a stone circle located over 2km to the west, seem to have been important features that were respected in the alignment of the terminal reave, thus preserving them outside the enclosed land. This pattern is also noticeable in the distribution of pre-reave settlements; they are also restricted to the north side of the stone row. In concluding, the RCHME suggest that the original axis defined by the stone row marks the establishment of land ownership early during the prehistoric occupation of the area: 'In many ways the most spectacular monument on [Holne Moor], the parallel reave system, is a mere afterthought in the developmental history of the landscape.' (RCHME 1997b, 8). These same observations could be made for the pattern of monuments and settlements on Shovel Down and Chagford Common.

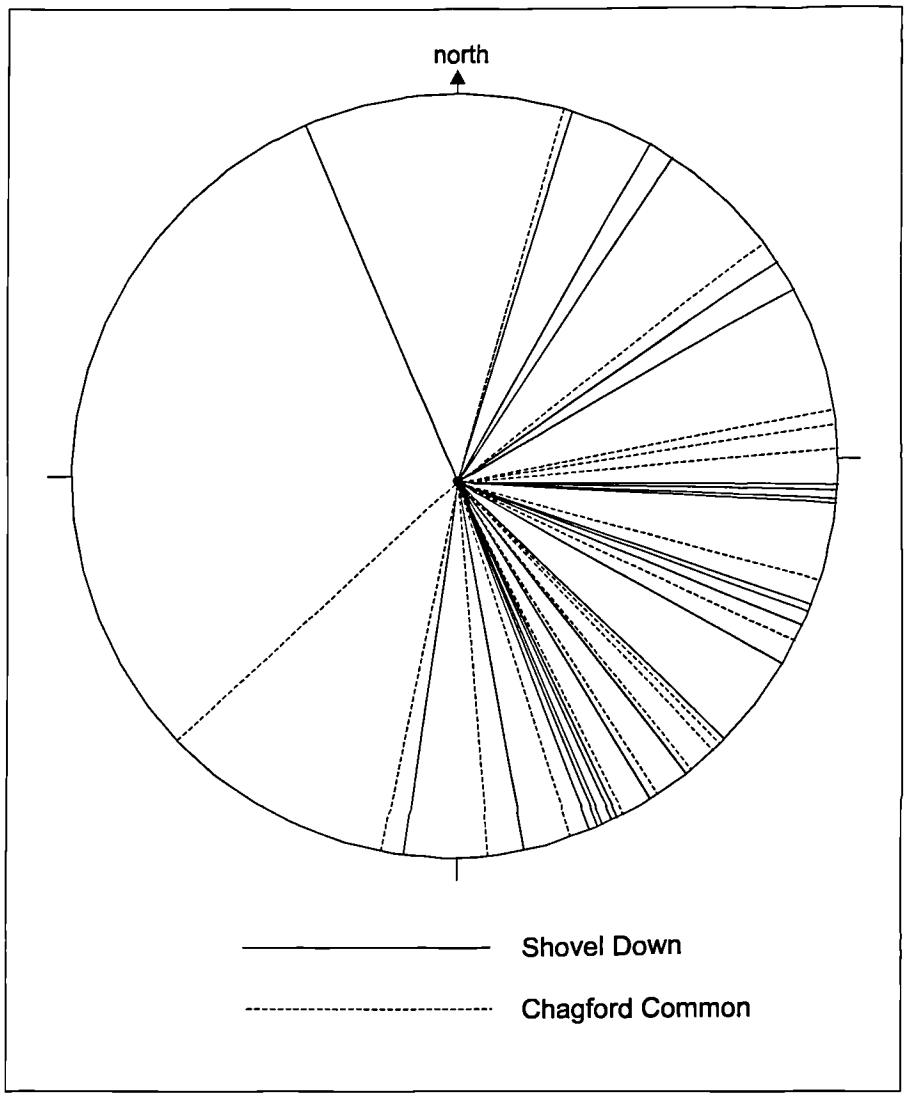

Fig 6.10 Orientations of building entrances on Shovel Down and Chagford Common, shown in relation to True North.

There are more than 100 'hut circles' in the study area. They are almost certainly not dwellings in every case, and indeed some may have changed their uses through time. It is a misnomer, therefore, to term them houses or even huts – regardless of the cultural attributions that the term 'house' implies (Brück and Goodman 1999) – since some may have been no more than small stock enclosures. The majority survive as low circular, sub-circular and occasionally rectangular stony banks ranging in width between 0.7-3.2m, though on average about 1.8m. A number of these preserve evidence of wall facing on the interior, and a few, some probably cleared of stone in the recent past, have visible external and internal wall lines. The internal area of the structures ranges from $7m^2$ to $69m^2$ though with a mean of roughly $29m^2$. The structures in the study area are generally larger than excavated huts from the whole of Dartmoor – the internal areas are in the range $2.5m^2$-$102m^2$, with a mean of $21m^2$ (based on data from Butler 1997, 269-274). Neither of these data sets are particularly reliable: the measurements from the study area are from unexcavated houses and the majority of the Dartmoor data is from the brief reports made during antiquarian excavations. The entrances to the houses, where visible, are frequently flanked by two megalithic (relative to the construction of the walls) door jambs. The mean width of the entrances is 0.96m, and they are in the range 0.6-1.4m. The doorways are predominantly facing south-easterly, with only a small number orientated to the north-east, and only two outside the range 15-195° (Fig 6.10). Elsewhere on Dartmoor the entrance orientation of round houses is predominantly southerly, though not unexpectedly there is a relationship between entrance orientation and slope aspect (Butler 1997, Fig 54). In the study area there are several instances where we can posit at least one or other factors in the siting of the doorway, notably when the structure faces out from the corner of a small enclosure.

The internal area and the orientation and width of the doorway are the main architectural features that can be consistently recorded for the circular structures in the study area. For all three variables the mean values and range are similar to that from elsewhere on Dartmoor, with the possible exception that the internal area of the houses is slightly larger. However, there is a difference between the structures on Shovel Down and those on Chagford Common. A two-dimensional scatter plot comparing the orientation of the entrance with the internal area for the houses on Chagford Common shows a broad spread of values without any clustering (Fig 6.11). In contrast, a similar plot for Shovel Down has a cluster of values representing buildings with a south-easterly aspect and an internal area of 20-$30m^2$ (roughly equivalent to 5-6m diameter) (Fig 6.12); the addition of the entrance size makes the clustering appear tighter on a three dimensional plot, though when isolated it does not appear to be an important factor. The houses within this cluster are distributed among the fields on the shallow slopes to the west of the stone rows. There are two buildings in the plots next to the stone rows (marked *1* on Fig 6.13), and two in the coaxial fields on the western side of the stream to the north of Stonetor Hill (marked *2*). The remainder are located in among the plots and coaxial fields on the north-west facing slopes to the east of the streams (marked *3*), with one outlier to the north. Two pairs of outliers not

included in the cluster (open triangles on Fig 6.12), and three within the cluster (filled triangles), have almost exactly the same internal area and entrance orientation. They are situated some distance apart on the ground, with only two out of the three within close proximity to one another (Fig 6.14). These patterns cannot tell us much in isolation. It is not clear whether the group of similar sized houses on Shovel Down should be separated temporally, functionally or not at all. Examined separately, the houses have little to relate to one another, however, when their relationship to the boundaries is considered a sense of the process of enclosure becomes clearer.

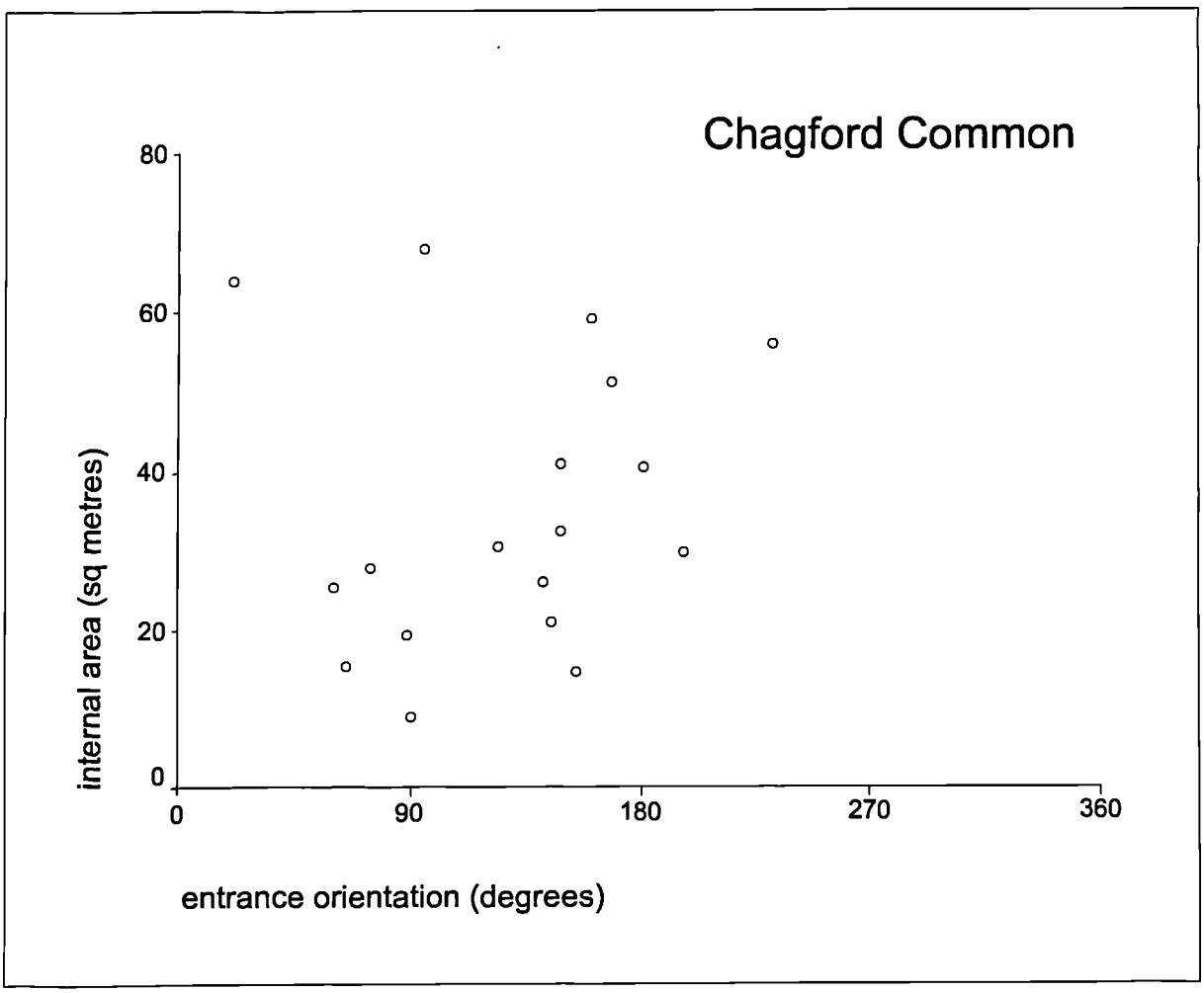

Fig 6.11 Scatter plot of entrance orientation and internal area of buildings on Chagford Common.

There are frequent physical relationships between field boundaries and buildings. The latter are generally in a primary relationship to the boundaries, either at the centre of a radial arrangement of small plots, incorporated into the course of one of the coaxial boundaries, or 'attached' to a boundary with a single short length of walling. A few of the huts are secondary to the boundaries; this is only clear where the boundary wall has been used as one or more sides of the structure. There are three groups of 'primary' structures in the study area: in the north-east corner, close to the Round Pound; on Shovel Down, on the west of the stone rows; and again to the west on the north-west facing slopes

next to the stream (Fig 6.15). Additionally, the plots and houses to the west of Stonetor Hill and the houses to the north of the stream (where the boundaries are not built up against the sides of the houses) might also be included as primary house groups. The location of the houses within these primary settlement groups structures the pattern of the boundaries built around them – a good example is the group of four houses among the plots on the western side of the stone rows (number *1* on fig 6.13).

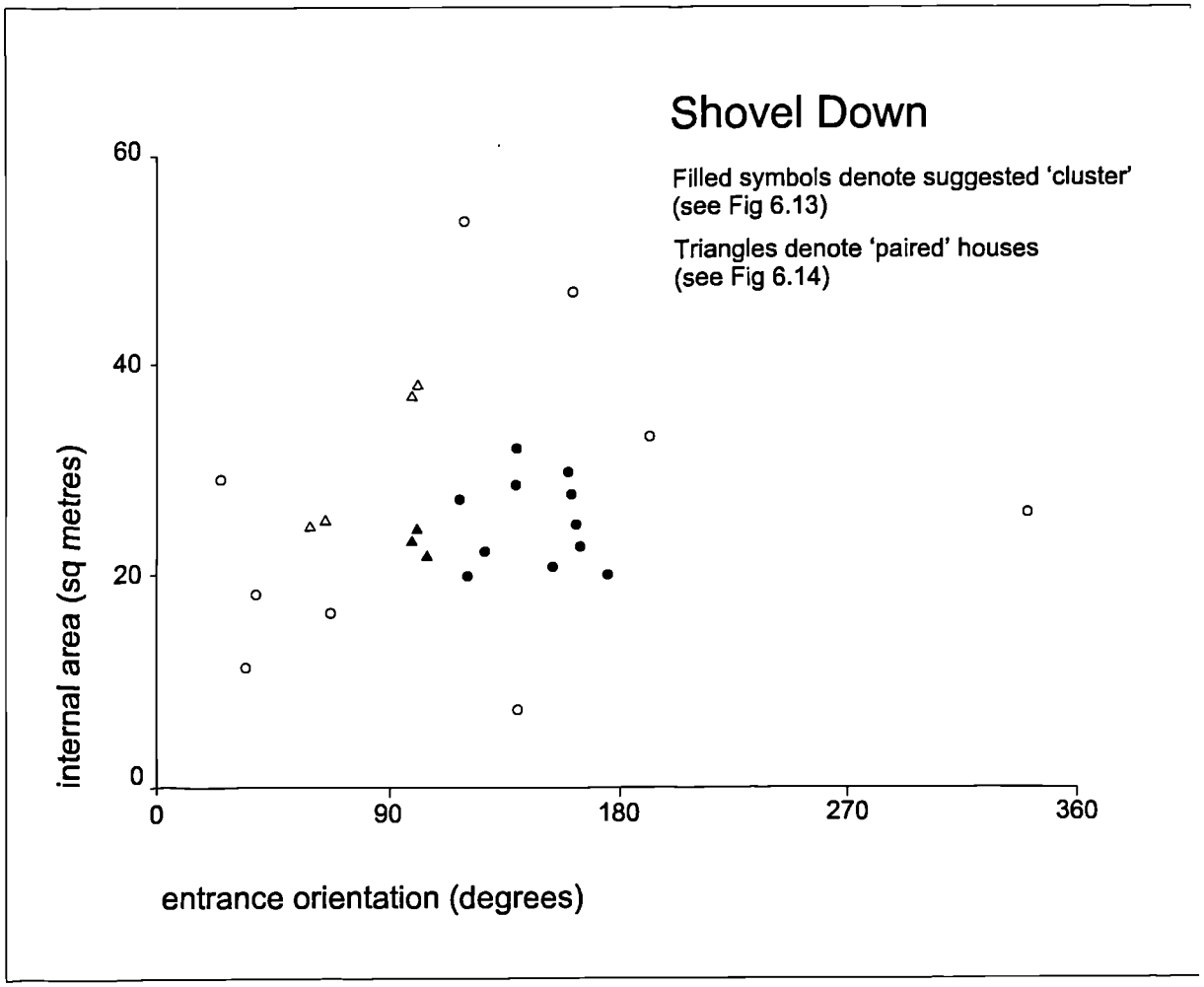

Fig 6.12 Scatter plot of entrance orientation and internal area of buildings on Shovel Down.

There are three structures in a primary relationship to coaxial boundaries (labeled *a-c* on Fig 6.15). Building *a*, located on the eastern side of Kestor Rock, is small (internal dimensions 3.1 x 3.6m) and irregularly built. It has a wide entrance (1.15m) orientated roughly due east, facing away from the tor. The north-west south-east aligned boundary that seems to have formed the initial limits of the coaxial fields on Chagford Common, before further boundaries were added to the west of the tor, incorporates *a* into its construction. The boundary on the south-east side is kinked slightly so as to join with the wall of the structure. In addition, it acts as a node for one of the coaxial banks running perpendicular to the main north-west south-east boundary. The relationship between the building, the tor, and the T-shaped junction between the boundaries is striking. Structures *b* and *c*, situated just to the south of

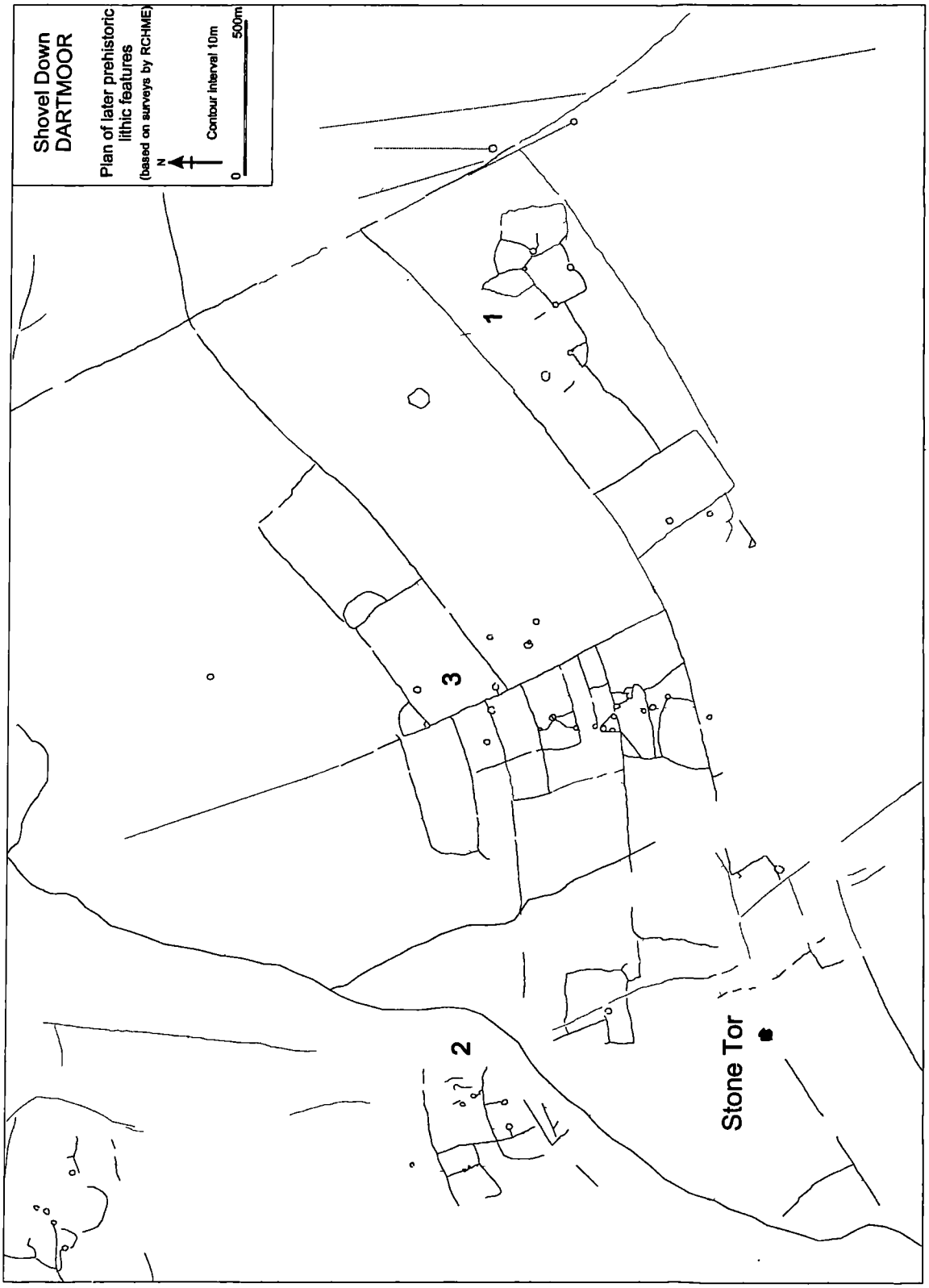

Fig 6.13 Round huts (depicted in red) on Shovel Down with similar entrance orientation (south-east) and internal area (20-30m^2).

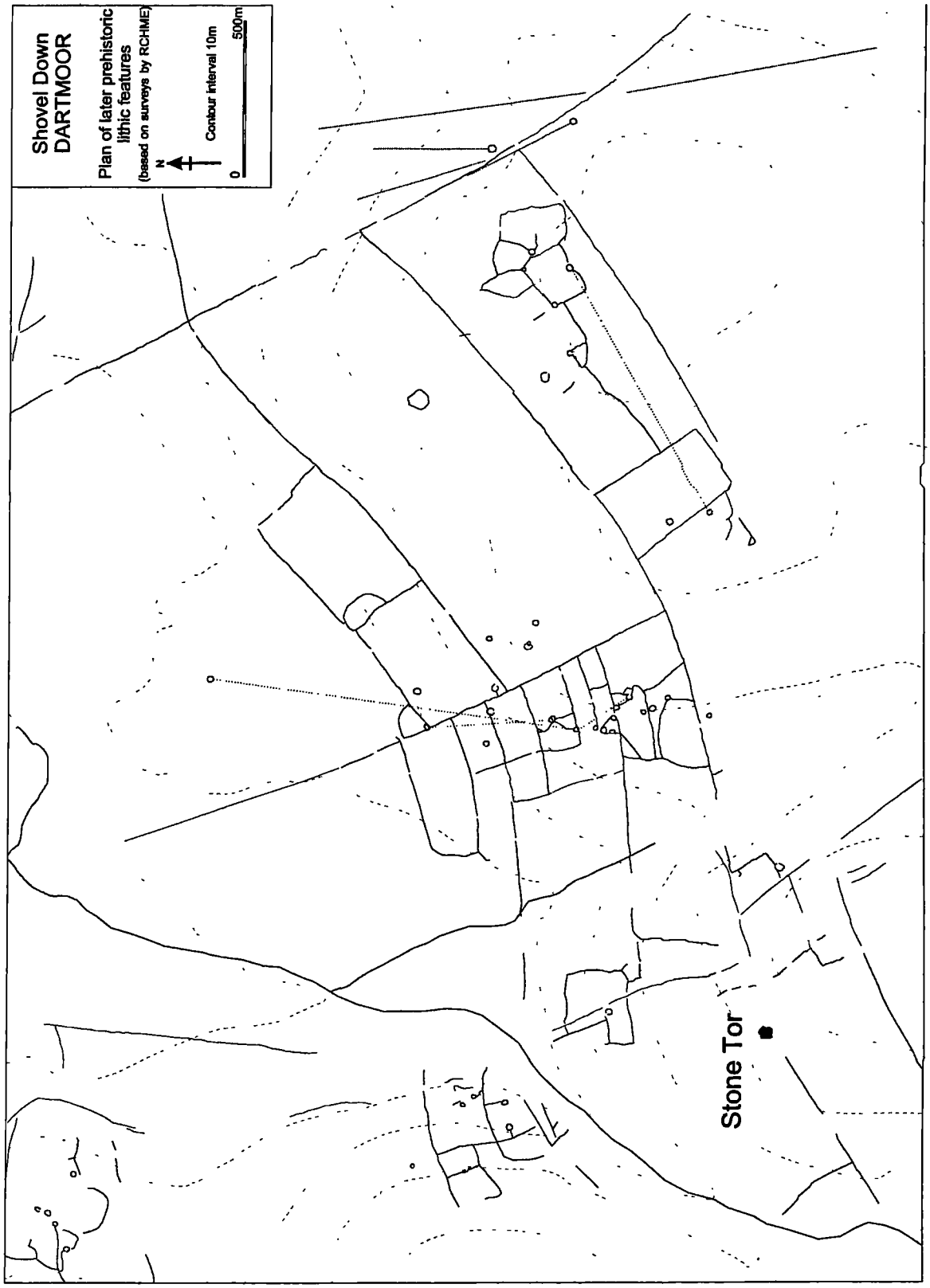

Fig 6.14 Round huts on Shovel Down with the same entrance orientation and internal area (linked by red lines).

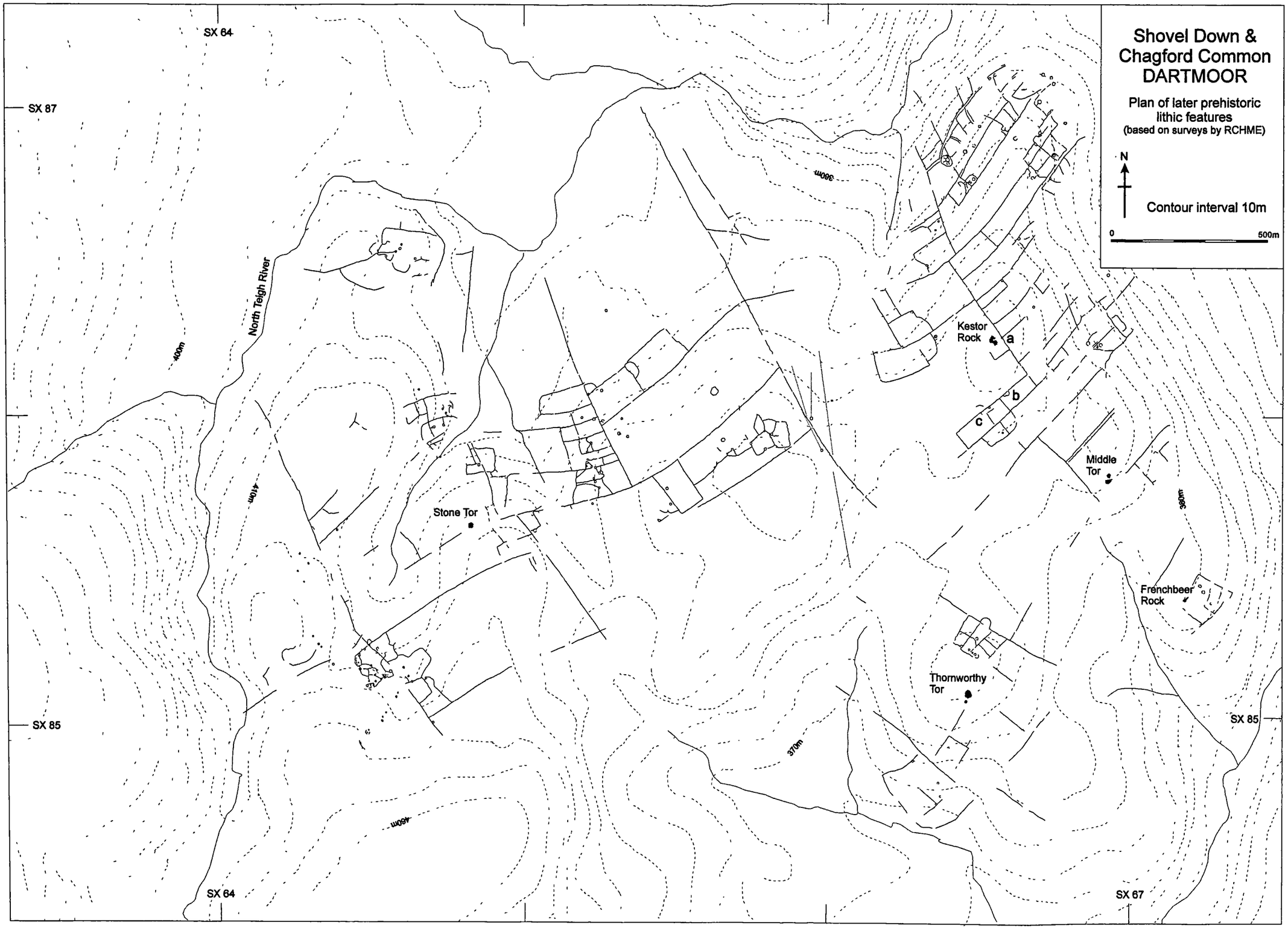

Fig 6.15 Location of round huts with a primary relationship to boundaries (shown in red).

Kestor Rock, were both incorporated into a coaxial boundary extending to the south-west from the north-west south-east boundary that was attached to a. The boundary was built around b, and abutting either side of c. The small enclosure into which b faces seems to have been built after the construction of the boundary. A third structure, between b and c, is secondary to the boundary, though it has approximately the same entrance alignment as c. There is an identifiable sequence to the construction of the buildings, the enclosure and the boundary, and what is most interesting is that b and c predated the stone boundary but were built on the same alignment as the boundary would later take.

There are at least five examples where a building is joined to a coaxial boundary with a short length of walling: on Chagford Common, north-east of the Round Pound; on the eastern side of the north south boundary forming the 'spine' of the coaxial fields on Shovel Down; and three instances among the plots and houses on the northern side of the stream to the north of Stonetor Hill. These short walls may have been part of an enclosure that included the house, the rest of the boundary being constructed from other materials, such as timber. Despite this argument, it is still interesting that the boundary between the house and the fields was constructed in stone. In most cases the gap between the house and the fieldwall is quite small, yet it was clearly important that the link was substantial and prominent.

The links between buildings and boundaries demonstrates that existing structures had an important influence upon the location of the fieldwalls, and that there was an intentional effort to physically emphasise the links between houses and boundaries by joining them together with short lengths of stone wall or bank. Similarly, boundaries were also related to one another in potentially meaningful ways. For instance, the two 'types' of boundaries in the study area, irregular plots and coaxial fields, seem to respect one another in every case. From the archaeological evidence it can be suggested that the plots are generally earlier than the coaxial boundaries, yet there are no examples of the former being slighted by the later fieldwalls. Instead, the coaxial boundaries are built in such a way as to incorporate houses and plots, such as those on the north-west facing slopes of Shovel Down (number *3* on Fig 6.13), or the plots remain unrestricted within the system of coaxial boundaries, for example those to the west of the stone rows (number *1*).

The plots and houses to the south-west of Stonetor Hill include examples of all the relationships discussed above (Fig 6.16).[7] The houses form the nodes for a network of small plots. The boundaries link the houses together, they enclose others, and some of the buildings in their construction. Notably, there are two cairns in amongst the plots, one of them situated at the join between three boundaries. The relationship between the coaxial boundaries and the plots is complex. The long, sinuous north

[7] The field evidence at the head of the stream to the west of Stonetor Hill was obscured by thick heather during the fieldwork. It was therefore not possible to record the dimensions of the structures or their relationship with the boundaries. This account is based on a study of the survey by the RCHME.

south aligned boundary that crosses the higher ground to the north from its origin close to a prominent bend in the North Teigh changes direction just before the plots and houses south-west of Stonetor Hill. Therefore later than the houses or a structure predating them, the boundary is earlier than the two coaxial boundaries that continue as far as the valley on the eastern side of Stonetor Hill. The northernmost of these boundaries incorporates two houses in its construction where it appears to link up with an earlier enclosure, which itself surrounded a cairn and includes two houses on its western side. There are a number of houses not linked to boundaries. Interestingly, a line of five houses aligned roughly north-east south-west extends below the southern limit of the plots. Another 'string' of four houses is located to the north-west, perpendicular to the coaxial boundaries.

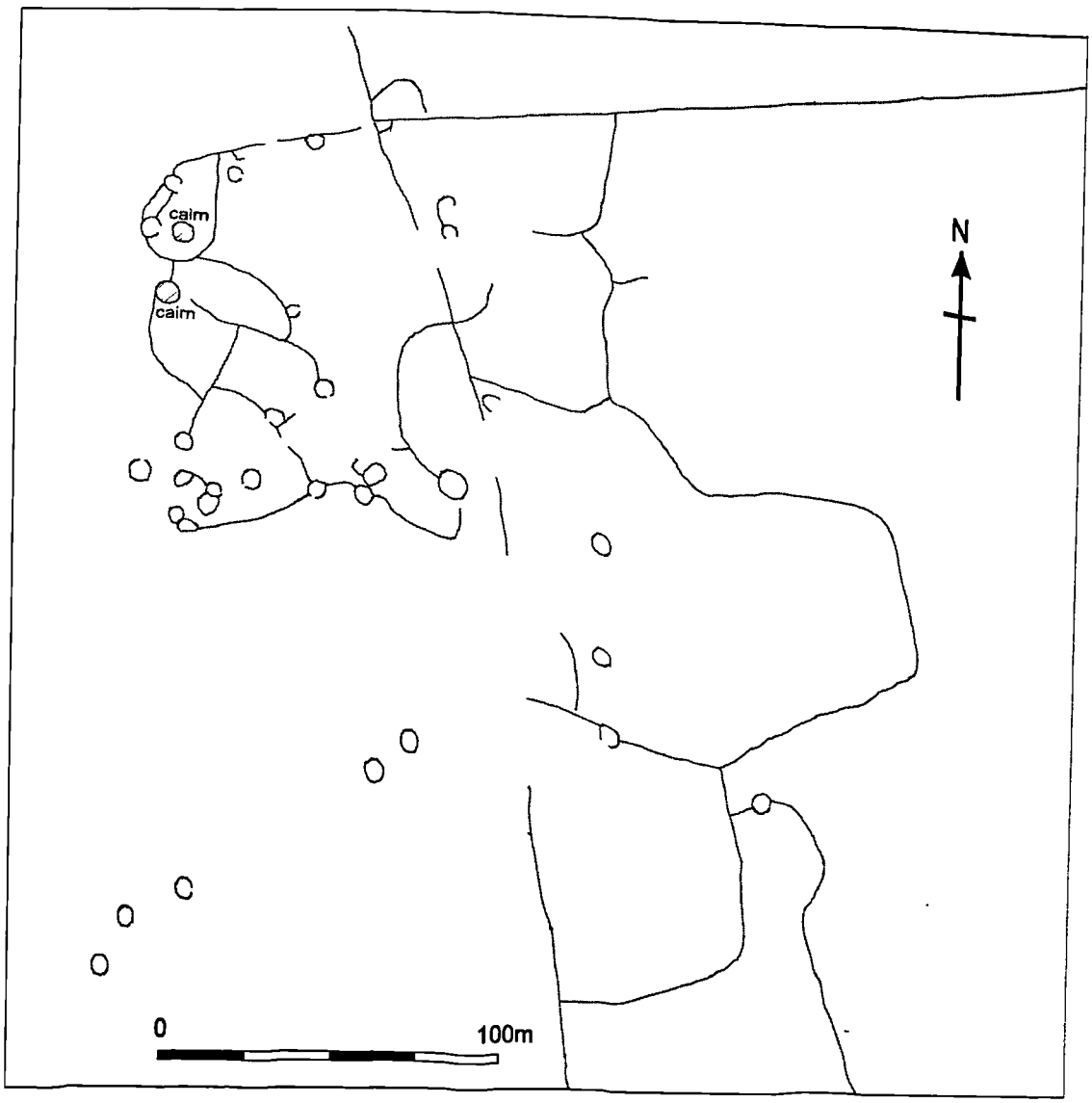

Fig 6.16 Stonetor settlement (based on an unpublished survey by RCHME, NMR record # GAM 832625).

Taken together the various relationships between houses, plots and coaxial boundaries form a complex interdependent web. A conservative estimate of four to five centuries between the construction of the

small plots and houses to the final use of the coaxial boundaries puts the significance of these many small linkages in perspective. But as has already been observed, there are other perhaps even earlier alignments in the study area that seem to affect the general location and layout of the houses and boundaries. The North Teigh River, for example, flowing east to west with its series of 90 degree bends, frames the moorland of Shovel Down and Chagford Common on the north and west sides. The coaxial boundaries broadly respect this alignment. The north south boundaries were constructed perpendicular to the river. The influence of the river is particularly noticeable to the north of Shovel Down where three north south boundaries all 'radiate' at slightly different angles depending on their relationship to the river. The North Teigh isn't the only pre-existing feature. The five tors in the study area – Stone Tor, Kestor Rock, Middle Tor, Frenchbeer Rock and Thornworthy Tor – also appear to follow the general north-east south-west alignment marked by the river and respected by the coaxial boundaries. For instance, Kestor Rock, Middle Tor and Frenchbeer Rock form a line across the high points of Chagford Common. This is exactly the same alignment as that taken by the coaxial boundaries. The unusual small 'house' below Kestor Rock located at the node of three boundaries begins to take on more significance in this regard. Though fragmentary, one of the coaxial boundaries running perpendicular to the alignment between Kestor Rock and Frenchbeer Rock links together Middle Tor and Thornworthy Tor. Finally, the principal north-east south-west boundary on Shovel Down curves from the main boundary to the west of the stone rows, over the high ground and across the valley towards Stone Tor. Although there is no evidence for it continuing right up to the tor, there is another fragment of boundary on the other side of the hill continuing the alignment towards the north south boundary associated with the plots and houses to the south-west of Stonetor Hill. The rivers, tors and relief are of course all interrelated, as they result from the geomorphological processed that shaped the topography of the moor. The humanly constructed features relate closely to the form of the landscape, even if they may on first appearances seem to impose a different, more rigid order.

Discussion

The synchrony that seems evident from the neat patterns of boundaries, settlements and ritual monuments is wholly deceptive. Not only can the horizontal stratigraphy of the boundaries be unravelled, as Fleming demonstrated, it is also possible to identify a much broader sense of process in this landscape as successive actions are structured by and themselves continue to structure the material resources and networks of significance for future generations of inhabitants.

Inhabitation of the area before the construction of any of the standing archaeology would have defined places and left paths between them. Areas had already been cleared of trees for grazing stock and perhaps for small patches of cultivation. Before and during such deliberate activity, the movements of animals within their own territories would have created 'smallscale diversity': 'Thus it was that there was considerable organisation in the land even before any deliberate clearances by people or the

formation of blanket peat' (Evans 1999, 27). The influence of previous dwellings, both human and nonhuman, is evident in the maintenance of existing alignments between the tors, and along the water courses and valleys. These features were the foci for early occupations and the routeways along which paths were taken. The tors and rivers would have attracted myths and personalities that implicated them within social life (*cf.* Tilley et al. 2000). Though these narratives were reworked as one generation after another inhabited the moor, as structures they remained pervasive.

The stone rows respected existing alignments. Though they seem divisive on a modern survey plan, it is unlikely that they created boundaries that didn't already exist in people's experiences of such places. As each successive row was erected they processed across one another's path, the slightings demonstrating nothing more that the architectural *bricolage* of their formation (*cf.* Barrett 1994c, 24). Stone-built round houses were constructed to the west of the stone rows, though it is not known whether this was before, during or after the use of the monuments. The houses that show a distinctive uniformity in their size and orientation are distributed between three areas, and in each case they show evidence for having been earlier than the coaxial boundaries. Such settlement areas generated and reproduced structures within this landscape. They were built in locales that might have already been occupied, but through their continued occupation they contributed to the creation of new places. The ways in which these areas were inhabited remains unknown even though the character of occupation practices, land use and intensity must be recognised as fundamental.

Practice wasn't restricted to spaces formalised by stone walls and boundaries. There were resources distributed both on and off the moor that structured the movement and tempo of people's daily lives. Crucial to the local concern of this study, there were 'in-between places' on the moor itself:

> Women's spaces are not always as easy to identify in the landscape as separate fields might be. They are frequently found in the 'in-between' spaces not deeply coveted by men but still quite useful to women ... Such spaces could include the bush growing along roadsides and fencelines, the small garden plots next to the house; the interstices above, below and between men's trees and crops; or the 'degraded' land found on steep, wooded hillsides or in overgrown gullies. Resources such as fuelwood, medicinal plants, wild foods, and grasses for weaving and thatching are found in these spaces, and are often critical to women's efforts to meet their personal, household, and community responsibilities.
>
> (Rocheleau and Edmunds 1997, 1355)

Divisions along the lines of kin, gender and social responsibility contributed to the ways in which space was used and organised. Such divisions were reproduced and maintained in the manner that people lived their daily lives, and such practices in turn structured and were structured within time-space settings with limits and material boundaries that were defined both arbitrarily and according to the availability of resources. Added together with the more formalised expressions of place embodied in the houses and field boundaries, the broad alignments of the stone rows, the tors and the river, the

moorland on Chagford Common and Shovel Down became a temporally and spatially complex network of inhabitations.

The construction of coaxial boundaries within this dwelt environment was not a wholesale reorganisation. Regardless of whether or not the reaves were constructed over a short or a long time span, they were built within existing structural conditions and taking full account of the material resources. They maintained the dominant alignments that had been present since before people had first come to the area: notably the line of tors. They were also built to incorporate pre-existing features, particularly round houses, other buildings and small enclosures. The small building to the north-east of Kestor Rock that formed the node at the perpendicular of two boundaries is a key example of this. The houses and buildings were material linkages between people, through their kin associations, and the land with its ancestral associations. They were, therefore, critical places for negotiating tenure. The coaxial boundaries were constructed within these existing human-land relations; tenure wasn't transformed. Yet it would have changed. Since it should not be forgotten that the coaxial boundaries did in themselves create new material conditions. They had the potential to formalise boundaries that before had been open to negotiation, or perhaps had never before been recognised discursively. They also made it possible to construct more boundaries of the same type. The horizontal stratigraphy that Fleming analysed reveals the process by which the reaves structured the landscape and, crucially, structured one another.

6.5 Biography of a boundary: 'Saddlesborough main reave' on Shaugh Moor

The biographies of the boundaries on Shovel Down and Chagford Common are likely to be significantly more complex than can be interpreted from the survey evidence alone. The survey plan and the standing archaeological remains are inherently synchronous; they disclose many different relationships at once, most of which we neither recognise nor understand. The bias in the survival of features made from stone and earth also inhibits as well as enables our understanding. Only after archaeological excavation can a thicker description emerge of the process by which boundaries became possible, how they reproduced existing structures, and how they structured future occupation.

The only substantial, published excavations of coaxial boundaries on Dartmoor are those undertaken during 1979-1981 on Shaugh Moor, an area of gently sloping, unenclosed moorland overlooking the Plym Valley in south-west Dartmoor (Fig 6.17). It is now completely isolated, bounded to the south and west by enclosed farmland, and the north and east by china clay pits and spoil tips; but during later prehistory the Plym Valley was intensively occupied (Robertson 1992; Smith in Balaam et al. 1982, 240-261). The archaeological remains on Shaugh Moor are broadly representative of those found across eastern and southern Dartmoor as a whole (RCHME 1998). There are three stone rows,

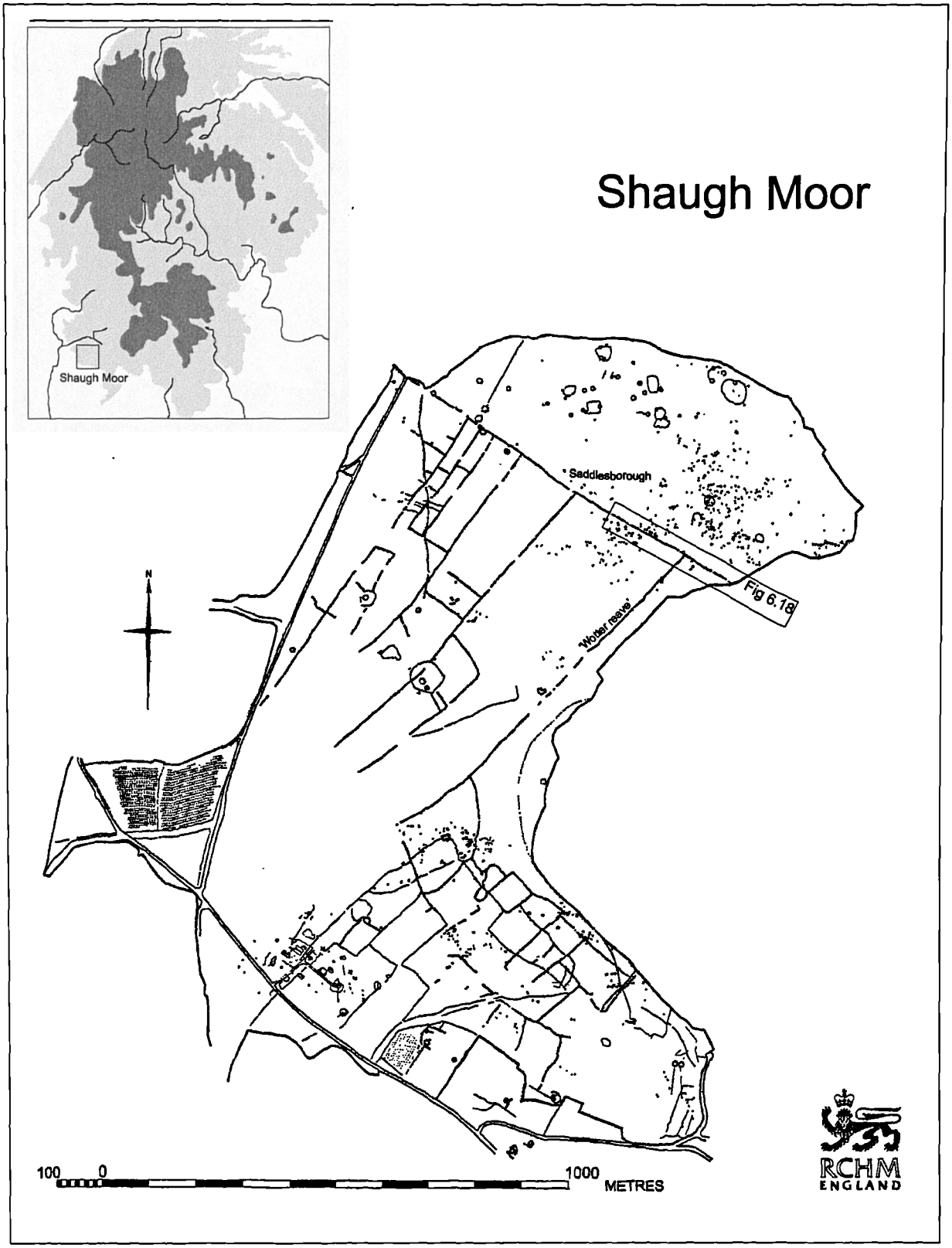

Fig 6.17 Shaugh Moor (based on RCHME 1998).

one of which is associated with a stone circle and two that terminate at cairns. In addition to these monuments and the now destroyed ring cairns that have already been discussed (section 6.2), there are eight cairns in the area. Most of these are substantial kerb cairns, although there is at least one other

example of a ring cairn situated close to Saddlesborough, the highest point on Shaugh Moor. A system of reave boundaries encloses the slopes of the moor below Saddlesborough. In the northern half of the area the boundaries are regular; they consist of a series of coaxial banks aligned roughly north-west to south-east, perpendicular to a long and substantial reave. This 'terminal reave' continues to the north-west where, it has been suggested, it crosses the Plym Valley and links up with a boundary running between Wigford Down and Eylesbarrow, nearly 7km to the north. The coaxial fields in the southern half of the moor are on a similar alignment though less regular when compared with those to the north. Large, well-constructed round houses are distributed among the coaxial fields. Unusually, one of these large houses is located to the north of the terminal boundary, 'outside' the reave system. There are a number of small houses and enclosures to the north-east of the main reave. These are similar though not as developed as the houses and plots found on Shovel Down. Unusually for Dartmoor, there are fields and settlement that can almost certainly be attributed to the Iron Age. These consist of a series of small, irregular plots and terraces at the south-eastern corner of the area excavated during the Shaugh Moor Project (see below), and a large enclosure overlying one of the coaxial boundaries in the northern half of the moor.

The threat of burial under china clay spoil tips in the 1970s resulted in a rescue project being undertaken on Shaugh Moor. This included the excavation of a complete enclosed settlement, six cairns (see section 6.2), a sample of the field boundaries, and a comprehensive programme of environmental analysis (Wainwright et al. 1979; Wainwright and Smith 1980; Smith et al. 1981; Balaam et al. 1982). The investigation of the field system involved the intensive excavation of the main reave that marks the northern limit of the coaxial boundaries (Fig 6.18).

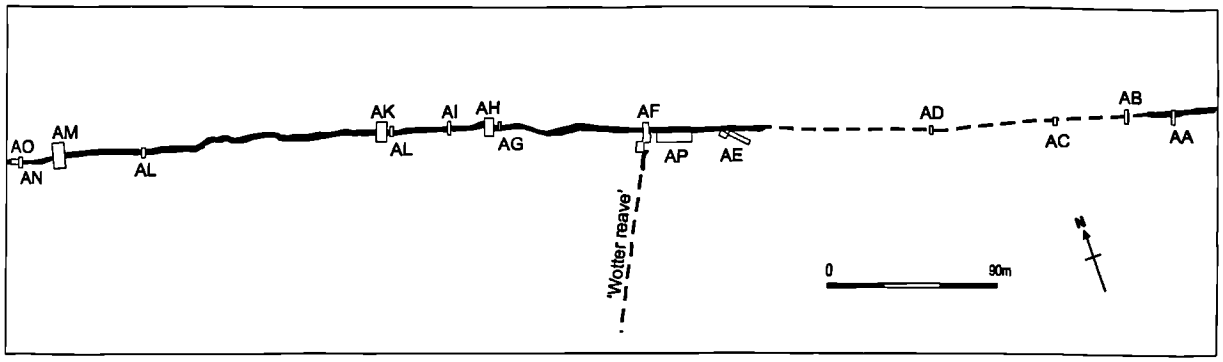

Fig 6.18 Location of excavation trenches on 'Saddlesborough reave' (based on Smith et al. 1981).

The Saddlesborough and Wotter Reaves

Investigations focused on a 600m length of the 'terminal reave' between the high ground on Saddlesborough and a boggy area on the lower slopes to the south-east. Following the excavation of 18 separate trenches across the boundary, the excavators identified two main phases of construction

(Smith et al. 1981, 209-216). The first phase, begun during the first half of the second millennium BC (Table 6.2), varied along the length of the boundary depending upon the nature of the ground. Towards the south-eastern end, in a boggy area, there was a wide shallow ditch; to the north-west, beyond the wet ground, this changed to a ditch with an accompanying bank on the north-east side, possibly with a fence on top of the bank; and towards the north-western limit of the area of investigation the boundary had consisted of a free-standing timber boundary with no ditch or bank. In contrast to this, the phase two boundary was a continuous stone wall accompanied by the silted up phase one ditch to the south-west. The coaxial boundary was also interpreted as being of two phases. The phase one boundary, consisting of a bank with an accompanying ditch on the south-east, was only defined in a trench located at the junction of the parallel and terminal reaves. The phase two boundary was also defined by a stone wall, although it was of a more substantial build to that found along the main reave.

CONTEXT	SAMPLE DESCRIPTION	UNCALIBRATED DATE	CALIBRATED DATE[8]
Overlying animal footprints, ??	Peaty deposit	3540±80 BP	2140-1680 BC
Underlying bank, Trench AF, Wotter Reave	Peaty deposit	3510±80 BP	2040-1620 BC
Base of phase 1 ditch,	Worked timber thought to be from clearance associated with construction of phase 2	3340±90 BP	1880-1430 BC
Underlying bank	Peaty deposit	3180±80 BP	1680-1260 BC

Table 6.2 Radiocarbon dates associated with boundaries on Shaugh Moor.

The initial activity along the line of the boundary varies to a greater degree than the sequence proposed by the excavators, which it would seem was a minimal interpretation of a complex sequence of archaeological deposits.[9] It is true that throughout most of its length the primary feature is ditch-like, in places the cut or cuts were clear and unequivocal. Despite this, particularly towards the south-east end of the boundary in an area of boggy ground, the ditch could be less well defined (Fig 6.19). At the south-west end, between trenches AA and AD, it was very broad (1.8-3.3m) with shallow and irregular sides. The ditch profiles in AA and AB were particularly shallow. At AC and AD the profile was better defined, although again the sides were irregular, suggesting frequent recutting and or truncation. Between AE and AM the ditch was defined by a relatively shallow cut up to 0.5m deep and 0.5-1.5m wide. There was evidence for multiple recuts along this section of the boundary, although some of the recuts were associated with the later construction of the wall. In addition to the recuts, multiple parallel ditches were recorded in the sections excavated between AH and AK. At AK and AJ the double-ditches were primary features, while at AH four roughly parallel ditches were excavated.

[8] Calibrated using OxCal v3.5 (Bronk Ramsey, 2000), atmospheric data from Stuiver et al. 1998.
[9] The published report provides a relatively detailed account of the deposits excavated. Additional section drawings and plans were examined in the archive of the Shaugh Moor Project held by Plymouth City Museum.

As with the single ditches, the multiple cuts were recut on several occasions. The extent of this recutting and truncation is unclear, but in several sections (e.g. AH west facing and AG east facing) the cut looks more like a negative lynchet. A single ditch was present from AL to AM; after AM, where the primary boundary was believed to be of timber construction – either a fence or line of hurdles – there was no evidence for a ditch.

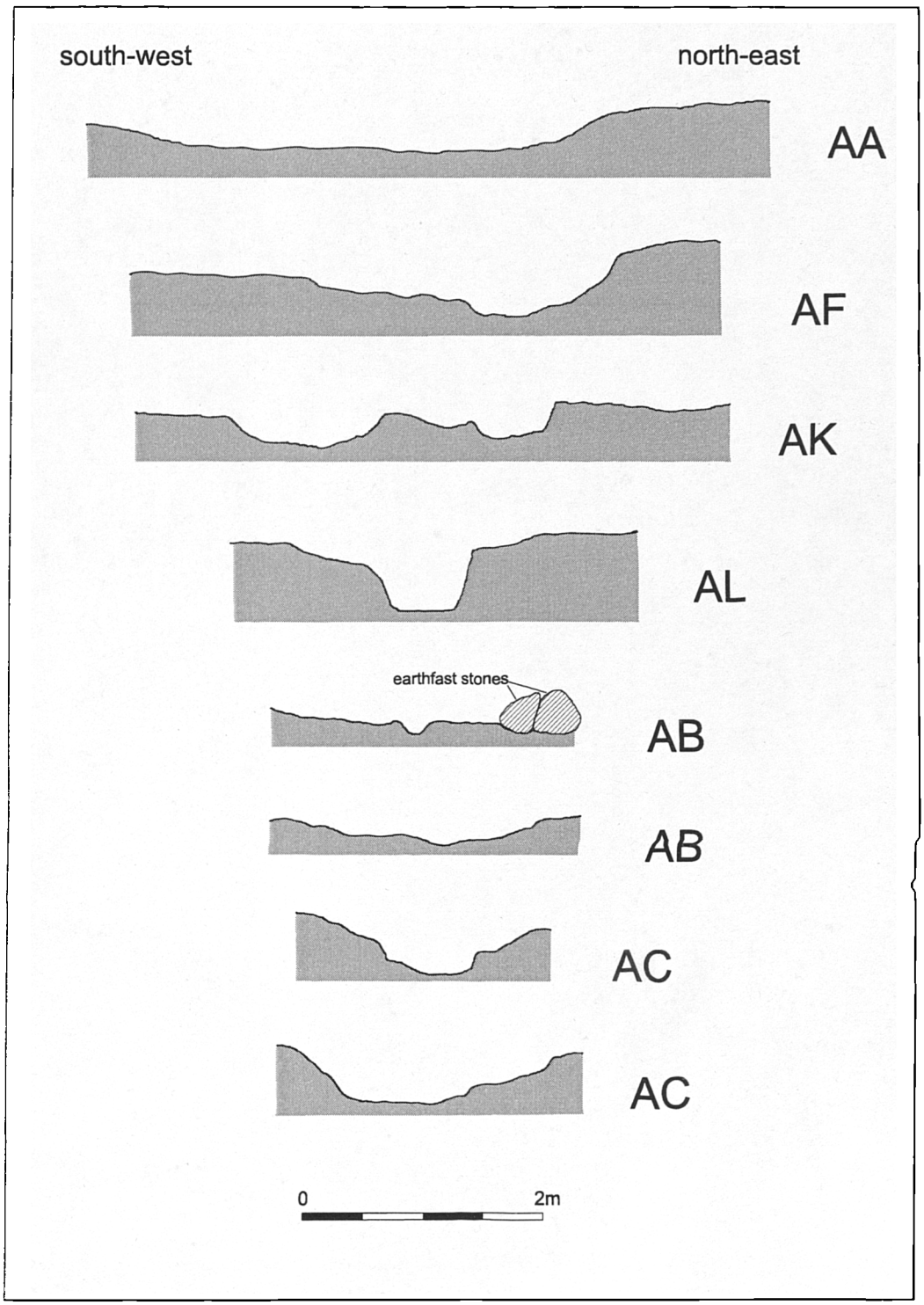

Fig 6.19 Profiles through ditch of 'Saddlesborough reave' (based on Smith et al. 1981 and unpublished section drawings in the archive of the Shaugh Moor Project, Plymouth City Museum).

Between trenches AM and AF a low bank had been constructed on the north-eastern side of the ditches. It consisted of a simple dump of subsoil, averaging 2.0m wide and 0.12-0.2m in height, that had been deposited during the cutting of the primary ditch. Further spoil resulting from recuts of the primary ditch were also deposited on the bank – in trench AL the later deposits are separated from the primary bank by a developed soil. Further downslope, in the wetter area to the south-east, there was no evidence for a bank, while upslope, towards the top of Saddlesborough the line of the boundary was marked by a line of post holes and hollows.

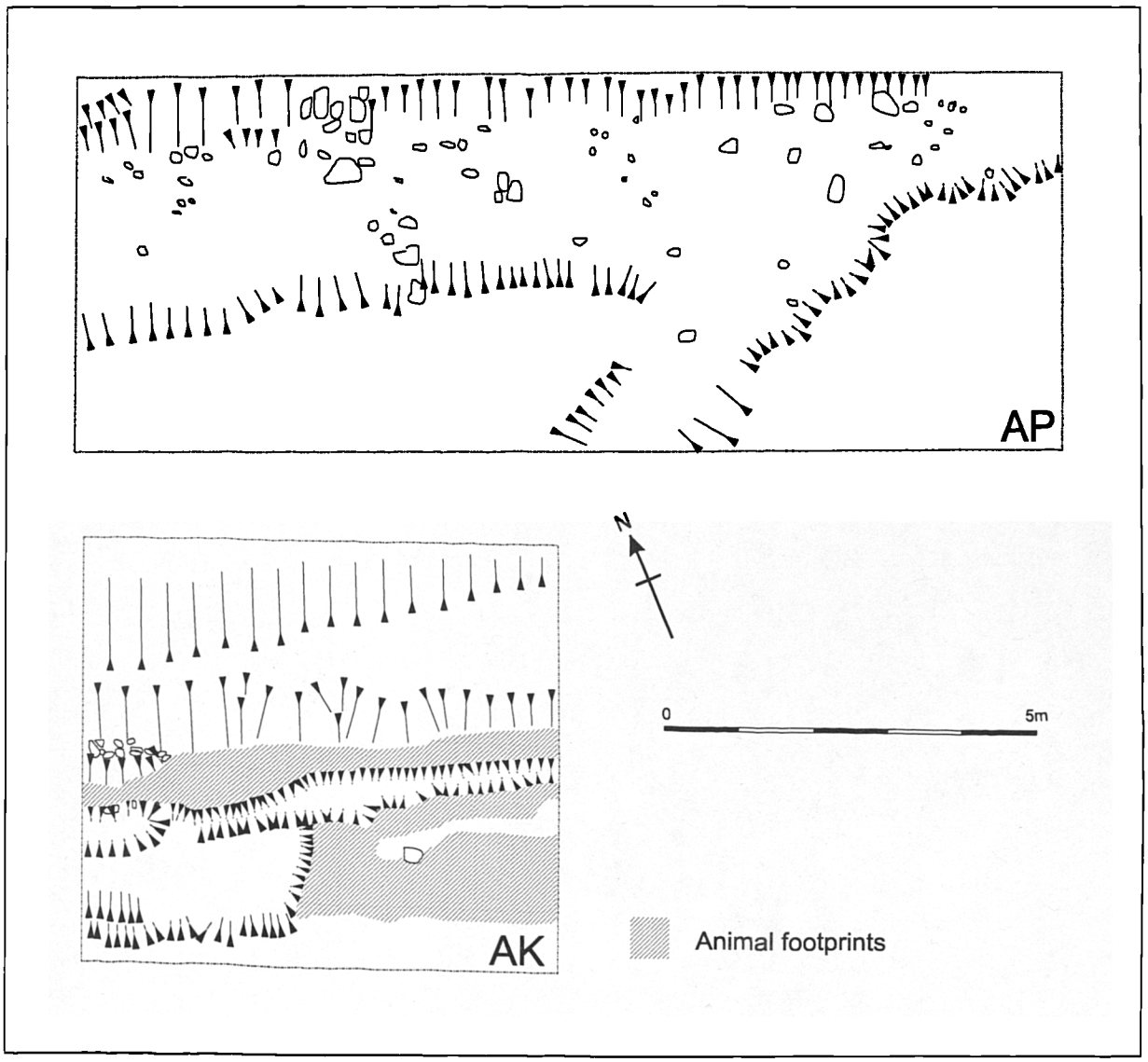

Fig 6.20 Simplified plans of hollow ways on 'Saddlesborough reave' (based on Smith et al. 1981 and unpublished plan in the archive of the Shaugh Moor Project, Plymouth City Museum).

A fascinating discovery was made in the south-western of the two ditches in AK. Beneath the silts, in the base of the ditch, a complex palimpsest of animal footprints were deeply impressed into the underlying sand (Smith et al. 1981, 214). The footprints were preserved as relatively deep impressions up to 0.03m in depth; they were made mainly by cattle and sheep, though with some horse and badger

prints also apparent. The animals had been moving along the line of the ditch in both directions, the cattle seemed to keep to the base of the ditch with the smaller stock occasionally using the sides of the feature. Further footprints were recorded in subsequent trenches to the south-east of AK, with the deepest impressions in the wetter ground in trenches AA to AP. The inclusion of small stones in the sides of the ditch, where it ran through the wetter ground, might be seen as an attempt to prevent erosion from stock movement with the effect that 'the lower reaches of the ditch became in effect a cobbled droveway up to 3.5m wide' (Smith et al. 1981, 214). In trench AP, a smaller, cobbled 'hollow-way' joined the main ditched feature from the south-west (Fig 6.20).

The second phase identified by the excavators was the construction of a wall following the line of the earlier boundary (Smith et al. 1981, 214-216). The form and position of the wall varied along the entire length over which it was investigated. Towards the north-west, the wall was of a regular construction, roughly 1.5m wide and 0.3-0.5m high, and had been built directly overlying the earlier postholes – the posts would seem to have rotted *in situ* before the wall was constructed. Between trenches AM and AE the form of the wall varied, from a wide, loose bank of stone (AH and AK) to a more regular bank of stone revetted on the south-west. To the south-east of trench AE there is little or no evidence for a wall with the exception of a short, narrow section uncovered in trench AA.[10]

One of the coaxial boundaries on Wotter Common, running perpendicular to the main reave, was also excavated. The 'Wotter Reave', as it is referred to in the excavation report, was visible as a double banked feature running intermittently from an outcrop north of Collard Tor to join with the main reave at AF. This junction was investigated, as were two sections of the double bank feature and the junction between the boundary and a bank associated with an adjacent field system. In trench AF there were two phases to the boundary. It began as a single bank and ditch that stopped short of the main reave. A posthole on the northern side of the ditch, associated with the main reave, may have been for a gate. A stone wall was then constructed on the north-west side of the bank and overlying the ditch of the main reave, effectively closing off the gap. The relationship between the two walls was not clear. Further down the boundary (trench W), to the south-west, the double bank proved to be an illusory combination of modern deposits and subsoil. A rough, substantial wall had been constructed, and abutting this was another, ruinous wall. At the south-western extent of Wotter Reave there was no evidence for a non-lithic element in the construction of the boundary. Instead, an irregular stone wall marked the north-west side of a 3.5m wide hollow way, the stone from which seems to also have been cleared to form a revetted bank on the south-east. The boundary on the north-western side varied over a short distance between being well constructed with inner and outer faces and a core, a roughly laid

[10] The plans of trenches AD to AB were not present in the archive, however, the available sections do not show any evidence for a wall on the north-east of the ditch, neither do the authors refer to trenches AD to AB in their description of the phase 2 boundary.

bank of boulders, and a series of slabs laid between earthfast boulders. The hollow way between the wall and the bank consisted of a cleared, flat area with a dished profile towards the centre.

Discussion

Section drawings and context sheets are a less than ideal substitute for a practical knowledge of the archaeology; it would be unreasonable, therefore, to place undue emphasis upon a re-analysis of the written archive alone. Nonetheless, alternatives can be offered to the excavators' suggestion that a single boundary, albeit of varied construction, was planned from the beginning and running the full length of the 'reave' (Table 6.3).

Excavator's phasing		Alternative sequence	
Phase 1a	Single ditch, ditch and bank, and timber boundary	Pre-boundary	Trackway, field ditches, possible lynchet
Phase 1b	Some recutting and enlarged bank	Phase 1	Elaboration and maintenance of some lengths of ditch and bank, possibly also construction of timber boundary
Phase 2	Wall	Phase 2	Build up of banks and some lengths of walling

Table 6.3 An alternative sequence for the boundary on Saddlesborough.

In the first instance, the primary features that were excavated beneath the line of the boundary varied considerably in their structure. Only in three trenches (AD-AF) was there a single, unequivocal ditch. Elsewhere, notably towards the south-eastern end of the boundary, the 'ditch' was very wide and shallow, and considering the animal footprints further upslope in AK, these wide linear depressions may just as easily have been eroded trackways. Elsewhere the line of the boundary was recut, further ditches were added, and timber fences were erected. There was no evidence for a consistent pattern in the construction of the various elements that eventually made up the boundary.

The bank and later stone wall are similarly variable. The bank was an ephemeral feature in many of the excavated trenches, although it was potentially topped by a hedge – inferred on the basis of the branches recovered from the waterlogged sections of the ditch. The wall too was structurally inconsistent along the investigated length of the boundary. Somewhat in contrast to this, the widely spaced sections cut into the boundary on Wotter Common demonstrated that the wall was relatively uniform and substantial along its length. The location of the boundary was not arbitrary; the hollow way excavated in trench W, and the trackway excavated in AP, which was parallel to the south-west north-east coaxial boundaries, are evidence that alignments were not necessarily structured by the boundaries alone.

The final alignment of the boundary on Saddlesborough was contingent upon many different actions and processes taking place over an indeterminable length of time. The developed soil formed over the bank in trench AL is evidence that for at least some periods of time the boundary remained undisturbed. Elsewhere along its alignment the boundary was variously a ditch, recut and remodelled on numerous occasions, and a trackway used by animals moving between the high ground in the north-west perhaps to a water source below the lower slopes. It can be inferred from the presence of stones set into the sides of these trackways, including the example running perpendicular to the boundary in AP, that the trackway was deliberately maintained for this purpose. The rather haphazard construction of a wall is therefore an attempt to formalise an alignment that had potentially developed as a boundary rather than been planned as such from the beginning.

While there have only been a few excavations of reave-type boundaries on Dartmoor, in every case, without exception, there has been at least some evidence for an historical sequence. Of two parallel reaves excavated on Holne Moor (Fleming 1994, 72-73), one consisted of a later wall situated upon an earlier bank accompanied by a shallow ditch. Further along the same boundary there were no traces of earlier features. The other parallel reave was preceded by a line of stakeholes in the area close to its junction with the terminal reave, yet beyond this there was only slight evidence for a possible fence. 165m further on, the reave consisted of no more than a line of granite boulders. The terminal reave investigated by the Holne Moor Project had no predecessor, although a line of stakeholes was discovered on the same alignment as the boundary but situated slightly to the north. At Gold Park, a short length of a silted-up ditch and a bank was excavated beneath a reave-type coaxial boundary, though on this occasion the later reave followed a different alignment to the bank and ditch (Gibson 1992).

The archaeological excavation of boundary features shows them to have long and complex biographies. Some began as the edges of fields, others as trackways. They shared a common alignment, but even this, as suggested in the previous section, was the product of a long and complex process. In order for the reaves to 'happen', there has to be the structures in place to enable such actions. The range of such conditions can only be imagined, but when the variability in material resources over the 600m of the Saddlesborough boundary is projected throughout the many kilometres of boundaries on the moor then the complexity of such a process begins to become apparent.

6.6 Land and society on Dartmoor during the Bronze Age

I ka tonu taku ahi, I runga I toku whenua – My fire has always been kept alight upon my (people's) land.
(Kawharu 1977, 41)

The third and second millennia BC on Dartmoor were characterised by extensive human settlement resulting in large areas of the landscape being cleared. A range of monuments were constructed; some

of them formalised and already sacred places, others may well have impressed new identities onto the land. Stone-built settlements and field boundaries were also a feature of the moorland landscape during this time, although the increasingly open patchwork of grazing and perhaps cultivation areas, along with the paths that linked them, was likely to have been an equal if not more pervasive structuring influence. This environment was in flux both in the long and the short term. There is no evidence to suggest occupation practices were permanently fixed at specific places. On the contrary, human groups would have followed daily, seasonal and longer term rhythms that allowed them to manage herds of animals on the moor, cultivate plants, collect and manage other plants outside the fields, acquire raw materials and so forth. The archaeological evidence is slight at present: the excavated pound at Shaugh Moor was seasonally occupied, the isolated hut groups on the higher slopes would have made good locations for transhumants to live during the summer months, and some of the raw materials found at settlement sites have been shown to come from elsewhere in the south-west peninsula. We cannot expect to recover evidence for short-term rhythms except through a knowledge of the farming strategies that sustained people – and even these may have varied significantly between areas. A part of these shorter and long term rhythms involved moving between the moor and its surroundings. Settlement evidence is known from the lower lying areas on all sides of Dartmoor; even the reaves can be shown to have continued across what is now improved farmland (Fleming 1988, 28*ff*).

The structures of power and identity that operated within society at this time were formed and maintained through the practices that people undertook during their daily lives. Social contact occurred at various levels. But, fundamentally, all relationships were enabled almost solely through face-to-face contact. These interactions resulted in alliances (and vendettas) within and between kin groups. They were limited partly by the spatial and temporal extent at which face-to-face contact could be maintained. But relationships could be extended and sustained across time-space by proxy through the use of material culture and by word of mouth. Through their involvement in such networks, individuals and groups may have acquired prestige and renown within the community. There is nothing to suggest that hierarchies were anything other than poorly formed throughout this period. Individuals would certainly have gained responsibilities and held dominant roles according to many different factors. They may also have lived within communities that in certain contexts recognised broadly defined identities based on the geographies they occupied, the material culture they used, and the manner in which they lived. But individual and community identity was rarely fixed from one generation to the next. It was negotiable through the actions of agents and in response to the histories they created.

The networks of coaxial stone banks, known as the reaves, were built as a part of these social conditions. As the boundaries have come to be regarded as an agricultural monument of the Bronze

Age to rival Stonehenge, they have also become increasingly isolated in time, space and in explanations of how they came about. This interpretation has partly resulted from the synchrony of the archaeological surveys through which the reaves were studied. As this is but one interpretation, there is easily room for other perspectives. Principally, it is time to move away from the suggestion that the construction of such boundaries was a planned event that required political decisions made between dispersed communities, or a hierarchical model of social structure with a single authority forcing its decisions upon all those that inhabited the moor. Instead, boundaries were made possible within existing social conditions, and consequently the boundaries themselves became structures of future actions. Tenure, as the power of agents to occupy land, is the fundamental concept in any study that seeks to interpret the reaves in this way.

Tenure, occupancy and knowledgeability

The 'commons dilemma' that Fleming believed emerged during the second millennium BC requires tenure to operate within large groupings. Power over the land was invested in the community – a human collective occupying valley-based 'large terrains'. Yet the articulation of tenure within everyday life does not necessarily allow for such community-wide 'tenure of territoriality' to develop. The studies of houses, cairns and boundaries that were presented in this chapter, taken together, demonstrate that tenure was articulated at a local level, principally through the relationship between occupancy and ancestral ties to the land.

Amongst the stone-built round houses, mostly located in pounds or where pounds would later be constructed, deliberate deposits of charcoal and pottery were made in pits to mark rites of passage in the lifecycle of the building. For instance at Foale's Arrishes, where two such pits were cut into the floor of one of the houses: one next to the doorway and another, covered by a stone, against the wall of the structure. Similar pits were also a common element in the construction of ring cairns. These monuments were places for formalised and sacred practices, a fact that was emphasised by their architecture, built as they were in the tradition of monuments such as stone circles and barrows. Yet, they also relied metaphorically on the structure of domestic buildings as well. Their shape and the deposits made in their centre could be identified with similar elements found at houses. These complex webs of relations between houses, ring cairns and mortuary monuments formed an important link between the living, their ancestors and the land they *both* occupied.

The relations between occupancy and tenure is again evident in the ways that boundaries were built between places and along paths. On Shovel Down, the houses – or buildings, since their identities remain indeterminable – structured where boundaries would be constructed. The ancient and contemporary histories associated with the buildings were combined with the significance of a house, as a symbol of occupancy and therefore tenure, to structure where and how physical boundaries could

be constructed across the land. Such boundaries were materialising virtual divisions that emerged through patterns of dwelling, and long histories of tenure had already left structures in the landscape.

Pathways and the time-space limits of action were equally powerful structures. The routeways that linked places were a strong embodiment of occupancy. They became more prominent through use, and their identity changed as the localities that they joined and the areas through which they passed acquired or lost significance. These trackways could themselves be virtual boundaries: either delimiting one space from another along their length, or laterally, as a byway between locales. Ditches, stone banks and fencelines formalised these trackways, as at Shaugh Moor. Or, as in the case of the south-eastern portion of the same boundary on Saddlesborough, the ditch became a trackway, and was then marked again by a wall. The identity of the feature depended upon its use, which itself depended on the ways that the land was occupied.

Occupations not only defined places and paths, they also structured areas of the land. As woodland and scrub was cleared or as pasture was turned to cultivation, practices generated their own time-space settings. The limits of these areas were not necessarily arbitrary, but nor were they continuously, consciously monitored and sustained. These structuring practices are archaeologically visible in the selective recutting of a ditch, or in the construction of boundaries along the edges of zones of land use; they are, unfortunately, invisible in the many 'in-between places' and occasional liminal areas where social responsibilities were met through the acquisition of resources and the maintenance of routines.

In all these ways, inhabitation of the land structured the construction of physical boundaries. Fundamentally, tenure was rooted in the occupancy of the living. That occupancy was embodied in the places where people lived, the paths they made and followed, and the time-space limits to daily practice. The legitimation for occupation lay with those that had inhabited the landscape previously, embodied in the barrows and cairns and articulated through deposits left in houses and monuments. The concern with occupancy marked a greater attachment to land among the living than was the case in northern England at this time (section 5.4), and perhaps tellingly it enabled the knowledgeability that would have been necessary for more intensive agricultural practices, and a firmer and more localised control over land.

Boundaries as processes and not systems

The network of Bronze Age coaxial boundaries that we can see today dividing up the land on Dartmoor were built within the social and material conditions outlined above. The resulting pattern was never conceived as a plan, even at a broad scale. The construction of the stone banks was contingent upon many different conditions and practices. Crucially, the banks themselves were potent structures. As the stone banks were built, and the, in places unwavering, regularity of the pattern was

formalised, so further boundaries repeated, mimicked and fitted in. The construction of boundaries was reflexive, as each further action looked back upon those that had gone before. There is certainly a place in such a process for what Bourdieu has termed 'unconscious coordination' (Bourdieu 1990, 58*ff*), though on a grand scale. Therefore, rather than identifying a 'dominant discourse' through which the reaves were planned, it is better to think of the interaction between individuals, families and communities 'as a multiplicity of discourse elements that can come into play in various strategies' (Foucault 1990, 100).

To leave it at that would be to suggest that there was nothing consciously intended by the reaves. The tone of the argument so far could be taken to mean they were an accident, mere chance brought about by the concurrence of certain social and material conditions. Or, on the other hand, by interpreting the changing human-land relations on Dartmoor as a *process*, I am suggesting it was somehow inevitable or predetermined. Clearly neither of these is the case. For one thing, the fundamental reason that land could be divided in this way lay in the fact that tenure was held by those who occupied it. The land was sustained and negotiated through occupancy. This made the reaves possible. Yet such agency was worked out in peculiar, contingent and localised conditions. So, to respond to the second point, 'why were the reaves constructed?' is a null question. There never was a single 'why'. No singular motivation would have been sustained across such expanses of time-space, and between communities and generations. For all the varied reasons that seemed necessary at the time, there emerged a 'tradition' of boundary building founded on the close ties between occupancy and land.

7

CONCLUSIONS

7.1 Summary of theoretical framework

The theoretical framework for recent interpretations of the Bronze Age is principally a reworking of theories of society and practice developed in the social sciences. In these theories, the conditions of social life are 'internalised' and viewed as the consequences of the practices they recursively organise. Practices are the routinised, usually non-discursive, actions of knowledgeable and capable individuals. Actors draw upon a range of social and material conditions during social life, and these conditions are in turn generated or reproduced through practice. This duality is fundamental to explaining why structures can only be studied in terms of the practices that give them meaning. Change occurs within society because actors can also be agents, in that they have the power to transform or make a difference to the conditions that they inhabit. Agency is the combination of knowledgeability – the tacit know-how of living – and capability – the power to act. It is, furthermore, crucial to our understanding of history, since it is through agency, that is to say as a consequence of intentional and unintentional structural transformations through time and space, that histories are made.

A significant failing in this theory is that material resources are externalised from social life by enforcing a dichotomy between society and nature. This is primarily because sociology is above all a study of the modern condition: a world-view, based upon post-Enlightenment reasoning, that opposes nature and culture. This process of purification – dividing culture from nature – cannot be generalised for all world-views, and indeed among many nonmodern communities the relations between humans, nonhumans and the classificatory schemes used to explain the world, can be both complex and alien to western experience. An example of this is the coagency that is often attributed to nonhumans – whether animals, plants or objects. The power of nonhumans to act within social life, and to influence and have an effect upon humans, cannot be defended philosophically. Nevertheless, nonhuman agency, along with a commeasuring or synergy of society and nature, can be elements within nonmodern ontologies. An archaeological study of social life that seeks to go beyond modern dichotomies must take account of these other forms of knowledge.

Fields are a hybrid of nature and culture. They are settings in which society and environment are inextricably linked. These relations emerge in the practices, undertaken in the fields, that transform and mediate existing material and social conditions. These conditions include the soil, plants, animals, the technology and know-how of agriculture, and the social relations and identities of the individuals and groups involved. Agency is central to these processes of mediation and transformation. As the power to make use of resources it can be equated, from a sociological perspective, with tenure. The resources over which tenure is held are many and varied, and they are distributed multi-dimensionally in space and time. Tenure is contingent upon the character of these resources, the practices in which they are implicated, the time-space setting of practice, and the social identities of the agents. Consequently, the same 'field' may embody a range of resources spread temporally (perhaps based on seasonal availability) and spatially, resulting in multifarious qualities of tenure. Tenure, as the rights of access and use acted out in a field, makes history: 'Tenure is about the ways in which a resource locale is worked or bound into the biography of the subject, or into the developmental trajectory of those groups, domestic and otherwise, of which he is a member' (Ingold 1986, 137). Tenure is not solely attributable to humans; other collectives, such as material objects, spirits and ancestors, may hold rights of access which they may then confer upon humans.

The relations between land and society are complex historical processes that comprise the actions of knowledgeable agents – made up of humans, nonhuman and collectives – and the mediation and transformation of the material and social conditions they inhabit in time and space.

7.2 Summary of case studies

The development of fields and boundaries during the Bronze Age in Britain is a regionally variable phenomenon. There are considerable differences in terms of the morphology, chronology and social context of the archaeological remains of early fields, ranging, as discussed in 2.3, from the small cairns and banks found on Arran, to the interdependent network of coaxial boundaries on the Fenedge of East Anglia. The two case studies, northern England and Dartmoor, were chosen primarily to reflect something of this variety.

In the former, a morphological distinction can be made between the groups of small cairns, known as cairnfields, and the houses and plots delimited by unstructured banks of field-cleared stone. The cairnfields and settlements are also distinguishable chronologically: the former are generally earlier in date (c.2400-1500 BC) than the latter (c.1500-800 BC). While it is accepted that the clearance of stone into cairns was a long-lived activity that was neither culturally nor geographically specific, the depositional sequence and structure of many of the early cairns set them apart from later examples. These depositional and architectural elements included complete or token human burials, deposits of

charcoal and material culture, rough kerbs and outer ditches, and pre-existing features such as earthfast stones or trees. The formal deposits and structural elements within the small cairns implicated them within a tradition of cairn building that included burial monuments and ring cairns.

The differences between cairnfields and settlements emerged as a consequence of the ways in which they were inhabited. Cairnfields were not permanently occupied. They were fields in which the temporality of their occupation depended upon social and biological rhythms that were linked with the type of land use, the timing and extent of clearance, and the length of fallow (Kitchen 2000, Table 5-1). Cairnfields are interpreted as evidence for the colonisation of upland areas during the earlier Bronze Age, and their association, in some regions, with burial monuments has led to the suggestion that tenure in the cairnfields was legitimated in relation to the dead (Barrett 1989, 124). This argument can be extended to include both the individual burial monuments and the small heaps of stone cleared from the fields. They both had a part to play in the legitimisation of tenure in cairnfields. The small cairns were important because they acted as 'solid metaphors' representing the ancestors of those that used the fields, and the biographies of the fields themselves (*cf.* Tilley 1999). These figurative associations worked in two ways: (1) the stone that was gathered from the field and incorporated into the cairn was formally transformed into *cairnstone* – an enculturated element that gained meaning through its association with monuments such as ring cairns and barrows; (2) deposits in the cairns marked specific events in the life of the field, such as the breaking of new ground and the clearance of vegetation. These metaphors did not follow a unifying scheme; instead, they were contingent upon the practices undertaken in the field. It can, at the least, be suggested that the structure of the cairns implicates them in tenure. By transforming the fieldstone into cairnstone, and therefore making the small cairns represent burials, the clearance of the field was linked to the ancestors of the community. Also, by including formal deposits that represented events in the life of the field, so the cairn embodied the biography of the field's occupation. Tenure may well have been held in the short term by those that used the field, but in the long term the legitimisation and control over land use was invested in more remote authorities, most likely the ancestors of the community, materialised in the small cairns that littered the fields. In such a case, the bonds between people and the areas of land where they cultivated plants or grazed their animals were not fixed. Tenure over resources was negotiated between the living and the ancestors.

The deposition of fieldstone around the limits of houses and fields during the later second millennium BC contrasts to the cairnfields both in terms of the character of their occupation and in the ways tenure operated. The stone that surrounded the houses and boundaries was no longer converted into cairnstone. It did not include formal deposits, nor was it structured in a way that mimicked burial monuments. It was, instead, informally heaped around the extents of the locales that formed the time-space settings for daily practices. During the life of the settlement the stone gradually built up,

eventually formalising the limits of practice. It was possible to deposit stone in this way, without reference to the past, because tenure was no longer considered remote from people's daily lives. Tenure was now held by the groups who occupied the settlements and not by the ancestors of a wider community as had been the case in the cairnfields. This change in land tenure enabled people to 'settle-down'. Conversely, it was also the process of settling down that brought about a closer attachment between small groups or households and the places they came to occupy on a more permanent basis. The process of desanctifying the field allowed stone to be dumped around settlements and along field edges, in a sense creating fields and therefore unintentionally forming places.

The unintended creation of place and space is also an important factor in understanding the process of land enclosure on Dartmoor. During the second millennium BC, the reaves were constructed across the moor, dividing the land up into large territories; within these territories a pattern of coaxial boundaries emerged, parcelling up the lower slopes. The archaeological study of the boundaries has concentrated on their construction and use within synchronous interdependent systems. The stone banks were the intended outcome of a plan to enclose and parcel up the moor. The apparent uniformity of this phenomenon, and its isolation in interpretative accounts of the prehistory of the moor has contributed to the dominance of a single narrative history of their construction. It is possible, however, to interpret the evidence in other ways, particularly when employing different temporal and geographical scales in the analysis.

In the first instance, prior to the construction of the boundaries, a developed sense of tenure over places already existed. Evidence for this can be found in the close structural similarities between ring cairns and houses. Not only were they of a similar shape and orientation, they included comparable deposits of charcoal and material culture, often in pits. Based on the evidence from southern England, Bradley has interpreted the evidence for a link between circular monuments and houses during the Bronze Age as evidence for the existence of a common symbolic code that contributed to the meaning of their respective architecture (Bradley 1998, 150). Using the same evidence, Brück has argued that the formal deposits in houses commemorated events in the lifecycle of the building and / or its inhabitants (Brück 1999). While not contradicting these ideas, the evidence from Dartmoor is most clearly an evocation of a physical and ontological relationship between people and place. The deposits in ring cairns formalised the relations between people, place and ancestors. In the houses, those relations were strengthened by occupancy. Crucially, these relations between land and society emerged in the early Bronze Age, and therefore before the construction of the reaves. This evidence for tenure operating at a localised level, negotiated within small communities, and between households and their ancestors, balances the evidence for much larger territories based around the distribution of monument complexes and burial mounds.

The construction of the reaves involved the mediation and transformation of existing social and material conditions. Amongst these conditions were the histories of occupancy and tenure embodied in the houses. On Chagford Common and Shovel Down, the buildings proved to be potent structures in terms of their influence upon where the stone banks were built. They formed the nodes for junctions of boundaries, and the alignments between groups of buildings were later followed by the stone banks. Earlier paths and alignments, such as those between the hilltop tors or along watercourses, also structured the location of the boundaries. The process of enclosure built on existing structures, namely earlier occupations, the identity of houses and enclosures and the existing experiences and knowledge of the landscape. These broad statements should be tempered by the fact that each boundary may well have had its own particular history. At Saddlesborough, the excavated reave was shown to have gone through a relatively complex construction sequence that varied along its length. Rather than having a consistent identity, it was variously a pathway for animals, the limit for individual fields, and an intermittent stone wall. The alignment that the reave followed may at first appear purposeful, but its heterogeneous history suggests that its final, archaeological form was merely the culmination of complex and contingent processes.

Taken together, the three studies on Dartmoor offer different perspectives on the relations between land and society during the Bonze Age: before the construction of the reaves, land tenure was invested at the level of individual households; the later boundaries were constructed in the context of this existing, localised tenure, as well as following wider geographic alignments that had structured inhabitation of the landscape over millennia; each boundary had a long and complex biography, that was contingent upon, among other things, the social practices of which it was a material condition. In addition, as reaves were formalised across areas of the moor, they in turn structured the construction of further boundaries. This reflexive process engendered a tradition of boundary building. But the reasons for constructing individual boundaries would have been localised and specific to the immediate social and material conditions.

In comparing the studies of northern England and Dartmoor, the relations between land and society seem to have different historical trajectories in the two regions. In northern England during the early Bronze Age, land tenure was controlled within the wider community, and it may well have been perceived to have been held by the community's ancestors. During the second half of the second millennium BC, smaller groups did occupy places on a more permanent basis, and this was both an outcome of and a contributory factor in land tenure becoming legitimated through occupancy. In contrast, on Dartmoor, the ontological ties between small social groups and places were established during the early Bronze Age. This is not to say that the houses were necessarily permanently occupied, but rather that occupancy, whatever its character, enabled tenure to be legitimated at a local level. By the later second millennium BC, tenure over land was already established and understood at a local

level and legitimated through occupancy. Under such circumstances, it is much easier to envisage how, in some areas of the moor, the need might have arisen for boundaries to be formalised as short term conflicts between local groups, and / or wider communities, arose. The differing histories of land and society in these regions depends, therefore, primarily upon the ways in which people inhabited the material and social conditions that were available to them: histories of occupancy, land use, senses of place, tenure over land (whether ancestral or linked to the household).

7.3 Smaller worlds? Interpreting the Bronze Age

In archaeological interpretations of social change during the Bronze Age, attention has been drawn to the widespread appearance of fields and boundaries from the middle of the second millennium BC. The evidence for early fields is believed to indicate a shift towards more intensive farming practices, and a change in land tenure from the temporary use of locales, where access to resources was controlled at a community level, to relatively permanent usufruct over bounded areas of land. These are linked with the fragmentation of social groupings and the adoption of less mobile occupation practices; a process made evident in some regions by permanently occupied, enclosed settlements. Concurrent with these changes there was a shift in the context of ritual activity from monuments to the domestic sphere; this has been characterised as a transition between two 'kinds' of landscape (Barrett 1999): a landscape dominated by monuments to one dominated by fields (Bradley 1998, 148). The second millennium BC is identified as a period when fundamental changes occurred in the way people lived and understood their world. It is these developments, such as permanent settlements, more intensive agricultural practices, and a shift in the context of ritual, which later come to epitomise the Iron Age. The impetus for my research was the observation that despite the importance of fields and boundaries as material conditions of society in these accounts of social change, they have not been subjected to the same degree of rigorous analysis as has been undertaken in the study of monuments and domestic structures.

The case studies undertaken as part of this research broadly support the interpretation of the Bronze Age as a period of important and fundamental changes in the ways people inhabited the landscape. There was a process of 'settling-down'; tenure was increasingly legitimated in terms of occupancy and with reference to bounded areas of land; and the domestic sphere became an important context within which to undertake rituals associated with sustaining ontological security. These processes are closely interrelated, but they are also geographically and chronologically diverse.

The idea that communities settled-down, or in other words that settlements were occupied on a more permanent basis, is crucial to recent interpretations. For Barrett (Barrett 1994b, 95) and Brück (Brück 1997), this settling-down is the consequence of social fragmentation, as smaller groups sought to build

boundaries both socially and materially. It offers a contrast between the 'expansive and manipulable kinship and exchange networks' (Brück 1997, 221-222) of the early Bronze Age and the well defined households of the middle Bronze Age. The desire to control space within and around settlements, and the close association between the lifecycle of the house with those of inhabitants are examples of the way in which smaller communities identified themselves in relation to their wider world. Indeed, a further contrast can be drawn between the way large monuments, particularly henges, were seen as a microcosm of the Neolithic world at community level (e.g. Richards 1996; Thomas 1996), and the house became a microcosm of the middle Bronze Age world (Brück 1997). In these terms, the house, and by implication the surrounding settlement, become spaces through which ontologies can be mediated and therefore sustained.

The relations between land and society remain marginal to these accounts. The construction of field boundaries and changes in land tenure are identified as effects of social fragmentation, rather than, as has been suggested in this thesis, a significant condition that enabled change. These interpretations are based predominately on the evidence from southern England; outside this region, the processes reflect different histories of land-society relations.

In northern England changes do take place in settlement practices, and these can be attributed to groups 'settling-down'. Yet, this is not necessarily evidence for the permanent occupation of settlements, nor is it concomitant with the same need to control social space or to place material and symbolic boundaries around the household. There seems, instead, to have been subtle changes in the way land was constituted ontologically. Rather than being 'sacred', in that tenure was mediated between the community and their ancestors, individual households were able to lay some long-term claim to particular places. The metaphorical expression of this change in attitude towards land can be seen in the way fieldstone was treated: whereas previously it had been transformed into cairnstone, by the later Bronze Age it could no longer act as a marker and a mediator for rights of access and tenure. Barrett interpreted the development of fragmentation and intensification as being founded in early Bronze Age burial rites, whereby relations of kinship and therefore lineage were brought to the fore during burials (Barrett 1994c). This in turn enabled lines of inheritance to be established, and for small communities to define themselves in terms of their immediate past and future. Yet the deposits within the cairnfields of northern England are interpreted, on the basis of the research for this thesis, as evidence for land tenure being more remote from people's daily lives. Community and ancestry were important, but land remained inalienable outside these social networks.

To contrast with this, on Dartmoor, the close ties between households and place were already established by the earlier second millennium BC. This was balanced by people's integration within the more extensive communities and exchange networks that were mediated through monuments such as

stone circles. The network of boundaries that later developed across the moor is usually interpreted as a moor-wide 'decision', whose variability at a local level reflects the different ways in which the plan was 'executed' (Fleming 1994). In contrast with this, it can be argued that the reaves were constructed as part of an ongoing process of negotiation, at a local level, between people and the land. The uniformity of the final, archaeologically derived, pattern of boundaries reflects the peculiar interplay of localised tenure and wider social networks that existed on Dartmoor during the Bronze Age. It does not, however, indicate a uniformity of purpose. A 'tradition' of formalised boundaries developed in a landscape characterised by a fragmented and localised sense of place which, unlike southern and northern England, was integrated within wider social networks rather than displacing them.

In conclusion, it is important to situate land and society to the fore in accounts of later prehistoric society. The relations between people and land changed through time. The basis for their ontological attachment to place and landscape was materialised in different ways, primarily according to the manner in which daily practices mediated and transformed existing social and material conditions. Furthermore, these processes were regionally variable, leading to particular and often localised histories, which have achieved varying levels of coherence depending upon the scales at which archaeologists have objectified them.

APPENDIX

ROUND HUTS ON SHOVEL DOWN AND CHAGFORD COMMON, DARTMOOR

The data tabulated below is a record of 63 round houses on Shovel Down and Chagford Common, Dartmoor. The fieldwork was undertaken during July 1999 and February 2000. The following measurements were recorded: width of bank or wall; internal dimensions of structure; entrance width and. In addition, a record was made of the form of wall construction, where visible, and any relationship(s) between the walls of the house and field boundaries. The location of each structure is shown on Fig 6.9.

a Hut # (see Fig 6.9)
b Internal dimension (1) in metres (measurement taken across diameter or side of structure depending upon shape, see l)
c Internal dimension (2) in metres (measurement taken across diameter or side of feature depending upon shape, see l)
d Internal area in sq. metres (calculated on basis of whether or not structure is round or rectangular, see l)
e Width of ring bank or wall in metres
f Width of entrance in metres
g Orientation of entrance in degrees from Magnetic North
h Entrance type (u=unclear, p=possible, c=clear)
i Number of field boundaries definitely linked to the structure
j Number of field boundaries possibly linked to the structure
k Structure is primary (p) or secondary (s) to attached boundaries; (n) no discernable relationship
l Shape of structure: o=round/oval, r=rectangular/sub-rectangular

a	b	c	d	e	f	g	h	i	j	k	l
1	7.6	7.4	44.16	0	0		u	0	0	n	o
2	6.7	6.1	32.15	1.25	0		u	0	0	n	o
3	7.65	8.4	50.55	1	0	168	p	0	0	n	o
4	6	6.2	29.21	1	1	196	c	2	1	p	o

a	b	c	d	e	f	g	h	i	j	k	l
5	5.15	4.85	19.63	0.7	0.9	88	c	0	0	n	o
6	9.85	8.9	68.99	0	0		u	0	0	n	o
7	6.5	5.9	30.18	3.2	1.4	124	c	1	1	p	o
8	9.5	9.1	67.89	1.5	1	94	c	1	0	p	o
9	8.6	8.65	58.40	1.4	1.35	160	c	2	0	p	o
10	6.2	6.2	30.18	2.8	0		u	3	0	p	o
11	7.65	8.3	49.93	0	0		u	0	0	n	o
12	4.05	4.45	14.18	0	0		u	0	0	n	o
13	4.1	4.6	14.85	1.5	0.6	154	c	0	0	n	o
14	4.65	5.45	25.34	1.6	1	142	c	2	0	s	r
15	5.8	6	27.33	0	0		u	0	0	n	o
16	3.1	3.6	8.81	1.3	1.15	90	c	1	2	p	o
17	7.1	7.25	40.41	1.9	1.15	148	c	0	0	n	o
18	3.8	3.3	12.54	1.5	0		u	2	0	p	r
19	6.4	6.4	32.15	1.7	0.95	148	c	2	0	p	o
20	5.1	5.3	21.23	2.2	0.8	144	c	2	0	s	o
21	5.4	5.95	25.28	2.1	0.6	60	c	0	1	p	o
22	5.9	6	27.79	0	0.9	74	p	0	1	p	o
23	4.2	4.65	15.37	1.6	0.85	64	c	2	0	p	o
24	7.5	6.8	40.13	2.1	0.95	180	c	1	0	p	o
25	9	9	63.59	1.4	0	22	u	0	0	n	o
26	8.55	8.3	55.72	1.6	0.9	232	c	3	0	p	o
27	4.55	6.25	22.89	1.3	0.66	166	c	1	0	p	o
28	4.95	5.1	19.82	1.6	0.6	122	c	0	0	n	o
29	4.95	6.4	31.68	0	0	142	c	0	0	n	r
30	3.05	3.05	7.30	0	0.75	142	c	0	0	n	o
31	5.3	4.5	18.85	1.9	0		n	0	0	n	o
32	5.35	6.45	27.33	3.2	0.95	118	c	1	0	p	o
33	5.1	5.25	21.02	2.2	0.9	156	c	0	0	n	o
34	5.25	5.3	21.84	0	1.05	106	c	0	0	n	o
35	5.05	4.85	24.49	1.95	0.6	60	c	3	0	p	r
36	6.7	6.25	32.91	3	1.2	194	c	0	0	n	o
37	5.8	6.1	27.79	2.1	0.75	162	c	2	0	s	o
38	5.7	5.6	25.06	2.3	1.05	66	c	3	0	p	o
39	4.95	2.8	13.86	0.9	0		u	3	0	p	r
40	5.2	5.9	24.18	2.2	0.95	102	c	3	0	p	o
41	4.5	5	17.71	2.1	0		n	1	0	p	o
42	5.15	5.5	22.26	1.6	0.8	128	c	2	0	p	o
43	6.7	6.05	31.90	1.5	0		n	2	0	p	o
44	3.4	4.25	11.49	1.3	0.9	36	p	2	0	p	o
45	4.5	5.1	18.09	1.6	0		n	3	0	p	o
46	5.15	5.7	23.10	1.95	0.95	100	c	2	0	p	o
47	4.3	4.9	16.61	1.7	1.2	68	c	0	0	n	o
48	7.65	7.75	46.54	2.6	0.95	164	c	0	1	p	o
49	6.65	7.25	37.92	2	1.15	102	c	2	0	p	o
50	5.6	5.8	25.50	1.6	0.95	342	c	2	0	p	o
51	5.65	5.6	24.84	2.5	0.9	164	c	0	0	n	o

a	b	c	d	e	f	g	h	i	j	k	l
52	7.4	6.9	40.13	0	0		n	2	0	p	o
53	5.7	5.4	24.18	1.6	0		n	0	0	n	o
54	6.1	5.95	28.50	2.3	0.95	140	c	0	0	n	o
55	4.5	4.05	18.23	2.2	0		u	0	0	n	r
56	6.75	5.4	28.97	2.4	1.35	26	c	0	1	s	o
57	4.6	5	18.09	2	1.05	40	c	0	0	n	o
58	6.9	5.4	29.69	0	1.3	162	c	0	0	n	o
59	5.7	5.7	25.50	2	0		u	0	0	n	o
60	4.5	4.5	15.90	1.7	0		n	2	0	p	o
61	4.75	5.35	20.02	1.6	0.8	176	c	1	1	p	o
62	7.8	8.7	53.43	1.6	1.25	120	c	0	0	n	o
63	6.85	6.85	36.83	2	0.95	100	c	0	0	n	o

REFERENCES

Adam, B. 1990. *Time and Social Theory*. Cambridge: Polity.

Alder, M. A. 1996. Land tenure, archaeology, and the ancestral Pueblo social landscape. *Journal of Anthropological Archaeology* 15, 337-371.

Anderson, I. K. 1906. Eleventh report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 38, 102-113.

Annable, R. 1987. *The Later Prehistory of Northern England: Cumbria, Northumberland and Durham from the Neolithic to the Late Bronze Age*. Oxford: BAR (Brit Ser) 160i, ii & iii.

Arensburg, C. M. 1959. *The Irish Countryman: an anthropological study*. Gloucester, Mass.: Peter Smith.

Arensburg, C. M. & Kimball, S. T. 1968. *Family and Community in Ireland [2nd Edn]*. Cambridge, Mass.: Harvard University Press.

Ashbee, P. 1957. Excavations on Kildale Moor, North Riding of Yorkshire, 1953. *Yorkshire Archaeological Journal* 39, 179-192.

Ashbee, P. 1960. *The Bronze Age Round Barrow in Britain: an introduction to the study of the funerary practice and culture of the British and Irish Single-Grave People of the second millennium B.C.* London: Phoenix House.

Aston, M. & Rowley, T. 1974. *Landscape Archaeology: an introduction to fieldwork techniques on post-Roman landscapes*. London: David and Charles.

Bailey, G. N. 1981. Concepts, time-scales and explanations in economic prehistory. In A. Sheridan & G. N. Bailey (Eds). *Economic Archaeology: towards an integration of ecological and social approaches*. Oxford: BAR (Int Ser) 96, 97-117.

Bailey, G. N. 1983. Concepts of time in quaternary prehistory. *Annual Review of Anthropology* 12, 165-192.

Baker, A. R. H. & Butlin, R. A. (Eds) 1973. *Studies of Field Systems in the British Isles*. Cambridge: Cambridge University Press.

Balaam, N. D., Smith, K. & Wainwright, G. J. 1982. The Shaugh Moor Project: fourth report – environment, context and conclusion. *Proceedings of the Prehistoric Society* 48, 203-278.

Ball, T. 1931. Opening of barrows in Swinburne Park. *Proceedings of the Society of Antiquaries in Newcastle upon Tyne (4th Ser)* 4, 75-81.

Barber, J. (Ed.) 1997. *The Archaeological Investigation of a Prehistoric Landscape: excavations on Arran 1978-1981.* Edinburgh: Scottish Trust for Archaeological Research.

Baring-Gould, S. 1894. Hut circles at Tavy Cleare. *Report and Transactions of the Devonshire Association* 26, 197-198.

Baring-Gould, S. 1896. Third report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 28, 174-199.

Baring-Gould, S. 1897. Fourth report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 29, 145-165.

Baring-Gould, S. 1898. Fifth report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 30, 97-115.

Baring-Gould, S. 1899. Sixth report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 31, 146-155.

Barker, G. (Ed.) 1981. *Prehistoric communities in Northern England: essays in social and economic reconstruction.* Sheffield: University of Sheffield.

Barker, G. 1985. *Prehistoric Farming in Europe.* Cambridge: Cambridge University Press.

Barker, M. M. 1934. Tumuli near Carrock Fell. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 34, 107-112.

Barker, M. M. 1951. Some excavations in the Carrock Area. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 50, 201-202.

Barnatt, J. 1989. *Stone Circles of Britain: taxonomic and distributional analyses and a catalogue of sites in England, Scotland and Wales.* Oxford: BAR (Brit Ser).

Barnatt, J. 1994. Excavation of a Bronze Age unenclosed cemetery, cairns, and field boundaries at Eaglestone Flat, Curbar, Derbyshire, 1984, 1989-1990. *Proceedings of the Prehistoric Society* 60, 287-370.

Barnatt, J. 1999. Taming the land: Peak District farming and ritual in the Bronze Age. *Derbyshire Archaeological Journal* 119, 19-78.

Barnatt, J. 2000. To each their own: later prehistoric farming communities and their monuments in the Peak. *Derbyshire Archaeological Journal* 120, 1-86.

Barnatt, J. & Smith, K. 1997. *The Peak District: landscapes through time.* London: Batsford.

Barnes, B. 2000. *Understanding Agency: social theory and responsible action.* London: Sage.

Barrett, J. C. 1980a. The evolution of later Bronze Age settlements. In J. C. Barrett & R. Bradley (Eds). *Settlement and Society in the British Later Bronze Age.* Oxford: BAR (Brit Ser) 83, 77-100.

Barrett, J. C. 1980b. The pottery of the later Bronze Age in lowland England. *Proceedings of the Prehistoric Society* 46, 297-319.

Barrett, J. C. 1988. Fields of discourse: reconstituting a social archaeology. *Critique of Anthropology* 7, 5-16.

Barrett, J. C. 1989. Time and tradition: the rituals of everyday life. In H. Å. Nordström & A. B. Knape (Eds). *Bronze Age Studies: transactions of the British-Scandinavian Colloquium in Stockholm May 10-11 1985*. Stockholm: Statens Historiska Museum, 113-126.

Barrett, J. C. 1994a. The Bronze Age. In B. Vyner (Ed.) *Building on the Past: papers celebrating 150 years of the Royal Archaeological Institute*. London: RAI, 103-122.

Barrett, J. C. 1994b. Defining domestic space in the Bronze Age of southern Britain. In M. Parker Pearson & C. Richards (Eds). *Architecture and Order: approaches to social space*. London: Routledge, 87-97.

Barrett, J. C. 1994c. *Fragments from Antiquity: an archaeology of social life in Britain, 2900-1200 BC*. Oxford: Blackwell.

Barrett, J. C. 1999. The mythical landscapes of the British Iron Age. In W. Ashmore & A. B. Knapp (Eds). *Archaeologies of Landscape: contemporary perspectives*. Oxford: Blackwell, 253-265.

Barrett, J. C. 2000. A thesis on agency. In M.-A. Dobres & J. Robb (Eds). *Archaeology and Agency*. London: Routledge, 61-68.

Barrett, J. C. 2001. Agency, the duality of structure, and the problem of the archaeological record. In I. Hodder (Ed.) *Archaeological Theory Today*. Cambridge: Polity, 141-164.

Barrett, J. C. & Bradley, R. (Eds) 1980. *Settlement and Society in the British Later Bronze Age*. Oxford: BAR (Brit Ser 83i & ii).

Barrett, J. C., Bradley, R. & Green, M. 1991. *Landscape, Monuments and Society: the prehistory of Cranborne Chase*. Cambridge: Cambridge University Press.

Battaglia, D. 1999. Towards an ethics of the open subject: writing culture in good conscience. In H. Moore (Ed.) *Anthropological Theory Today*. Cambridge: Polity, 114-150.

Bauman, Z. 1995. *Life in Fragments: essays in postmodern morality*. Oxford: Blackwell.

Bell, M. 1992. The prehistory of soil erosion. In M. Bell & J. Boardman (Eds). *Past and Present Soil Erosion: archaeological and geological perspectives*. Oxford: Oxbow, 21-35.

Bintliff, J. 1982. Settlement patterns, land tenure and social structure: a diachronic model. In C. Renfrew & S. Shennan (Eds). *Ranking, Resource and Exchange: aspects of the archaeology of early European society*. Cambridge: Cambridge University Press, 106-111.

Blaker, R. 1902. Ancient cultivations. *Sussex Archaeological Collections* 45, 198-203.

Boast, R. 1997. A small company of actors: a critique of style. *Journal of Material Culture* 2(2), 173-198.

Bohannan, P. 1963. 'Land', 'tenure' and land-tenure. In D. Biebuyck (Ed.) *African Agrarian Systems*. Oxford: Oxford University Press, 101-115.

Boserup, E. 1965. *The Conditions of Agricultural Growth: the economics of agrarian change under population pressure*. London: George Allen & Unwin.

Bourdieu, P. 1977. *Outline of a Theory of Practice.* Cambridge: Cambridge University Press.

Bourdieu, P. 1985. The genesis of the concepts of habitus and field. *Sociocriticism* 212, 11-24.

Bourdieu, P. 1990. *The Logic of Practice.* California: Stanford University Press.

Bourdieu, P. 1994. *In Other Words.* Cambridge: Polity.

Bourdieu, P. & Passeron, J.-C. 1990. *Reproduction in Education, Society and Culture.* London: Sage.

Bowden, M. & Mackay, D. 1999. Archaeology and the Ordnance Survey revisited: field investigation by the Ordnance Survey Archaeology Division 1947-1983. In P. Frodsham, P. Topping & D. Cowley (Eds). *'We were always chasing time': papers presented to Keith Blood.* Northern Archaeology 17/18 (Special Edition): Northumberland Archaeology Group, 1-13.

Bowen, E. G. & Gresham, C. A. 1967. *History of Merioneth.* Dolgellau: Merioneth Historical and Record Society.

Bowen, H. C. 1961. *Ancient Fields: a tentative analysis of vanishing earthworks and landscapes.* London: British Association for the Advancement of Science.

Bowen, H. C. 1990. *The Archaeology of Bokerley Dyke.* London: HMSO.

Bowen, H. C. & Fowler, P. J. (Eds) 1978. *Early Land Allotment in the British Isles: a survey of recent work.* Oxford: BAR (Brit Ser) 48.

Brackenbury, A. 1984. *Breaking Ground and other poems.* Manchester: Cararnet.

Bradford, J. S. P. 1957. *Ancient Landscapes: studies in field archaeology.* London: Bell.

Bradley, R. 1978a. Prehistoric field systems in Britain and north-west Europe – a review of recent work. *World Archaeology* 9, 265-280.

Bradley, R. 1978b. *The Prehistoric Settlement of Britain.* London: Routledge and Keegan Paul.

Bradley, R. 1980. Subsistence, exchange and technology: a social framework for the Bronze Age in southern England c.1400-700bc. In J. C. Barrett & R. Bradley (Eds). *Settlement and Society in the British Later Bronze Age.* Oxford: BAR (Brit Ser) 83, 57-76.

Bradley, R. 1984. *The Social Foundations of Prehistoric Britain.* London: Longman.

Bradley, R. 1997. *Rock Art and the Prehistory of Atlantic Europe: signing the land.* London: Routledge.

Bradley, R. 1998. *The Significance of Monuments: on the shaping of human experience in Neolithic and Bronze Age Europe.* London: Routledge.

Bradley, R. 2000. *An Archaeology of Natural Places.* London: Routledge.

Bradley, R., Entwistle, R. & Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain: the work of the Wessex Linear Ditches Project.* London: English Heritage.

Braithwaite, M. 1984. Ritual and prestige in the prehistory of Wessex c.2200-1400 BC: a new dimension to the archaeological evidence. In D. Miller & C. Tilley (Eds). *Ideology, Power and Prehistory.* Cambridge: Cambridge University Press, 93-110.

Briggs, S. 1999. *New insights from old records: a perspective of British and Irish fields and clearances since 1690.* Paper presented at the EAA Annual Meeting, Bournemouth.

Brown, P. & Podolefsky, A. 1976. Population density, agricultural intensity, land tenure and group size in the New Guinea Highlands. *Ethnology* 15(3), 211-238.

Brück, J. 1997. *The Early-Middle Bronze Age Transition in Wessex, Sussex and the Thames Valley.* Unpub PhD Thesis, University of Cambridge.

Brück, J. 1999. Houses, lifecycles and deposition on middle Bronze Age settlements in southern England. *Proceedings of the Prehistoric Society* 65, 145-166.

Brück, J. & Goodman, M. 1999. Introduction: themes for a critical archaeology of prehistoric settlement. In J. Brück & M. Goodman (Eds). *Making Places in the Prehistoric World: themes in settlement archaeology.* London: UCL Press, 1-19.

Burgess, C. B. 1980a. *The Age of Stonehenge.* London: Dent.

Burgess, C. B. 1980b. Excavations at Housledge, Black Law, Northumberland 1979, and their implications for Early Bronze Age settlement in the Chevi ts. *Northern Archaeology* 1(1), 6-12.

Burgess, C. B. 1981. Excavations at Houseledge, Akeld, Northumberland. *Universities of Durham and Newcastle Archaeological Reports* 1980, 7-10.

Burgess, C. B. 1982. Excavations and survey on Black Law, Akeld, Northumberland. *Universities of Durham and Newcastle Archaeological Reports* 1981, 4-6.

Burgess, C. B. 1984. The prehistoric settlement of Northumberland: a speculative survey. In R. Miket & C. B. Burgess (Eds). *Between and Beyond the Walls: essays on the prehistory and history of north Britain in honour of George Jobey.* Edinburgh: John Donald, 126-175.

Burgess, C. B. 1995. Bronze Age settlements and domestic pottery in northern Britain: some suggestions. In I. Kinnes & G. Varndell (Eds). *'Unbaked Urns of rudely shape': essays on British and Irish pottery.* Oxford: Oxbow, 145-158.

Burgess, C. B. & Miket, R. (Eds) 1976. *Settlement and Economy in the Third and Second Millenia BC.* Oxford: BAR (Brit Ser) 33.

Burl, A. 1993. *From Carnac to Callanish: the prehistoric stone rows and avenues of Britain, Ireland and Brittany.* New Haven: Yale University Press.

Burnard, R. 1894. Exploration of the hut circles in Broadun Ring and Broadun. *Report and Transactions of the Devonshire Association* 26, 185-196.

Butler, J. 1997. *Dartmoor Atlas of Antiquities: volume 5, the second millennium BC.* Exeter: Devon Books.

Butzer, K. 1972. *Environment and Archaeology.* London: Metheun.

Carlstein, T. 1982. *Time Resources, Society and Ecology: on the capacity for human interaction in space and time. Volume 1: preindustrial societies.* London: George Allen and Unwin.

Caseldine, C. J. & Hatton, J. M. 1994. Into the mists? Thoughts on the prehistoric and historic environment. In D. M. Griffiths (Ed.) *The Archaeology of Dartmoor: perspectives from the 1990s*: Proceedings of the Devon Archaeological Society 52 (Special Edition), 35-47.

Caulfield, S. 1978. Neolithic fields: the Irish Evidence. In H. C. Bowen & P. J. Fowler (Eds). *Early Land Allotment in the British Isles.* Oxford: BAR (Brit Ser) 48, 137-143.

Champion, T. 1999. The later Bronze Age. In J. Hunter & I. Ralston (Eds). *The Archaeology of Britain: an introduction from the Upper Palaeolithic to the Industrial Revolution.* London: Routledge, 95-112.

Chapman, J. C. & Shiel, R. 1993. Social change and land use in prehistoric Dalmatia. *Proceedings of the Prehistoric Society* 59, 61-104.

Cherry, J. 1961. Cairns in the Birker Fell and Ulpha Fell area. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 61, 7-15.

Childe, V. G. 1940. *Prehistoric Communities of the British Isles.* London: W & R Chambers.

Chou, C. 1997. Contesting the tenure of territoriality: the Orang Suku Laut. *Bijdragen tot de Taal-, Land- en Volkenkunde* 153(4), 605-629.

Christison, D. 1898. *Early Fortifications in Scotland: mottes, camps and forts.* Edinburgh: William Blackwood.

Clarke, B., Crocombe, R., Lukau, A., Lumour, P. & Macintyre, M. 1994. *Customary Land Tenure Issues in Papua New Guinea.* Canberra: Australian International Development Assistance Bureau.

Coles, J. M. & Harding, A. F. 1979. *The Bronze Age in Europe: an introduction to the prehistory of Europe c. 2000-700BC.* London: Metheun.

Collingwood, R. G. 1945. *The Idea of Nature.* Oxford: Clarendon Press.

Colt Hoare, R. 1812. *The Ancient History of South Wiltshire.* London.

Coulsen, W. & Clayton 1865. Linhope Camp. *Archaeologia Aeliana (New Ser)* 6, 37-38.

Cowley, D. C. & Edwards, D. N. 1988. *Callaly Moor Field Survey and Excavation, Phase Three, 1988.* Newcastle upon Tyne: Unpub Report, Archaeological Unit for North East England.

Craib, I. 1992. *Anthony Giddens.* London: Routledge.

Crawford, O. G. S. 1923. Air survey and archaeology. *Geographical Journal* 61(5), 342-366.

Crawford, O. G. S. 1924. *Air Survey and Archaeology.* Southampton: Ordnance Survey Professional Paper 7.

Crawford, O. G. S. 1953. *Archaeology in the Field.* London: Phoenix House.

Crawford, O. G. S. & Keiller, A. 1928. *Wessex from the Air.* Oxford: Oxford University Press.

Crocombe, R. 1974. An approach to the analysis of land tenure systems. In H. P. Lundesgaarde (Ed.) *Land Tenure in Oceania.* Honolulu: University Press of Hawaii, 1-17.

Croll, E. & Parkin, D. (Eds) 1992. *Bush Base-Forest Farm: culture, environment and development.* London: Routledge.

Crosby, V. M. 1989. *Agricultural Change in Later Prehistoric and Roman Britain.* Unpub PhD thesis, University of Southampton.

Crossing, W. 1912. *Guide to Dartmoor: a topographical guide of the forest and commons [2nd Edn].* Plymouth: Western Morning News.

Curwen, E. & Curwen, E. C. 1923. Sussex lynchets and their associated fieldways. *Sussex Archaeological Collections* 64, 1-65.

Curwen, E. C. 1927. Prehistoric agriculture in Britain. *Antiquity* 1, 261-289.

Curwen, E. C. 1932. Ancient cultivations. *Antiquity* 6, 389-406.

Curwen, E. C. & Hatt, G. 1953. *Plough and Pasture.* New York: Schuman.

Damas, D. 1994. *Bountiful Island: a study of land tenure on a Micronesian atoll.* Waterloo, Ontario: Wilfred Laurier University Press.

Davis, G. & Turner, J. 1979. Pollen diagrams from Northumberland. *New Phytologist* 82, 783-804.

DEC 1894. The exploration of Grimspound: first report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 26, 101-121.

DEC 1895. Second report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 27, 81-92.

Descola, P. 1996. Constructing natures: symbolic ecology and social practice. In P. Descola & G. Pálsson (Eds). *Nature and Society: anthropological perspectives.* London: Routledge, 82-102.

Descola, P. & Pálsson, G. 1996a. Introduction. In P. Descola & G. Pálsson (Eds). *Nature and Society: anthropological perspectives.* London: Routledge, 1-21.

Descola, P. & Pálsson, G. (Eds) 1996b. *Nature and Society: anthropological perspectives.* London: Routledge.

Dickens, P. 1992. *Society and Nature: towards a green social theory.* New York: Harvester and Wheatsheaf.

Digim'rina, L. S. 1995. *Gardens of Basima: land tenure and mortuary feasting in a matrilineal society.* Unpub PhD Thesis, Australia National University.

Dixon, D. D. 1892. Notes on the discovery of British burials on the Simonside Hills, parish of Rothbury, in Upper Coquetdale, Northumberland. *Archaeologia Aeliana (New Ser)* 15, 23-32.

Dixon, D. D. 1903. *Upper Coquetdale, Northumberland: its history, traditions, folk-lore and scenery.* Newcastle upon Tyne: Frank Graham.

Dobres, M.-A. 2000. *Technology and Social Agency: outlining a practice framework for archaeology.* Oxford: Blackwell.

Durkheim, E. 1982. *The Rules of Sociological Method and Selected Texts on Sociology and its Method.* London: Macmillan.

Dymond, C. W. 1893. Barnscar: an ancient settlement in Cumberland. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (First Ser)* 12, 179-187.

Dymond, C. W. & Hodgson, T. H. 1902. An ancient village near Threlkeld. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (New Ser)* 2, 38-52.

Edmonds, M. 1999. *Ancestral Geographies of the Neolithic: landscapes, monuments and memory.* London: Routledge.

Edmonds, M., Evans, C. & Gibson, D. 1999. Assembly and collection – lithic complexes in the Cambridgeshire fenlands. *Proceedings of the Prehistoric Society* 65, 47-82.

Edmonds, M. & Seaborne, T. 2001. *Prehistory in the Peak.* Stroud: Tempus.

Elgee, F. 1930. *Early Man in North-East Yorkshire.* Gloucester: John Bellows.

Elias, T. O. 1951. *Nigerean Land Law and Custom.* London: Routledge and Kegan Paul.

Ellen, R. 1996. Introduction. In R. Ellen & K. Fukui (Eds). *Redefining Nature: ecology, culture and domestication.* Oxford: Berg, 1-36.

Ellen, R. & Fukui, K. (Eds) 1996. *Redefining Nature: ecology, culture and domestication.* Oxford: Berg.

Engels, F. 1972. *The Origin of the Family, Private Property and the State.* London: Lawrence and Wishart.

Evans, C. 1993. Bronze Age investigations. *Fenland Research* 8, 2-34.

Evans, C. & Knight, M. 2000. A Fenland Delta: later prehistoric land-use in the lower Ouse Reaches. In M. Dawson (Ed.) *Prehistoric, Roman and post-Roman Landscapes of the Great Ouse Valley.* London: CBA, 89-106.

Evans, C. & Pollard, J. 2000. Storey's Bar Road sub-site – a re-appraisal. In F. Pryor (Ed.) *Archaeology and Environment in the Flag Fen Basin.* London: English Heritage.

Evans, C., Pollard, J. & Knight, M. 1999. Life in woods: tree-throws, 'settlement' and forest cognition. *Oxford Journal of Archaeology* 18(3), 241-254.

Evans, J. G. 1972. *Land Snails in Archaeology.* London: Academic Press.

Evans, J. G. 1999. *Land and Archaeology: histories of human environment in the British Isles.* Stroud: Tempus.

Evans, J. G., Limbrey, S. & Cleere, H. (Eds) 1975. *The Effect of Man on the Landscape: the highland zone.* London: CBA Research Report 11.

Feacham, R. W. 1973. Ancient agriculture in the highland of Britain. *Proceedings of the Prehistoric Society* 39, 332-353.

Feld, S. 1996. A poetics of place: ecological and aesthetic co-evolution in a Papua New Guinea rainforest community. In R. Ellen & K. Fukui (Eds). *Redefining Nature: ecology, culture and domestication.* Oxford: Berg, 61-87.

Fleming, A. 1971. Bronze age agriculture on the marginal lands of north-east Yorkshire. *Agricultural History Review* 19, 1-24.

Fleming, A. 1978a. Dartmoor reaves: a nineteenth century fiasco. *Antiquity* 52, 16-20.

Fleming, A. 1978b. The prehistoric landscape of Dartmoor, part 1, south Dartmoor. *Proceedings of the Prehistoric Society* 44, 97-124.

Fleming, A. 1980. The cairnfields of north-west Dartmoor. *Proceedings of the Devon Archaeological Society* 38, 9-12.

Fleming, A. 1983. The prehistoric landscape of Dartmoor part 2: north and east Dartmoor. *Proceedings of the Prehistoric Society* 49, 195-241.

Fleming, A. 1984. The prehistoric landscape of Dartmoor: wider implications. *Landscape History* 6, 5-19.

Fleming, A. 1985. Land tenure, productivity, and field systems. In G. Baker & C. Gamble (Eds). *Beyond Domestication in Prehistoric Europe.* London: Academic Press, 129-146.

Fleming, A. 1987a. Coaxial field systems: some questions of time and place. *Antiquity* 61, 188-202.

Fleming, A. 1987b. Prehistoric tin extraction on Dartmoor: a cautionary note. *Report and Transactions of the Devonshire Association* 119, 117-122.

Fleming, A. 1988. *The Dartmoor Reaves: investigating prehistoric land divisions.* London: Batsford.

Fleming, A. 1989a. Coaxial field systems in later British prehistory. In H. Å. Nordström & A. B. Knape (Eds). *Bronze Age Studies: transactions of the British Scandinavian colloquium in Stockhom, May 10-11, 1985.* Stockholm: Statens Historiska Museum, 151-162.

Fleming, A. 1989b. The genesis of coaxial field systems. In R. Torrence & S. E. van der Leeuw (Eds). *What's New? A closer look at the process of innovation.* London: Unwin and Hyman, 63-81.

Fleming, A. 1994. The reaves reviewed. In F. M. Griffiths (Ed.) *The Archaeology of Dartmoor: perspectives from the 1990s*: Proceedings of the Devon Archaeological Society 52 (Special Edition), 63-74.

Fleming, A. 1998. Prehistoric landscapes and the quest for territorial pattern. In P. Everson & T. Williamson (Eds). *The Archaeology of Landscape.* Manchester: Manchester University Press, 42-66.

Fondahl, G. A. 1998. *Gaining Ground? Evenkis, land and reform in southeastern Siberia.* Boston: Allyn and Bacon.

Ford, S. S. 1991. *The nature and development of prehistoric settlement and land use in the middle Thames region (8000-500bc) with special reference to the evidence from lithic scatters.* Unpub PhD Thesis, University of Reading.

Ford, S. S., Bowden, M., Mees, G. & Gafney, V. 1988. The date of the 'Celtic' field systems on the Berkshire Downs. *Britannia* 19, 401-414.

Foucault, M. 1990. *The Will to Knowledge.* London: Penguin.

Fowler, P. J. 1969. Fyfield Down 1959-68. *Current Archaeology* 16, 124-129.

Fowler, P. J. 1971. Early prehistoric agriculture in western Europe: some archaeological evidence. In D. D. A. Simpson (Ed.) *Economy and Settlement in Neolithic and Early Bronze Age Britain and Europe.* Leicester, 153-182.

Fowler, P. J. 1981a. Later prehistory. In S. Piggott (Ed.) *Agrarian History of England and Wales 1,1.* Cambridge: Cambridge University Press, 61-298.

Fowler, P. J. 1981b. Wildscape to landscape: 'enclosure' in prehistoric Britain. In R. Mercer (Ed.) *Farming Practice in British Prehistory.* Edinburgh: Edinburgh University Press, 9-54.

Fowler, P. J. 1983. *The Farming of Prehistoric Britain.* Cambridge: Cambridge University Press.

Fowler, P. J. 2000. *Landscape Plotted and Pieced: landscape history and local archaeology in Fyfield and Overton Down, Wiltshire.* London: Society of Antiquaries of London.

Fowler, P. J. & Evans, J. G. 1967. Plough marks, lynchets and early fields. *Antiquity* 41, 289-301.

Fox, A. 1954a. Celtic fields and farms on Dartmoor, in the light of recent excavations at Kestor. *Proceedings of the Prehistoric Society* 20, 87-102.

Fox, A. 1954b. Excavations at Kestor, an Early Iron Age Settlement near Chagford, Devon. *Report and Transactions of the Devonshire Association* 86, 21-62.

Fox, A. 1957. Excavations on Dean Moor, in the Avon Valley, 1954-1956: the Late Bronze Age settlement. *Report and Transactions of the Devonshire Association* 89, 18-77.

Fox, A. & Thriepland, L. M. 1943. The excavation of two cairn cemeteries near Hirwaun, Glamorgan. *Archaeologia Cambrensis* 97, 77-92.

Fox, C. 1923. *The Archaeology of the Cambridge Region.* Cambridge: Cambridge University Press.

Fox, C. 1932. *The Personality of Britain: its influence on inhabitant and invader in prehistoric and early historic times.* Cardiff: National Museum of Wales.

Gallant, L., Luxton, N. & Collman, M. 1985. Ancient fields on the south Devon limestone. *Proceedings of the Devon Archaeological Society* 43, 23-38.

Garwood, P. 1991. Ritual tradition and the reconstitution of society. In P. Garwood, D. Jennings, R. Skeates & J. Toms (Eds). *Sacred and Profane: proceedings of a conference on archaeology, ritual and religion, Oxford 1989.* Oxford: Oxford University Committee for Archaeology, 10-32.

Gates, T. 1982. Excavations at Hallshill Farm, East Woodburn, Northumberland. *Universities of Durham and Newcastle Archaeological Reports* 1981, 7-9.

Gelderd, C., Randall, J. & Dobson, J. 1914. Some Birkrigg barrows. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (New Ser)* 14, 466-479.

Gell, A. 1992. *The Anthropology of Time: cultural constructions of temporal maps and images.* Oxford: Berg.

Gell, A. 1998. *Art and Agency: an anthropological theory.* Oxford: Oxford University Press.

Gerrard, S. 1997. *Dartmoor: landscapes through time.* London: Batsford.

Gibson, A. 1992. The excavation of an Iron Age settlement at Gold Park, Dartmoor. *Proceedings of the Devon Archaeological Society* 50, 19-46.

Giddens, A. 1976. *New Rules of Sociological Method: a positive critique of interpretative sociologies.* London: Hutchinson.

Giddens, A. 1984. *The Constitution of Society: outline of a theory of structuration.* Cambridge: Polity Press.

Giddens, A. 1987a. *Social Theory and Modern Sociology*. Cambridge: Polity.

Giddens, A. 1987b. Time and social organisation. In A. Giddens (Ed.) *Social Theory and Modern Sociology*. Cambridge: Polity Press, 140-165.

Giddens, A. 1990. *The Consequences of Modernity*. Cambridge: Polity.

Giddens, A. 1991. *Modernity and Self-Identity: self and society in the late modern age*. Cambridge: Polity.

Giddens, A. 1994. Living in a post-traditional society. In U. Beck, A. Giddens & S. Lash (Eds). *Reflexive Modernization: politics, tradition and aesthetics in the modern social order*. Cambridge: Polity, 56-109.

Gilkes, P. 1975. *The Dying Lion: feudalism and modernization in Ethiopia*. London: Julian Friedmann.

Gillings, M. & Pollard, J. 1999. Non-portable stone artefacts and contexts of meaning: the tale of Grey Wether (www.museums.ncl.ac.uk/Avebury/stone4.htm). *World Archaeology* 31, 179-194.

Gingell, C. 1992. *The Marlborough Downs: a later Bronze Age landscape and its origins*. Devizes: Wiltshire Archaeology and Natural History Society.

Gluckman, M. 1943. *Essays on Lozi Land and Royal Property*. Livingstone: The Rhodes-Livingstone Institute.

Goodridge, J. & Thornton, K. 1994. John Clare: the trespasser. In H. Houghton, A. Philips & G. Summerfield (Eds). *John Clare in Context*. Cambridge: Cambridge University Press, 87-129.

Goody, J. 1983. *The Development of the Family and Marriage in Europe*. Cambridge: Cambridge University Press.

Gosden, C. 1999. *Anthropology and Archaeology: a changing relationship*. London: Routledge.

Graham, A. 1959. Cairnfields in Scotland. *Proceedings of the Society of Antiquaries of Scotland* 90, 7-23.

Graves, C. P. 1989. Social space in the English medieval parish church. *Economy and Society* 18(3), 297-322.

Green, M. M. 1941. *Land Tenure in an Ibo Village in South-Eastern Nigeria*. London: Percy Lund.

Greenwell, W. 1877. *British Barrows: a record of the examination of sepulchral mounds in various parts of Britain*. Oxford: Clarendon.

Griffith, F. M. 1984. Archaeological investigations at Colliford Reservoir, Bodmin Moor, 1977-8. *Cornish Archaeology* 23, 47-140.

Griffith, F. M. 1994. Changing perceptions of the context of prehistoric Dartmoor. In F. M. Griffiths (Ed.) *The Archaeology of Dartmoor: perspectives from the 1990s*: Proceedings of the Devon Archaeological Society 52 (Special Edition), 85-99.

Grinsell, L. V. 1978. Dartmoor barrows. *Proceedings of the Devon Archaeological Society* 36, 85-180.

Guillet, D. 1981. Land tenure, ecological zone, and agricultural regime in the Central Andes. *American Ethnologist* 8, 139-156.

Halliday, S. 1999. Hut-circle settlements in the Scottish landscape. In P. Frodsham, P. Topping & D. Cowley (Eds). *'We were always chasing time': papers presented to Keith Blood.* Northern Archaeology 17/18 (Special Edition): Northumberland Archaeology Group, 49-65.

Harding, A. F. 2000. *European Societies in the Bronze Age.* Cambridge: Cambridge University Press.

Harding, A. F. & Lee, G. E. 1987. *Henge Monuments and Related Sites of Great Britain.* Oxford: BAR (Brit Ser) 175.

Harding, A. F. & Ostoja-Zagórski, J. 1994. Prehistoric and early medieval activity on Danby Rigg, North Yorkshire. *Archaeological Journal* 151, 16-97.

Hawkes, J. & Hawkes, C. F. C. 1948. *Prehistoric Britain.* London: Chatto and Windus.

Heaney, S. 1975. *North.* London: Faber and Faber.

Heidegger, M. 1975. *Poetry, Language, Thought.* New York: Harper Colophon.

Hewitt, I. & Beckensall, S. 1996. The excavation of cairns at Blawearie, Old Bewick, Northumberland. *Proceedings of the Prehistoric Society* 62, 255-274.

Higgs, E. S. (Ed.) 1972. *Papers in Economic Prehistory.* Cambridge: Cambridge University Press.

Higgs, E. S. (Ed.) 1975. *Palaeoeconomy.* Cambridge: Cambridge University Press.

Hill, J. D. 1995. *Ritual and Rubbish in the Iron Age of Wessex: a study on the formation of a specific archaeological record.* Oxford: BAR (Brit Ser) 242.

Hingh, A. D. 1998. The archaeology of the agricultural landscape: land-use and access to land in later prehistoric society in north-west Europe. In B. Haring & R. de Maaijer (Eds). *Landless and Hungry? Access to land in early and traditional societies.* Leiden: CNWS, 1-18.

Hirst, P. & Woolley, P. 1985. Nature and culture in social science: the demarcation of domains of being in the eighteenth century and modern discourses. *Geoforum* 16(2), 151-161.

Hodder, I. 1990. *The Domestication of Europe: structure and contingency in Neolithic societies.* Oxford: Blackwell.

Hodder, I. 1999. *The Archaeological Process: an introduction.* Oxford: Blackwell.

Hodgson, E. 1928. Excavations above Milkingstead, Eskdale. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 28, 149-151.

Hogan, M. 1991. *Land Tenure and Differentiation in Nuevo Lima, Peru: articulated development in the high rainforest.* Unpub PhD Thesis, University of California.

Hollyman, G. A. & Curwen, E. C. 1935. Late Bronze Age lynchet settlements on Plumpton Plain, Sussex. *Proceedings of the Prehistoric Society* 1, 16-38.

Hoskins, W. G. 1985. *The Making of the English Landscape.* London: Penguin.

Ingold, T. 1986. *The Appropriation of Nature: essays on human ecology and social relations.* Manchester: Manchester University Press.

Ingold, T. 1992. Culture and the perception of the environment. In E. Croll & D. Parkin (Eds). *Bush Base-Forest Farm: culture, environment and development.* London: Routledge, 39-56.

Ingold, T. 1995. Building, dwelling, living: how animals and people make themselves at home in the world. In M. Strathern (Ed.) *Shifting Contexts: transformations in anthropological knowledge.* London: Routledge, 57-80.

Ingold, T. 1996a. Against the motion (1) in the debate – 'Human worlds are culturally constructed'. In T. Ingold (Ed.) *Key Debates in Anthropology.* London: Routledge, 112-118.

Ingold, T. 1996b. Hunting and gathering as ways of perceiving the environment. In R. Ellen & K. Fukui (Eds). *Redefining Nature: ecology, culture and domestication.* Oxford: Berg, 39-56.

Ingold, T. (Ed.) 1996c. *Key Debates in Anthropology.* London: Routledge.

Ingold, T. 2000. *The Perception of the Environment: essays in livelihood, dwelling and skill.* London: Routledge.

James, W. 1996. For the motion (1) in the debate – 'Human worlds are culturally constructed'. In T. Ingold (Ed.) *Key Debates in Archaeology.* London: Routledge, 105-112.

Joass, J. M. 1866. Notes on some northern antiquities. *Proceedings of the Society of Antiquaries of Scotland* 6, 386-388.

Jobey, G. 1968. Excavations of cairns at Chatton Sandyford, Northumberland. *Archaeologia Aeliana (4th Ser)* 46, 5-50.

Jobey, G. 1978. Iron Age and Romano-British settlements on Kennel Hall Knowe, North Tynedale, Northumberland. *Archaeologia Aeliana (5th Ser)* 6, 1-28.

Jobey, G. 1980. Settlement potential in northern Britain in the later second millennium BC. In J. C. Barrett & R. Bradley (Eds). *Settlement and Society in the British Later Bronze Age.* Oxford: BAR Brit Ser 83, 371-376.

Jobey, G. 1981a. Green Knowe unenclosed platform settlement and Harehope cairn, Peebleshire. *Proceedings of the Society of Antiquaries of Scotland* 110, 72-113.

Jobey, G. 1981b. Groups of small cairns and the excavation of a cairnfield on Millstone Hill, Northumberland. *Archaeologia Aeliana (5th Ser)* 9, 23-43.

Jobey, G. 1983. Excavation of an unenclosed settlement on Standrop Rigg, Northumberland, and some problems related to similar settlements between Tyne and Forth. *Archaeologia Aeliana (5th Ser)* 11, 1-21.

Jobey, G. & Tait, J. 1966. Excavations on palisaded settlements and cairnfields at Alnham, Northumberland. *Archaeologia Aeliana (4th Ser)* 44, 5-48.

Jobey, I. & Jobey, G. 1987. Prehistoric, Romano-British and later remains on Murton High Crags, Northumberland. *Archaeologia Aeliana 5 Ser* 15, 1-22.

Johnson, N. & Rose, P. 1994. *Bodmin Moor: an archaeological survey volume 1 – the human landscape to c.1800.* London: English Heritage.

Johnston, R. & Pollard, J. 1997. Excavation and survey at Kellah Burn, Northumberland. *Universities of Durham and Newcastle Archaeological Reports* 20, 25-28.

Johnston, R. & Pollard, J. 1998. Excavations at Kellah Burn, Northumberland, June 1997. *Universities of Durham and Newcastle Archaeological Reports* 21, 33-37.

Johnston, R. & Pollard, J. 1999. Excavation and survey at Kellah Burn, Northumberland. *Universities of Durham and Newcastle Archaeological Reports* 22, 17-23.

Jones, A. 1998. Where eagles dare: landscape, animals and the Neolithic of Orkney. *Journal of Material Culture* 3(3), 301-324.

Jones, R. M. 1982. *The North Wales Quarrymen 1874-1922.* Cardiff: University of Wales Press.

Kahn, M. 1990. Stone-faced ancestors: the spatial anchoring of myth in Wamira, Papua New Guinea. *Ethnology* 29, 51-66.

Kawharu, I. H. 1977. *Maori Land Tenure: studies of a changing institution.* Oxford: Clarendon Press.

Kelly, R. L. 1992. Mobility/sedentism: concepts, archaeological measures and effects. *Annual Review of Anthropology* 21, 43-66.

Kieniewicz, S. 1969. *The Emancipation of the Polish Peasantry.* Chicago: University of Chicago Press.

Kitchen, W. H. 2000. *Later Neolithic and Bronze Age Land Use and Settlement in the Derbyshire Peak District: cairnfields in context.* Unpub PhD Thesis, University of Sheffield.

Lane, C. R. 1998. Introduction: overview of the pastoral problematic. In C. R. Lane (Ed.) *Custodians of the Commons: pastoral land tenure in East and West Africa.* London: Earthscan, 1-25.

Latour, B. 1993. *We Have Never Been Modern.* Cambridge, Mass.: Harvard University Press.

Lawrence, P. 1955. *Land Tenure among the Garia: the traditional system of a New Guinea people.* Canberra: Australian National University.

Lévi-Strauss, C. 1966. *The Savage Mind.* London: Weidenfeld and Nicolson.

Lewis, H. A. 1999. *The Characterisation and Interpretation of Ancient Tillage Practices Through Soil Micromorphology: a methodological study.* Unpub PhD Thesis, University of Cambridge.

Limbrey, S. & Evans, J. G. (Eds) 1978. *The Effect of Man on the Landscape: the lowland zone.* London: CBA.

Llobera, M. 1996. Exploring the topography of mind: GIS, social space and archaeology. *Antiquity* 70(269), 612-622.

Lynch, F. 1993. *Excavations in the Brenig Valley: a Mesolithic and Bronze Age landscape in Wales.* Gwynedd: Cambrian Archaeological Association.

Lyons, D. 1998. Witchcraft, gender, power and intimate relations in Mura compounds in Déla, northern Cameroon. *World Archaeology* 29(3), 344-362.

MacCormack, C. P. & Strathern, M. (Eds) 1980. *Nature, Culture and Gender.* Cambridge: Cambridge University Press.

Macklin, M. G., Passmore, D. G., Stevenson, A. C., Cowley, D. C., Edwards, N. & O'Brien, C. F. 1991. Holocene alluviation and land-use change on Callaly Moor, Northumberland, England. *Journal of Quaternary Science* 6(3), 225-232.

Maguire, D. N., Ralph, N. & Fleming, A. 1983. Early land use on Dartmoor – palaeobotanical and pedological investigations on Holne Moor. In M. Jones (Ed.) *Integrating the Subsistence Economy*. Oxford: BAR (Int Ser) S181, 57-105.

Malinowski, B. 1935. *Coral Gardens and their Magic, Volume 1: a study of the methods of tilling the soil and of agricultural rights in the Trobriand Islands*. Bloomington: Indiana University Press.

McCay, B. J. & Acheson, J. M. (Eds) 1987. *The Question of the Commons: the culture and ecology of communal resources*. Tucson: University of Arizona Press.

McCullagh, R. P. J. & Tipping, R. (Eds) 1998. *The Lairg Project 1988-1996: the evolution of an archaeological landscape*. Edinburgh: Scottish Trust for Archaeological Research.

Meek, C. K. 1948. *Colonial Law: a bibliography with special reference to native African systems of law and land tenure*. London: Oxford University Press.

Meek, C. K. 1949. *Land Law and Custom in the Colonies [2nd Edn]*. London: Oxford University Press.

Megaw, J. V. S. 1976. Gwithian, Cornwall: some notes on the evidence for Neolithic and Bronze Age settlement. In C. B. Burgess & R. Miket (Eds). *Settlement and Economy in the Third and Second Millenia BC*. Oxford: BAR (Brit Ser) 33, 51-79.

Mendoza, J. D. 1996a. The duality of structure. In C. Bryant & D. Jary (Eds). *Anthony Giddens: critical assessments, volume 2*. London: Routledge, 219-270.

Mendoza, J. D. 1996b. Ontological security, routine, social reproduction. In C. Bryant & D. Jary (Eds). *Anthony Giddens: critical assessments, volume 2*. London: Routledge, 271-309.

Meskell, L. 1999. *Archaeologies of Social Life: age, sex, class et cetera in Ancient Egypt*. Oxford: Blackwell.

Migot-Adholla, S. E. & Bruce, J. W. 1994. Introduction: are indigenous African land tenure systems insecure? In J. W. Bruce & S. E. Migot-Adholla (Eds). *Searching for Land Tenure Security in Africa*. Iowa: Kendall Hunt, 1-13.

Miles, H. 1975. Barrows on the St. Austell granite, Cornwall. *Cornish Archaeology* 14, 5-82.

Miles, H. 1976. Flint scatters and prehistoric settlement in Devon. *Proceedings of the Devon Archaeological Society* 34, 3-16.

Mills, A. 1948. A section of 'celtic' field terraces at Streatly Warren, Berkshire. *Berkshire Archaeological Journal* 51, 51-52.

Monaghan, J. 1994. An unenclosed Bronze Age house site at Lookout Plantation, Northumberland. *Archaeologia Aeiliana 5th Ser* 22, 29-41.

Moore, J. 1997. The infernal cycle of fire ecology. In P. Topping (Ed.) *Neolithic Landscapes*. Oxford: Oxbow, 33-40.

Mortimer, J. R. 1905. *Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire*. London: A. Brown.

Myers, F. R. 1986. *Pintupi Country, Pintupi Self: sentiment, place, and politics among Western Desert Aborigines*. Berkeley: University of California Press.

Nadel, S. F. 1946. Land tenure on the Eritrean Plateau. *Africa* 16(1), 1-21 & 99-109.

Needham, S. 1996. Chronology and periodisation in the British Bronze Age. *Acta Archaeologica* 67, 121-140.

Netting, R. M. 1993. *Smallholders, Householders: farm families and the ecology of intensive, sustainable agriculture*. Stanford: Stanford University Press.

Newbigin, N. 1936. Excavations of a long and a round cairn on Bellshiel Law, Redesdale. *Archaeologia Aeliana (4th Ser)* 13, 293-309.

Nowakowski, J. A. 1991. Trethellan Farm, Newquay: the excavation of a lowland Bronze Age settlement and Iron Age cemetery. *Cornish Archaeology* 30, 5-242.

Palmer, R. 1984. *Danebury, an Iron Age Hillfort in Hampshire: an aerial photographic interpretation of its environs*. London: RCHME.

Parker Pearson, M. 1981. A Neolithic and Bronze Age site at Churston, South Devon. *Proceedings of the Devon Archaeological Society* 39, 17-26.

Parker Pearson, M. 1990. The production and distribution of Bronze Age pottery in south west Britain. *Cornish Archaeology* 29, 5-32.

Parker Pearson, M. 1992. *Bronze Age Britain*. London: Batsford.

Piggott, S. 1949. *British Prehistory*. Oxford: Oxford University Press.

Piggott, S. 1950. *William Stukeley: an eighteenth-century antiquary*. Oxford: Clarendon.

Pilcher, J. 1969. Archaeology, palaeocology and C14 dating of the Beaghmore stone circle site. *Ulster Journal of Archaeology* 32, 73-90.

Pollard, S. H. M. 1971. Seven prehistoric sites near Honiton, Devon part II. *Proceedings of the Devon Archaeological Society* 29, 162-180.

Portugali, J. 1985. Between nature and society: an introduction. *Geoforum* 16(2), 93-98.

Poulett Scrope, G. 1870. On the origin of the terraces, baulks or lynchets of the Chalk Downs. *Wiltshire Archaeological and Natural History Magazine* 12, 185-191.

Pred, A. 1986. *Place, Practice and Structure: social and spatial transformation in southern Sweden, 1750-1850*. Totowa N.J.: Barnes and Noble.

Preucel, R. & Hodder, I. 1996. Nature and culture. In R. Preucel & I. Hodder (Eds). *Contemporary Archaeology in Theory*. Oxford: Blackwell, 23-38.

Price, D. G. 1985. Changing perceptions of prehistoric tinning on Dartmoor. *Report and Transactions of the Devonshire Association* 117, 129-138.

Price, D. G. 1988. Prehistoric tin extraction on Dartmoor: a reply to Andrew Fleming. *Report and Transactions of the Devonshire Association* 120, 91-95.

Pryor, F. 1980. *Excavations at Fengate, Peterborough, England: third report*. Peterborough: Northamptonshire Archaeological Society / Royal Ontario Museum.

Pryor, F. 1991. *Flag Fen: prehistoric fenland centre.* London: Batsford.

Pryor, F. 1996. Sheep, stockyards and field systems: Bronze Age livestock populations in the Fenlands of eastern England. *Antiquity* 70(268), 213-324.

Pryor, F. 1998. *Farmers in Prehistoric Britain.* Stroud: Tempus.

Quinn, G. F. 1995. A new survey of the prehistoric field system on Kerswell Down and Whilborough Common. *Proceedings of the Devon Archaeological Society* 53, 131-134.

Quinnell, H. 1988. The local character of the Devon Bronze Age and its interpretation. *Proceedings of the Devon Archaeological Society* 46, 1-12.

Radford, C. A. R. 1952. Prehistoric settlements on Dartmoor and the Cornish Moors. *Proceedings of the Prehistoric Society* 18, 55-84.

RCAHMS 1990. *North-East Perth: an archaeological landscape.* Edinburgh: HMSO.

RCAHMS 1994. *Glenesslin Nithsdale: an archaeological survey.* Edinburgh: RCAHMS.

RCAHMS 1997. *Eastern Dumfriesshire: an archaeological landscape.* Edinburgh: The Stationery Office.

RCAHMW 1960. *An Inventory of the Ancient Monuments in Caernarvonshire, Volume II.* London: HMSO.

RCAHMW 1997. *An Inventory of the Ancient Monuments in Brecknock (Brycheiniog): the prehistoric and Roman monuments. Part i: later prehistoric monuments and unenclosed settlements to 1000AD.* Aberystwyth: RCAHM(Wales).

RCHME 1970. *An Inventory of the Historical Monuments in the County of Dorset, Volume 3, Part 2.* London: HMSO.

RCHME 1997a. *Ancient Landscapes of the Yorkshire Wolds.* Swindon: RCHME.

RCHME 1997b. *Holne Moor, Dartmoor, Devonshire: a landscape survey by the Royal Commission on the Historical Monuments of England.* Exeter: Unpub Report, RCHME.

RCHME 1998. *Shaugh Moor, Devon: an archaeological survey by the Royal Commission on the Historical Monuments of England.* Exeter: Unpub Report, RCHME.

Rees, A. D. 1996. *Life in a Welsh Countryside: a social study of Llanfihangel yng Ngwynfa.* Cardiff: University of Wales Press.

Reynolds, P. J. 1979. *Iron Age Farm: the Butser experiment.* London.

Rhodes, P. 1950. The celtic field systems on the Berkshire Downs. *Oxoniensia* 15, 1-28.

Richards, C. 1996. Henges and water: towards an elemental understanding of monumentality and landscape in late Neolithic Britain. *Journal of Material Culture* 1, 313-336.

Richards, J. 1990. *The Stonehenge Environs Project.* London: English Heritage.

Richardson, C. 1982. Excavations at Birrel Sike, near Low Prior Scales, Calder Valley, Cumbria (NY 0702 0735). *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 82, 7-27.

Richmond, A. 1999. *Preferred Economies: the nature of the subsistence base throughout mainland Britain during prehistory*. Oxford: BAR (Brit Ser) 290.

Riddell, J. 1987. Land tenure and agroforestry: a regional overview. In J. B. Raintree (Ed.) *Land, Trees and Tenure: proceedings of an international workshop on tenure issues in agoforestry*. Nairobi and Madison: ICRAF and the Land Tenure Centre, 1-16.

Rival, L. 1996. Blowpipes and spears: the social significance of Huaorani technological choices. In P. Descola & G. Pálsson (Eds). *Nature and Society: anthropological perspectives*. London: Routledge, 145-164.

Robertson, J. G. 1992. *The Archaeology of the Upper Plym Valley*. Unpub PhD Thesis, University of Edinburgh.

Robinson, E. & Summerfield, G. (Eds) 1966. *Clare: selected poems and prose*. Oxford: Oxford University Press.

Robinson, T. 1997. *Stones of Arran: Labyrinth*. London: Penguin.

Rocheleau, D. & Edmunds, D. 1997. Women, men and trees: gender, power and property in forest and agrarian landscapes. *World Development* 25(8), 1351-1371.

Rome Hall, G. 1887. Recent explorations in ancient British barrows, containing cup-marked stones, near Birtley, North Tynedale. *Archaeologia Aeliana (New Ser)* 12, 241-267.

Rorty, R. 1979. *Philosophy and the Mirror of Nature*. Princeton, NJ: Princeton University Press.

Rowe, S. 1848. *A Preambulation of Dartmoor*. Exeter: J G Commin.

Rowlands, M. 1980. Kinship, alliance and exchange in the European Bronze Age. In J. C. Barrett & R. Bradley (Eds). *Settlement and Society in the British Later Bronze Age*. Oxford: BAR (Brit Ser) 83, 59-72.

Roymans, N. & Kortlang, F. 1999. Urnfield symbolism, ancestors and the land in the Lower Rhine region. In F. Theuws & N. Roymans (Eds). *Land and Ancestors: cultural dynamics in the Urnfield period and the Middle Ages in the Southern Netherlands*. Amsterdam: Amsterdam University Press, 33-61.

Sahlins, M. 1987. *Islands of History*. London: Tavistock.

Scott-Elliot, J. & Rae, I. 1967. The small cairnfields of Dumfriesshire. *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society (3rd Ser)* 44, 99-116.

Shanks, M. 1992. *Experiencing the Past: on the character of archaeology*. London: Routledge.

Shanks, M. & Tilley, C. 1987. *Social Theory and Archaeology*. Cambridge: Polity.

Shennan, S. 1997. *Quantifying Archaeology*. Edinburgh: Edinburgh University Press.

Shoup, J. A. 1990. *Hima: a traditional Bedouin land-use system in contemporary Syria and Jordon*. Unpub PhD Thesis, Washington University.

Silvester, R. J. 1980. The prehistoric open settlement at Dainton, South Devon. *Proceedings of the Devon Archaeological Society* 38, 17-38.

Siu, H. F. & Faure, D. 1995. Introduction. In D. Faure & H. F. Siu (Eds). *Down to Earth: the territorial bond in south China.* Stanford: Stanford University Press, 1-19.

Smith, K., Coppen, J., Wainwright, G. J. & Beckett, S. 1981. The Shaugh Moor Project: third report – settlement and environmental investigations. *Proceedings of the Prehistoric Society* 47, 205-273.

Spear, T. 1997. *Mountain Farmers: moral economies of land and agricultural development in Arusha and Meru.* Oxford: James Currey.

Spence, J. E. 1935a. A note on tumuli on Threepow Raise, Moor Divock. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 35, 66-68.

Spence, J. E. 1935b. Report of the Committee for Prehistoric Studies. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 35, 170-181.

Spence, J. E. 1937. Bolton Wood enclosure. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 37, 43-48.

Spratt, D. & Burgess, C. B. (Eds) 1985. *Upland Settlement in Britain: the second millennium BC and after.* Oxford: BAR (Brit Ser) 143.

Spratt, D. A. 1989. *Linear Earthworks of the Tabular Hills of Northeast Yorkshire.* Sheffield: University of Sheffield Department of Archaeology and Prehistory.

Spratt, D. A. 1991. Recent British research on prehistoric territorial boundaries. *Journal of World Prehistory* 5(4), 439-480.

Stone, G. D. 1996. *Settlement Ecology: the social and spatial organisation of Kofyar agriculture.* Tucson: University of Arizona Press.

Stone, J. F. S. 1937. A Late Bronze Age habitation site on Thorny Down, Winterbourne Gunner, south Wiltshire. *Wiltshire Archaeological and Natural History Magazine* 47, 640-660.

Strathern, M. 1980. No nature, no culture: the Hagan case. In C. P. MacCormack & M. Strathern (Eds). *Nature, Culture and Gender.* Cambridge: Cambridge University Press, 174-222.

Stuiver, M., Reimer, P. J., Bard, E., Beck, J. W., Burr, G. S., Hughen, K. A., Kromer, B., McCormac, G., van der Plicht, J. & Spurk, M. 1998. INTCAL98 Radiocarbon Age Calibration, 24000-0 cal BP. *Radiocarbon* 40(3), 1041-1083.

Stukeley, W. 1776. *Itinerarium Curiosum.* London.

Swaison Cowper, H. 1888. Some prehistoric remains in North Lonsdale. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (First Ser)* 9, 497-504.

Swartz, D. 1997. *Culture and Power: the sociology of Pierre Bourdieu.* Chicago: University of Chicago Press.

Taçon, P. 1991. The power of stone: symbolic aspects of stone use and tool development in western Arnhem Land, Australia. *Antiquity* 65, 192-207.

Taylor, C. 1975. *Fields in the English Landscape.* London: Dent.

Thomas, H. 1998. Culture/nature. In C. Jenks (Ed.) *Core Sociological Dichotomies*. London: Sage, 110-122.

Thomas, J. 1991. *Rethinking the Neolithic*. Cambridge: Cambridge University Press.

Thomas, J. 1996. *Time, Culture and Identity: an interpretive archaeology*. London: Routledge.

Tilley, C. 1994. *The Phenomenology of Landscape: places, paths and monuments*. Oxford: Berg.

Tilley, C. 1996. The powers of rocks: topography and monument construction on Bodmin Moor. *World Archaeology* 28(2), 161-176.

Tilley, C. 1999. *Metaphor and Material Culture*. Oxford: Blackwell.

Tilley, C., Hamilton, S., Harrison, S. & Anderson, E. 2000. Nature, culture, clitter: distinguishing between cultural and geomorphological landscapes; the case of the hilltop tors in south-west England. *Journal of Material Culture* 5(2), 197-224.

Timms, S. 1994. 'Deep breathing to Grimspound': archaeologists discover Dartmoor. In F. M. Griffiths (Ed.) *The Archaeology of Dartmoor: perspectives from the 1990s*: Devon Archaeological Society Proceedings 52 (Special Edition), 1-19.

Tipping, R. 1996. The Neolithic landscape of the Cheviot Hills and hinterland: paleoenvironmental evidence. In P. Frodsham (Ed.) *Neolihic Studies in No-Man's Land: papers on the Neolithic of northern England from the Trent to the Tweed*. Northern Archaeology 13/14 (Special Edition): Northumberland Archaeology Group, 17-33.

Toms, H. 1925. Bronze Age or earlier lynchets. *Proceedings of the Dorset Natural History and Archaeological Society* 46, 88-100.

Toms, H. S. 1911. The problem of ancient cultivations. *The Antiquary* 47, 411-417.

Tronvoll, K. 1998. *Mai Weini, a Highland Village in Eritrea: a study of the people, their livelihood and land tenure during times of turbulance*. Laurenceville, NJ: Red Sea Press.

Turner, J. R. 1990. Ring cairns, stone circles and related monuments on Dartmoor. *Proceedings of the Devon Archaeological Society* 48, 27-86.

van der Veen, M. 1992. *Crop Husbandry Regimes: an archaeobotanical study of farming in northern England 1000BC-AD500*. Sheffield: J. R. Collis Publications.

Wainwright, G. J., Fleming, A. & Smith, K. 1979. The Shaugh Moor Project: first report. *Proceedings of the Prehistoric Society* 45, 1-33.

Wainwright, G. J. & Smith, K. 1980. The Shaugh Moor Project: second report. *Proceedings of the Prehistoric Society* 46, 65-122.

Walker, D. 1965. Excavations at Barnscar, 1957-58. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 65, 53-65.

Ward, J. E. 1977. Cairns on Corney Fell, West Cumberland. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* 77, 1-5.

Ward, R. G. & Kingdom, E. 1995. Land use and tenure: some comparisons. In R. G. Ward & E. Kingdom (Eds). *Land, Custom and Practice in the South Pacific.* Cambridge: Cambridge University Press, 6-35.

Weiner, A. B. 1985. Inalienable wealth. *American Ethnologist* 12(2), 210-227.

Wheeler, M. 1963. Homage to Sir Cyril Fox. In I. Foster (Ed.) *Culture and Environment: essays in honour of Sir Cyril Fox.* London: Routledge and Keegan Paul, 1-6.

Whittle, A. W. R. 1986. *Scord of Brouster: an early agricultural settlement on Shetland.* Oxford: Oxford Committee for Archaeology.

Whittle, A. W. R., Pollard, J. & Grigson, C. 1999. *The Harmony of Symbols: the Windmill Hill causewayed enclosure, Wiltshire.* Oxford: Oxbow.

Williams, R. 1973. *The Country and the City.* London: Chatto and Windus.

Woodward, P. J. 1991. *The South Dorset Ridgeway: survey and excavations 1977-84.* Bournemouth: Dorset Natural History and Archaeological Society.

Worth, R. H. 1900. 19th report of the Barrow Committee. *Report and Transactions of the Devonshire Association* 32, 46-54.

Worth, R. H. 1937. 13th report of the Dartmoor Exploration Committee. *Report and Transactions of the Devonshire Association* 69, 147-150.

Yates, D. T. 1999. Bronze Age field systems in the Thames Valley. *Oxford Journal of Archaeology* 18(2), 157-170.

Yates, M. J. 1984. Groups of small cairns in northern Britain – a view from SW Scotland. *Proceedings of the Society of Antiquaries of Scotland* 114, 217-234.

Yates, T. 1989. Habitus and social space: some suggestions about meaning in the Saami (Lapp) tent ca. 1700-1900. In I. Hodder (Ed.) *The Meanings of Things: material culture and symbolic expression.* London: HarperCollins, 249-262.

Young, R. & Welfare, A. T. 1992. Fieldwork and excavation at the Crawley Edge cairnfield, Stanhope, Co. Durham. *Durham Archaeological Journal* 8, 27-49.