# 1 INTRODUCTION

## 1.1 RESEARCH QUESTIONS

The role of hillforts in the Iron Age has been much debated, especially with regard to the type and continuity of occupation and status of the inhabitants. Authors have argued for and against a high status for the hillfort, citing occupation evidence, artefactual presence and absence, rampart construction and geographical location. Opinion has differed regarding the nature and extent of the differences between hillforts and undefended settlements, the location of hillforts on the boundary or centre of territories, and the seasonality of occupation. In addition, both ritual and secular interpretations have also been advanced to account for the deposits at hillfort locations (for example Cunliffe 1992; Hill 1995a; Grant 1984c; Wilson 1992). This thesis aims to address these questions by furthering our understanding of the structuring of society within the ramparts of hillforts.

Using the hillfort at Danebury in Hampshire as a case study, butchery techniques and spatial patterning of bones will be investigated, to assist in developing an understanding of the activities undertaken at the site. Butchery analysis will be used to determine the intensity of exploitation of the carcass and the divisions that animal bones were split into. The positions of these 'butchery units' can then be investigated spatially; the zoning of particular elements in certain areas would indicate segregation of activity or deposition, and therefore some degree of specialisation or status based differentiation. More detailed analysis of associations of bone elements in individual deposits will help to define which activities led to particular deposits, and whether they had any specific status based on ritual or social distinctions.

Therefore, analysis will focus on the nature and scale of meat consumption and its status, the specialisation of tasks and segregation of activities, the manner of deposition of animal bone, and the changes in occupation and use over time. Some direct inter-site comparisons can be made with other Iron Age sites in the vicinity of Danebury, where the relevant data is available for study (section 1.3.1.3), and with sites that have already been subject to similar types of spatial investigation such as Wendens Ambo and Winklebury (Halstead *et al.* 1978; Fisher 1985).

Specifically, research questions will include:

a) Was butchery a specialised craft?

b) What parts were carcasses divided into, and how widely were they distributed?

c) Do some deposits reflect consumption activities? If so, can the scale of meat consumption be established?

d) Can the distribution of animal bone elements in pits and layers help us to detect zoning of activities in the hillfort?

e) Are there any identifiable differences in bone deposits that could indicate 'ritual' and 'secular' activity?

f) Are there any identifiable high and low status animal bone deposits?

g) Are there any distinctions between animal bone assemblages from pits and ditches?

h) How was consumption and deposition activity at Danebury different to that at Iron Age non-hillfort sites in Wessex?

### 1.1.1 Why Danebury?

The area excavated at Danebury is unusually large, and the continuous strip of excavated interior (section 2.1) provides an ideal opportunity to try to identify different use areas, as have been suggested for contemporary Manching (Collis 1976) and Maiden Castle (Sharples 1991). Thousands of pits were half sectioned and then fully excavated, providing entire, discrete deposits with well stratified fills that can be analysed as individual entities. Layers that had built up in quarries and against the ramparts were also excavated, so deposits in different feature types can also be compared.

The records of faunal remains at Danebury are full, computerised and detailed. They are also numerous, with over 240,000 identified bone fragments recorded. Much of the material recorded in this database had not been fully utilised. For example the butchery records have not previously been looked at in detail, despite the comprehensive manner of recording. The extremely large dataset is unique for Iron Age sites, many of which have only been sampled, and many outside southern Britain producing little in the way of surviving bones. The bones at Danebury are also extremely well preserved, and because of this, the butchery marks are very clearly defined. For butchery analysis, a large sample size is especially important, since the process of butchering may result in a very small percentage of cuts impacting on the bone (section 1.3.5). In terms of comparative data, the Danebury Environs project (Cunliffe 2000) provides several sites in the vicinity, excavated, recorded and written up in a similar manner.

### 1.1.2 Why butchery?

'butchers, like artists, leave something akin to a signature in the marks of their handiwork' (Kemp 1994:145).

There is considerable potential to help resolve some of the questions raised about the nature of Iron Age society using evidence from butchery techniques alone. The types of marks found on the bones can help us to interpret social aspects of butchery and meat eating: chopping through bones to produce meat parts on the bone suggests rapid processes, with little regard for the physiology of the animal. Large chunks of meat can be taken as evidence of large scale, communal consumption. Cuts to the articular parts of bones suggest a careful technique and detailed knowledge of the skeleton and musculature. Analysis of changing butchery patterns over time can assess the extent of outside influences (such as Roman techniques), tool type and intensity of use.

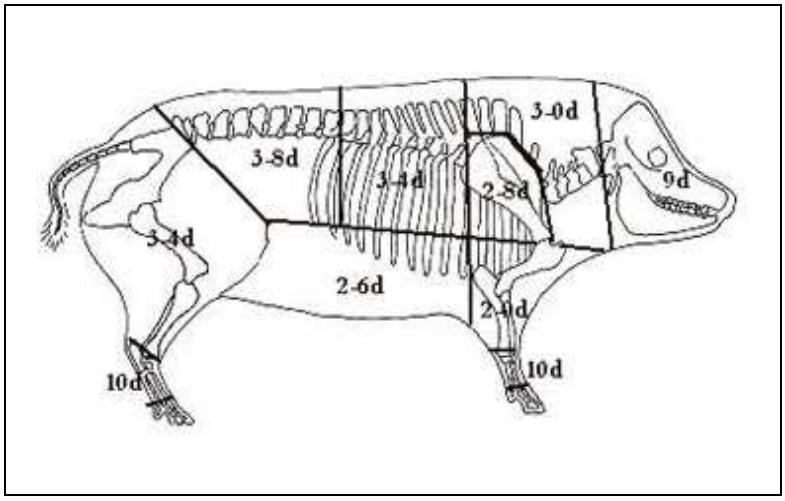


Figure 1.1: Monetary value of different pig carcass parts. After: Gerrard 1964: 200.

Even today, butchery processes are regionally divergent and the resulting cuts of meat are imbued with status. For example, the meat on the lower limbs is cheaper and less desirable than that on the rump or loin (figure 1.1). In this study the main purpose of investigating butchery, however, is to enable the particular units of butchery to be identified, and their locations within the hillfort displayed. Each butchery unit consists of a group of bones (perhaps the phalanges and tarsals for the feet), a single bone or a part of a bone (in modern butchery, the front of the pelvis provides meat for a specific cut, for instance). Obviously it is impossible to say whether all bones were butchered in the same manner, or at all, but the standardisation of marks implies a consistent method was followed (Grant 1987).

### 1.1.3 Why spatial patterning?

Once individual butchery units have been defined, they can then be spatially located by deposit or area. If these units, which are separated at the time of carcass dismemberment, are not found in the same pit or layer, they have obviously been further dispersed (see below). If butchery units are found together, this implies more immediate deposition, or that the units remained together during cooking and meal preparation.

Many authors have suggested functional or taphonomic differences between areas (Wilson 1986; 1994), or activity-based segregation of areas (Halstead *et al.* 1978; Meadows 1997). Cunliffe states that no patterning of small finds was present at Danebury (Cunliffe 1995: 42), although he identified different use areas on the basis of structures. However, many analyses can be carried out with animal bone other than simply frequency and location. Species and body part are also important; the skull and the femur or the horse and the sheep may represent very different activities or values, and may have been consumed by different people or groups.

Communities with social hierarchies, such as are envisaged by Cunliffe for Danebury (Cunliffe 1995), may produce deposits or areas that contain predominantly 'rich' or 'poor' remains. This type of segregation occurs when rich and poor groups live in different areas and deposit remains separately. Meat bones of a high perceived value (which may not be the same as those defined as such today) will then be located mainly in richer areas. Trotters and heads, commonly perceived as low status cuts in modern England, may have a different distribution to vertebrae and pelvic bones. This kind of separation has been suggested for Roman and medieval sites (Stokes 1996; Loveluck 1998), but is unlikely to be recognised during excavation by non-specialists.

A centralised society is likely to have butchery and consumption activities taking place in different areas. An example is Roman Exeter (Maltby 1979), where butchery waste in high densities was deposited in certain defined areas. Cunliffe suggests that occupation and storage at Danebury were mainly found in different areas, and bone evidence may reflect this, although the analysis of distribution of other finds has not shown a clear relationship to the structural evidence. A less specialised society might produce different types of bone deposits, so one might expect a range of bone elements spread across the site.

A wide distribution of bone elements across the site is, then, as interesting a scenario as evidence for segregation of body parts. A society that selects and deposits its food in no particular pattern may in fact be highly developed, with complex means of waste collection and disposal. A high degree of control over butchery and/or depositing bones may be exercised in this case. Alternatively, the society may have been egalitarian, making no distinction between what are commonly regarded as meat cuts of high and low values. Other forms of evidence such as settlement type, housing and artefactual evidence can then be brought in to shed further light upon these phenomena.

An important consideration when looking at spatial patterns is temporal differences in bone distributions. The analyses outlined above are only suitable when pits can be regarded as a single entity, an idea that has been challenged by Hill (1995b) and Grant (2002). Investigation of separate deposits within pits needs to be performed, allowing different faunal contents between individual deposits to be defined. Specific events, such as feasting, might produce a distinctive signature in the bone record - large quantities of bone from many animals.

In addition, some pits contain ‘special deposits’ (section 1.3.4), possibly indicating that a completely different deposition strategy was in place for pits, compared to that for the layers which built up around the ramparts and in hollows, and as occupation layers in buildings. If pits and layers show variation in depositional practice, then one topic that needs addressing is whether they also contain the remains of different types of consumption activity. It is also important to identify whether different consumption and depositional practices were taking place in the pits that did not contain ‘special deposits’.

The large area of Danebury that was excavated, and the huge number of bones recovered, provides the perfect opportunity to look for spatial patterning. However, the large sample size makes manual investigation very difficult. Geographic Information Systems provide an ideal medium by which to investigate this kind of patterning. The faunal data can be linked to the spatial locations of pits and layers easily, and particular bones or combinations displayed very quickly. This is especially useful when repetitive analyses are undertaken, for example where the locations of bones of different species and from different phases need to be explored.

### 1.1.4 Models for identifying consumption activities and social structures

Some models for identifying different activities and social groups using butchery evidence and animal bone distributions are outlined below. In some cases they overlap, and the same bone distribution could be used to argue for more than one scenario. Where it is impossible that the scenarios could have co-existed, it is necessary to include other types and sources of information other than faunal remains, and from different sites, to clarify interpretations (see chapter 6).

#### 1.1.4.1 Feasting or 'household' scale consumption

Ethnographic and historical sources cite that meat eating in large quantities is often regarded as desirable, but is in fact relatively uncommon (Fiddes, 1991: 11-23). However, communal eating and feasting could be represented by the presence of bones that carry large quantities of meat, or by dense deposits of many bones from individual animals. A dense deposit could be recognised from the archive data, if a large number of bones was recovered from a relatively small volume of soil. The meat from a modern young pig (similar in size to a mature Iron Age pig) could feed at least 60 people (R. Boulton, pers. comm.), and if this number of people was eating at once, the bone remains of an entire pig may be found together in one deposit.

Carcasses are unlikely to remain articulated even when the whole animal is roasted on the bone (as might take place prior to feasting), as the ligaments break down during cooking and the bones disarticulate. However, articulated parts or whole animals may have been filleted, even if they do not show any butchery marks, and would have produced a similar quantity of food to an animal cooked whole on the bone. In both types of butchery, the full resources available would not have been utilised, as when the butchery method left parts of the animal still articulated, it is likely that small scraps of meat and the marrow would have been deposited with the bones. This type of cooking, while not feasting, certainly does not utilise the carcass to its fullest potential.

Smaller scale 'family' or 'household' eating could be inferred from small parts of larger animals, such as a small consecutive series of vertebrae from a pig, or by larger parts of small animals, for example a whole sheep limb. A range of species and bone elements, perhaps in distinct butchery units (as identified during butchery analysis), might be indicative of general household debris (see below for status distinctions). Another

characteristic of smaller communities is the preservation of meat, when the quantity of meat available from one animal exceeds the amount that the group can eat before the meat begins to rot. In early modern Britain, one pig per family per year was slaughtered, and the preserved meat lasted until the next pig was killed in the next year (Malcolmson & Mastoris 1998).

A similar practice was observed until recently in the village of Fageca, Spain (Joan Segui pers. comm.). Most bones were deposited at once after disarticulation and filleting, but some (the scapula and the femur for example) were retained in the preserved meat to aid preservation. These bones, therefore, would be deposited at a later date, and possibly in a different place to the majority of the bones. Such a system, based on frugal use of meat, would probably also involve boiling up bone to use the scraps of meat and possibly extracting marrow. This would further disseminate the bone and fragment it.

#### 1.1.4.2 Hierarchical or egalitarian society

If the people using the hillfort were of different social classes, they might be expected to consume the meat of different species, ages or from particular parts of animals. Therefore a predominance of younger animals, which have not yet reached their optimum meat weight, might indicate higher status if the young meat was seen as possessing social prestige. Alternatively, older animals may have been more valued as their meat is stronger in flavour. Older animals will also have been kept for longer, consuming more resources, and could therefore have higher status. Thus an area or deposit that contained the bones of certain ages, or maybe of rarer species, could indicate particular status for this part of the hillfort or for the particular group that created the deposit. Pigs have sometimes been regarded as indicative of high status due to their lack of secondary products (see Grant 1988), but were also bred by poorer families since they are very easy to feed, eating scraps and waste products.

Specific meat cuts may have held different values. The head and trotters have traditionally been regarded as low status in modern Britain, and indeed these ‘waste’ parts are seldom eaten now. Obviously we cannot say for certain what value meat parts may have held in the Iron Age, but a cluster of specific bone elements or butchery units in one area could indicate particular status. Theoretically, bones carrying high (femur), medium (vertebrae) or low (skull) proportions of meat might be differently distributed. Large quantities of ‘meaty’ bones, or a high density of bones might indicate large-scale meat consumption, something that may only have been available to the more powerful members of society.

If all inhabitants of the hillfort were of the same social ranking, there might be no segregation of certain parts of meat, which would result in a homogenous pattern across the site, with no differentiation in species proportions, bone elements, types of butchery, or ages of animals.

#### 1.1.4.3 Specialised or unspecialised activity

A specialised society might be inferred from the consistency of techniques (such as butchery), which suggests work tasks had been taken up by selected individuals or groups.

If such specialisations existed, waste might be of a distinctive nature. Meat bones from different stages of butchery could include 'waste' bones such as the head and feet, filleted meat-bearing bones, etc. Consumption refuse might consist of bone from smaller species or parts of bone from larger species that had been cooked with the meat, for instance distal tibiae, vertebrae or ribs. Craft waste from hide working might comprise the metapodials and maybe skull, while glue production would result in fragmented bones. Horn working would produce concentrations of horncores and skulls with horncores removed, while bone working would perhaps result in scapulae with holes cut during button making or worked metapodials, etc. These might be found in separate areas, pits or deposits, if deposition was also segregated. A lack of specialisation might be implied from haphazard butchery techniques.

#### 1.1.4.4 'Structured' or random deposition

Ritualised activity has been suggested to explain at least a part of some pit fills. Cunliffe (1992) and Grant (1984a) regard 'special deposits' - articulated animals or parts of animals, skulls, unusual combinations - as propitiatory offerings, while Hill (1995a) suggests that all material in pits was 'structured'. Hill proposes that the number of bones recovered from Iron Age sites do not represent the total numbers of animals bred. Therefore bones that did survive must have been specially treated. However, the amount of meat consumed in the Iron Age could have been very small, so the deposits within the hillfort may provide an accurate reflection of the number of animals eaten. It is also possible that all the bones in pits may have held some sort of significance, for instance if they had all been derived from special occasion meals. The butchery on the bones certainly implies that meat was consumed, though it may have had a ritual basis, perhaps in feasting or sacrifice.

No special deposits were noted in the layers, which might represent a different and possibly more 'secular' activity. If the contents of the pits *excepting special deposits* contain material of a similar nature to layers, could it be said that there are lenses of ritual activity but that the rest of the deposit is 'secular'? Or might the whole site be ritual in nature? Indeed, strict distinctions between ritual and secular activity may not have had any validity in the Iron Age (section 1.3.4). Hill's hypothesis requires the bones to have been somehow selected for inclusion into pits, and so certain combinations or elements might be found together. Immediate deposition into available pits after consumption, with no ritual basis to the action, would mingle the bone elements, reducing any evidence of 'structuring'.

Certain areas of the site have been afforded different status by Cunliffe (1991: 25) and one of the key questions addressed in this thesis is whether the pits around the central 'shrine' structure contain bone assemblages that are noticeably different to pits in the 'storage' or 'occupation' areas? Whole heads, or exclusively unbutchered bone, for example, would add weight to a non-functional interpretation and specific associations of species and bone elements in certain areas - a horse and dog were buried together in one pit (Grant 1984c: 222) - might also suggest unusual deposition activity.

Other ritual acts such as sacrifice could be recognised by the deposition of whole animals or articulated parts of animals with no butchery evidence, which *may* have been deposited fully fleshed. It is difficult to say with certainty whether bones had been deposited with meat still covering the bone, as filleting marks will not necessarily be made on each bone that is filleted. Identification of sacrificial activity is further complicated by ethnographic evidence that some acts of sacrifice are accompanied by feasting (Klenk 1995). The resulting bones may bear butchery marks and be disarticulated, making them very difficult to distinguish archaeologically from the remains of 'ordinary' consumption.

One final possibility that is worth noting in the context of supposedly ritual activity is the deliberate curation of rubbish for later deposition (Pollard 1992). It could be inferred archaeologically by the incidence and location of gnawing and weathering, and small parts of disassociated bone.

### 1.1.5 Conclusions

This study will follow several major strands of enquiry. Firstly, the question of whether the occupants of the hillfort were socially stratified or not, and if such status differences are visible archaeologically through bone deposits. Secondly, to identify the scale of meat eating at Danebury, compared to other sites. Were the inhabitants eating communally or in small groups? Thirdly, it is important to consider the possible ritual nature of some deposition – are particular deposits (excluding those previously categorised by Grant (1984a) as 'special deposits') conspicuously different to the majority? The final broad aspect to address is the potential for identifying spatially segregated areas of activity that could indicate specialisation of crafts.

The methodology of the research has been designed to address the key issues outlined here through analysis and interpretation of the butchery marks by species phase and feature type, and by spatial investigation of the butchery 'units' in two and three dimensions. Thus it should be possible to describe and interpret the distribution of particular bone elements across the hillfort, the scale of bone deposition and the integrity of bone elements in individual deposits. The analysis can also be used to investigate sites other than Danebury, in order to provide comparative results.

## 1.2 THESIS STRUCTURE

The thesis begins with a review of the relevant literature to date, and its impact upon this study (section 1.3). The appropriateness of methodologies for investigating butchery and spatial patterning is assessed, the results outlined, and the main theoretical issues are described, and interpretations given.

Chapter 2 broadly outlines my methodology: the selection of data, choosing a sample area of the site, phasing and the nature of the available data. Detailed methodologies for each analysis (butchery, spatial distribution) are provided at the start of each of the three data analysis chapters (chapters 3-5).

Chapter 3 describes and interprets the butchery marks at Danebury by species, phase and feature type, in order to ascertain which bones made up butchery 'units' in each case. Butchery patterns at Suddern Farm and Nettlebank Copse, two sites excavated during the

Danebury Environs programme, and Balksbury hillfort, a nearby settlement, are also analysed in the same way, using butchery records made by Julie Hamilton and Mark Maltby.

Spatial analysis begins in chapter 4 with two-dimensional investigation of the butchery unit distribution across the selected sample area of the site. Investigation was again divided into species, phase and feature type. In chapter 5 the spatial analysis was expanded to look at individual deposits in pits and layers. This introduced a three-dimensional aspect to the investigation, which enabled temporal differences in deposits to be considered at the same time as spatial ones. Also, 'occupation' deposits in circular structures are compared to stratified layers in pit.

The data chapters are followed by a discussion chapter, chapter 6, which brings results of the analyses together in order to explore possible interpretations and incorporate evidence from other sites and different specialisms. The concluding chapter (chapter 7) sums up my interpretation of the results, with an analysis of how the aims of this project have been met, and an appraisal of the methodologies used. As expected, the thesis has prompted more questions than it has addressed, and profitable lines of further enquiry have been outlined at the end of chapter 7.

Appendices detailing the coding method for recording butchery marks and the coded entries themselves are provided (appendices 1 and 2). Appendix 3 describes a butchery experiment undertaken to investigate and consolidate the interpretations of butchery marks drawn in the archive. Appendices 4 and 5 provide a glossary of terms for reference and a diagram of the positions of bone elements in the skeleton.

Where practical, illustrations have been included in the manuscript, but the inclusion of all figures in text would render some sections of chapters 3, 4 and 5 very difficult to follow. For this reason, the majority of the figures are located at the end of each relevant chapter, and are referenced by chapter and figure number (the first figure in chapter 5, for example, is figure 5.1). The list of figures (pages vii-viii) indicates which illustrations are embedded in the text. Where figures have been adapted or sourced from other authors, the relevant publication is referenced in the figure caption. Illustrations and photographs were drawn or taken by the author unless otherwise stated, although the butchery diagrams and carcass divisions in chapter 3, and bone element representations in chapter 5, were turned into digital images from my drawings and then manipulated into more presentable forms by Cain Hegarty.

## 1.3 REVIEW OF THE LITERATURE

### 1.3.1 Hillforts And The Iron Age

#### 1.3.1.1 Danebury and its interpretation

Danebury is probably the best-known and most extensively excavated Iron Age hillfort in Britain. Its first interpretation as a centre of control was proposed by Barry Cunliffe, who co-ordinated excavation of almost 60% of the site over more than 20 years. His suggestion that 'large communal hilltop enclosures were probably built to serve as bases for the autumn and winter management of stock' (Cunliffe 1991: 356) was based on high proportions of immature individuals evidenced from the faunal analysis. The hillfort was one of only a few to be redefended in the 4th century BC, and this, he says, gave it a 'position of dominance'; a defensive 'focal point for the community' (Cunliffe 1991: 356). The redefence was seen as a response to changes initiated by pressure on land, which increased as the bronze economy collapsed. Further periods of stress were proposed at the end of the third century (Cunliffe 1984a: 31), from increasing quantities of slingshots, sheep, the incidence of periodontal disease in sheep and propitiatory human burials. The numerous pits found within the hillfort were interpreted as underground storage for grain (Cunliffe 1992). This was taken to be evidence for stockpiling of resources, with the hillfort as a central redistribution point controlled by tribal leaders. The theory was developed using information on seed provenance, which showed the grain to have originated from many locations (Jones 1995). However the hillfort did not attract large quantities of goods from long distance (Cunliffe 1984a: 32), suggesting that any influence it held was regional.

Cunliffe's interpretation has been challenged and modified since its initial publication. For example, the viability of underground grain storage was investigated. An experiment undertaken at Butser experimental farm showed that grain could be stored successfully for many years without spoiling, if it were properly sealed (Reynolds 1974; Hill *et al.* 1983), and Fitzpatrick states that grain stored underground has twice the germination rate of that above ground (Fitzpatrick 1997: 80). Why, then, were the four post structures (interpreted as granaries) so common? Cunliffe suggested food stored in these was intended for more immediate consumption, with that stored underground reserved for sowing in the coming year.

Cunliffe's explanation for the underground burial of grain has an economic basis, though he ties it in with symbolic practice. The lack of evidence for warfare suggests that grain was not beneath ground to avoid spoiling in conflict, but he suggests that the grain in pits was kept as a back up in the case of crops failing or as a safe store between harvest and germination. The special deposits (see part 1.3.4) were thought to have been placed at appropriate times after the safe removal of the grain to give thanks or request bountiful crop growth (Cunliffe 1992). It should be possible to test whether all deposits in pits, or just some, have a different, or special nature which could be indicative of this kind of propitiatory 'offering'.

Stopford (1987: 70) disputed the interpretation of Danebury as the residence of the top elements of a socially stratified society. She maintained that the structures within the enclosure did not provide evidence of stratification: there was nothing to suggest the presence of a 'single high status house' such as would be inhabited by a chief or tribal leader. The 'granaries' *were* found in two size categories, though the larger were not necessarily of more complex construction, so could not be regarded as high or low status. It could be argued that Stopford's conclusions are based on rather Eurocentric, 20th century distinctions of power and prestige, where larger, most robust structures are considered the most important. Stopford does go on to say that the central locations and lasting nature of a central rectangular structure suggest that it was of greater importance than the housing. Despite being interpreted as a 'shrine', there is nothing to indicate what it was used for.

Stopford also convincingly reasoned that the artefactual evidence suggests a site with only a few specialisations, similar to most undefended settlements in southern Britain in the Iron Age (with the exception of Meare and Gussage all Saints). She suggests that sites with easy access and more finds, such as Glastonbury, are likely to have acted as 'neutral' exchange centres (1987: 73). Lock (1989) argued against her interpretation, but only by refuting her suggestion that Danebury was not primarily for residence on the grounds of posthole evidence for housing. Sharples claimed that Maiden Castle in Dorset had a similar material culture and mixed economy to surrounding Iron Age sites, and that the only difference was the construction of ramparts, allowed by a large population sustained by acquisition of agricultural land (Sharples 1991: 259). Of course, Maiden Castle may have operated differently to Danebury.

The homogenous nature of material culture is explained by Sharples as a 'deliberate suppression of status distinctions' (Sharples 1991: 260). In his opinion, the elite who organised the construction and maintenance of the defences were trying to manipulate public

opinion, to portray the defences as a benefit for all, not a means by which power structures could be maintained. The motivation therefore was not personal gain, in the form of foodstuffs, goods or habitat (all distinctions between pottery types vanished in the early-middle Iron Age), but presumably more to do with the ability to command an expanse of land or the services of people, possibly related to warfare. This would make any analysis of status difference on the basis of artefactual evidence redundant, but if there did appear to be differences in social status between some deposits, it suggests that his claim is invalid.

The use of hillforts as primarily defensive centres was argued against by Bowden and McOmish, using examples in Dorset which were overlooked by higher ground and situated indivisibly with earlier prehistoric monuments (Bowden and McOmish, 1989). They suggested that other interpretations such as ceremonial centres needed to be considered.

Hill also suggests that hillforts were not primarily defensive, but served as a gathering place for the people of the dispersed farmsteads. Citing the similarity of deposits at Danebury and Winklebury, he regards the special deposits as defining the settlements. The differences between deposits at the hillforts may have resulted from different farm-holders 'owning' the land (Hill 1995b). He suggests that the storage of grain acted as a symbol of unity, conjoining the diverse origins of the grain. Hill also suggests that hillforts are less densely occupied than farmsteads (Hill 1995b). This is however based on the assumption that un- or partially filled pits were left open long enough to trap small mammals and so would have had to have been avoided by the population, from the rather slight evidence of rodent bones in some pits. The proposed difference is not substantiated for a number of reasons: pits are also found on non-hillfort sites such as Winnall Down; only a few pits may have been open at any one time; and they could in any case have been loosely covered.

Fitzpatrick (1997) also suggests the hillforts acted as focal areas, but to facilitate breeding of stock in a landscape of dispersed communities with small flocks. However the similarity between sheep mortality profiles from Danebury, Balksbury and undefended settlements such as Old Down Farm and Winnall Down suggests that these have a common economy, rather than that each performed a specialised role (Hill 1996a: 98).

Sharples, in his discussion of Maiden Castle, suggests that hillforts were defended because they straddled the area between pastoral and arable land. These settlements, he suggests, were defended since control over the land allowed the development of a large community, which was consequently required to defend the land (Sharples 1991: 259). The large capacity

of hillforts for grain storage would thus have been needed to feed workers (with both workers and grain brought in from 'client settlements'), during periodic (yearly) episodes of rampart construction and maintenance (Sharples 1991: 260). He explains the absence of a hierarchy in material culture between sites by proposing that control and ownership of resources, not individual status, were the focus of competition. Therefore attacks on individuals would achieve little, while violent assault on the community as a whole could lead to dominance over advantageous land.

Harding (1980: 11) counters the interpretation of hillforts as central places, citing the peripheral role hillforts played in border areas in historic Ireland, as ecclesiastical, specialised or royal domains. It is difficult to accept this as evidence as the period and location are completely different, and coincidence of form does not imply parity of function. Harding also suggested that hillforts controlled trade routes, since multivallate examples in Dorset are found on the coast in suitable positions. Hill refuted the Theissen polygon theory, used by Cunliffe to explain the areas of control he visualised for hillforts, since not all hillforts can be shown to be in use at one time. Instead he suggests a more inclusive analysis, in conjunction with other settlement types (Hill 1996a: 101).

The limited artefactual evidence for Danebury operating as a centre of exchange or industry, or an elite residence, shows that the hillfort 'could well be something peripheral to the main functioning of the local society rather than its centre' (Collis 1985: 349). Haselgrove concurs with this opinion, stating that until comparable sites have been dug there is nothing for Danebury to be the centre *of* (Haselgrove 1986: 367). This has been addressed by the Danebury Environs project (Cunliffe 2000), although Cunliffe's interpretation does not alter, instead conforming to and reinforcing the original representation of Danebury as a central place (discussed below in section 1.3.1.3). The investigation of bone to be undertaken here will add a new dimension. The nature of butchery, consumption and deposition at different settlements can be contrasted, indicating variety of butchery technique, extent of specialisation, possible evidence for higher status, etc. The potential for large animal bone assemblages to aid our understanding can also be elucidated.

#### 1.3.1.2 Differences between regions in the Iron Age

Extremely divergent Iron Age material culture, funerary practice and settlement have been recognised, especially between the north and south of Britain (Hill & Cumberpatch 1995), and more recently books such as *Northern Exposure* (Bevan 1999) have explored the Iron

Age in the north in its own right, rather than as an inferior branch of Southern Britain. Even within Southern Britain there are differences between Iron Age settlements: Maiden Castle has a lower density of pits, and a higher density of structures than Danebury. Hill (1996a) interprets this regional diversity as a product of the different belief systems maintained by the people in each area, each using hillforts as a communal focus. Other analyses reinforce the differences between wider regions in the Iron Age. In the Welsh Marches for example, the largest hillforts lie in the lowland zones, with smaller ones, interpreted as household sized establishments, on the upland areas (Jackson 1999: 207). This is opposed to the pattern in the southern areas, where the larger hillforts lie on the higher land. In the South West the pattern is different again; in Devon hillforts are not situated on the top of a hill, but are just offset, implying their function was dissimilar in this region (Collis 1997: 88).

Jackson (1999: 218) suggests that the location of undefended settlements on good quality farmland would have 'allowed attention to focus on the wider community... and permit mobilisation of the resources necessary to construct the LHF's [large hillforts] which dominate zone 1 [poor land]'. Those from Wessex, however, show an even spread across zones of poor to good land, and another process may have been at work here. In addition, their status as special places is suggested, and the siting of one, Berth, Shropshire, in a marshy area, is linked to the suggested importance of watery deposits in the Iron Age (Jackson 1999: 213).

#### 1.3.1.3 The Danebury Environs project

A selection of site types was chosen for investigation in a 'like manner' to Danebury (Cunliffe 2000: 14) to enable accurate comparison of the settlements in the area, and the way these would have related to the hillfort. The animal bones from the Environs project were identified and recorded by Julie Hamilton, but the methods used were 'intended to be compatible with, and as similar as possible to, those used by Grant (1984a, 1991a) for Danebury' (Hamilton 2000a: 59). The proximity of the sites to Danebury and the similarity of excavation techniques make the Environs sites the most appropriate comparisons for this analysis.

Although the main focus of this thesis is the intra-site investigation of butchery for spatial analysis, the inclusion of a comparative section is extremely important. A study of only the hillfort would give a narrower view. Many of the questions outlined in part 1.1 would be very difficult to address from the investigation of one site alone. Detailed scrutiny of

butchery evidence from other settlements might identify major differences in eating and deposition, which could be representative of different sizes of community groups, social or ritual practice, or consumption activity.

The two sites chosen for detailed butchery analysis were selected from three suggested by Julie Hamilton, as having the largest faunal assemblages, and therefore a relatively large number of butchery marks. Suddern Farm, Middle Wallop (4km west of Danebury) had a long lifespan so animal bone and butchery marks from the early Iron Age to the Roman period were available for study. Cunliffe called Suddern Farm an 'enditched enclosure' and suggested it was of high status due to the presence of more elaborate pottery, copied from Gallo-Belgic forms. Its re-use after the demise of Danebury was also considered proof of transference of power (Cunliffe 2000: 192).

Nettlebank Copse, Wherwell (2km north-east of Danebury) provided a contrast in settlement type, length of use and continuity of occupation. This site was originally a small settlement, which was occupied in the early Iron Age then abandoned. It was reused in the mid-first century BC after ditches were cut, becoming what is generally classified as a banjo enclosure (Cunliffe 2000: 176). It was then supposedly reoccupied and used as a stock management centre (Cunliffe 2000: 188).

Cunliffe used pottery evidence to suggest a period of abandonment for both sites. St. Catherine's Hill-Worthy Down pottery types were missing from Nettlebank Copse and Suddern Farm, but prolific at Danebury. Cunliffe dismissed the idea that their absence was due to the lower status of Nettlebank Copse and Suddern Farm, since this pottery type was present at other small scale settlements in the area. He also suggests that they could not have been overlooked during excavation as Nettlebank Copse was totally excavated. (Cunliffe 2000: 181).

The evidence from animal bone and charred grain assemblages was incorporated into his interpretation. In the early period (800-300BC) it was suggested that, at Danebury, grain arrived already processed, while at the other sites there was evidence of both winnowing and threshing: the processed products from these sites could have been taken to Danebury. The ages at death of animals from the Environs sites were diverse, suggesting year round use (Cunliffe 2000: 172). This correlates with the evidence from the grain assemblages, which also showed no evidence for seasonal occupation. In this early period, the percentage of cattle compared to other species was higher at Suddern Farm, which Cunliffe says indicates

a higher status than Nettlebank Copse. Both consisted of predominantly mature animals, implying that at both sites animals were kept mainly for their secondary products.

In the middle period (300-100BC) Danebury was refortified, but the other settlements appear to have been abandoned. Cunliffe suggests that the hillfort, or its immediate environment, were then occupied by a dislocated population, who processed the crops in the fields before delivering them to the hillfort. The presence in the fort of many neonatal sheep and cattle is taken as confirmation that the flocks and herds were in the vicinity at lambing time (Cunliffe 2000: 182). This hillfort-centric view is not substantiated by the demonstrated presence of any complementary activities in the surrounding area, although it would of course be very hard to find archaeological evidence of such activities. Danebury was certainly surrounded by field systems, which were thought to have gone out of use with the abandonment of the hillfort (Palmer 1984: 131). It is worth mentioning that neonatal animals are not necessarily evidence of lambing, as such animals could have been specifically selected from outlying settlements.

In the late period (100BC-50AD) Danebury was burned and the gate never rebuilt. There is little evidence for its use after the millennium (Cunliffe 2000: 188). However, at this time Suddern Farm's ditches were recut and Nettlebank Copse was reoccupied. Cunliffe proposed a transfer of authority from the hillfort to defended settlement sites such as Suddern Farm. Nettlebank Copse was thought to be a centre for seasonal gathering, with livestock culled in festivals. Animal seasonality profiles suggested sheep were killed in the autumn/ winter. The relatively high percentages of pig at 23% MNI (minimum number of individuals) (Hamilton 2000b: 178; 2000c: 104) was given as a possible indication of feasting (Cunliffe 2000: 188).

Pottery and faunal evidence indicates variations in status (Cunliffe 2000: 189). Nettlebank Copse contained only 10% of imported Poole Harbour fabrics, as opposed to 30-40% at Suddern Farm. Cunliffe uses the (slightly) higher percentages of cattle at Suddern Farm (24% MNI at Suddern Farm and 17% MNI at Nettlebank Copse (Hamilton 2000b: 178)), and the presence of imported pottery to imply the higher status of this site (Cunliffe 2000: 189). The cattle at Suddern Farm were killed at an optimum age for meat production, rather than kept to supply traction or milk, a possible indication of lower intensity of exploitation and therefore higher status at this site.

I will explore the validity of Cunliffe's interpretation by examining butchery marks on the animal bone. He believed that these settlements were initially subordinate to Danebury, and

possibly paid tax in provisions, then became seasonal foci or substitutes for the location of authority. The butchery techniques may reveal the degree of use of the sites, and any change over time. Evidence of festivals can be provided from larger parts of animals, while taxes could be paid in preserved meat products, which could result in a different butchery technique. Knowledge of butchery techniques may confirm some of the events suggested by Cunliffe. A change in butchery technique in the late Iron Age, for example, could be linked to the disturbance that he attributes to the tripartite influences of possible Belgic settlement, Classical influences from cross-channel trade and the campaigns of Julius Caesar (Cunliffe 2000: 189).

**Conclusions**

The function of hillforts, therefore, has been much debated. Cunliffe and Hill, who suggest that hillforts are a centre of tribal control or a community gathering place, respectively, provide two main differences of opinion. Much of the archaeological evidence could be used to support either statement, with grain from many different areas at the hillfort, large defences requiring many people and much time, and regional diversity. However the animal husbandry evidence and types of deposit and artefact do not differ substantially between hillfort and non-hillfort sites, suggesting that their status was similar. Some differences in pottery types and species proportions are described for Suddern Farm and Nettlebank Copse; meat consumption patterns for these two sites will be used to investigate possible status differences.

There is the potential to use animal bones to better understand hillforts in two main areas:

a), through analysis of butchery, to recognise differences between hillforts and open settlements, that might be indicative of a higher status, such as size of meat deposits and intensity of carcass use;

b), at a more detailed level, to attempt to recognise, in the spatial distribution of different cuts of meat, clues to indicate areas within the hillfort which could be indicative of different sectors of society or more advanced craft specialisation.

### 1.3.2 Animal Husbandry In The Iron Age

Using Grant's (1984a) analysis of the faunal remains from Danebury as a starting point, this section aims to discuss the current views of animal husbandry in the Iron Age, and how this is relevant to the ways people have interpreted deposits of animal bone. The species proportions, herd age structure, parts of the carcass present and evidence for disease will be considered. The butchery will be discussed separately, in section 1.3.5.

At Danebury the mixed farming economy indicated by the presence of the three main domesticates, together with horse, dog, cat, bird and wild animals, suggests a fairly wide exploitation of animals, focused though on domestic species. Butchery marks on cattle, sheep, pigs, horse and dog (including filleting marks for the removal of flesh, not just skin or sinews) suggest exploitation of all these species for food. The use of a range of species has advantages over monoculture in terms of farmland rotation and use of diverse habitats, as well as the production of secondary products such as milk, hides, traction and manure. Cultural preference must also be considered, although this is difficult to pinpoint.

The change in species proportions over the span of occupation appears small. This lack of change is considered 'remarkable' by Grant (1984a), as one might expect alteration of husbandry practices over time necessary to adjust to the environment. However, Grant attributes slight changes in proportions to some changing husbandry practices in respect of secondary product exploitation, and density of occupation over time. Pigs seem to become relatively less common over time, which was suggested to result from a lack of inclination, as the population increased, to keep animals which could compete with humans for food. Sheep show a higher incidence of periodontal disease over time, taken as evidence for greater pressure on grazing land. Fewer whole animal deposits in the later phase are suggested to have stemmed from the same pressure, making food resources more scarce, and deposits of them less common (assuming that special deposits have flesh on them when buried). More juvenile horse bones in the later period are also taken as evidence of greater exploitation of animals for food, although this could have resulted from a change in activity, for example horse breeding on site (Grant 1984a: 546).

Grant suggests that the low numbers of wild animals deposited mean hunting was not common, as in other Iron Age sites. This does not imply a great stress on the system of production. The birds that were recovered showed few butchery marks and a 'very narrow range of species' (Grant 1984a: 547). Might this instead be indicative of selection of specific

species for deposition? The symbolism of wild and domestic animals differs in ethnographic literature (see section 1.3.6) and deliberate deposits may have reflected such a trend (see section 1.3.4). So hunting *may* have been common but the bones disposed of in different ways. This, however, can be only speculation.

Most other Iron Age sites mirror the predominance of sheep within the sample at Danebury. Grant (1984a: 543) suggests this may be due to the 'well drained chalkland' around Danebury. In Wessex and around the Thames valley, the highest proportions of sheep bones were found on sites on higher land, such as Danebury, Old Down Farm and Gussage-all-Saints (Grant 1984b: 103). This was thought to be due to the suitability of the more fertile valleys for cattle grazing; sites at Ashville, Farmoor and Odell may have offered too damp an environment for sheep grazing.

Maltby offers a review of the faunal assemblages from the Iron Age, in which he considers the husbandry techniques and species proportions. There are a few sites that show evidence of relatively high percentages of pig bones; examples are Groundwell Farm, Wiltshire, Croft Ambrey and Skeleton Green. These had been interpreted by Coy (1981) as sites with better environmental conditions for pig rearing, though Maltby suggests that contacts with the continent may also have played a part (Maltby 1996: 20). Otherwise the proportions and bone elements are reasonably consistent by site, which he suggests as indicative of a self-sufficient mixed economy.

At Danebury, the low numbers of sheep killed at the age of optimum meat production (MWS 17-27) would imply an emphasis on the production of wool and/or milk, while the high numbers of very young animals also suggest exploitation for milk and perhaps indicate that Danebury was used as a breeding centre (Grant 1984a: 508). However, other sites differ; at Owslebury the pit deposits contained remains from significantly older individuals than the enclosure ditch. The sheep killed at optimum age for meat occur in more downland, and later Iron Age, contexts (Maltby 1996: 22), possibly suggesting that in the upland locations at this time the pressure on animal husbandry was greater. Thus the age of animals may differ between sites and feature types, a factor that should be considered when only parts of a site have been excavated.

Pigs from open settlements have usually been killed at the age of optimum meat production, the stage when the pig will not put on more meat regardless of its food intake (this stage in modern breeds occurs at 9 months, but in the past was rather later (see Silver 1969)). The

pigs from the hillfort sites of Danebury and Balksbury include high numbers of young or neonatal individuals which Maltby suggests may have resulted from the use of these sites as breeding centres (Maltby 1996), but this could again be the result of selective deposition.

High proportions of immature but almost fully grown cattle at later Iron Age open settlements are suggested by Grant (1982) to result from a split in management: the upland sites with young animals being used as calving centres, and the lowland sites used for rearing, and therefore sometimes culling. Maltby points out that farmsteads with large numbers of immature cattle are of later date than the majority of sites, so a chronological change might be indicated. He suggests that more sites need to be examined before accepting such a hypothesis (Maltby 1996: 21).

Hambledon (1998) completed a more exhaustive and wider regional study of the age structures and species proportions of animal populations, with regard to the height above sea level and geographical locations of the sites. Her conclusions are similar to Hill's (1995a) in that different sites sometimes have diverging species proportions and ages, but she also states that within Wessex the differences between hillforts and other settlements are less pronounced than elsewhere. Her conclusions are hampered by the paucity of sites with large animal bone assemblages outside the south of England.

These interpretations are, as Maltby (1985) says, dependent on further analysis of the specific contexts from which the bone is recovered. Issues of structured deposition (section 1.3.4) and the extent of excavation, as well as integration of other information, such as associations with finds and type of deposit, should help. The in-depth study of the butchery and depositional areas of the bone from Danebury, which is the purpose of this thesis, may significantly add to our knowledge by identifying any different areas of use within the hillfort. Butchery analysis may also be able to assist when defining changes over time, such as the greater pressure on resources suggested by Grant (1984a).

### 1.3.3 Spatial Patterning

Relevant studies of spatial patterning of artefacts and ecofacts occur mainly in three fields: ethnographic, historic and archaeological (the majority from early prehistory) studies; the methods and theory employed to investigate spatial distributions are diverse.

A type of study that is ideal for use with sites used by hunting communities, which leave behind little trace of their activity, and/or single-use sites, that can be examined in their entirety, is Binford's (1978) research into the discard of bones by the Nunamuit. He used a contemporary hunter-gatherer community that utilised lithic technology, to try to reconcile what would be found in the archaeological evidence (bone elements), with the living society that procured and consumed animals. The finds followed different patterns according to site type. He showed the bones at different sites to represent certain activities such as killing (where the parts regarded as waste were discarded), temporary occupation (where processing is started to facilitate the carrying home of the carcass) and permanent or semi-permanent settlement sites (where the meat is distributed and cooked). However, long term farming communities where rubbish is accumulated and items are deposited in deeper features are much more difficult to interpret in this way.

With reference to hunter-gatherer sites, Binford (1981) has also stated that bone processing waste is a good indicator of activity, as unlike tools, which can be re-used, waste is unlikely to be moved far from the place of its initial production and deposition. This is not necessarily the case in more complex societies, where the 'waste' may be discarded or redeposited outside activity areas or where bone parts are not regarded purely as waste but are imbued with meaning (both described in this section).

Studies of settlement ethnography have tended to consider the bone refuse in economic terms: for example, as dumps of waste in middens and as the remains of processing activities; primary bone refuse in hearths used by Kua San hunter-gatherer groups was assumed to be a result of food waste being deposited immediately prior to cooking and consumption (Bartram *et al*. 1991). Such analysis would be relevant to Danebury were it clear that purely economic activity was occurring, and that these were being fossilised in 'occupation' layers. The presence of 'special deposits' suggests that this is not necessarily the case (section 1.3.4), and that the bone may have been deposited in a complex manner in pits at least (no special deposits were identified in the layers that built up in quarry hollows and against the ramparts); a simple or direct activity separation in two dimensional spatial terms is possible but has not been recognised to date.

There is ample anthropological evidence for people symbolically structuring activities spatially. The Bororo of the Amazon basin have ceremonies in the male-inhabited centre of the enclosure, and the women are relegated to the periphery where they perform domestic tasks. The Marakwat of Kenya deposit ash by women's huts, and goat excrement beside the

men's, to symbolise fertility and control, respectively (Levi-Strauss quoted in Parker Pearson 1996: 117). In both these examples gender is the key consideration, but they also show that the everyday can take on ritual or symbolic meaning (living areas for the Bororo, waste for the Marakwat). If found archaeologically, these would probably be construed as a living space and a ceremonial space in the former example, or in the latter as a waste dump and goat sheds in functional terms. It is however important to avoid over-simplifying spatial function using artefactual evidence. An interesting comparison can be seen in the 1st AD pits on the continent that contain ash (Green 1992: 105). Using the analyses above the presence of ash could be interpreted as resulting from fertility rites, or domestic waste activities according to the conceptual framework of the excavator. This highlights the need to take an inclusive look at deposits, to assess their associations and position, not just their contents.

Archaeological analysis of spatial patterning with relevance to animal bone studies has been undertaken in prehistoric and historic contexts. Studies on the Iron Age often fall into those of feature differentiation, for example differences between ditches and pits and upper and lower parts of pits (Grant 1984a; 1991a; Maltby 1995; Wait, 1985). Various excavation reports have included consideration of spatial patterns in bone remains, especially in well preserved Wessex chalkland sites. (Wilson 1986; Maltby 1981). Maltby (1985) found that at Winnall Down there was a spatial division between larger and smaller animals. Cow and horse were more commonly found in the external quarries and boundary ditches, while sheep and pig were more common in pits near to the structures. The effects of carnivores were also considered as a possible reason: dog activity was found to spread larger bones further than smaller ones (see also Ioannidou 1999).

Such studies were reconsidered and brought together by Wilson (1996). He also concluded that bones from larger animals were found at the periphery of the settlement and smaller ones, such as sheep and pig, were mostly found nearer the centre. He provided a functional explanation for this patterning, suggesting that the larger animals were butchered and their bones deposited at the periphery. Also the density of bone was found to be highest in the centre of the settlement at Wendens Ambo (Wilson 1978) and at Winnall Down (Maltby 1985). Examples that Wilson cites as back up to his claim can be re-examined with reference to the recently investigated topic of structured deposition. For instance, the concentration of bone in the centre and at the entrance to the enclosure at Mingies Ditch that Wilson noted may in fact be due more to a symbolic statement of separation between enclosed and external areas, than motives related to hygiene or ease of division/ deposition. Study of the place of deposition of currency bars suggests that the entrance and boundary area may carry

symbolic significance (Hingley 1990). The discovery of animal burials in pits beneath the boundary ditches at Danebury suggests the same underlying belief system may be at work here.

The separation of large from smaller animals might also have been meaningful to the depositors. Sheep and pigs fulfil different economic functions to cattle and horses and may also have fulfilled very different social or ritual functions in society. The larger animals would have provided a very large quantity of meat to consume or store, more than even an extended family would be able to consume on one occasion. The smaller animals could have been slaughtered as provisions on a small scale (see Grant 2002). The secondary products from these animals would also have differed, the power provided by horse/cattle, wool and manure from pigs and sheep and milk from sheep and cattle. Their roles in life may have altered perceptions of them in death. The status in which animals are held is widely differing between societies (see section 1.3.6 and Tambiah 1969).

This evaluation does not underestimate the effects of carnivore action, or the need to remove rancid parts away from occupation areas and casual re-distribution of animal bone. But it does question the simplistic assumptions that the outside of the settlement is a place for the slaughter of large animals, while smaller ones could be 'fitted into' the central area for their death (Wilson 1996: 26).

Wilson (1996) states that the patterns of deposition he proposes are cross cultural, being found on medieval manor sites, and in non-industrial communities such as the Nuba (quoting Hodder 1982) where animal waste is deposited far from the living quarters. Assumptions of functionality of structures is also implicit in this analysis - the archaeological sites may well not have been inhabited at all, or for parts of the year. The Nuba are also noted by Hodder (1982) as having crania built into walls of granaries, those of pigs mostly female, and of cattle mostly male. This seems to be a cultural process in selective bone deposition that Wilson has rather glossed over in his interpretation of animal bone type and provenance.

Economic expedience was also cited as the influence behind the deposition of dogs and horses in peripheral ditches in 18$^{th}$ century Witney Place. Even though these animals were prized in their lifetime, once dead it is suggested that they no longer held any meaning for their owners (Wilson 1996: 78). What then of Victorian pet cemeteries, where favoured dogs and cats lie interred? These are far removed from the Iron Age, but are at least as relevant a

context as 18th century Britain. Other Iron Age material from Hungary shows entire burials of horses, including one individual with an iron ring in its mouth, and are probably not results of an effort to be rid of a useless carcass as quickly as possible, but represent both effort in the digging of a burial pit, and status in the inclusion of grave goods (Jerem 1998).

In the attempt to be inclusive, Wilson's explanation is too selective. It would be dangerous to assume that the areas of a partially excavated settlement which are highest in sheep and pig bone are nearest the centre, and base further calculations on this, as spatial patterning from Iron Age sites investigated by Hingley (1990) shows (see part 1.3.3). Other periods offer similar segregation of deposit, for example Neolithic ceremonial enclosures (Pollard 1995). These contain deposits of differing nature in each area of the enclosure. None of these areas can be shown otherwise to be the focus of activity, and to base such an assumption on the species found is to ignore fundamental issues of the choice involved in bone deposition.

Halstead and colleagues (1978) investigated the spatial positions of animal bone elements from the Iron Age and Roman periods of occupation at Wendens Ambo, Essex. The small size of the sample (90kg from the Iron Age contexts) did not allow for analysis of the separation of the animal into butchered parts, or into individual bones. Instead the interpretation was based on an arbitrary division into skull, trunk and limbs. The restrictions thus created are significant, since the upper and lower limbs, for example, carry very different proportions of meat. Some of the conclusions are severely limited by the small sample size and the suggested greater proportion of limb bone on the outskirts (as opposed to meat bone in the centre) cannot be tested statistically. This type of investigation can, however, be carried out at Danebury where the sample size is so much larger.

The conclusions reached for Wendens Ambo suggest that table rubbish (younger and smaller animals, upper limbs, ribs, vertebrae, pelvis, scapula) was deposited periodically in linear ditches and pits, while the kitchen refuse (skulls, lower limbs, and bones especially of larger animals which demand more division for cooking) was found mainly in the periphery (Halstead *et al.* 1978: 128). This corroborates Wilson's findings, but not necessarily his interpretation. The deposition of smaller animals in the centre and larger at the periphery might have many meanings. Rather than a spatial division as postulated by Wilson, Halstead and colleagues suggested a temporal division to explain the dichotomy. This was based on the positions of sheep bone, which showed evidence of different parts being buried in the same place, and it was hypothesised that younger, smaller animals that could be butchered and cooked in the same place without need to preserve parts for later consumption could be

deposited in one episode (Halstead *et al.* 1978: 123). It is also possible that the difference did not indicate simple spatial distribution, but that feature type was an important factor, with some bones destined for pits and others for ditches or gullies.

The presence of large numbers of skulls in some pits at Wendens Ambo suggests that, like Danebury, there may be some evidence of structured deposits, although the skulls could represent primary butchery waste. However, an interpretation of the deposits as resulting purely from food processing is too simplistic. An additional problem stems from the small sample size: in order to investigate the spatial distributions of parts the authors included bone which could only be divided into large/ medium/ small mammal, and the amalgamation of upper and lower limbs was retained. This makes the interpretation inconclusive; testing of this theory requires a much larger sample size. A site such as Danebury, with its 'special deposits' in pits, and other bone from layers and gullies around structures, is of a similar date, but large enough to provide a suitable analysis.

Meadows (1997) continued Wilson's discussion of butchery from early Romano-British periods at Barton Court Farm (Wilson 1986). She showed that at Barton Court Farm the density of bone is highest in the internal enclosure of the centre of the site. There is evidence for structuring of deposits again with mandibles in ditches apparently placed in distinct places and a concentration of the bones of horse and dog in ditches. It is possible that this apparent pattern of mandibles in fact results from the high density of this bone element, ensuring its survival where other bones were destroyed, but the presence of bone correlates with beaker distributions, suggesting that a clear pattern is indeed evident (Meadows 1997: 28). Meadows also suggests that in the late Iron Age, the centre of an enclosure was dedicated as public space, as opposed to the 'private' space at the periphery (Meadows 1999). Differences in the spatial distributions of animal bone waste at Danebury might confirm this, for example, public space may contain the remains of feasting, while private areas could contain smaller parts of animals eaten by families of households.

The deposits specifically denoted as special at Barton Court Farm (crania, articulated parts of, or whole, animals) were found in an internal ditch in the area of highest concentration of features and activity, interpreted as the main area of habitation. A division between north and south sides of the settlement became more pronounced in the Roman period, and is suggested to be 'a distinction between private domestic practices... and more public ceremonies away from the living area' (Meadows 1997: 33). So it is suggested that Iron Age

practices mixed the public and the private, perhaps indicating that spatial divisions are less apparent in the Iron Age than in later periods.

The methodology used by Stokes (1996), in his investigation of the spatial patterning of animal bone from South Shields Roman Fort, uses as a basis the bone parts which can be seen to constitute discrete units after disarticulation. After consideration of the butchery from which he determined which bones would remain together, he looked at the frequencies of each butchery unit from each selected area of the site, and compared them. The final conclusion was that barrack blocks contained both table and processing waste, suggesting community butchery and cooking, carried out in small groups in the same place as food was eaten (Stokes 1996: 100). He carried out further analysis of Roman eating habits: 'Ritual made a very real difference to the way animals were made into food - a crucial element in the sacrifice was the sharing out of the victim among the participants. The division had to be conspicuously fair... the animals were simply divided into portions more or less equal in size' (Stokes 2000: 147). Although the carcasses were divided up into equal portions, the thoracic and lumbar vertebrae, pelvis and scapula were found only in the area of the house of the commandant. Stokes' evidence shows that, despite apparent equality in butchery methods, the distribution of bone elements can expose distinctions between residences of different status.

Stokes' method of looking at bone parts takes into account the way the carcass was divided as the basis for an analysis of the spatial distribution. However, this functional approach to consumption and deposition practices at South Shields does not take into account the problems of working through possible specific deposition practices (such as placement of 'special deposits') engendered by people, which is suggested to have happened at Danebury and other Iron Age sites (section 1.3.4).

Various spatial analyses have been undertaken on a two-dimensional level at Danebury, including for small finds (Cunliffe 1995: 41), pottery (Brown 1991: 281-2) and human bone (Walker 1984: 458-9). While small finds and pottery do not show any specific patterning by density, the human bones are found outside the main area of greatest pit density in the early phase. The analysis of pottery was based on grid squares, rather than individual pits, and while this gives a good impression of the overall densities, pits are individual entities and should be investigated as such. Animal bones also offer the potential for in-depth analysis based not only on presence or absence, but also the meat and symbolic values of particular bone elements.

For the Iron Age hillforts the numbers of pits and overall length of occupation are significant factors to be taken into account. Hill (1993) has suggested that only one or two pits would have been filled in a human lifetime, assuming a consistent deposition rate. At Winnall Down it is suggested that one would have been filled every 10 to 20 years (Hill 1995a). Cunliffe (1992) however suggests that 8 would have been open at any one time, filled at the rate of one a year. Grant (2002) uses detailed analysis of individual layers within a pit together with toothwear evidence to suggest that one of the large Danebury pits was filled over a period of just over eighteen months, from the late spring in one year to the winter of the following year. If this were the case, deposits dating from the same month, or even year, may have been made into a number of different pits. Stratified layers in pits may not be isolated deposits, but a random fraction of all the bones deposited within that particular time span.

Thus the spatial distribution must not just be considered as two-dimensional but as three-dimensional, and this is of pivotal importance in understanding bone distributions. If sections of the site were designated for certain activities over long periods of time then it is likely that patterns will emerge. If the deposits were formed of an amalgamation of remains or from small scale, one-off activities then they are likely to present a far more complex pattern. There has been little work produced which has been able to look at temporal differences on large sites to a high degree of definition and accuracy, since dating techniques and sample sizes often prove inadequate.

One example is Stopp (1999: 139) who has looked at how Iron Age pit deposits formed at a site in Switzerland, and concluded that, for the lower layers in pits, material was gathered together in a protected environment before deposition in pits. This was based on the intermingling of bone parts and the low numbers of matchable fragments. She has not looked specifically at spatial patterning among the deposits, except to say that the parts had been broken up before deposition. Unfortunately, no interpretation of the possible activities prior to deposition was undertaken.

Theoretical thought on the patterning of both artefacts and ‘waste’ products such as animal bone has concentrated on the potential of looking at divisions between interior and exterior/ front and back (Bruneaux 1988), centre and boundary (Hingley 1990), spatial division into sectors (Pollard 1995), and on types of feature (Hill 1995b) and the meaning and recognition of ritual. These concepts are further explored in the following section.

The only GIS based investigation of Danebury to date has been landscape, not artefact, based (Lock & Harris 1996). However, the potential of GIS for intra-site studies has also been noted (Llobera 1993), and is more fully described in section 4.1.

To summarise, there have been no studies directly comparable to this one, and at Danebury, spatial analyses of pottery and small finds have not been in as much detail as the methods that will be used in this thesis. The approach used by Stokes (1996) is the closest to that which will be employed here. The datasets for a Roman fort and Iron Age hillfort are, however, very different, meaning that analysis of Danebury will be less straightforward. Temporal as well as spatial analysis is required for pit deposits, and the absence of secure stratigraphic dating of pits further complicates the distribution pattern. However, the concept of identifying which bones were part of a butchery unit, and where these bones were consequently found was first used, to good effect, by Stokes. Many of the spatial studies that have considered Iron Age animal bone have centred around functional and taphonomic explanations (for example Halstead *et al.* 1978; Maltby 1985; Wilson 1996). While these are important and should be taken into consideration, they are not necessarily the only factors at work. The focus here will be on attempting to look beyond the taphonomic biases to the activities which took place before deposition, using inclusive analyses. Historical and ethnographic examples have tended to concentrate on identifying patterns of activity (for example Binford 1978; Meadows 1997; Stokes 1996); this study will attempt to join the two.

### 1.3.4 Structured Deposition

Early faunal studies centred on animals as environmental indicators, as relics of past human economic regimes. As techniques improved, animals could be aged and sexed (e.g. Silver 1969; Wilson *et al.* 1982; Grant 1982; von den Dreisch 1976), and their proportions and sizes more accurately estimated. This led to the development of sophisticated techniques for assessing the husbandry regimes from the recovered assemblages, in the form of the sex and death profiles of the herd. However the question of whether or not the recovered assemblage was representative of the economy was initially overlooked. Two strands of investigation have been followed to ascertain the biasing effects that may be present: natural taphonomy (see chapter 2) and human depositional choice, which is the concern of this chapter.

In the initial report on fauna from Danebury, some deposits of animals were seen as ‘special’ if they conformed to specific criteria: these included the cranium, articulated parts and whole animals apparently placed deliberately in pits (Grant 1984a). Grant suggests that the

presence of whole animals of different ages and species, when found together, makes the chances of their being natural deaths very low (Grant 1984a: 542; Grant 1991b). The presence of sling stones and chalk blocks placed with the animals lends weight to the suspicion that there was ceremony involved, even if it were merely a waste deposit of a natural death or a diseased animal. The special deposits were also more frequently of species that were less well represented in the overall analysis (Grant 1984c).

Barrett suggests that animal and human partial skeletons in pits are symbolic of the death and rebirth which is epitomised by the agricultural cycle, a view which is in fact not far from Cunliffe's own (for example compare Barrett 1991 and Cunliffe 1995: 272), but Barrett suggests that the cycle must be embedded in the economic working of the site, and that this has not been addressed in the Danebury volumes (although it has been explored for the Environs sites). In contrast, Maltby (1985: 138) suggests that finds of large parts of animals deposited together represent nothing 'beyond what we should expect from sensible culling strategies'.

Wilson (1992: 341) has also disputed the evidence for special deposits, stating that they had been accepted 'without question' after the initial findings from Danebury. He accepts that animal bones found with burials and in shafts are ritual in origin, but argues that 'most of the criteria that identify Iron Age pit ritual are suspect' (Wilson 1992: 342). He suggests that taphonomic factors account for the presence of skull, articulated and whole skeletons as the pits preserve these unusual deposits better than other features. The presence of bones from younger animals in pits he also suggests to result from this factor, since these more fragile elements may have been less well preserved, and so less well represented, in layer deposits.

Wilson (1992) also states that there is insufficient documentation of associations of stone, artefacts and human bone. He says that the criteria for identification of ritual need to be better defined before ritual contents in Iron Age pits can be accepted definitively. I feel the emphasis of his critique is misplaced, and that Wilson is looking for a ritual or secular explanation, with no provision for a combination of the two. He does not dispute that what Grant calls 'special' deposits are unusual, but he wants them to fit into a predetermined scheme for 'ritual' deposits, which is, in the opinion of this author, too strict a means of defining deposits. This is especially true when it can be seen that communities in the Iron Age appeared to have different characteristics according to geographical location (see section 1.3.1.2), and that there is a huge range in the types of 'unusual' deposit (Grant 1984a: 542).

The difference in species proportions between defined special deposits and the bone regarded as waste, which is incorporated into the rest of the pit fill, is convincingly argued to be further evidence for the special nature of these deposits (Grant 1984a: 542; Hill 1995a: 57). Grant states that there is a higher proportion of less productive animals in terms of commodities (i.e. dogs and horses) in the pits containing special deposits. This, she says, may be due to a special status for these animals, or to the smaller economic impact which their loss would impart to the community (Grant 1984a: 542). Special deposits of the more economically important animals, such as cattle, show a lower incidence of whole animals which might also suggest this was the case. It could also be that horses and dogs may have been more symbolically meaningful and less utilitarian (companionship or hunting, for example, rather than wool and cheese production) or formed part of a different sociological category (a symbol of status rather than the essential provision of clothing or food) to sheep and cattle. Whichever is the case, it does seem that the deposits were being selected in some way.

Cunliffe (1992) suggests that pits may have contained special deposits that have since rotted, such as cheeses or hides. It is also possible that organs might have had significance and been used as special deposits - heart or lungs or even boned out muscle; see for example graves in prehistoric Sudan (Grant 2001). This would argue against Hill's assertions that pits with special deposits in them are different in other ways from those without, although there is as yet no evidence of organic special deposits. Hill (1995a) also takes a relatively arbitrary stance in arguing that there is little reason for us to regard skulls as special but not, for example, pelves. Some Gaulish sites appear to have afforded skulls special treatment (Bruneaux 1993) and Roman writers suggest that 'Celts' were fervent head-hunters. However, it is also documented that ethnographic groups can regard different parts of the skeleton as worthy of special status, for example sheep tibiae are of particular importance to some contemporary Mongol communities (Szynkiewicz 1990). Therefore it is not necessarily just skulls and articulated parts that would have been regarded as special.

Hill (1995a: 26) in fact believes that all deposited bones held some significance; he states that 'the very notion of waste in a subsistence economy can be questioned'. If the reasons behind deposition were functional, as proposed by Maltby (1985) and Wilson (1978) then why were some or all bones deposited in pits rather than further utilised as fuel, fertiliser or raw material for glue making and bone working? This explanation by itself is unconvincing, as it marginalises social aspects of consumption and deposition, such as choice and affluence.

Both Bradley (1985) and Hill (1995a) questioned the possibility that *any* deposit was fortuitously representative of the economic system in which it operated. Hill also states that the archaeological record is not a passive 'fall out' from past activities (albeit affected by factors such as canine gnawing, weathering or soil degradation, etc) but 'evidence for the specific practices... that reproduced past social life' (Hill 1995a: 125). He also states that an economic system could not operate independently of other cultural processes, and that patterns can be created by day-to-day management (Hill 1995a: 15), in addition to distinct rituals; a view also held by Lefebvre (1991). Therefore, although the majority of bones in pits were not recognised as special deposits, they were still deliberately deposited there, and should not automatically be assumed to be 'un-symbolic'.

Bradley (1985) had already suggested that artefacts that could have been re-used but were instead deposited were a form of offering. He thought this originated from gift giving, adapted so that items were removed from the cycle before the quantities being exchanged became too high. He was talking specifically about metal objects, but his arguments could be extended to animal remains that had not been fully exploited before deposition. In both cases a choice has been made to end the functional life of the artefact before absolutely necessary, although the reasons for this may not be overtly symbolic and could instead be simple dislike or lack of necessity. At Danebury, bone was not routinely exploited for marrow, and it is also possible that the special deposits may have still been fleshed (section 6.3). Bradley (1998) states that deposition in watery contexts prevented retrieval of wealth for later use, and the same would apply to a useable organic substance that had been buried; effectively it becomes a sacrifice. Wait (1985: 151) for example saw special deposits as entirely ritual sacrifices, citing Roman literature and ethnographic parallels, although these may not be reliable.

Another explanation for the intentional deposition of valuable or useful items is given by Sherratt (1991). He discusses the power of sacred items, and suggests that foods, for example, which had been used in some form of ceremony, would leave 'sacred waste'. This may have had to be disposed of in a ritually safe and appropriate manner, such as by burning, or even burying. Bone waste otherwise can easily be used in hearths as fuel, or on the fields as fertiliser. He suggests that 'with care, one might hope to discern various cycles of feasting, from domestic celebration to communal occasions requiring large scale slaughter/ sacrifice of animals and the brewing of drinks' (Sherratt 1991: 50). Maltby also says of a pit from Winnall Down containing many major meat bones: 'if these bones were processed at the same time, a substantial quantity of meat would have been made available.

It is probable that some means of preserving meat was employed, unless this meat was to be distributed immediately to a relatively large number of people' (Maltby 1985: 137). Although the emphasis is different, both Sherratt and Maltby suggest that deposits can in some cases directly reflect past activity (see also Grant 2002).

Hill (1995a: 24) holds a different opinion, stating that 'the archaeological record does not record the location of past activities but past disposal'. The activity that had been recorded is that of disposal, although the items from deposition would have been subject to other activities previously. Spatial patterns would not therefore necessarily closely reflect pre-depositional activity. Using Danebury as an example, it is possible to ascertain whether specific deposits in any way reflected prior activities, for example the creation of specific units of butchery (as discussed in section 1.3.3).

The very small minimum number of animals represented by the bone buried in pits again suggests the possibility that these were only a small proportion of the meat remains, and were perhaps in some way different to, or selected from, the bulk of the bone, as suggested by Hill (1995a: 60). At Danebury the minimum numbers of animals are very low (Grant 1984a: 546). For the entire life of the site (over 500 years), and the whole extent of settlement, an estimated minimum number of 4264 cows, sheep and pigs were deposited, or just over 8 individuals per year. Using species proportions from the site overall, we can propose that these comprised 6 sheep, one cow and a pig, a total net meat weight of 710kg (using Vigne 1991). At approximately 2 kg a day, this does not represent a great deal of food, although the hillfort may well only have been occupied on a seasonal basis or meat consumption have been an exceptional activity.

It is possible that this represents the total number of animals consumed in the Iron Age, but there has been no fieldwalking in the pasture area around Danebury, which could ascertain whether rubbish (including bones and pottery pieces) was deposited on the fields as fertiliser (Hampshire County Council, pers. comm.). In comparison, in 1950's Uganda, one chicken would feed a family for four days, and in England in the middle ages up to half of the year was spent in abstinence from meat (Fiddes 1991). It is not suggested that such low meat consumption was necessarily the case at Danebury, as it is quite possible that much of the remains from meat consumption was deposited in other areas (ditches perhaps, or on fields or thrown to the dogs suggested to have been present in small numbers at Danebury (Grant 1984a)) but it is worth bearing in mind that meat is not an efficient food to produce, and may have been a marginal element in the everyday diet.

However, if Hill's (1995a) theory that certain bone parts were 'reserved' for deposition during the ordinary process of butchery was right, then one might be able to detect patterning in the bone deposits, if particular elements had been selected. If this had occurred, the bone must have been in a 'safe' place, away from dogs or erosive elements, or the deposition must have been made very shortly after slaughter.

Pit deposits therefore may consist of a relatively small or large proportion of material which is not what would be expected of waste from 'secular' consumption, depending on whose interpretation one favours. Hill's theory has had repercussions in the analysis of recovered animal bone, which became to some authors reflective of specific 'behavioural' practices rather than, as previously thought, a reflection of past economic systems. The phenomenon of special deposits was seen to be widespread, with various Iron Age sites in Wessex showing animal bone of a supposed structured nature (Hill 1995a: 14). Smaller scale habitations like that at Barton Court Farm, Oxfordshire have similar types of deposit to Danebury. Here, although the settlement is dated to slightly later than Danebury and runs into the Romano-British period, there is evidence of special deposition of pig (Wilson 1986). There are also parallels with Iron Age Ashville in Oxfordshire, despite the original interpretation of articulated deposits as butchery waste in the base of pits (Parrington 1978).

There is great variance between different sites. Single special deposits at Danebury form 75% of cases, while special deposits at Winnall Down always occur in the same pit as others. This discrepancy may be caused by differing methodologies, especially since special deposits were only defined as excavations at Danebury progressed, implying that some from Danebury may have been overlooked. Other authors have largely followed the definition of special deposits made by Grant (1984a), so the nature of deposits are generally comparable, even though the incidence may not be. Thus a consideration of the intra-site patterning at Danebury does not necessarily provide a blueprint for the rest of the Southern British Iron Age, but should be regarded more as a set of findings with which to compare those from other sites.

Wait (1985) also looked at differences between special deposits from different types of settlement. He concluded that they occurred solely in pits, and skulls were the most common form of special deposit from any site. Hillforts and settlements had similar numbers of sheep and horses, while dogs were found mostly on settlements and pigs only from hillforts (Wait 1985: 251). Thus the setting and status of the site may influence depositional practice. However Danebury does not fall easily into one category, since it has ample evidence for

both dogs *and* pigs as special deposits. It may be that this analysis can help to define some other similarities, in terms of animal bone deposition, between Danebury and other sites.

The ways in which these deposits can assist in understanding the thoughts and practices behind deposition are still unclear. Associations and differences can provide 'clues' which help in the (re)formation of our ideas about life in the Iron Age, and analysis of processes which occurred prior to certain types of disposal should also be useful. As James Hill asserts, thoughts and practices do not always coincide. He cites the example of the USA where 'there are very strong analogies to the effect that "all men are created equal"… yet our *behaviour* shows that [this is] not true. We would see evidence of this archaeologically, but not be able to infer the ideologies' (Hill 1994: 90). So even where patterns or differences are found, it is not always possible to directly infer ideologies, and the evidence for behavioural practice may be the closest we can get to actually understanding mindsets. However there is potential for defining differences between sites and periods, even if the actual philosophy behind the deposit has been lost.

Special deposits have been defined as 'animals... or parts of animals... which were not exploited... in the normal manner' (Wait 1985: 151). The difficulty comes when trying to identify what exactly *is* the normal manner (if one existed), and which parts of which sites show evidence of 'ordinary' consumption and deposits, unaffected by ritual behaviour.

The use of the word 'ritual' itself is problematic. I have used it here in a less formal context than that in which it is normally encountered, to describe any activity which is engendered in societal rules and is repeatable, conforming to an accepted meaning. By this account, activities such as Sunday lunch would assume some of the status of ritual. It could be argued that any or all activity, including deposition, is structured according to social trends, since it is impossible to act outside of one's own frame of reference, which will have been socially defined (Brück 1999). Thus a Christmas meal assumes a higher level of ritual than a Sunday lunch and the Sunday lunch has a higher ritual status than a weekday dinner. This topic is discussed further in chapter 6, with consideration of *degrees*, instead of *definitions*, of 'ritual'.

If deposits represent specifically non-functional depositional activities, they may bear very little relationship to the predominantly functional domestic or craft-based activities that form the basis of analysis in this thesis (cooking/ butchery etc). The investigation of functional activities is still relevant to the analysis of the 'non-functional' history of animal bones. It is

impossible to investigate the spatial distributions of individual bones without first understanding the parts they were divided into and the associations they originally had. However, functional activities are often imbued with symbolic meaning, and indeed, many societies do not attempt to impose a strict division between the two. Economic practice may be inseparable from cultural practices. Barrett (1991: 2) states, for example, that all material culture is the residue of a significant system. It might be said that modern British society has an ideology based on rationalism, and therefore that our division of activities into ritual and secular is as culturally specific as a society that makes no distinction between the two (Hodder 1982). Therefore, what we see as functional activities (using butchery as an example) may have been as integral a part of, and as influenced by, a system of belief that might have produced special deposits.

Davidson provides a succinct example of the mingling of ritual and secular in consumption patterns. He states that in Classical Athens, 'Even the meat sold in the market... had been cut from animals that had been killed ritually' (Davidson 1997: 15). Here the meat was cut into equal sized portions for sharing, and was not butchered with any consideration for defined 'cuts' of meat. It therefore took on a different status to fish, which could be cut into fillets and appreciated by gourmands. He does not mention what happened to the resulting bone, but there is no indication that it was treated in any special way. However depositional practice in Iron Age Britain is suggested to be rather more complex. The discovery by Hingley (1990) that iron currency bars from Iron Age contexts are found at the terminals of ditches at the entrances of enclosures, led to the conclusion that items survived to be recovered *because* of, not *despite* burial, and that burial was a deliberate act possibly incorporating a high degree of ritual.

Pollard (1992) has shown structuring of deposits at Neolithic sites considered to be purely ritual in nature. At the Sanctuary, Overton Hill, Wiltshire, there is an east-west division in numbers of pig bone and these also cluster around one of the rings in the concentric circles (Pollard 1992). At Neolithic Woodhenge too, Pollard found clusters of artefactual material including bone. Pig bone was mainly found outside the structure, while cattle bone was found inside it, and the ditch terminals frequently contain animal bone, while other parts of the ditch contain human bone as the only artefactual deposit. Groups of bone containing burnt and unburned material are proposed to have been 'curated' before deposition, rather than burnt *in situ* (Pollard 1995: 141). The Neolithic date, 'ritual' nature and smaller scale of these examples inhibits direct comparison with Danebury, but as far as defining and describing a tradition of intentional, meaningful deposition goes, they are still important.

Therefore, the patterns of deposition shown in bone distributions as well as artefact studies (Hingley 1990), suggest that more was occurring than simple disposal of rubbish. For example children are more commonly buried centrally on non-hillfort sites (Hill 1995a: 12), and there are deposits of multiple animals in single pits (e.g. the 12 foxes, and single deer from one pit at Winklebury), and a predominance of certain species in other pits (e.g. raven at Winklebury (Fisher 1985: 29)).

In summary, there is ample evidence to suggest that not all pit deposits in the Iron Age were purely utilitarian in nature (Hill 1995a; Grant 1992; Barrett 1991). Some authors suggest that no surviving material reflected 'everyday' activities, but it has been argued here that everyday activities often incorporated symbolic meanings, even if deposits did not closely reflect activities. It is possible that all meat eating was an unusual activity. Caution must be practised when looking at butchery and spatial patterning at Danebury, in order to avoid simplification in analysis, or providing overly functional interpretations. However, taphonomy also played a part in forming patterns of bone distribution (Wilson 1992), and it is equally important to recognise differentiation between deposits that might be due to the poorer survival of certain bones, for instance those of younger animals or more fragile elements.

A useful addition to understanding the enigma of structured deposition, which can be provided by this thesis, is definition of the characteristics of the majority of bones in pits, and how (and how much) they differ from recognised special deposits and from the bones in ditches and occupation deposits. Differences in special deposits between sites suggest that other deposits may also differ by site. Also, considering the extent to which the butchery and spatial patterning of most bones are affected by the presence of special deposits can help us to understand how 'embedded' the special deposits were in everyday life.

### 1.3.5 Butchery Methods

At a broad perspective, it seems that butchery in Britain was community based at least from the Middle Ages up to the mid twentieth century. Differences in technique even in comparatively recent times can characterise habits of meat consumption. It also provides an understanding of the social context in which the butcher existed. This seems to have remained unchanged throughout the historical past from the later medieval period. Although it is recognised that the Iron Age is different in fundamental ways, it is still useful to

compare techniques applied to the carcass, allowing for alterations in conformation brought about by selective breeding.

Contemporary analysis of animal processing enables understanding of techniques leading to butchery marks. Peck (1986) looked at abattoirs of different sizes and related the marks left on the bones to the competence of the butchers involved. He concluded that where there were copious marks the butcher was inexperienced, since most joints could be separated leaving no trace on the bone. This has implications for understanding butchery from Danebury, i.e. that all bones may have been butchered even though few might be marked.

Aspects of butchery, which are often archaeologically invisible, can also be gleaned from texts on meat production. For example, slaughter by slitting the throat may mark the hyoid but only in the case of a very deep cut, although pole-axing is attestable in archaeological contexts (Grant 1975). The killing is best undertaken after resting the animal, as stress introduces acidity into the muscles and renders them more difficult to preserve (Gerrard 1964: 207). The techniques of killing can also be explored: to retrieve a high proportion of the blood, sticking is advised before or immediately following death. Documentary evidence can also provide information on the role of butchers and the development of butchery as a specialised craft. A full time slaughterman may not have been required in societies where meat was only occasionally eaten: in 19$^{th}$ century rural Britain the pig sticker could be 'a thatcher by day, so killed at night' (Malcolmson & Mastoris 1998: 91). In the past, when meat was consumed in smaller quantities the killing became an event: 'pig killing was... a semi-public act, involving several people... and (as a rule) more as subsequent beneficiaries' (Malcolmson & Mastoris 1998: 89) and in this case the butcher played a certain social role. If butchers were rarely needed, then the level of consistency in butchery might vary, and this might be reflected in the archaeological remains.

To interpret butchery marks on the bones requires some anatomical knowledge of the positions of tendons and muscles. Marks close in spatial terms can serve very different purposes, for example the cut made to a metapodial during the severing of the ligament to remove the foot can look very similar to a cut which impacted on the metapodial during skinning. Where cutmarks are found in areas of muscle and ligament attachment they can be suggested to arise from meat stripping and disarticulation respectively. Specific butchery texts (e.g. Lawrie 1998; Ashbrook 1955; Hammond 1932; Nicholls 1917) are valuable for assisting butchery technique and cut mark interpretation, described in greater detail in

chapter 3. The differentiation of butchery technique between species, demonstrated by these texts, means that species must be considered individually.

The butchery techniques undertaken at Danebury were not originally explored in detail or fully published, being intended for inclusion and elaboration in a further volume. The detailed study has not come to fruition, at the time of writing, although a brief summary has been published (Grant 1987). Most analyses of Iron Age sites provide only a cursory mention of the types of tools that could have been used, and the species that showed evidence of cuts from them. Even where butchery marks are published analysis is normally incomplete. No standardised system for recording butchery has yet been adopted, with questions raised about the ease of understanding for publication, necessity of recording the exact position of each mark, coupled with the desire to record all details for posterity. Attempts have been made by various authors to formulate computer compatible codes for recording butchery (Rixson 1989; Maltby pers. comm.; Hamilton, pers. com.) but none has been universally accepted. The illustrative technique is by far the easiest to comprehend, although it is time consuming. If a recording system could be decided on which satisfied the various demands, the topic would be made much more approachable for writer and reader alike.

Grant's interpretation of Iron Age butchery suggests a typical method of disarticulation at the joints (Grant 1987: 55). She suggests that the lack of burnt bone at Danebury implies boiling of meat, so the pottery evidence should therefore correspond to the size of parts the animals were divided into (see part 1.3.5.1). However, if the bones were defleshed then large parts of meat could have been roasted off the bone, although this is not a usual cooking method as bone conducts heat, making roasting more efficient. It is, however, perfectly possible to roast rolled joints which have been boned. Since the bones were disarticulated at most joints, the meat parts would be only as large as the anatomical part, i.e. that from the femur would only be as big as a ham, and could of course have been further divided.

Although the butchery recorded from the majority of Iron Age sites is not extensively published, there is some evidence for consistency. Comparisons are provided here between sites from central southern Britain, most notably Wessex and Hampshire in particular. In light of discussions into the extent of regional distinction in the British Iron Age (Bevan 1999), it has been decided to concentrate on those settlements of a similar geography in the initial analysis, and leave a wider interpretation to the final discussion. However the relative paucity of well documented sites from elsewhere in Britain will restrict comparison. Even

the well documented sites often have the merest description of butchery, with the main aim being to describe the implement, not the method or meaning, of dissections.

For instance, the butchery evidence from Gussage-all-Saints is very limited, but a depression on one cattle skull was noted, similar to that caused during pole-axing. The dog bones showed evidence of skinning and defleshing (Harcourt 1979). Maltby (1985: 137) suggests that at another unenclosed settlement, Winnall Down, the larger animals were 'disarticulated and stripped of meat', and these were found together in large 'dumps' of bone in pits. The bones were those that bear a large proportion of meat, and were not split to extract the marrow. In this part of Britain, bones do not appear to have been commonly split for marrow extraction, nor chopped, although in the late Iron Age there is some evidence for the latter at least at Maiden Castle: cattle and horse were chopped into regular sizes. Sharples (1991: 150) suggests this pattern of butchery was intended to facilitate cooking in pots, citing an ethnographic parallel.

In general, Iron Age sites such as the farmstead sites at Barton Court Farm (Wilson 1986) and Ashville, Oxfordshire (Wilson 1978), and defended sites such as Maiden Castle (Armour-Chelu 1991) and Danebury (Grant 1984a) show habitual disarticulation. The majority of cuts are found in particular places indicating, for example, the common disarticulation of the scapula and humerus, and the removal of meat from the scapula blade. Thus there are similar marks on the bones at Danebury and Winnall Down (Maltby 1985).

Studies have been made of butchery from different periods and geographical areas (e.g. Luff 1994; Armour-Chelu 1993; Stokes 1993; Bunn 1981). These are useful since they contain practical descriptions that serve to assist understanding of butchery processes. For instance, in Luff's analysis of Egyptian butchery practice, she concludes that the absence of knife cut marks on the distal articulation of the humerus indicated that pig and cattle carcasses were stiff and straight legged when butchered, since this articular surface is only exposed when the joint is flexed, and that cutting through the ligament here is the easiest method of disarticulation. Incompetence or inexperience may have led to the same effect, but she noted that other joints have been disarticulated efficiently. Goats, which showed many knife cuts on the distal articulation, were probably butchered when freshly killed (Luff 1994: 168). It is of course possible that the bone simply had not been marked by the butchery at this location, or that cattle and pigs were disarticulated differently; caution must be used when drawing conclusions based on the absence of cut marks, since they may not occur on all, or even most, butchered bone.

Despite the useful points raised by this analysis, direct comparisons between sites of different geographic locations and time periods are naturally limited in most cases. However, Rixson (1989) and Binford (1981) provide useful general descriptions of butchery marks and their causes. Investigation of the morphology of butchery marks has been undertaken at macro and microscopic levels, and these studies are invaluable when identifying the tools that caused butchery marks found on the bones (Olsen & Shipman 1988; Shipman & Rose 1983)

#### 1.3.5.1 Archaeological evidence for cooking and eating in the Iron Age

Agriculture played a large part in the eating patterns of Iron Age Britain. Grains and other vegetable matter are documented from Iron Age sites, as are a variety of domestic animal bones, and a small proportion of wild animal bone. Some cooking implements, such as spits, may be archaeologically invisible if made of wood, but pottery vessels are common. Ovens are not found at Danebury, although burnt daub is common and could be the remains of dismantled ovens; hearths were found inside some circular structures (Cunliffe & Poole 1991: 84-86). However, few of the bones from Danebury were burnt, as would be expected if meat were roasted on the bone (Kovacik 2000).

Coy suggested that roasting meat on the bone could cause an 'ivoried' effect; that is, bone which has the texture and appearance of ivory (Coy 1975). However, this interpretation was challenged, and she notes that the same effect could also be produced by rapid deposition (Coy 1987), so should instead serve as an indicator of human activity. This effect had not been recorded for the Danebury bone, and unfortunately, time constraints did not allow for further investigation of the incidence of burnt or ivoried bone, except for on a limited scale (chapter 2).

Analysis of pottery forms has the potential to aid our understanding of cooking methods. Pope (forthcoming), looking at vessel form and function in Iron Age Dorset, uses ethnographic analogy, vessel rim restriction, surface decoration and finish and residue analysis to propose four types of vessels: serving, processing, cooking and storage. The proportions of these can be used to define assemblages and look at activities and change, and she suggests predominant activities differ by settlement in the Iron Age. She notes that at Maiden Castle, the primary vessel form was for storage, which might suggest that the larger defended sites were indeed used for large scale storage. Pot size may also relate to the sizes of meat portions, if we assume that meat is being boiled; cooking pots at Danebury vary

widely in size from 100-320mm in diameter (Brown 1995: 55), which would accommodate most sheep/goat and pig bone elements, but suggests that the largest bones of cattle would have been filleted prior to cooking. Although there is potential for this type of analysis, it does not fall within the scope of this thesis (but see section 6.1.1).

#### 1.3.5.2 Animal bones in funerary contexts

Funerary deposits can in some cases provide valuable information about butchery cuts. For example, food offerings found in prehistoric graves from northern Dongola, Sudan were placed in the following specific portions: 'scapula and humerus (sometimes with the radius and ulna)… the tibia, calcaneum and astragalus; the ribs, with or without the sternum; the ribs and part of the vertebral column; all or part of the vertebral column; and the sternum alone' (Grant 2001: 549). Grant suggests the sternum may have been deposited with the heart, although this part would not survive archaeologically. These joints of meat may mirror those produced for the living, or they may be specific to funerary practice (although Grant points out that butchery techniques are often conservative in nature). Thus comparison of meat cuts in graves in the Iron Age with those interpreted from butchery marks might be informative.

Individual graves in Iron Age cemeteries in East Yorkshire often show the presence of animal parts (Stead 1991). It is uncertain whether these parts could represent habitual meat 'cuts', or a specific funerary rite either as a sacrifice or a funerary meal. The parts include pig mandibles, radius and ulna, and metacarpals (Stead 1991:141). Whole forelimbs have been found as special deposits at Danebury, and this could represent a particular ritual activity rather than mirroring animal disarticulation for consumption, something to be tested in this thesis. At Rudston the bones had been defleshed, so this was not a simple sacrificial offering but possibly resulted from a funeral feast followed by deposition of the bones, linking these deposits to consumption activity, if not everyday practices. However Hampshire and East Yorkshire were spatially and culturally separate in the Iron Age, so this may not provide a useful comparison.

In southern Dorset, Durotrigian burials with meat products consist of pigs in female graves and cattle in male burials, with sheep found in both (Whimster 1981). These are whole animals, such as found in pit deposits. A late Iron Age pit at Flagstones (Dorchester), in which was deposited an adult skeleton and infant skull, also contained articulated cattle and horse limbs (Hill 1995a: 121). The distinction between pits and burials appears to merge

here, and articulated animal limbs and human remains are commonly found in pits at Danebury. Layers do not contain any recognised articulated deposits, and may represent a different butchery technique and consumption activity to pits.

In summary, it seems that although there is potential for understanding societies using butchery analysis, this method of investigation has not been fully embraced by archaeologists. This is probably due to the small sample numbers from available sites and time restrictions, but this study should be able to address the issue exhaustively using the substantial numbers of bone from Danebury. Most sites in the Iron Age in Southern Britain seem to have a similar method of butchery involving disarticulation at joints. However there may be inconsistencies in cooking, portion size, the intensity of use of the carcass (for marrow extraction, etc) and other butchery methods (including the consistency of types of mark) that could assist in drawing distinctions between sites and site types in terms of consumption activity and specialisation. The social role of the butcher, that is, whether the person was a dedicated craftsperson or performed butchery as necessary, could be inferred from the consistency of butchery techniques. Ritual aspects can also be addressed by comparing the cuts of meat created in butchery to those deposited in graves.

### 1.3.6 Animal Symbolism

Animals have been assigned many different roles and meanings throughout contemporary and ancient human societies. Ethnographic analogies are at best mind-openers and inferences made from archaeological data can only ever be tentative. Nevertheless, some of the diverse ways in which animals are regarded shows the extent and variety of the symbolism which humans impose upon the natural world, and that one should be open to what appear to be non-functional explanations.

Some of the archaeological evidence from Iron Age Gaul strongly argues for special treatment of some parts of animals or their physical remains. For example a ‘shrine’ at Gournay contained numerous bones from mature oxen, along with the remains of meat-bearing parts of young sheep and pig (Green 1992: 94). Other archaeological evidence for symbolic roles which animals play is found from Yorkshire. At Burton Fleming and Rudston Iron Age cemeteries, parts of animals are found in graves, and often it is particular parts which are found: at Barton Fleming the left foreleg of sheep was prominent; at Rudston half pig heads and forelimbs (Stead 1991). These species and bone elements might therefore

carry some meaning, and deposits containing these combinations could be recognised in other features.

Historical archaeology offers ways in which to place meat consumption in a social framework. The definitions of animals alter according to the rites and needs of the society that defined them. For example, French Catholic colonies in Quebec classified the beaver as a fish in the 17th century as it 'spends most of its time in water' (Scott 1996: 346), thus permitting consumption of this animal on fast days, when other food in the new colonies was scarce. Households in Quebec were found to differ considerably in their animal bone assemblages, and nationalities were inferred from these findings. This type of research has a bearing on prehistoric periods, especially in considerations of Danebury where the site has been interpreted as 'belonging' to many different households (Hill 1995a) or to one controlling hierarchy (Cunliffe 1991).

There is an extensive ethnographical literature concerning the ways animals are treated and considered. This has included tamed/ wild oppositions (Levi-Strauss 1978: 472) and the reasons for the perceived divisions (Tambiah 1969). This has a bearing on how the animals are treated both in life and in death, and what are considered acceptable uses and means of consumption. The Karam of New Guinea give a special status to the pig and dog, which straddle the border between wild and tame, and to the cassowary which, although considered wild, is signified different due to its appearance (including 'human'-like legs) (Bulner 1967: 12). As a result of the special status of these animals specific rites are established around their consumption. The pigs' stomach and mouth cannot be eaten by men, for example, though women are permitted to consume these parts. The killer of the cassowary must eat its heart to return the spirit to the forest: archaeologically such divisions would be impossible to detect.

The Nuer of Sudan consider cattle as part of the community, in direct opposition to the 'domain of the wild creatures' (Rawson n.d.: 40). The Bedouin, when sacrificing cattle, do so at a sacred place, and leave the bones there in gullies and 'waste container', while the parts unconsumed in the ritual are taken back to the home, resulting in spatial separation of the parts (Klenk 1995: 64). The diverse parts in the gullies are therefore those eaten first at the ritual slaughter site. The symbolic choice in eating of different parts is evident in other societies. The inhabitants of Buquata share food according to ritual: species is the first consideration and mutton is of the highest status. Of the carcass, the head and sternum carry

the most value (Grantham 1995: 75). This could be archaeologically visible, if different places are used for the deposition of remains of different status.

The social sciences have also contributed to the discussions of the symbolic value of animals, mostly in examining the rites and taboos involved with the consumption of meat. Douglas for example considers the ways in which food is prepared for consumption, and the transformation from living animal to dead meat. She looks at the Jewish process of slaughter, where blood is a metaphor for life, so must be drained from the animal before consumption. The 'life' is seen to revert to God if the slaughter occurs in a holy place (Douglas 1975: 270). She also considers the prohibition of eating pig as a reflection of the desire for one community to stand apart from others, the pig being chosen for its perceived difference: like the forbidden rabbit and camel, the pig has no cloven hoof (in Leviticus 11: 2-3). She also considers the combination of food in meals to be significant. The temperature, components and order of dishes contribute to the hierarchy. For instance, the food served to different people will differ in composition (liquid/ solid), heat (hot to friends, cold to acquaintances) and order (a small dish first, the main in the middle and another small dish to finish). The social context of the edible animal and its component parts alters depending on who is eating it.

Binford calculated a meat utility index on the basis of what bones carried the most calorific meat, and a preference index which ranked the bones in order of desirability to the consumer, in this case the hunting society of the Nunamuit. The economic and perceived values were shown to be wildly diverging, highlighting the need for a regard of social values in any consideration of meat consumption patterns (Binford 1978).

'Curation' and selection of animal parts for later deposition have been suggested for Neolithic monuments (Pollard 1995), but can also be seen in more domestic contexts ethnographically. For example the Mongols keep sheep tibiae in the roofs of their houses to ensure fertility (Szynkiewicz 1990) while the Mesakin hang head bones of goats or cattle in or above the granary entrances (Hodder 1982). These bones are kept separate from the rest of the bones which are deposited outside the enclosure.

Animal food has often held a different status from plant food, and so the remains from each may have been treated in a different manner, and this could have led to deposition in different places. In India people eat different amounts of meat according to status and context. Upper caste Hindus do not eat meat, although lower caste communities may, and

this occurrence should be preserved in the material record. Some vegetarian farmers eat the meat of small animals when in private (Goody 1982: 127) but not in the village. The distinction between these public and private areas may also provide differences in faunal incidence. Bones may, therefore, be more symbolically loaded than, for instance, plant remains, and this could lead to different places or procedures for deposition.

Thus we conclude that there is evidence of special treatment of animal bones from Iron Age and ethnographic contexts, and therefore that bone deposition patterns from Danebury must be considered with an open mind for both functional and non-functional explanations. Particular bone elements or species may have held a different or ritual status, and bones that resulted from consumption of an overtly ritual nature might be deposited in a different place to those that did not. Different people may have eaten different parts or species, although the status of meat parts would not necessarily be what we would expect from meat or marrow content, or current meat values. Nonetheless, ethnographic analogy cannot be used as a direct explanation for archaeological patterning. The diversity of human behaviour, and the partial, distorted, nature of archaeological assemblages make direct comparisons unreliable. It is, however, likely that some form of pattern was present if the inhabitants of the hillfort consisted of different social classes, and if activities held different ritual status. This pattern may be visible archaeologically if deposition was similarly segregated.

### 1.3.7 Conclusions

Many research issues have been raised here. Danebury has been at the centre of a debate concerning the role of hillforts, interpreted variously as economic power centres, communal gathering places and symbolic enclosures. The exact nature of the relationship between Danebury and its surrounding settlements is still disputed and will be addressed in this project through analysis of the scales of consumption and degrees of craft specialisation between sites. However regional diversity is strong, and sites outside southern Britain may not be able to usefully contribute to this debate. The animal husbandry methods and butchery techniques at Danebury are (as far as can be assessed using current knowledge) similar to the majority of sites in Iron Age Wessex. Can any difference in butchery, cooking and meat consumption be recognised between sites that might be indicative of different status or function? Is there a difference in the extent of specialisation of butchery at different sites?

There is a lack of comprehensive, systematic butchery investigation and recording. Such a body of work from Danebury would assist interpretation at other sites where sample size is smaller and there is therefore less butchery evidence, and provide a means by which to assess differences between sites. Further to this, there is a lack of systematic investigation of spatial patterns from complex Iron Age sites. At Danebury, there is no evidence for spatial patterning of small finds or pottery, but more comprehensive analyses will be undertaken here, and in any case, bone remains may have held a different status from other artefactual debris.

Two-dimensional investigation of animal bone has been used to good effect on Roman sites (Stokes 1996), and with the application of powerful spatial data programs such as GIS, detailed spatial investigation can also be carried out on the extremely large sample at Danebury. Evidence for specialisation in industrial or craft activity would be suggested by spatial segregation of activities, and similarly, status differences of meat foodstuffs could also be established from the spatial segregation of particular bone parts. In addition, the investigation of bone element distribution by feature type could assist in defining the relative status of sites - animal bone assemblages from some sites were recovered mainly from ditches (e.g. Mingies Ditch) and at others from pits (e.g. Danebury); are the depositional differences between these sites (outlined in section 1.3.3) in fact due to differential deposition into pits and layers?

However, simple two-dimensional analysis may be inadequate for the task of unravelling the complex deposition patterns at Danebury. Differences within individual features must also be addressed, since pit deposits consist of many separate layers that could have resulted from the deposition of the remains of different, temporally separate, activities. A key issue is whether or not deposits reflect different activities. If so, it might be possible to distinguish different consumption activities, and perhaps to suggest the scale of consumption in different areas or times, or indeed on different sites.

Other aspects of social life, such as symbolism and ritual activity involving animal bone, have been shown to affect two and three-dimensional distributions of the relevant bone elements in some societies. It is probable that some kind of ritual activity existed in the Iron Age, and that functional interpretations may not provide the complete story; certain, repeated bone element associations might be meaningful and should be looked for. An important aim of this thesis is to identify what differences, if any, existed between the majority of bone elements and those found in association with special deposits. This should enable us to better understand the nature of ‘special’ and ‘everyday’ deposition in the Iron Age, and to identify differences between sites that may have a basis in deposition, as well as consumption, activity.