The Later Iron Age in Britain and Beyond

edited by

Colin Haselgrove and Tom Moore

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The end of the Sheep Age: people and animals in the Late Iron Age

Umberto Albarella

At a conference in Sheffield a few years ago, I suggested that if the three age system had been created by a British zooarchaeologist, we might today be talking of a Cattle Age (the Early Neolithic), a Pig Age (the Late Neolithic), and a Sheep Age (the Bronze and Iron Ages; Albarella 2000). It goes without saying that this is a complete caricature of the reality, but perhaps no more so than the characterisation of a particular phase of human evolution on the basis of the most common material used to make tools. Of course, just as we find that some Iron Age societies barely used iron, there are also cases of populations of that period for whom sheep were less important than other livestock. Despite the obvious exceptions to any generalisation, it is worth bearing in mind that animals can be as representative of a society as any other elements of material culture.

In this paper I will discuss the relationship between people and animals in a period that ranges from approximately the mid second century BC to the first century AD (i.e. the Late Iron Age). We will see that this is a phase that especially deserves to be called the Sheep Age and anticipates the return to the Cattle Age prompted by the Roman invasion in AD 43. The paper is general enough in its aims not to require a precise definition of the area under investigation, but broadly speaking I will be writing about central and southern Britain.

The interest of the Late Iron Age for our understanding of past (and present) human cultures cannot be overestimated. This period pre-dates an important invasion, which is historically well documented. It therefore provides us with an excellent opportunity to analyse the effects of acculturation, or at least attempted acculturation. We have little chance of properly understanding the effects of the Roman conquest of Britain, if we do not have at least some idea of the lifestyle and customs of the British population before that event. The Late Iron Age is not just of historical interest *per se*, but it also provides us with the opportunity to analyse the mechanisms of cultural contact. This interest is enhanced by the fact that archaeology works at its best when it can be used comparatively, and the study of this period offers us the opportunity to compare life in Britain before and after this major historical event. It would, however, be a mistake to compare the Late Iron Age exclusively with the Roman period, as its characteristics depend equally on what occurred before its onset. A comparison with the Early and Middle Iron Ages – although the boundaries are not as clear cut as those with the Roman period – is therefore also appropriate.

The chief aim of this paper is to investigate to what extent the evidence of animal bones from archaeological sites can help us in characterising the Late Iron Age. To do so we will have to analyse differences and similarities with earlier and later periods. A full review of the available data is beyond the scope of the paper, so I will select the elements which are central to the question of how distinctive was Late Iron Age exploitation of animals. I will not discuss the intriguing dearth of aquatic resources – particularly fish – at many sites of this period, as this is dealt with in another contribution (Dobney and Ervynck this volume). Equally, I will not deal with the frequent and widespread presence of skeletons or partial skeletons of animals on Iron Age sites. This phenomenon has already generated much debate (e.g. Grant 1984a; Wilson 1992; Hill 1995a), and it would not be very useful to revisit the issue here. This is not to say that this paper will focus exclusively on economic aspects of Iron Age societies. That 'faunal… remains on Iron Age sites are very much "cultural" in the nature of their deposition' (Parker Pearson 1996,

128) is a truism, but it is probably still worth mentioning. Any dump of bone material on an archaeological site has cultural implications, which are connected with the organisation of the society and its beliefs. These characteristics are not exclusive to the so-called 'structured depositions' – a much-abused term in British archaeology (see Albarella and Serjeantson 2002).

Previous studies

It is often pointed out that our view of the Iron Age is strongly biased towards central southern Britain (e.g. Bevan 1999a, 1). This bias also applies to the study of animal bones. Although zooarchaeological studies of Late Iron Age faunal assemblages have been undertaken from sites across Britain, their frequency tends to diminish from south to north. A difficult balance therefore needs to be struck between using the evidence from the south as an interesting case study, but at the same time avoiding the trap of applying it uncritically to the rest of the country.

To draw truly convincing results about past ways of life, zooarchaeologists need to deal with at least a number of large assemblages of bones, which will permit the analysis of aspects of animal exploitation that go well beyond a mere list of exploited species. The reality of the present evidence is that the sites that have produced some of the largest animal bone assemblages tend to be in the same region (Wessex and neighbouring areas).

The study of the largest animal bone assemblage ever recovered from an Iron Age site was that carried out by Grant (1984b; 1991; but see Jones 1995 for a final comment) on the material from the famous hillfort of Danebury (Hampshire). The assemblage included bones from all Iron Age phases, but there was no Roman material. Another important Late Iron Age assemblage, also from Hampshire, is that from Owslebury. Regrettably the full study of the bones has never been published, but an Ancient Monuments Laboratory report is available (Maltby 1987). Unlike Danebury, Owslebury did not have any material from the Earlier Iron Age, but provided the opportunity for comparing the Late Iron Age with the Roman period.

Bob Wilson has studied several Late Iron Age assemblages, mainly from the upper Thames valley, but his key contribution is probably his work on the horizontal distribution of animal bones, which has made us aware of how different context types may produce assemblages with different biases (for a compendium of this evidence see Wilson 1996). Wilson's approach was also applied to the animal bones from Owslebury, where Maltby (1987) highlighted patterns and differences not only in the vertical, but also in the horizontal distribution of the bones. More recently, Hambleton (1999) has produced a very useful review of the relative frequency and age patterns of the three main domesticates (cattle, sheep, and pig) on British Iron Age sites. There are many other works, but this is the key evidence we must consider in studying the relation between people and animals in the Iron Age.

Historical sources

Although we have no direct written accounts of the British Late Iron Age, several Greek and Roman writers provide some information about life in Britain in this period, but for the most part this includes only a few vague references to the use of animals. The one source that provides more that a passing reference to agricultural practices and the use of animals in Britain is Caesar's account of the Gallic war. First he mentions the customs of Belgic populations, who had moved from the Continent to the maritime part of Britain. According to Caesar, these people cultivated the fields and owned vast amounts of livestock, and in general led a lifestyle not dissimilar from that of their land of origin. Apparently they restrained from eating hares, domestic fowl, and geese, but liked to keep some of these animals (*Gallic War* V, 12). In addition, Caesar states that the coastal populations were far more civilised than those living inland, who did not practice agriculture, lived entirely on milk and meat, and dressed in leather (*ibid.* V, 14).

Writing at the end of the first century AD (i.e. after the Roman conquest) Tacitus is disappointingly uninformative about British life in that period. Apart from mentioning the unpleasantness of the climate and the fertility of the soil, which produces many crops but neither olives nor vines (*Agricola* 12), he is silent about the relationship between indigenous people and their landscape. This lack of detail is particularly lamentable if we compare the *Agricola* with Tacitus' account of German populations (*Germania*), with its wealth of information about the local exploitation of natural resources. Among other sources it is worth noting that the Greek Strabo (late first century BC) mentions in his *Geography* (IV, 5, 4) that Britain exported to the Continent, among other things, grain, cattle, hides, and hunting dogs.

One word of comment is necessary. We must bear in mind that classical writers had a biased view of the world, which they tended to interpret as having its central place in Rome (Bevan 1999, 3). For instance Caesar's view of British life in inland areas – which can easily be discounted on the basis of archaeological evidence – tends to reflect the idea that the level of civilisation decreased when moving further from the area of Roman influence. A similar approach can be detected in Tacitus' account of Germanic populations. In addition, the reliability of these sources cannot be taken for granted. Caesar in particular seems to be rather fanciful in many of his descriptions – see for instance the imaginary animals supposed to live in the forested areas between Gaul and Germany (*Gallic War* VI, 25–28).

It is therefore possible that these brief descriptions tell us more about Roman ideology than about the reality of the people living in north-west Europe. Yet – however biased – these words represent our only opportunity to hear a direct account of the people from this distant past, and we should therefore not ignore them.

The Late Iron Age and before

A starting date for the Late Iron Age cannot easily be established. Cunliffe (1991, 107) and Haselgrove (1999a, 130) place this around 150 BC, while other authors propose a somewhat later date (see Hill 1995b, 74). What is more important for this paper, however, is to pinpoint what criteria have been adopted to discriminate the Late Iron Age from previous periods.

The classic subdivision of the Iron Age is based on pottery typology. The Late Iron Age, in particular, is characterised by the appearance of new pottery forms, which seem to have been influenced by French and Roman originals (Hill 1995b, 79). Among other elements used to identify this period it is worth mentioning the suggested intensification not only in pottery making, but also in salt extraction, ironworking and in general in the trade with the Continent (Cunliffe 1991, 157; Haselgrove 1999a, 128–32). This last phenomenon seems also to have been associated with an increased consumption of exotic foodstuffs and drink, probably used as a means of social distinction (Hill 2002). Even more relevant here is that the period seems to be typified by an intensification in agricultural activity witnessed by the increased clearance of forests and the colonisation of areas with heavier and damper soils (Haselgrove 1999b, 271). This phenomenon is probably linked with the increased use of spelt (*Triticum spelta*), a type of wheat better suited to heavy soils, for which there is evidence from the Tees lowlands and other areas in northern England (Van der Veen 1992, 77).

Are any of these aspects of the Late Iron Age also reflected in the faunal record? The slight relative increase in sheep in the latest phases that seem to characterise the flagship site of the British Iron Age – Danebury – and a few other sites in Wessex (Grant 1984b; 1984c, 116), has led to the suggestion that in the south of the country sheep numbers increased 'throughout the first millennium' (Cunliffe 1991, 380). Maltby (1996, 21) refutes this suggestion, as he regards it to be based on insufficient evidence and not supported by data from other Wessex sites. Hambleton (1999) reinstates Grant and Cunliffe's assumption of a relative increase of sheep on the downland sites of southern England, but fails to identify any similar trend in other British regions.

A review that I carried out on sites located in the Midlands and East Anglia, however, suggests that the Wessex situation may not be unique. Figure 1 shows that the frequency of sheep bones is much greater at

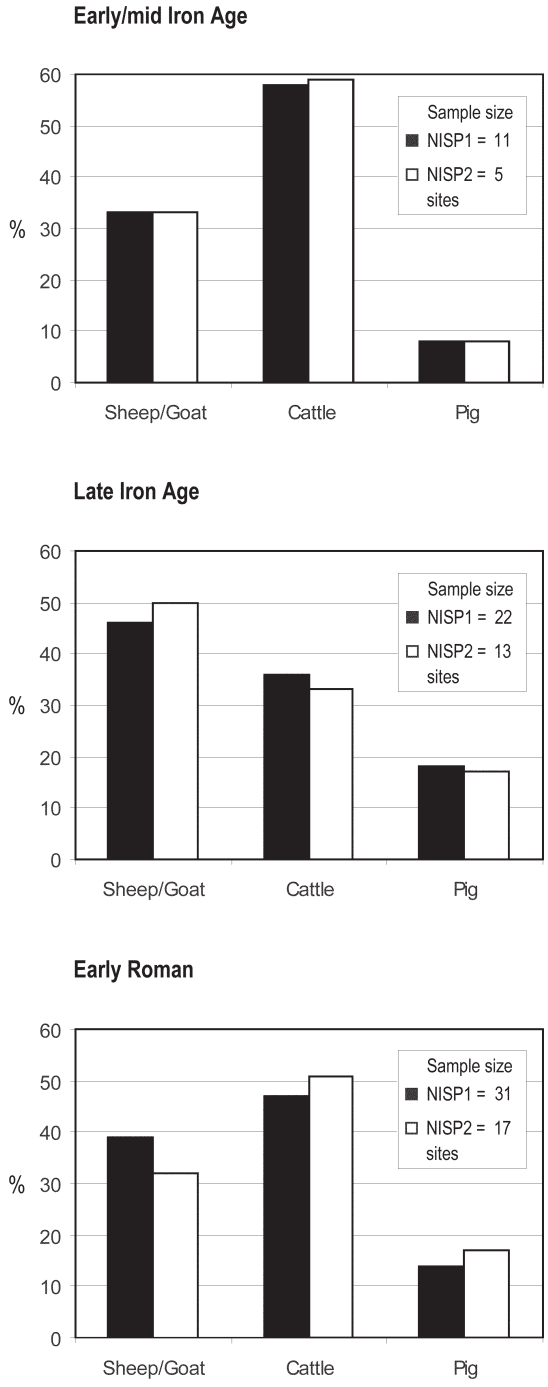

Fig. 1. Average frequency of the main domestic mammals at Iron Age and early Roman sites in the Midlands and East Anglia (see Table 1). NISP = Number of identified specimens; NISP 1 = mean of the percentages calculated for each site; NISP 2 = percentage of the total NISP for all sites. Despite small variations, the two calculations (NISP1 and NISP2) show similar trends.

Late Iron Age sites than at those of Early and Middle Iron Age date. Details of the sites can be found in Table 1. Hambleton (1999) has already highlighted the fact that Iron Age sites in eastern Britain tend to have a large number of cattle bones. This certainly seems to apply to

Site	*County*	*Date*	*Type*	*Sheep NISP*	*%*	*Cattle NISP*	*%*	*Pig NISP*	*%*	*Reference*
Blackhorse Road	Hertfordshire	EIA	Enclosure	48		98		11		Legge *et al.* 1989
Harborough Rocks	Derbyshire	EIA	Open settlement	26		30		8		Bishop 1991
Ivinghoe Beacon	Buckinghamshire	EIA	Hillfort	658	32	1243	61	140	7	Westley 1970
Moles Farm	Hertfordshire	EIA	Pit cluster	11		54		0		Ashdown and Merlen 1970
Tallington	Lincolnshire	EIA	Enclosure	37		63		13		Harman 1993
Pennylands	Buckinghamshire	EIA/MIA	Open settlement	341	30	710	62	94	8	Holmes 1993
Scole-Dickleburgh	Norfolk	EIA/MIA	Unknown	231	34	351	56	58	9	Baker 1998
Ardale	Essex	MIA	Unknown	6		102		1		Luff 1988a
Aston Mill Farm	Hereford & Worcs	MIA	Enclosure	276	44	279	44	74	12	Lovett 1990
Blackhorse Road	Hertfordshire	MIA	Enclosure	130	26	330	67	31	6	Legge *et al.* 1989
Coldharbour Farm	Buckinghamshire	MIA	Open settlement	72		63		7		Sadler 1990
TOTAL				1836		3323		437		
Beckford	Hereford & Worcs	LIA	Enclosure	115		134		27		Gilmore 1972
Bierton	Buckinghamshire	LIA	Pit cluster	607	45	445	33	304	22	Jones 1988
Blackthorn	Northamptonshire	LIA	Enclosure	74		68		6		Orr 1974
Braughing Bath House	Hertfordshire	LIA	Village	91		84		89		Ashdown and Evans 1977
Burgh	Suffolk	LIA	Enclosure	692	48	585	40	178	12	Jones *et al.* 1987
Clay Lane	Northamptonshire	LIA	Enclosure	516	42	642	53	64	5	Jones *et al.* 1985
Cowbit Wash	Lincolnshire	LIA	Saltern	28		94		2		Albarella 2001
Dragonby	Lincolnshire	LIA	Open settlement	2922	58	1415	28	658	13	Harman 1996
Dragonby	Lincolnshire	LIA	Open settlement	3945	58	1944	29	879	13	Harman 1996
Elms Farm (Heybridge)	Essex	LIA	Open settlement	216	18	780	65	196	16	Johnstone and Albarella 2002
Edix Hill (Barrington)	Cambridgeshire	LIA	Open settlement	337	55	177	29	102	17	Davis 1995
Edmundsoles	Cambridgeshire	LIA	Pit cluster	78		24		41		Miller and Miller 1978
Hardingstone	Northamptonshire	LIA	Industrial	473	48	379	38	140	14	Gilmore 1969
Harlow Temple	Essex	LIA	Temple	1777	89	55	3	155	8	Legge and Dorrington 1985
Moulton Park	Northamptonshire	LIA	Enclosure	192	30	364	57	79	12	Orr 1974
Nazeingbury	Essex	LIA	Farm	40		142		15		Huggins 1978
Old Bowling Green	Hereford & Worcs	LIA	Industrial	147		94		10		Locker 1992
Puckeridge and Braughing	Hertfordshire	LIA	Open settlement	446	35	396	31	445	35	Croft 1979
Rainham Moor Hall Farm	Essex	LIA	Unknown	12		91		10		Locker 1985
Skeleton Green	Hertfordshire	LIA	Open settlement	449	18	786	32	1202	49	Ashdown and Evans 1981
Tort Hill West	Cambridgeshire	LIA	Open settlement	39		64		14		Albarella 1998
Wardy Hill	Cambridgeshire	LIA	Enclosure	708	56	371	29	183	15	Davis 2003
TOTAL				13904		9134		4799		

Table 1. (above and right) List of sites with frequencies of the main domestic mammals used to create Fig. 1. NISP = Number of identified specimens. Percentages have only been calculated for sites whose total NISP for the three species was greater than 500. Only these sites have been used to calculate NISP 2, while all sites contribute to NISP 1 (see Fig. 1). EIA = Early Iron Age; MIA = Middle Iron Age; LIA = Late Iron Age; ER = Early Roman. These are all hand-collected assemblages. Sites where the hand-collected and sieved samples had been combined have been excluded as they are not comparable with the others.

Site	*County*	*Date*	*Type*	*Sheep NISP*	*Cattle %*	*Pig NISP*	*Reference %*	*Site*	*County*	*Date*
Buckingham Street	Buckinghamshire	ER	Urban	9		15		2		Jones 1982
Caesaromagus	Essex	ER	Temple	1255	70	384	22	146	8	Luff 1992
Caesaromagus	Essex	ER	Local centre	130		152		36		Luff 1988b
Castle Hill (East Bridgeford)	Nottinghamshire	ER	Fort	126		65		6		Harman 1969
Causeway Lane	Leicestershire	ER	Urban	1475	36	1983	48	675	16	Gidney 1999
Colchester	Essex	ER	Urban	3206	23	7838	57	2761	20	Luff 1993
Dodder Hill	Hereford & Worcester	ER	Fort	74		141		10		Davis 1988
Dragonby	Lincolnshire	ER	Open settlement	413	51	284	35	111	14	Harman 1996
Dunstable	Bedfordshire	ER	Burials	102		86		1		Jones and Horne 1981
Elms Farm (Heybridge)	Essex	ER	Open settlement	462	26	1231	69	101	6	Johnstone and Albarella 2002
Grandford	Cambridgeshire	ER	Village	461	60	218	28	91	12	Stalllibrass 1982
Harlow Temple	Essex	ER	Temple	563	84	24	4	81	12	Legge and Dorrington 1985
Hockwold-cum-Wilton	Norfolk	ER	Villa + Vicus	112		115		10		Cram 1967
Kelvedon	Essex	ER	Unknown	68		96		33		Luff 1988c
Lincoln	Lincolnshire	ER	Urban	40		79		12		Scott 1988
Lincoln	Lincolnshire	ER	Urban	132	22	386	65	77	13	Dobney *et al*. 1996
Longthorpe	Cambridgeshire	ER	Fort	596	30	1123	56	276	14	Marples 1974
Longthorpe	Cambridgeshire	ER	Military	772	36	1221	58	120	6	King 1987
New Cemetery	Staffordshire	ER	Fort	66	14	306	65	101	21	Levitan 1996
Old Bowling Green	Hereford & Worcs	ER	Industrial	195		88		14		Locker 1992
Orton's Pasture	Staffordshire	ER	Enclosure	45		129		28		Hammon 1998
Park Street	Northamptonshire	ER	Urban	167		149		52		Payne 1980
Puckeridge–Braughing	Hertfordshire	ER	Town	701	55	366	29	215	17	Fifield 1988
Rainham Moor Hall Farm	Essex	ER	Unknown	10		67		0		Locker 1985
Sheepen	Essex	ER	Industrial	1188	20	3107	52	1714	29	Luff 1985
Sidbury	Hereford & Worcs	ER	Roadside settlement	451	47	431	45	71	7	Scott 1992
St Peters School	Essex	ER	Enclosure	18		166		0		Bedwin 1988
The Shires	Leicestershire	ER	Urban	525	32	749	46	360	22	Gidney 1991
Wavendon Gate	Buckinghamshire	ER	Unknown	171	21	611	75	35	4	Dobney and Jaques 1996
West Stow	Suffolk	ER	Industrial	279	44	257	41	97	15	Crabtree 1990
Whitwell	Leicestershire	ER	Farm	50		15		5		Harman 1981
TOTAL				13862		21882		7241		

the group of chosen sites from the earlier period – when cattle is even more frequent than it was to be in the Roman period – but not to the Later Iron Age sites.

Of course a number of difficulties have to be borne in mind in this comparison. Inter-site analysis is notoriously complex and full of potential pitfalls. Firstly, none of the sites considered has an Early or Middle Iron Age *and* a Late Iron Age phase. In other words, the two chronological groups include completely different sites and there is no opportunity to observe progression through time at the same site (as was possible at Danebury). This means that, beside chronological changes, factors like different geographical location and type of settlement may affect the frequency of species. In addition, different bone assemblages have probably been subject to different levels of taphonomic modification and quality of recovery during excavation, and derived from different types of contexts. Strictly speaking the two groups of sites are not directly comparable.

However, if we consider that no clear correlation has been found between settlement types (with the exception of banjo enclosures that tend to have more sheep), geological location, altitude, and species frequency (Hambleton 1999), we can be more confident that the difference between the two periods is genuine. Preservation and recovery factors will probably also have acted randomly in the two groups and whilst they certainly play a role in affecting the representation of species in individual sites they are unlikely to be the main factor behind this general trend. A less crude comparison should probably be carried out, but in the meantime the evidence points rather convincingly towards an increase in the importance of sheep in the Late Iron Age in central England.

To sum up the situation across the country, we should mention that on the downland of southern England there is a strong predominance of sheep throughout the Iron Age – probably reflecting the fact that this is a rather dry area and hence less suitable for cattle breeding. In this area sheep increase further in the later part of the period. In the upper Thames valley the frequency of cattle is much higher, and this predominance remains in place until the end of the period. The damper conditions of this region would not favour sheep husbandry (Grant 1984c, 104). In central England (the Midlands and East Anglia), there is also a predominance of cattle, but this situation is reversed in the Late Iron Age. In all other regions the evidence is too scanty to identify any clear chronological change (see Hambleton 1999, 59–60).

The trend, observed in some regions, of an increase in the importance of sheep, is not matched by any parallel change in strategies of sheep husbandry, at least as far as we can tell from the available evidence. There is a hint that the Late Iron Age witnessed an increase in mutton production at some southern sites (Maltby 1987, part 6; 1996, 23), but the general pattern indicates continuity rather than change (Hambleton 1999, 88). In most Iron Age sites – early and late – a large proportion of sheep was culled when relatively young, before they reached their optimum size in terms of meat production. This has led Grant (1984c, 107) and other authors to suggest that Iron Age sheep husbandry was more oriented towards wool than meat production. However, a comparison of three Iron Age sites, all displaying a quite typical mortality curve for the period, with a medieval site, where there is almost certainly an emphasis on wool production, shows striking differences between the Iron Age and medieval profiles (Fig. 2).

The killing of sheep at such an early age is likely to be connected with the difficulty of keeping and feeding large numbers of animals over the winter. Many yearlings would therefore be slaughtered in the late autumn before they start losing weight (Hambleton 1999, 70). A detailed analysis of the distribution of sheep tooth wear stages at the Mid/Late Iron Age site of Market Deeping (Lincolnshire) has highlighted the presence of a seasonal peak, probably corresponding to the period immediately preceding the coldest part of the year (Albarella 1997). Autumn killing has also been suggested for Edix Hill, Barrington (Davis 1995), and the Puckeridge sites of Station Road (Croft 1979) and Skeleton Green (Ashdown and Evans 1981).

Sheep were probably numerous, otherwise such a high rate of juvenile killings would have been difficult to sustain. However, management of the flocks may have been difficult, particularly over the winter. Meat, wool and milk were probably all used, with no specialisation in any particular production. Sheep must also have been important as sacrificial animals, as indicated by zooarchaeological work at the temple of Harlow (Legge and Dorrington 1985). The sacrifices sensibly occurred in autumn, to avoid any clash of economic and religious needs.

There seems to be a greater variation in cattle husbandry strategies between different sites. Some – like Danebury (Grant 1984a) and Cowbit Wash (Albarella 2001) – have large numbers of young calves, perhaps an indication of an emphasis upon milk production, although Hambleton (1999) suggests that this – at least in the case of Danebury – may represent the effect of a preservation bias. Others have large amounts of immature animals (Maltby 1996, 21), probably an indication of a particular interest in meat production. There are, however, also sites where most cattle are fully adult (Hambleton 1999, 78), which is probably a consequence of their use for traction. All in all there seems to be little evidence of specialisation, with the possible exception of a few individual sites. Most importantly, the evidence does not show any sign of a chronological trend, with the Late Iron Age similar in character to the earlier periods.

The only detectable element of animal husbandry that seems to differentiate the Late Iron Age from the previous period is the increase in sheep numbers (relative to cattle) that occurs in some regions. Can we relate this with the hypothesised agricultural intensification men-

tioned above? Both Cunliffe (1991, 380) and Hambleton (1999, 59) emphasise the importance of sheep manure for increasing soil fertility. Sheep were certainly folded onto the fields on a regular basis, and perhaps they were more suitable than cattle for this purpose, as they cause less damage and also – in many environmental conditions – they could have been easier to keep. Since crops can provide a higher yield of food per unit area than animal products, it is possible that a population expansion may have brought about the need to intensify agricultural activity, with the main purpose of animal keeping being their service to cultivation. In this respect an increase in sheep may be a by-product of farming intensification. There are, however, still obscure areas in this hypothesis, as cattle, though probably not as efficient as sheep in manuring the land, have the great advantage of providing traction power – a key factor in crop production. The clarification of this problem is frustrated by the dearth of sites that have Middle *and* Late Iron Age phases. As usual, more work is needed, both on the available data and in uncovering new evidence.

It has also been suggested that cattle, being more expensive to keep, may be indicators of wealth (Haselgrove 1999b, 268). It is therefore possible that their reduction in number in the Late Iron Age caused – or was a consequence – of some re-organisation of Iron Age society. If cattle were really a status symbol, then the fact they had become rarer (relatively to sheep) must have made them even more valuable. We should consequently consider the possibility of linking cattle frequency with the higher status of particular sites. Once again economy cannot be completely disconnected from social issues.

Pigs are consistently the third commonest species found on Iron Age sites, although a few exceptions occur, like Skeleton Green (Ashdown and Evans 1981). There is a slight trend towards increased pig frequency in the Late Iron Age (Fig. 1 – although not at Danebury where the opposite is the case), but it is hard to say to what extent this is significant. Perhaps more interesting is the consideration that relatively low numbers of pig bones are a characteristic of the British Iron Age, as sites in continental Europe tend to have much higher frequencies of this species (Grant 1984c, 112; Hambleton 1999; cf. Méniel 1987). Since pig is solely a meat-producing species, it is possible that this implies lesser consumption of meat on British sites, which may have relied to a greater extent on crop production.

Hunting (particularly of deer) may have been of social importance in the Iron Age (Grant 1981), but had little impact on the diet. Bones of wild animals are found quite regularly on British sites, but always in small numbers. Even in this respect the Late Iron Age does not seem to differ from the earlier periods.

The Iron Age faunal record provides little evidence of trade intensification in this period. However, one species, the domestic fowl (*Gallus gallus*) – although it had probably found its way to this country a little earlier – turns up with some regularity only from this period

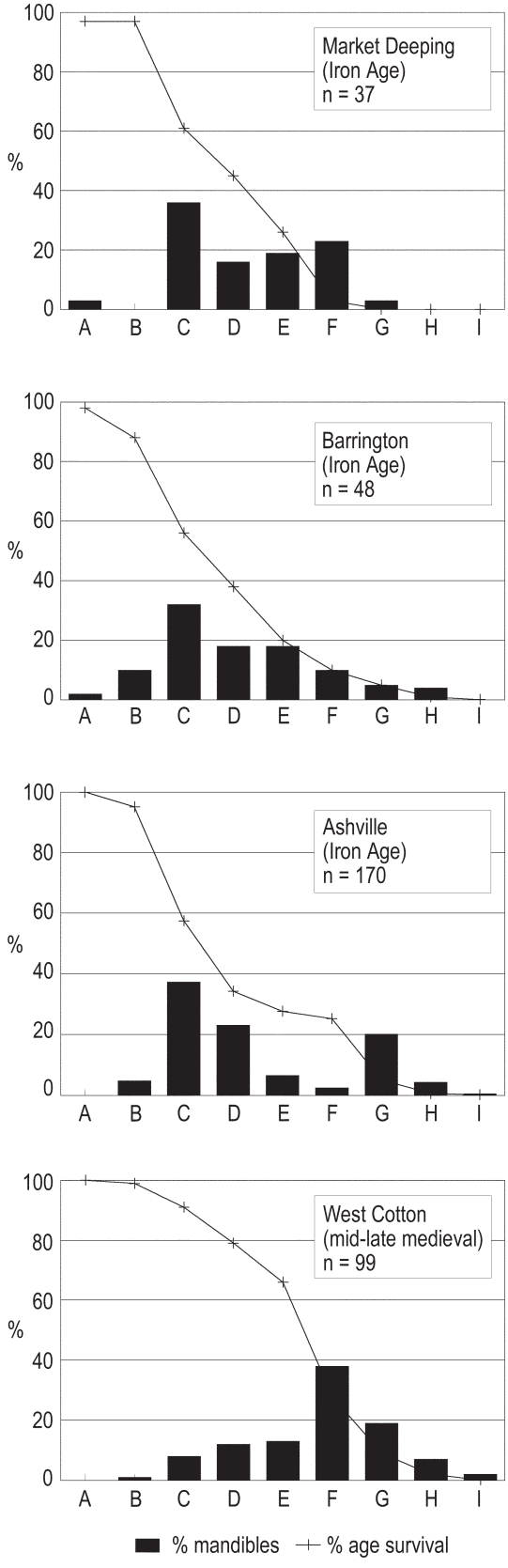

Fig. 2. Relative percentages of sheep mandibles by age-stage at the Iron Age sites of Market Deeping (Albarella 1997), Barrington (Davis 1995), and Ashville (Hamilton 1978). To emphasise the contrast, the kill-off pattern at the medieval site of West Cotton (Albarella and Davis 1994) is also shown.

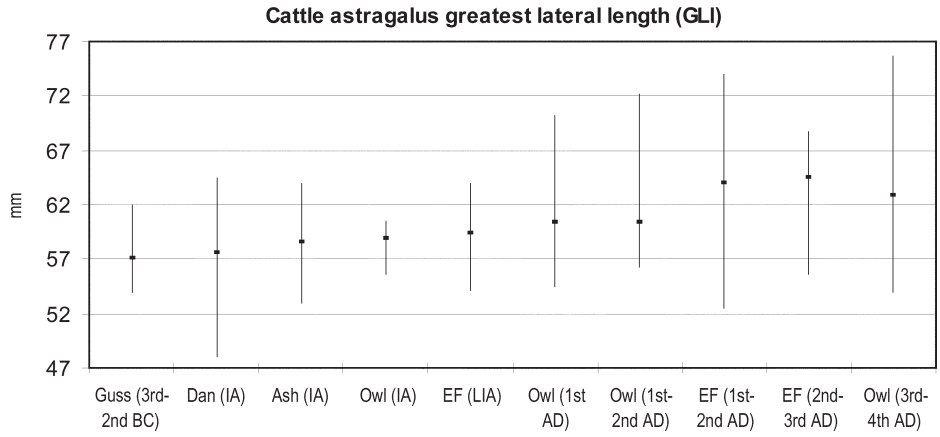

Fig. 3. Cattle size (range and mean) at various Iron Age and Roman sites in Britain. Guss = Gussage All Saints (Harcourt 1979); Dan = Danebury (Grant 1991); Ash = Ashville (Wilson et al. 1978); Owl = Owslebury (Maltby 1987); EF = Elms Farm (Johnstone and Albarella 2002).

onwards. In central England domestic fowl are found in Early Iron Age levels at Blackhorse Road, Hertfordshire (Legge *et al.* 1989), and in the Early/Mid Iron Age phase at Scole-Dickleburgh, Norfolk (Baker 1998), but at many more Late Iron Age sites. At Danebury, which has the full Iron Age sequence, it is not found before the latest part of the period (Grant 1984c, 114). The record therefore confirms Caesar's claim (see above) that British people kept domestic fowl, but there are more doubts about his assertion that these birds were not eaten. Large numbers of chicken bones were found in the Late Iron Age levels at Skeleton Green, Puckeridge (Ashdown 1981), and butchery marks were noted on domestic fowl bones from Station Road (Ashdown 1979). Admittedly both assemblages probably slightly post-date Caesar's visit to Britain, yet it is likely that the practice of eating fowl meat had a longer history.

One very important aspect of zooarchaeological analysis that has been neglected for the Iron Age is the examination of the size and shape of the animals, which can be so informative about cultural contact, introductions, and farming intensification. At Danebury a full biometrical study was not undertaken, but preliminary information indicates no change in cattle size over time and only a slight decrease in sheep size (Grant 1991); no comments are provided about pig size over time. Maltby (1996, 22) also believes that cattle were subject to no improvement throughout the Iron Age. The information from most sites (see Fig. 3) is, however, frustratingly approximate in terms of chronology, hampering any opportunity to clarify the question of whether there were any attempts to improve livestock, perhaps triggered by the economic and social changes that were taking place in the Later Iron Age. A frequent comment in reports on Late Iron Age sites is that the livestock was of a small size (e.g. at Burgh, Dragonby, Skeleton Green), but this is an area where more work is badly needed.

The Late Iron Age and beyond

The end of the Late Iron Age can quite conveniently be associated with the Roman invasion of AD 43. Obviously an Iron Age style of life did not abruptly end that year, which is why we tend to talk of a late pre-Roman Iron Age, but the Roman conquest undoubtedly brought about significant modifications in the organisation of society and in the use of the countryside. It is, however, debatable to what extent such changes were sudden and revolutionary, or merely represented an acceleration of forces that were already under way. It is therefore necessary to investigate how the animal evidence can contribute to the clarification of this question.

Unlike the Middle to Late Iron Age transition, the beginning of the Roman period saw a change in the frequency of the main domestic species that was widespread and is relatively well documented. The increased importance of cattle, mainly at the expense of sheep, is attested at most sites where both Late Iron Age and early Roman phases are represented. This is the case at Owslebury (Maltby 1987), Dragonby (Harman 1996), and Elms Farm, Heybridge (Johnstone and Albarella 2002), where large bone assemblages were analysed. A review of species frequency at a number of sites in East Anglia and the English Midlands is also consistent with this trend (Fig. 1). The earlier warning concerning the difficulties of inter-site comparison applies to this analysis as well, although the larger number of early Roman assemblages makes the results more reliable.

Such a clear change in the proportion of the species of greatest economic importance indicates a substantial re-organisation of at least some elements of the farming system. The increased emphasis in cattle husbandry may be related to a number of phenomena:

- the need to feed the Roman army with meat rapidly

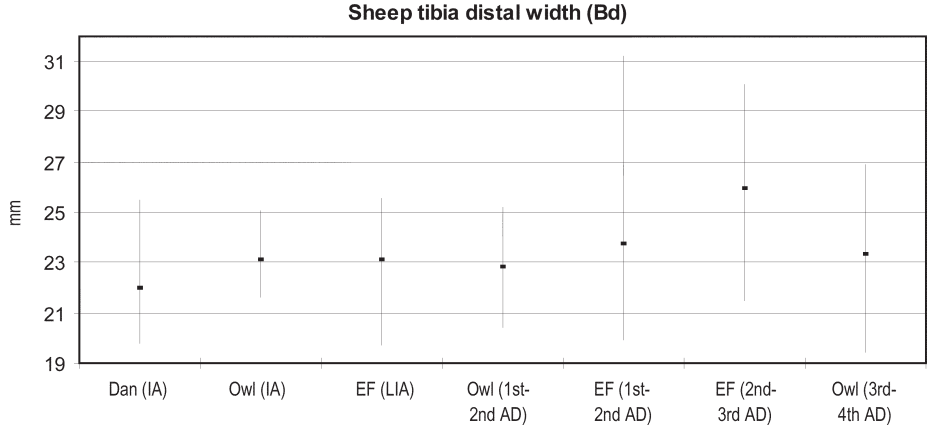

Fig 4. Sheep size (range and mean) at various Iron Age and Roman sites in Britain. Dan = Danebury (Grant 1991); Owl = Owslebury (Maltby 1987); EF = Elms Farm (Johnstone and Albarella 2002).

produced by improved cattle breeds imported from the Continent;
- the cultural preference for beef, which could have been imported by central European legionaries associated with the Roman army (see King 1978);
- a need to increase agricultural production through intensive ploughing of heavy soils aided by the use of large and powerful oxen.

The fact that at most early Roman sites cattle seem to have been slaughtered when adult would support the last suggestion. It is, however, worth mentioning that, while there is no substantial change in the age at slaughter of cattle between the Late Iron Age and the early Roman period at Heybridge, a larger proportion of adult animals is found in later periods (mid second century AD onwards). It is therefore possible that the need to produce meat (perhaps for the army) prompted the change, but this was eventually replaced by a shift to more crop production and the use of cattle for ploughing.

There is no indication that pigs – the most common animal at Roman sites in Italy – increased in importance after the arrival of the Romans. If farming practices were being modified, this was not a phenomenon prompted by Mediterranean cultural preferences.

It has been suggested that the dearth of Late Iron Age data prevents us from understanding whether large breeds of animals were introduced to Britain in that period, or as a consequence of the Roman arrival (Millett 1990, 11). Despite the unsatisfactory level of biometrical analysis for the whole of the Iron Age, this is fortunately no longer the case. There is clear evidence of increase in cattle size in the 'Belgic/early Roman' period at the site of Bancroft, Buckinghamshire (Holmes and Rielly 1994, table 55). At Owslebury too, larger cattle (and possibly horses, but the sample is small) are found from the beginning of the Roman period, although further increase occurred later (Maltby 1987, part 5). The most convincing evidence of all comes from the site of Elms Farm, Heybridge, where in the early Roman period cattle are not only more numerous but also considerably larger than their Late Iron Age counterparts (Johnstone and Albarella 2002).

Cattle seems to be the only species to have been improved so rapidly. At Elms Farm there is evidence that most other domestic species, including sheep, pig, horse, and domestic fowl also became larger, but not for at least another century after the arrival of the Romans. This evidence suggests that the Essex coast, rather than that of Wessex, probably acted as the main interface between Britain and the rest of the Roman empire (cf. Cunliffe 1991, 545). Since Belgic tribes had settled in central southern England, it is unlikely that they represented the main agent of innovation in agriculture and husbandry. The waves of change were more probably arriving from the South-East.

A wider comparison of the metric data is frustrated by the fact that most animal bone reports do not include individual measurements. Not even the six volume report on Owslebury (Maltby 1987) includes the metric data. Consequently any comparison between sites has to rely on ranges and means. Yet, even this crude analysis manages to highlight the increase in cattle size occurring after the end of the Iron Age (Fig. 3). Unfortunately, measurements from different Iron Age phases at Danebury and Ashville were combined, so that it is not possible to demonstrate a lack of size change between the earlier and later part of the period, which is likely to have been the case.

Fewer data for sheep are available (Fig. 4), but what little evidence there is indicates a lack of size increase in the early Roman period at both Owslebury and Elms Farm. As mentioned above, sheep improvement eventually occurred at Elms Farm, but not at Owslebury,

where the local farmers seem to have been content to carry on breeding the same small type of animals, which had been present since the Iron Age.

The increase in size that occurs after the end of the Iron Age – immediately for cattle, later on for other species – is accompanied by a general increase in variation (e.g. Johnstone and Albarella 2002, Figs. 38–40). Small livestock of the Iron Age type are still present, but alongside larger animals, which contribute to increased mean values. Due to their rather sudden size increase it is likely that some cattle were imported from the Continent, although some local improvement may have also occurred.

The importance of livestock improvement, as part of a more general phenomenon of acculturation, should not be underestimated. The ancient Latin sources make it abundantly clear that this was a significant element of cultural differentiation for both the Romans and the indigenous populations of north-western Europe. Caesar (*Gallic War* IV, 2), for instance, compares the Gauls, who were prepared to spend large sums of money to procure improved animals, with the Germans, who preferred to keep local livestock, despite this being small and ungraceful. There is an implicit verdict here of cultural backwardness on the German populations. Tacitus claims that for the Germans it is only important to have large numbers of livestock, and they do not care about the fact that their cattle are short, ugly, and hornless (*Germania* 5). Unfortunately, we do not have comparable accounts for Britain, but it is likely that the Romans regarded its inhabitants in a similar fashion. In Roman eyes, the keeping of unimproved livestock was a sign of primitiveness, but for the local population they could have represented a way to maintain their cultural identity, as suggested by the difference in attitude between Gauls and Germans described by Caesar.

If we accept this point, it is not surprising that no evidence of livestock improvement exists throughout the Iron Age. Even in a period of frequent cultural contact with the Continent – as the Late Iron Age must have been – local populations may have been reluctant to give up their traditional systems of husbandry. Only a massive event like the Roman invasion seems to have brought about a significant change. Large animals are not necessarily better than small ones. Improved livestock can produce a greater meat output, perhaps better quality wool and greater traction power, and is therefore more suitable for intensive agriculture and an economy strongly oriented towards the market. However, the small, ungracious native animals could have been more resilient in local environmental conditions, and were probably maintained at less expense and with a lower labour input.

Among other elements that help to differentiate between the use of animals in the Late Iron Age and the early Roman period, it is worth mentioning some butchery patterns that seem to have been introduced by the Romans soon after their arrival. Two types in particular seem to have been typically Roman. One is represented by perforations in cattle scapulae, probably caused by hook damage, and generally associated with the brining or smoking of meat joints (Schmid 1972; Dobney 2001). The other is a pattern of intensive butchery on cattle post-cranial bones, which are normally reduced to small, clearly chopped, pieces. This type of assemblage (normally not much else is found in these groups of bones) has become known as a 'soup-kitchen' deposit, as it was originally interpreted as the result of the preparation of soup or broth (Van Mensch 1974). However, we cannot exclude the possibility that it represents waste from intensive fat extraction, or the making of glue. Both types of butchery have been identified at Elms Farm in the early Roman levels, but not earlier. One Late Iron Age site in Britain – Bierton, in Buckinghamshire (Jones 1988) – has produced evidence of hooked scapulae but the relevant assemblage is dated to the first century BC/AD and may therefore include post-conquest material. Both hooked scapulae and 'soup-kitchen' deposits are known from continental Europe but they are not found on Italian sites.

While different regions must have been affected in different ways, the animal bone evidence supports Cunliffe's view (1991, 200) of a rapid process of Romanisation, although further changes did occur at a later stage. What is difficult to establish is whether these changes in farming practices were the result of dietary and economic causes, or were cultural preferences imposed upon a reluctant population. Probably both elements, difficult to disentangle in the archaeological record, played a role.

Conclusions

The above discussion can lead to a number of different interpretations of Late Iron Age animal husbandry, according to which line of evidence is considered to be of the greatest importance.

- One possibility is to see the Late Iron Age as a period of *transition*, which prepares and anticipates the greater changes that occurred after the Roman conquest. The evidence for this viewpoint is, however, rather slim and can probably be confined to the appearance of the domestic fowl in the faunal record and the occasional case of a small pet dog or Roman style of butchery found on Late Iron Age sites.
- Conversely, we could interpret the Late Iron Age on the basis of its *distinctiveness,* as perhaps suggested by the increased emphasis in sheep husbandry noted in some regions. This is at odds with what subsequently occurred in the Roman period, and also distinguishes the Late Iron Age from the previous period.

- Finally, we may emphasise the degree of *continuity* between the Late Iron Age and earlier times. This hypothesis is supported by the fact that differences in animal husbandry seem to have been much greater between the Roman period and the Late Iron Age, than between this and the Earlier Iron Age.

In reality, the two centuries preceding the Roman conquest are characterised by all the elements described above, with a different emphasis at particular times and places. Yet, the overriding impression is one of *continuity*. However important the episodes of agricultural intensification that took place in the Late Iron Age, they are overshadowed by the massive changes that occur throughout the Roman period.

The strong emphasis placed on innovations brought about by the arrival of the Romans does raise the concern that such an interpretation may simply be the consequence of adopting a core–periphery view of the Roman area of influence, which will inevitably portray the periphery as backwards and rather static in its social and economic developments. In reaction, some authors have emphasised the fact that some changes in farming practices may have taken place in Britain *before* the Roman conquest (e.g. Millett 1990). We have, however, seen that – as far as the faunal record is concerned – there is little evidence that this was really the case.

Perhaps attempts to play down the effects of Romanisation, and indeed of getting rid of the term altogether, suffer from the problem of regarding the move towards intensification and market economy as necessary and inevitable, and indeed a sign of civilisation. The difference with more traditional views of the Roman conquest, influenced by the words of sources such as Caesar and Tacitus, is simply that this change is suggested to have occurred at an earlier date.

An alternative way to look at this question is to interpret the reluctance of British Iron Age populations to adopt elements of the Roman economy, and in particular strategies of animal husbandry, as a sign of vitality rather than backwardness. Haselgrove (1999b, 255), for instance, has pointed out that 'failure of material to enter the record on Iron Age settlements might reflect cultural choices on the part of the inhabitants rather than material impoverishment'. That there was a widespread resistance to adopt a Roman style of life can also be detected in the words of the ancient writers. It has already been mentioned that German populations were content with livestock of small stature despite the availability of larger animals through trade. At the same time some of them – according to Caesar – refused to drink wine as this would weaken the men (*Gallic War* IV, 2). Apart from avoiding the less pleasant physical effects of some of these imports, it is likely that the Germans were also trying to preserve their cultural identity, threatened by the expansion of Rome.

A similar situation may have occurred in Britain, where trade contact was certainly already intense in the first century BC (Cunliffe 1991; Hill 1995b). That this does not seem to have been followed by widespread changes in the economic system may be due to attempts of cultural self-preservation. The Iron Age animal economy seems to have continued for many centuries without an apparent need for substantial modification. The system was probably relatively sustainable and did not need the support of imported goods.

Eventually the British population gave in, and, as Tacitus notoriously reports, 'were led to things which dispose to vice, the lounge, the bath, the elegant banquet. All this in their ignorance they called civilisation, when it was but a part of their servitude' (*Agricola* 21). The evidence of the animal bones, however, suggests that the process was long and that, in order to be accomplished, it had to await the physical occupation of the island by the Romans. The final period of the Iron Age therefore saw not only the end of prehistory, but also of political freedom and cultural independence for the British populations. As herds of large imported cattle replaced flocks of small native sheep it was clear that the Sheep Age too had come to an end.

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