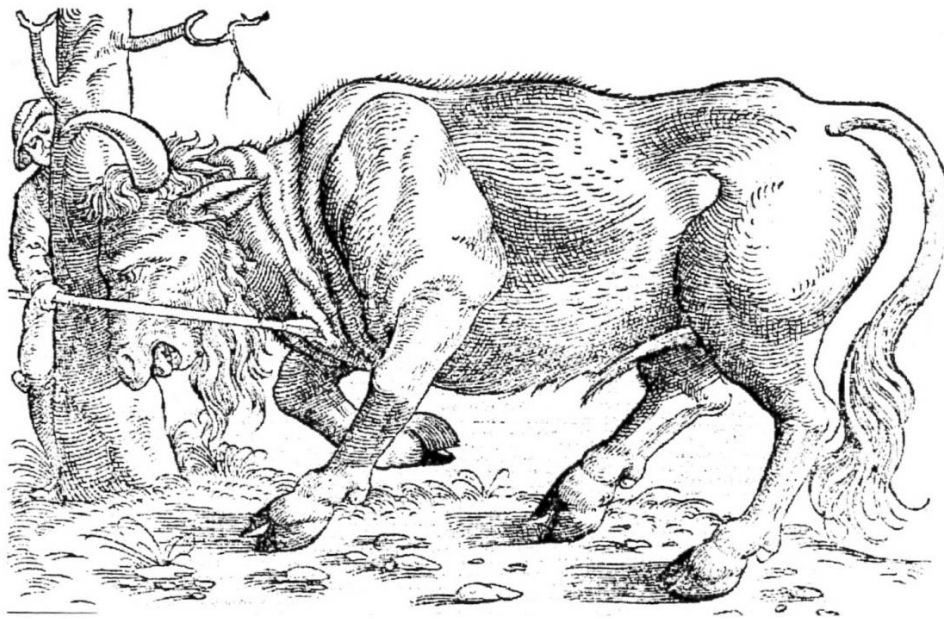


Animals in the Neolithic of Britain and Europe

Neolithic Studies Group Seminar Papers 7

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Animals in the Neolithic: A Research Agenda? No Thanks.

Umberto Albarella

The Neolithic period occupies a special place in archaeological research and in people's fascination with the past. The characteristic that makes the Neolithic so unique among other periods of our history is that its beginnings coincide with the origins of the domestication of plants and animals. This great innovation modified people's ways of life arguably as no other. However, like those artists condemned to be remembered for one famous masterpiece, while the rest of their work is neglected, the Neolithic has often been restricted to these important cultural changes that define its onset. Thousands of years of subsequent developments have somehow played second fiddle. It is understandable that our interests have been concentrated on the key steps in the evolution of human societies, and it would therefore be wrong to stigmatise this bias excessively. Nevertheless, Neolithic people left us traces of a great diversity of activities, which go well beyond the origins of farming, and each represents a potential mine of information about prehistoric life, all equally worthy of attention.

This collection of articles on the interaction between people and animals in the Neolithic has many virtues that I will discuss in this brief commentary. One is that it presents case studies that range widely across the duration of the Neolithic period. No paper focuses on the intensively researched Mesolithic/Neolithic transition, though some of them (Boyle, Halstead, Miracle) discuss it on the basis of the evidence for later stages of the Neolithic. Most papers deal with issues that span the Neolithic period, and those that have a greater chronological focus, concentrate on the middle Neolithic (Serjeantson), the late Neolithic (Isaakidou, Cotton *et al.*) or both (Boyle, Miracle), but none with the period of origins of food production – the early Neolithic. Interestingly enough the two papers by Isaakidou and Cotton *et al.* tackle the much less commonly discussed upper boundary of the period – the transition between the Neolithic and the Bronze Age. The approach is, however, very different, with Isaakidou focussing on economic change in Crete and Cotton *et al.* with modifications in the use of the landscape in southern England. I believe that this chronologically diverse representation reflects the vitality of Neolithic research and demonstrates that the bias in research focus between the earlier and later parts of the period is being gradually redressed.

Equally commendable is the fact that this volume makes good use of the great diversity of skills, approaches and knowledge that characterise archaeological research. In a book dealing with prehistoric human-animal relations it is expected that zooarchaeologists

would write the lion's share of the contributions. Though this is certainly the case here, it is refreshing that there is also a substantial input from archaeologists with different backgrounds. This results in an interesting diversity of approaches and viewpoints, with subjects such as the history of archaeology (Field), the integration of plant and animal studies (Halstead, Dineley), ethnography (Halstead) and patterns of deposition (Pollard, Cotton *et al.*) playing an important complementary role to the analysis of animal remains.

Even within zooarchaeology many methods and lines of evidence are considered, which ensures that the full potential of the discipline is exploited. Occurrence and frequency of species play an important role in the research questions raised by a number of contributors (Boyle, Zeiler, Halstead, Miracle), but it is particularly the analysis of kill-off patterns in domesticated livestock that plays a major role for our understanding of Neolithic life. This is analysed in some depth by Isaakidou, in order to define the characteristics of Neolithic life and discuss how they compare with Sherratt's suggestion of a secondary products revolution (Sherratt 1983). Miracle and Serjeantson throw further light on this subject by discussing the mid and late Neolithic evidence from other parts of Europe. An important issue that emerges from the analysis of ageing patterns, particularly in the papers by Halstead and Miracle, is that we have not yet sufficiently explored the potential of using animal remains for detecting seasonal activities. Though it has many interpretative difficulties, the detection of seasonal patterns can be very important for our understanding of patterns of formation of faunal assemblages. These may reflect cultural and economic preferences but also availability and profitability of different resources at different times of the year.

Other lines of zooarchaeological evidence that seem to be extremely productive include the evidence deriving from butchery marks (Miracle and Serjeantson in particular), pathological conditions (Clark, Isaakidou) and – most innovatively – animal diet (Halstead, Dineley) and organic residues from pots (Serjeantson, Dineley). Other areas of study, such as isotopic and biomolecular analysis, which have recently made rapid progress in providing further important information about our prehistoric past, are not represented, though the results are referred to in a number of papers. This is a pity, but the approaches are sufficiently diverse for the book to be regarded as a significant sample of the directions that Neolithic research in human-animal interactions is taking nowadays.

The use of a biometrical/morphological approach to the study of animal bones, here adopted in only one paper, that by Clark, deserves a separate comment. In the early studies of domestication, biometry was almost the only method of study used, so it has suffered the fate of having been snubbed by both processual and post-processual archaeologists, with both schools regarding it as terribly old fashioned. I have discussed elsewhere the misjudgement in this rejection (Albarella 2002), but it is interesting to see that the legacy of this attitude has not completely gone away. This is despite the fact that the power of modern computerised analysis has made biometrical analysis far easier than it used to be. I originally became interested in biometry because I wanted to understand better the role that wild fauna played in Neolithic economies and societies and realised that that this would have been difficult to understand without being able to assess relative proportions of wild/domestic cattle and pigs. These forms are difficult to distinguish from each other and the best tool we have for their discrimination is their metric analysis at population level. In her – otherwise impressive – analysis of the

contribution of wild animals to human life in the European Neolithic, Boyle should have perhaps taken this question into account.

A further reason why this book is successful is that it does not fall into the trap of adopting an artificial dichotomy between an economic as opposed to a social archaeology. The emphasis placed on either one or the other of these aspects has generated much – generally fruitless – debate in the last few decades. An accusation which has often been addressed to zooarchaeologists is that they have interpreted their evidence exclusively on the basis of environmental or economic factors – what Miracle calls here a ‘calorie fetish and focus on subsistence economies’ – but it has been motivated more by a desire on the part of the critics to enhance their own sphere of influence within archaeology than by any real concern for the hypothetical bias (Albarella 2001). In my experience, most zooarchaeologists – even those less inclined to a theoretical approach – have always been aware of the social and ideological sphere of the human world and have not been shy of interpreting their evidence on the basis of ritual or social patterns of behaviour (e.g. Davis and Payne 1993; Wilson 1999; Lauwerier 2002). Nonetheless, it would be foolish not to accept that an excessive interest in taphonomic histories and utility indices has occasionally led to social and cultural perspectives being lost from sight. Most of the contributors to this book remain unchallenged by these potential problems. I suspect that this is not because they have embraced a ‘new *modus operandi*’ (see Miracle’s paper) – the old *modus operandi* was just an artificial construct – but simply because they all have the necessary awareness that social and economic issues are so entangled that their interpretations cannot be tackled separately. Most papers in this book do take the whole range of environmental, economic, social and ideological factors into account in their interpretations. It is perhaps worth mentioning in particular Serjeantson’s attempt to interpret the archaeological assemblage from Runnymede as possible evidence of feasting activities and Pollard’s suggested association of different animals with symbolic meanings based on the analysis of funerary practices. Even Clark, who bases her paper on traditional morphological analysis, takes the ceremonial element into account in her interpretation of possible hybrid forms of Neolithic canids. It is important that various lines of interpretation are taken into account because they make sense in that particular archaeological context, rather than to reassure or please any potential readership, or show an awareness of social and ideological issues at all costs. There are points in this book where the writers are almost apologetic for tackling issues concerning subsistence and environment. There is no need for that: interpretations must be the product of an intellectual curiosity for the past and an honest process of analysis, not of a perceived orthodoxy of thinking.

Having dealt with the range and breadth of approaches that characterise this book I would like to use the second part of this commentary to highlight some of the areas of Neolithic research to which various papers provide a particularly important contribution. There are endless potential readings of the various lines of investigation presented here, and the choice of subjects possibly reflects no more than my personal interests.

NEOLITHIC LIFEWAYS

The European Neolithic witnessed a great diversity of life styles, though there is a general perception that once farming had been introduced to a particular area, Neolithic

societies started relying on the cultivation of crops and husbandry of animals as their almost exclusive source of subsistence. This undoubtedly holds true for some areas of Europe but it is a phenomenon that should not be entirely generalised, as several contributions to this book demonstrate. An interesting contrast emerges between the south and the northwest of Europe. Halstead and Miracle underline the fact that in the Aegean and north Adriatic areas most Neolithic assemblages are dominated by the bones of domestic animals. The beginning of the Neolithic seems to have been abrupt in these regions, with animal domestication – including species which were certainly imported such as sheep and goats – rapidly taking over from hunting. A similar scenario has also been reported for the southern Adriatic (Bökönyi 1983) and the western Mediterranean (Vigne 1999). The fourth millennium BC in England seems to witness a similar phenomenon of rapid economic change. Pollard regards this situation as ‘peculiar’ but we have seen that is attested in other European areas too. The situation presented by Boyle for Western Europe, Zeiler for the Netherlands and Miracle for some north Italian examples is different. It is, however, unclear whether this represents a difference in space or time. Most of the examples of the abundance of wild fauna in Neolithic contexts belong to the middle and late Neolithic rather than the earlier part of the period, a trend also recognised by Pollard for Britain. Boyle mentions a number of French sites with abundant wild animals, of which the most remarkable is probably the middle Neolithic site of Rocadour (Lesur *et al.* 2001) which seems to have relied almost exclusively on hunting. In the Netherlands the predominance of wild or domestic fauna seems to depend mainly on environmental conditions (Zeiler in this volume and 1997), whereas in Italy, as in France, most sites with a predominance of wild fauna belong to the mid/late Neolithic. Examples of this are Molino Casarotto (Jarman 1971), Cornuda (Riedel 1988), Razza di Campegine (Riedel 1990) and Mulino S. Antonio (Albarella 1987–88).

The information that we have so far is probably insufficient to reconstruct a general European trend, but there are hints that we are not simply dealing with the persistency of a hunter-gather style of life, but rather with a possible return to hunting in later Neolithic cultures. The consequences of this, for our understanding of the mechanisms of cultural evolution, are enormous. I suspect that our interpretations of the transition to farming have so far been biased by an element of evolutionary determinism. As long as we see farming as a superior economic strategy we will have to assume that once introduced this new system rapidly replaced hunting and gathering and any society that managed to hang on to the previous system of life was inevitably marginalized and destined to disappear within a few generations. It is perhaps with such scenario in mind that Pollard interprets the abundance of wild animals at Coneybury Anomaly as an indication of a ‘transitional economy’ – seemingly implying the existence of an intermediate stage in the inevitable progress from a primitive form of food procurement (hunting) to a more sophisticated one (farming). Similarly, Boyle sees the ‘persistency’ of hunting societies in the later part of the Neolithic as the possible result of a response to harvest failure and climatic change. Hunting is therefore seen mainly in negative terms, almost as a buffer option – when farming fails, people have no other choice but resort to hunting. Both authors may well be correct in their interpretations, but I wonder whether we should not consider the possibility that hunting may have represented – given the right ecological conditions – a deliberate cultural choice and a perfectly viable and desirable

option for some Neolithic communities. Boyle alternatively suggests that in the later Neolithic hunting may have played a 'recreational' role. This once again seems to imply that at this stage of human cultural evolution hunting is not expected to represent a sustainable economic system.

If we rid ourselves of the idea that hunting represented an economic system only practiced by marginal communities in periods of crisis, we can perhaps interpret patterns of activities in the European Neolithic in a more dynamic way. A range of different activities may have been in place in the Neolithic, with different communities adopting a diversity of strategies according to their environmental settings, surrounding human communities, cultural backgrounds and seasonal movements. A complex system of interactions based on variable combinations of hunting, foraging, farming and trade has for instance been suggested for the Neolithic of central Africa (cf. Gifford *et al.* 1980) and the fact that such a model can be reflected in the reality of human life is confirmed by several ethnographic examples (Blackburn 1970; Newman 1970). There are also attested cases of pastoral communities returning to a predominantly hunting economy (e.g. Ingold 1974). I see no reason why such models cannot have a role to play in our interpretation of the middle and late Neolithic in at least some areas of Europe. It is likely that people interacted with animals in many different ways and if predation and stock-breeding represent two useful categories for our understanding of the past, there is little doubt that interactions were more complex than this, with a multitude of different possibilities also in place.

The contributions by Halstead, Miracle and Pollard add useful evidence and thought to our understanding of Neolithic lifeways and the interactions between different communities. Halstead's key point – strongly backed by his expertise in Greek ethnography – is that despite the abundance of the bones of domestic animals from Neolithic sites in Greece, animal husbandry probably played a minor role in an economy which was mainly geared towards cereal production. This could explain the great predominance of sheep and goats, which are regarded as causing less damage to cereal cultivation than pigs and cattle, and also perhaps even the dearth of wild fauna, which would be expected among communities strongly oriented towards a vegetarian diet. Miracle adds to the complexity of the situation by suggesting that some of the sites that are dominated by wild fauna may in fact have been occupied only seasonally. Perhaps some farming communities concentrated on hunting at times of greater availability of game. What I find interesting here is that, unlike other contributions, in this scenario hunting is regarded as a potentially useful strategy and not just as a makeshift solution.

On the subject of the interaction between different communities, Pollard's hypothesis that the people living in Britain in the early Neolithic had to be supplied with domestic animals coming from the European mainland is interesting. This suggestion, however, does not take into account that, once domestic animals had been introduced, there are no reasons why local communities should have not taken up the technology of animal breeding. We do now have evidence of the existence of domestication events in Europe (Larson *et al.* 2005) in the case of the pig. Though it is not possible to be certain about the precise areas where these events occurred, we cannot rule out the possibility that local domestication of the pig also happened in Britain. Nevertheless, Pollard is certainly right that interactions between communities living at the opposite ends of the Channel

occurred, as animals such as sheep and goats were certainly imported. If archaeologically we find traces only of the material evidence of these contacts there is little doubt that exchanges occurred at an ideological level too, creating the foundations for the development of new and possibly even more diversified ways of life.

SCALE OF ANALYSIS

Rather than getting diverted by pointless discussions about the impossibility of generalisation in archaeological interpretations (Hodder 1986) the papers in this book just get on with the job of reconstructing Neolithic life by tackling the archaeological evidence at both local and regional level. There is here an impressive range of different case studies, dealing with examples as specific as a single pit or as general as the whole of Western Europe. What is particularly stimulating is the readiness of the contributors to try to contextualise the findings they discuss by moving continuously from the particular to the general and *vice versa*. A successful example of this approach is represented by the paper by Cotton *et al.* Here, by analysing the evidence of a very discrete individual event, the killing of an aurochs by human hunters, the authors provide evidence that they then apply to the interpretation of the whole late Neolithic landscape. Their interpretations may well be open to debate but the attempt is certainly admirable.

In their analyses, Miracle, Serjeantson and Isaakidou also move from the micro- to the macro-regional scale. The specificity of their case studies is however subject to great variation, ranging, as it does, from a small cave to a settlement and to a whole palace. The example of Pupićina Cave is I believe particularly interesting as, by analysing in depth the evidence of what probably was no more than a sheep pen, Miracle manages to make important considerations concerning regional patterns of Neolithic activities. Boyle's approach is very different as she provides information at a regional scale gathered from a large number of individual studies. Once trends are identified they are then effectively applied to aid the understanding of specific sites.

The lesson to be learnt is undoubtedly that both approaches are effective. Studies of individual assemblages and sites represent the foundations on which our regional patterns can be defined and, however limiting their evidence may appear initially, should never be discounted as being uninformative. At the same time overviews are essential to detect patterns that are only apparent at a larger scale, and are of great use for our understanding of more localised phenomena. Sweeping generalisations are often made not by those who are brave enough to propose them, but rather by researchers who do not understand their inevitable limitations and end up using them inappropriately.

NEW ASPECTS

People of my generation grew up with a rather simplified notion of the Neolithic. Apparently Neolithic people lived in an environment where almost all the late glacial fauna had disappeared, hunting played no significant economic role, and animals were exclusively reared for meat. The last few years have seen a slow but gradual change to this view, and some of these accepted beliefs have started to crumble.

One of the most significant new pieces of evidence that archaeological research has recently produced is that Neolithic people kept livestock for milk as well as meat. The direct evidence for this has been obtained through the analysis of organic residues from pots (Copley *et al.* 2005), but the analysis of kill-off patterns obtained from various archaeological sites across Europe has also highlighted the existence of husbandry strategies that seem to be geared towards milk production. Some of the papers in this book contribute to dismantle the old myth of a meat-specialised Neolithic husbandry. Miracle and Serjeantson both identify milk oriented mortality curves in mid-late Neolithic sheep and cattle from Croatia and Britain. Isaakidou focuses specifically on this question and concludes that at Neolithic Knossos cattle and sheep were used as part of a mixed economy in which milk production must have played a part. She also suggests that cattle were probably used for traction too, which, if confirmed, would take apart another commonly held view regarding a later introduction of this practice. This last question will deserve further investigation, but as research makes further progress it seems that the writing is on the wall for a 'secondary products revolution' which only took place after the end of the Neolithic. It has been a hugely stimulating idea for more than twenty years, but it has been gradually losing elements bit by bit, and today, at the very least, we can no longer call it a 'revolution'.

Another area where recent research seems to have produced important new evidence concerns the survival of Pleistocene relicts well into the Neolithic. In particular the notion that horses became extinct soon after the end of the last glaciation in Europe has now been proved to be incorrect (Uerpmann 1990). Once again various contributions to the volume provide important supplementary information to this question. Serjeantson mentions the presence of horse bones in what may be mid-Neolithic levels at Runnymede, though she is sensibly cautious about their chronology until radiocarbon dates become available. However, considering the now fully accepted idea that horses were present in continental Europe in that period – as indicated in Boyle's paper – it would not be that surprising if they survived in Britain too. Horses were certainly present in Britain and Ireland in the late Neolithic, as the evidence from Durrington Walls (Harcourt 1971), Newgrange (van Wijngaarden-Bakker 1974) and Grimes Graves (Clutton-Brock and Barleigh 1991) indicates, though their status as wild or domestic in this period is debatable, as it coincides with the time when domestic horses had started being introduced to Europe from the Eurasian steppes. What seems, however, very likely – though see a different view provided by Pollard in this volume – is that those horses were eaten, as clear butchery marks on the Durrington Walls bones indicate (U. Albarella Personal observation).

An important consideration regarding the possible survival of the horse and other Pleistocene relicts in the Neolithic is provided by Boyle, who suggests that these species may have become rare and therefore confined to limited pockets of the countryside. Consequently they may have become difficult to hunt and in general not worth pursuing by human hunters. We must therefore be careful in using the archaeological evidence for the reconstruction of faunal spectra in different periods and regions. It is possible that a failure to find these animals in the archaeological record simply reflects rarity rather than absence. A similar scenario can be envisaged in the case of the aurochs, which survived in small numbers until the Middle Ages in Poland, but in many other areas of

Europe – including Britain – seem to have disappeared as early as the Late Bronze Age (see the paper by Cotton *et al.* and Clutton-Brock 1986). Perhaps later cases of survival of the *Bos primigenius* will one day be discovered.

NATURE AND CULTURE

Did Neolithic people see the ‘cultural’ world of the village in which they lived, the animals they kept and the objects they made as clearly distinct from a ‘natural’ world made of forest, wild animals and uncultivated land? According to Serjeantson and Pollard the answer is a resounding ‘yes’. Serjeantson explains the apparent avoidance of the use of wild animals in feasting activities as a consequence of the fact that Neolithic people perceived the ‘world of nature’ as ‘alien’, and, presumably, inappropriate for these kind of celebrations. Pollard goes further and suggests that the Neolithic brought about ‘the creation of a conceptual division between natural and cultural domains’ and that the status of wild animals ‘was lessened by their existence outside mainstream social life’. It is difficult to either agree or disagree with these statements – the archaeological evidence concerning the ideological sphere of prehistoric life is notoriously ambiguous and prone to subjective interpretations. I will, however, put diplomacy aside and confess my scepticism. Firstly, I suspect that the proposed dichotomy may be more the product of our view of the world than of any Neolithic perception. Ingold (2000, chapters 3 to 5 in particular) has, among others, provided several examples of societies that keep domestic animals but see the boundaries between cultural and natural worlds blurred or even non-existent. There is, of course, a great deal of variation, but also no real reason to assume *a priori* that such a dichotomy represents an inherent characteristic of farming communities. Secondly, the evidence on which these assumptions are made seems to me not entirely persuasive. The suggestion that wild animals may have purposefully been excluded from feasting activities would gain some strength if they had instead occurred in ordinary everyday meals, but this evidence is either absent or not available. This may be a consequence of the fact that any meat consumption event was a feast, but, if this is the case, we are still left with the problem that we miss a comparative example – and zooarchaeology is a discipline that mainly relies on relative rather than absolute evidence. Pollard’s assumption that the absence of fur animals in fourth millennium sites suggests that they must have been regarded as taboo food can also be difficult to sustain when we consider that mustelids are common in contemporary Dutch sites (see Zeiler’s paper) and are also present in late fourth millennium contexts from Runnymede (see Serjeantson’s paper). It is certainly true that some populations may choose to avoid deliberately the meat of specific wild species, but at the moment it seems difficult to prove this for the British early Neolithic. Even if we could, we should still leave the door open for the possibility that some animals were left untouched because they were regarded *highly* rather than *lowly*.

Later in the same paper Pollard, however, suggests the possibility of a more complex ‘classification of animals based on proximity or distance to people, spatially and/or ontologically’, which takes us away from the simple dichotomy of a cultural world opposed to a natural one. If that was the case it is intriguing to think where hybrid forms, such as the possible wolf/dog discussed by Clark, would fit. This animal may well have been

difficult to categorise and could have therefore played a special role in people's imagination. This would explain its presence in a ceremonial deposit, as Clark herself suggests. In general the question of hybrid animal forms and the way they are perceived by people is of great interest and should perhaps be pursued with greater intensity. In medieval times hybrid forms (or their symbolised representations) were regarded with disdain rather than respect (Salisbury 1994) perhaps just because they did not clearly fit in any of the mental categories of the people of the time. There is of course no cultural connection between the Neolithic and the Middle Ages, but this example just shows how diverse human responses to natural phenomena can be.

As a conclusion to this commentary I must say that this book presents a collection of studies on the role of animals in the Neolithic of remarkable interest and diversity. It would have indeed been sad if all of the papers had taken a similar approach, or followed a similar intellectual model. Fortunately the editors of this volume have not made the mistake of imposing any restrictions on the scope of the individual authors or, worse, have attempted to set a research agenda. I find the pursuing of research agendas a rather pointless exercise: they are either too general to be of any use or they try to impose detailed plans for future research and become needless straightjackets. Each of the papers in this book is structured in a different way, uses a different source of evidence, adopts a different methodology and pursues a different research interest – and this is refreshing to see. In addition, as I said at the beginning of this commentary, it also provides a good cross-section of where research on Neolithic animals is today. The main problem that archaeological research is presently facing is its excessive *sameness* rather than *diversity*. This needs addressing because the most stimulating research always emerges outside pre-constituted agendas. This book provides its own excellent contribution to this particular pursuit of greater intellectual freedom. If I have occasionally picked on some of the aspects that can be controversial it is because I wanted to try to stimulate reflection and discussion. Rather than providing us with a predictable research agenda, the book offers a great range of different sets of data and ideas that should be sufficient to stimulate much future research. I have no doubt that, like his companion volume on the relationship between people and plants in the Neolithic (Fairbairn 2000), this book will become an important source of information for bioarchaeologists and prehistorians alike. In his memorable forward to his edited volume *Animal Bones, Human Societies* Rowley-Conwy (2000) predicted that the next decade of zooarchaeological research was 'going to be fun'. This book undoubtedly meets his expectations.

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