Woodland clearance in the Mesolithic: the social aspects

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Did Mesolithic people regard the woodland as a wilderness or park? Previous models have portrayed the hunter-gatherers of the Mesolithic as in tune with nature and making use of clearings to attract game. Using equally valid analogies, the authors propose a more hostile landscape that was conceived and managed with clearings and paths to help allay its menacing character.

Keywords: Mesolithic, woodland, subsistence, phenomenology

Introduction – clearings and food procurement

Since the pioneering work of Smith (1970) it has been increasingly recognised that Mesolithic populations had an impact upon their surroundings. In the UK most of the evidence is palaeoecological, in particular via pollen and charcoal (e.g. Simmons 1975, Simmons 1999), snails (e.g. Preece 1980; Preece *et al.* 1986; Davies & Griffiths 2005) and fungal spores (Innes & Blackford 2003). Most convincing are the fine resolution pollen analyses (FRPA) of Simmons and Innes (1996). At the present time, the evidence is sufficient to suggest that there were woodland clearances during the Mesolithic period, and many authors invoke direct human causation (anthropogenic clearance) although it is often also acknowledged that natural processes (e.g. lightning strike, storms) are also possible causal agents (naturalistic clearance). Brown (1997) has recently convincingly demonstrated that such natural openings would leave an identical signal in the palaeoecological record as humanly created gaps. It has also recently become apparent that such clearances are not restricted to the uplands (see Fyfe *et al.* 2003; Davies & Griffiths 2005, and also Preece *et al.* 1986 for an Irish example). This has weakened previous arguments for an anthropogenic cause, based upon consistent upland settings, more or less on the tree-line where woodlands were perhaps thinner and more easily manipulated by human populations.

Nevertheless, however clearings were created, it is also generally accepted that they were utilised by Mesolithic populations for food procurement. Whether there was deliberate manipulation (*i.e.* management) and removal of tree cover through fire clearance, girdling or coppicing to encourage browse that in turn attracts game animals (e.g. Simmons 1975, 1999; Caseldine & Hatton 1993), or opportunistic hunting use afforded by naturally created clearings (e.g. Brown 1997) is, therefore, in some senses irrelevant. The implication, in *both* cases, is that clearings had an economic use; they were places used for food procurement, usually as part of an annual round (see Mellars 1976; 1978). Even where the

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Received: 26 November 2003; Accepted: 6 May 2004; Revised: 2 July 2004

ANTIQUITY 79 (2005): 280–288

browse-attraction model has been questioned, such argument has focused on the benefits of clearance for encouraging plant food resources rather than animal ones (e.g. Mason 2000). Rarely is there mention, let alone serious and lengthy discussion, that such clearances may have been made or used for other reasons, Evans (1999) being a notable exception.

Just as Brown (1997) was right to question whether the emphasis upon deliberately created clearances was right, so it is legitimate to consider why there is so much emphasis upon a resource procurement function for such clearances. It is widely recognised that there is only circumstantial archaeological evidence, in that *some* locations where clearances have been demonstrated in the palaeoecological record have also yielded artefacts of a similar date. Notwithstanding the fact that the two sets of data are never securely integrated in time, and also often vary considerably in their spatial proximity, it is also the case that artefactual evidence for butchery near or within such clearances is generally lacking. Such is the paucity of data that Simmons (1999: 214) was forced to suggest that cleared areas were '*not necessarily the same spots used for sleeping, tool repair and food processing*'. Such activities, it is argued, would scare any game one wished to attract anyway. Quite apart from the fact that once a major kill had been made there would be little point in remaining 'hidden', at least for the immediate future, this argument leaves open the possibility that food procurement strategies within and around clearances can be inferred whether or not there are any supporting archaeological data. This seems far from ideal, if not tautological. We must go back to the basis of the evidence for clearings – the palaeoecological record – and admit that even though such clearances seem certainly to have occurred, the record is neutral with respect to origin, meaning or intention. No pollen, snail or fungal spore diagram shows deliberate use of such areas for food procurement, let alone deliberate clearance for such a purpose. Even where evidence for the presence of large game animals can be found, for example from the discovery of fungal spores from species that thrive around concentrations of animal dung, this does not help much in determining original intent for the clearing even if anthropogenic in origin (*cf.* Innes & Blackford 2003). Animals will be attracted to cleared areas whether they are subsequently hunted or not.

Most of the 'evidence' invoked in favour of the resource procurement model for clearings comes, in fact, from ethnography, and principally from the recognition that indigenous populations of North America used fire to increase grazing areas. Simmons (1999), for example, in producing his synthesis of recorded Mesolithic impacts on the environment, relies largely on such analogous comparison (see p. 180) in arguing for his '*simple materialist approach*' (p. 196) to the relationship between Mesolithic populations and their environment. Whether acknowledged or not, virtually all other writings on Mesolithic impacts on the vegetation adopt the same materialist position. The result, however, is that for the period as a whole, humans are regarded mostly as doing nothing more than pursuing a kind of optimal foraging strategy. In addition, the acceptance of clearings being used for food procurement *tends* to be taken as acceptance that the clearings are anthropogenic in origin (see above).

Where is the sociality?

The reliance on this materialist approach for the Mesolithic is now increasingly at odds with the cultural richness we ascribe to both the preceding Late Upper Palaeolithic (LUP)

and succeeding Neolithic periods. While we seem happy to describe social relationships for these periods, for example as can be seen in discussions of LUP cave or other art, or the complex social negotiations undertaken around Neolithic monuments or even in natural places (Bradley 2000), it is only recently that there has been a movement towards describing Mesolithic socialities (e.g. Bevan & Moore 2003). Even this, though, is sometimes a response to looking for earlier manifestations of more classically 'Neolithic' behaviour, as recently discussed by both Edmonds (1999) and Bradley (2002). Mostly, this lack of discussion can be ascribed to a lack of evidence. Britain does not have the Mesolithic cemeteries of the near continent (e.g. Cauwe 2001), although the current re-analysis of remains from Aveline's Hole, Mendip will go some way to redress this. We really have nothing more than a few tantalising glimpses, such as the antler 'masks' from Star Carr or the possible 'totem poles' from the Stonehenge area. In light of this, it is perhaps to some extent understandable that for many prehistorians the Mesolithic period is an age of 'getting by', with most energy concentrated upon gaining enough calories to survive.

The adoption, whether conscious or not, of a mind-set which is dominated by ideas of resource procurement and optimal foraging is significant also in that it implies a certain relationship with nature. In spite of the ample environmental data for the period, the continued dominance of ascribing artefacts and sites of the period into functional categories reduces such data to mere background-environment rather than landscape. Although we now ascribe all sorts of deep and meaningful interactions between humans and their surroundings for the Neolithic (for a recent example see Cummings & Whittle 2003), it is still unusual to do likewise for the Mesolithic (though see Warren 2003). This paucity of discussion is all the more noticeable when it is realised that many archaeologists argue quite happily that Mesolithic populations did not see themselves as separate from nature. If this is so, where is the social engagement with non-human things? The resource utilisation model for clearances outlined above implies, whether intentionally or not, benign, or even beneficent, surroundings are there to be 'harvested' or 'plundered'. This is almost as idyllic as any later pastoral scene – the earth as provider above all else. Optimal foraging does not allow us to easily think about children playing *amongst* the trees, adults singing and dancing *beyond* the light of the fire, the child or grandmother left dying of infection *in* a cave, or the hunter being *lost* in the woodland and falling prey to wolves or madness. Instead, it encourages us to think of people in the Mesolithic as automatons, driven by evolutionary imperatives (see Ingold 1996) in much the same manner as we ascribe to other animals today, such as for jackrabbits (Marin *et al.* 2003).

Wilderness and fear

The ambivalent approach by modern writers to the environment in pre-farming societies is demonstrated well, if not to an extreme, by one of the foremost American authorities on landscape and wilderness, who, when discussing pre-agricultural societies, states both that '*No-one knows for certain how long prehistoric people existed in an Eden-like condition of hunting-gathering*', and that

> *'The idea of being lost in the wilderness logically necessitates a geographical referent conceptualised as home as distinct from all other places' so that hunter gatherers 'could not become lost in the wilderness, since it did not exist'.* (Oelschaeger 1991: 24)

While the first statement may seem a little too 'noble-savage' for some tastes, the implication of these remarks is useful inasmuch as it reiterates the benign nature generally ascribed to the environments occupied by hunter-gatherers. Again, whether meant or not, our picture of the British Mesolithic, dominated as it is by discussion of annual cycles, territories, hunting groups, base-camps, secondary camps *et cetera*, leads to an assumption that all land was accessible and utilised; nothing was strange or alien, and wilderness as a concept – that is land outside of one's immediate knowledge or familiarity – did not exist. But is this necessarily so? And, just as some ethnographic data have helped shape the resource procurement model, can we use other data to produce a different non-materialist vision of why clearings, in particular, may have been deliberately created and/or used?

The current predominant view of a benign or even beneficent environment during the British Mesolithic can be seen as sympathetic to the *reciprocity* mode of human-environment relationships (Descola 1996), where humans and non-humans 'share' the biosphere – acknowledging and influencing one another in a mutually beneficial way. Thus, the hunter may ask for forgiveness in killing game, but this is part of a cosmology in which such respectful negotiation ensures continued supplies. In some societies this is best illustrated by the belief that as long as negotiations are undertaken properly, the prey actually offers itself up for slaughter (e.g. Kinsley 1995) – it is part of the normal way of things. This contrasts, however, with another mode of human-environment relationship, termed the *predation* mode, where fear is a primary motivator determining behaviour and, whether or not humans consider themselves as separate from the rest of nature, surroundings are more often seen as malevolent rather than benevolent. Such malevolence, and indeed fear or tension generated by it, can be minimised by regulation of interaction and propitiation (i.e. ritual), but there is an underlying feeling of not being fully in control. As Kinsley (1995: 37) describes, for the Koyukon of Alaska '*the surroundings are aware, sensate, personified. They feel. They can be offended. And they must, at every moment, be treated with proper respect*'. The anxiety of the Ixtepejano of southern Mexico is more explicit, being described as living in a world '*saturated with harmful, even lethal, immaterial forces*' (Kearney cited in Bowie 1999: 9).

As well as being evident in the anthropological literature, this theme has also been explored more widely by Yi Fu Tuan (1979). He argues that right up to the modern era human populations have been driven by anxiety and fear of their surroundings. Parts of the landscape are often off-limits to normal activities either permanently or temporarily, for example at night when lack of light renders the familiar unfamiliar, a theme also explored for medieval Europe by Verdon (2002). In particular, Yi Fu Tuan explores the widespread threat of abandonment and banishment in strange lands or surroundings. While we might be tempted to see this as a manifestation of our modern angst, brought about by increasing urbanisation and separation from the natural rhythms of the land – as articulated, for example, in a recent study of hikers' fears of being alone in the wilderness (Coble *et al.* 2003), as well as being the subject matter of many fairy tales and modern movies – it is clear that such fears are also manifest in pre-literate and non-urban societies. If we choose to apply this to the British Mesolithic, our view of the purpose and/or use of woodland clearings may change.

Paths and clearings

There has been recent awareness of the importance of paths in prehistory. Tilley (1994), Edmonds (1999) and Bell (2003) have all discussed the possible importance of routeways in the Mesolithic period, the first two emphasising that proposed Neolithic 'routes' related to monuments may have had earlier precedents. The fact that Mesolithic populations moved around the landscape is, of course, not a new idea (see fig 3.1 in Smith (1992) for an example of proposed regional movements). However, the fact that they may have done so in prescribed ways is only recently coming to the fore. Here, we propose that one of the primary motivators in establishing paths may have been a level of fear of one's wooded surroundings – whether fear of actual harm from wildlife or spirits, or simply getting lost in surroundings where the horizon is seldom visible. From this position, several other arguments may follow. The first is that paths become established and have a measure of long-term permanence, in the same way that other animal trails tend to do. Second, this level of permanence leads to concentration of activity in some areas (near the paths), rather than others (away from the paths). This will lead to apparent continuity of use in the archaeological record for the period in some locations, for example as proposed by Barton *et al.* (1995). Third, this allows us to legitimately consider wilderness as a concept in the Mesolithic, and to force us to consider environment as more than 'backdrop'. Finally, it may lead us to explain some clearings as a purely social phenomenon, since where paths meet wider clearances tend to emerge as corners are cut or where such nodes are used as convenient markers in the landscape for resting. (Examples from Zambia and the French Alps are illustrated in Figures 1 and 2).

Figure 1. Paths meeting in Zambia. Note the emergence of a larger clearing at the node.

Figure 2. Natural clearing at nodal point of paths near Chamonix in the French Alps (photo P. Davies).

Some examples will help here. Whilst travelling in the Congo O' Hanlon (1997: 145) asked one of his local guides whether vengeful spirits could harm them at night. The response was: '*not in camp . . . That's your private domain, the familiar space you take with you when you move to another camp, make another clearing, and the paths – they're safe too, lines of ordinary life through the world of the spirits*'. This in spite of the fact, of course, that during the day the forest is providential. Later (p. 184), a guide offers up the information that '*There are still paths, to this day, which link the land*' of one tribe to another. Also, significantly (p. 306), '*we burn the grass during the dry season, . . . just to keep open the paths in the forest*'.

Indigenous North Americans also burned the grass to keep paths open, as occasionally acknowledged by archaeologists or palaeoecologists, for example, by Moore (2001: 219) – who also mentions, in passing, the '*use of fire to cleanse the area around campsites*'. Significant, too, is the fact that some Aboriginals in Australia close areas of land for some time when someone closely associated with that land dies. Before re-opening the land it is burned (Morphy 1995). An aura of culture while travelling through the landscape is also evident in discussion of the Nuavla tribe of Indonesia (Ellen 1996: 111), where '*when humans enter the forest, they carry with them what amounts to an aura of culture, and when ritual is conducted in the forest, it is as if islands and culture are created to ensure its efficaciousness*'. Together with the Congo example above the ethnoarchaeological message is clear: just because people live predominantly in a wooded landscape it does not necessarily follow that they see themselves as either inseparable from it or immune from its dangers. Many further examples of 'landscape anxiety' can be found in Yi Fu Tuan (1979), and Hirsch and O'Hanlon (1995) contains numerous examples of non-economic interactions with landscape.

Back to Mesolithic clearances – some summary remarks

The palaeoecological record seems quite clearly to demonstrate that there were clearances in the otherwise wooded middle to later Mesolithic landscape of the British Isles and that often fire, whether natural or anthropogenic in origin, seems to have been the mechanism for clearance, as evidenced by abundant charcoal remains. That is not disputed here. However created, they are usually seen as offering resource procurement opportunities, particularly of

game animals, though possibly of edible plants too. Where evidence is available, most data suggest that the clearances were relatively small in size, though may have been quite persistent through time (see Caseldine & Hatton 1993; Simmons 1999; Mason 2000; Davies & Griffiths 2005). Archaeological evidence for this economic use is generally accepted, however, to be circumstantial and/or inferred from analogy or expectation of how particular Mesolithic implements (tranchet axes in particular) were used. The ideas have become so accepted that the initial basis for them has been forgotten. Not only is the palaeoecological record neutral with respect to origin, meaning or intent (Evans 1999: 39), the anthropological and ethnographic literature has been used very selectively, and is often actually forgotten as being the basis of the argument entirely. The examples given above are sufficient in showing that one may also use such literature to suggest that clearances may have been created and/or used for non-economic reasons, and that a primary motivation may have been to keep paths open and to create a buffer against the woodland around rest sites. Even if anthropogenic in origin, the reason for the use of fire, evidenced and discussed so much in the palaeoecological record as being indicative of woodland manipulation for economic reasons, is open to considerable debate. Clearances *may* have been made for purely social reasons.

Future directions

At this stage, we have no way of knowing how clearances were created or used. In this paper we have argued that there may be a strong social dimension, and have deliberately chosen to oppose the dominant economic-functional explanations. We have found anthropological and ethnographic evidence in support of our position, as functionalists previously have for theirs. In doing so, however, we are not necessarily suggesting that an either (social)/or (functional) position *must* be taken at all times. We see it as quite possible that clearances made or used for one purpose may also have been used (as well) for another. This is important, since it is not our intention to replace one polarised position with another. That said, it is fruitful to consider how one might actually gain empirical evidence in support of either position. It seems to us that the answer lies in treating clearances in the palaeoecological record as monuments. In other words, we should approach them not so much as ecological phenomena, but as potential cultural ones (see The Apa Lelo camp in the Congo as drawn by Turnbull (1961: 32) as an example). Such an approach would steer us away from the usual 'keyhole' approach of palaeoecology and encourage actual archaeological excavations designed to investigate the entire clearance area. Perhaps we could even use the term 'monuscape' in such circumstances. This may be an unlikely prospect in the upland areas of the UK, where statutory landscape protection designations usually apply, but it is most certainly possible in practicable terms. Some of the lowland sites mentioned above might be suitable candidates for further enquiry of this nature. We might just be fortunate, and find there were more to clearances than we currently imagine.

Acknowledgements

Bath Spa University College are thanked for supporting this work. The paper has been helped by the input of two anonymous referees who are thanked for their helpful comments.

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