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Hedgerows of different cultures: implications from a Canadian and English cross-cultural study

S. M. Oreszczyn and A. B. Lane

The Faculty of Technology, The Open University, Walton Hall, Milton Keynes MK7 6AA
s.m.oreszczyn@open.ac.uk

Abstract

This paper outlines the functions and character of hedgerows in two different cultures through the investigation of different perspectives. Data from a small Canadian study in the Delta region of British Columbia was used to inform a larger study in two English counties. Although many aspects of the Canadian perspective on hedgerows were similar to that of the English perspective, the Canadian data highlighted the importance of cultural differences in hedged landscapes. These differences had important consequences for the way in which the hedgerows on the Delta were planned and managed and challenges the English perceptions of hedgerows and their management. The paper concludes that the ecological value of hedgerows are inevitably entwined with cultural feelings towards landscapes and that these cultural aspects have implications not only for the structure, function and ecological value of hedgerows, but also for the transfer of hedgerow knowledge between cultures.

Introduction

Hedgerows have been a common component of the English landscape for centuries and form part of our cultural heritage. Maps and pictures as far back as the written record extends depict hedgerows as part of the English landscape. The word 'hedge' itself is believed to be of Anglo-Saxon origin (Rackham, 1986). Many hedgerow plants form part of English customs or rituals and are steeped in folklore (Mabey, 1996). While in the past hedgerows served an important function on the farm as living fences, today hedgerows are particularly valued for their function as wildlife habitats. Increasing interest in hedgerows as a means for enhancing biodiversity has led to an emphasis being placed on their value for sustaining wildlife, particularly in largely agricultural landscapes (Oreszczyn and Lane, 2000). However, it is not just their 'hard' readily measurable objective values, such as number of bird species, but also their 'soft' subjective values, such as colours, scents and patterns, that give them importance. The evidence for this is everywhere in English culture, in politicians' speeches, newspaper reports, magazine articles, and peoples' conversations about their holidays or gardens (Oreszczyn, 1999).

As part of cultural landscapes fashioned by human activities (Naveh, 1995), hedgerows are affected by the different relationships people have with their environment. As noted by Baudry et. al., (2000), different cultures will possess different perceptions of hedgerow function and their management. The research presented in this paper reports on findings from research that explored present day cultural aspects of English hedgerows and how they related to hedgerows within a different culture. A small study of peoples' perspectives of Canadian hedgerows was related to a much larger study on English hedgerows that explored the human dimensions of hedged landscapes through the collection and exploration of different peoples views.

Methodology

This research was based on a systems approach to researching hedgerows and used Grounded theory (Glaser and Strauss 1967; Glaser, 1992) as the research methodology. The research process took an holistic, inductive approach to researching hedgerows within which hedgerows were considered as a whole, that is, as an integral part of a human activity system (Checkland, 1981; Ison and Blackmore, 1997). Hedgerows were therefore considered as a whole, as an integral part of a human made landscape with which people have a relationship (Oreszczyn, 2000; Oreszczyn & Lane, 2000). The theoretical framework and research methodology used in this research project are set out in full in Oreszczyn, (1999).

The Study Areas

For the English study the research focussed on two English counties, Buckinghamshire and Cambridgeshire. The areas possessed contrasting landscape characters and farming styles and were close to urban areas. Although both areas have been subject to change as a result of increasing mechanisation of farming activities leading to increasing field sizes, in recent years farms in the Cambridgeshire area have retained far fewer hedgerows.

The Canadian study area focussed on Delta, British Columbia. Fertile soils make it one of the most productive agricultural areas of Canada (Melnychuk, 1995), however, it is also an internationally important wildlife site for migrant waterfowl. However, unlike the English landscape which has a well documented history of agriculture practices reaching back through the centuries (Rackham, 1986) and where hedged field boundaries date back to prehistoric times (Robinson 1978), although parts of the Fraser river delta were settled by a distinct group of Salish Indians, it was not until around 1887 that the first European settlers arrived (Phillips and Buckley, date unknown) and planted the original hedgerows. Settlers of different nationalities planted different species. The Swedish, for example, planted poplars, particularly as windbreaks around their homes, while the British migrants planted the native English thorns. With changes in agriculture fences became less important and hedgerows grew up naturally along the fence lines and ditches. However, like the Cambridgeshire study area, as agriculture intensified and farm activities became mechanised, hedgerows were taken out. The oldest hedgerows in Delta are thought to be around 100 years old (DWFT newsletter September 1999), however, today, few remain.

Data collection

The research was designed to be as inclusive as possible of different people's relationships with hedgerows. For the English research in-depth qualitative data were gathered from different perspectives on hedgerows through 45 lengthy interviews using self-recorded tapes and /or face-to-face interviews with three broad groups: farmers, members of the public and professionals. Wider perspectives were also gathered from a questionnaire survey of 70 respondents and secondary data, such as the published literature and the responses from the 1998 Hedgerows Regulations consultation document (Department of the Environment/WO/MAFF, 1996); copies of newspaper and periodical articles, such as *Farmers Weekly*; the 495 responses to the 1997 hedgerows regulations consultation document; the minutes of evidence presented to the Select Committee on Environment, Transport and Regional Affairs concerning hedgerows (House of Commons, 1998). The academic hedgerow literature was itself treated as data for the expert perspective, a visit to an agricultural show provided background information for the farmers' perspective, and participant observation of two hedgerow workshops provided additional information for the experts' perspective. Informal data was also gathered from numerous discussions with people from all three categories.

For the Canadian study data were collected during a short visit to the Vancouver area of British Columbia. Information was gathered from a wildlife conservation project run by the Delta Farmland and Wildlife Trust (DFWT), the local museum and the University of British Columbia Library. Evidence of the farmers' perspective was taken from conversations with farmers and from the experiences of members of the DFWT. Further data were also collected from a small sample of British Columbian residents who had agreed to do self-recorded tapes and to answer the questionnaire used in the wider English questionnaire survey. As it was only possible to conduct a very limited study with the time and financial resources available, the data collected was not used as a direct comparison with the English data but was used to inform the English research findings. It should also be noted that as the sample size of the Canadian data was small, it is generally treated as a whole, whereas the extensive amount of English data enabled the perspectives of different groups, i.e. farmers, public and professionals to be represented.

Data analysis

The questions used for the interviews were open ended and covered many aspects of hedgerows so as to get a rounded picture of the respondents' views. The data was analysed within the grounded theory process with the aid of QSR NUD*IST (1997) which is a computer software program specifically designed for analysing this type of 'rich' and diverse qualitative data. The powerful searching facilities within NUD*IST allow categories (concepts or themes) and relationships to be identified within the data from which the researcher generates and builds theories, (see Oreszczyn, 1999). The headings below represent some of these themes.

Findings

Cultural similarities in hedgerow perceptions

Hedgerows as farm features

As with English farmers, members of the Canadian public were felt by Canadian farmers not to understand the world of the farmers and farmers in both countries felt that they frequently found themselves victims of pressures beyond their control. Like the English farmers, the primary concern of the Canadian farmers was for their farm as a business and they felt they were providing “free board” for wildlife. Respondents from both countries viewed the main barrier to conservation as being farm economics. As commented by one Canadian farmer: “*My theory is if you want trees or if you want grain for wildlife, or if you want pampas grass for the whole works, bulrushes or whatever, you can buy it. Because our reasons for being on the land is to make a living...*” [Canada2:154-156]. Canadian farmers shared a similarly increasing awareness of their image to the non-farming community and both professionals and farmers felt that recognition was a vital part of encouraging farmers to take up wildlife conservation on their land.

Like the Cambridgeshire farmers, the Canadian farmers were reported to be reluctant to reduce their field sizes and were concerned about the amount of space that they take up. They were concerned about the spread of weeds from the hedge bottom to the adjacent fields and that they would shade and take moisture from the crop. There was also evidence that an attractive hedgerow was one that was neat and tidy: “*I don’t like the blackberries it drives me nuts, I don’t like the ...trees. I like a hedgerow that’s organised. In Britain a lot of your hedgerows are pruned and that’s very, very nice. They are almost made to look like they are gardens.*” [Canada2: 259-261]. However, although the untidiness of hedgerows may be particularly disliked by the farmers, other people in both cultures valued blackberry bushes for blackberry picking in autumn: “*A particularly important hedgerow locally are possibly the blackberry bramble hedgerows that grow along the roadsides in this area, because they provide us with the great habitat for birds, they are always interesting and there’s some nice fruit to be picked in the summer.*” [Canada10: 132-135].

Hedgerows as landscape features

The flat, wide open space of the agricultural area of Delta was highly valued by the Canadian respondents as an alternative landscape in an otherwise forested and mountainous area. Both the English and Canadian respondents expressed strong emotional attachments to their local farmed landscapes. Similar conflicts of interests to that of the English study areas occur between urban/rural populations and between agriculture and wildlife conservation. As with the English data there was an increasing interest from the Canadian urban population in landscape aesthetic issues with hedgerows being viewed as an important feature for breaking up an otherwise featureless agricultural landscape. They added colour and diversity: “*It breaks up the landscape as well and provides diversity in there for, I guess I’m thinking of large farm operations and things like that where you have one type of crop production being carried out and you have a more diverse hedgerow to break up the landscape a little bit there.*” [Canada1: 37-42]. In common with the English respondents, while experts tended to separate out different aspects of hedgerow value and focus on the ecological aspects of hedgerows, the Canadian members of the public did not separate out the different features of hedgerows, appreciating all the different aspects of hedgerows as a whole: “*Since I live in the country there are lots of areas I can call hedgerows and like to see the birds and the animals use the hedgerow, like to see, like to sense the smell of the spring from the different shrubs coming into bloom and my senses are stimulated by appreciating a hedgerow*”. [Canada9: 49-50]. In both cultures the visual and aesthetic

aspects of hedgerows were considered important as were visual signs of human activity in the landscape. Hedgerows were felt to be important whether they had grown up naturally or been planted. Hedgerows were felt to represent a 'natural' feature in the landscape and many hedgerows in Canada are 'natural' features in that they grew up along fence lines rather than being planted.

Hedgerows as wildlife habitats

Hedgerows in both countries are seen as important for providing wildlife habitats in an otherwise agricultural area. In Delta they are particularly valued as raptor habitats leading to advisers recommending that a diversity of hedge structures be established. Birds featured highly among all the Canadian respondents and appeared to have a role in people's sense of place on the Delta. The experts and the public particularly held them in special regard. In addition to ecological value, they were viewed as part of the quality of life on the Delta and were an important part of the areas identity: "*Oh I like the birds. I like the dead trees in them (hedgerows), the dead trees tops where you can see the hawk and the eagles sitting in the top. I really like that. Even just like that they are attracting birds. And those are pretty majestic birds.*" [Canada 5: 100-102]. The enjoyment provided by the wildlife was a key factor in influencing both Canadian and English farmers concern for wildlife conservation as was the importance of hedgerows for game birds. However, birds could also be a source of conflict between conservation and farming.

Hedgerows as part of towns and gardens

Both the English and Canadian respondents, considered urban hedgerows to be important, in many respects providing a contrast with rural hedgerows in the same country. Garden hedgerows are a feature of suburban Vancouver gardens, often consisting of tall well manicured conifers and people felt they brought the 'countryside' into the towns. Like rural hedgerows, diversity was also seen as an important feature of the urban hedge: "*I like seeing hedgerows with flowers and things like that in the urban hedgerow and I like to seeing the different ones out there rather than just conifers, like rose hedgerows, I love those.*" [Canada 1: 130-132]. One of the main functions of hedgerows for all the Canadian respondents was for privacy, particularly around homes and they were also considered important barriers to noise. The public particularly appreciated hedgerows for their contribution to views and their local environment. In this respect the well hedged local hobby farms make an important contribution.

Like the English respondents, there was concern over tall conifer hedgerows, although such hedgerows were appreciated for the bird life they attracted. It was felt that such hedgerows could be a traffic hazard and people particularly disliked hedges that were cut at 'wrong' times of the year or that were badly managed such that they went brown. It was generally felt that an urban hedge should be maintained tidy and neat. Urban hedgerows, and trees, also appeared to fulfil a similar role to that of the rural and urban English hedgerows as part of memories of childhood play.

Hedgerows as English landscape features

As noted earlier, the historical development of hedgerows in both cultures was different with Canadian hedgerows being a much more recent countryside feature than in England. Indeed, many of the Canadian respondents viewed hedgerows as 'English' landscape features with several describing the English landscape as like a 'garden'. For one farmer the English landscape represented his definition of what landscape was: "*If I go to Britain, I find that that's landscape, beautiful rolling fields, hedgelines trees here and there, you might find the odd stream through it. I mean that's almost as beautiful as walking into a garden, they are like large gardens. And a bare field as we talked about doesn't really offer much. Some people thinks it's the most beautiful thing, I find that very boring, but with the tree mix, the different colours, that's landscape. In my opinion.*" [Canada2:217-222]. While like the English farmers he appreciated a hedged landscape elsewhere and particularly liked rolling countryside, on his own farm hedgerows were limited to areas of the farm where they could be viewed from the farm house, stock fields and odd corners of land where they did not interfere with crops.

Cultural differences in hedgerow perceptions

Trusted relationships

Differences are highlighted by the contrasting approaches to hedgerow management. While some local councils provide hedge grants, the main English conservation initiatives, such as the Countryside Stewardship Scheme administered by the Rural Development Service in the Department of Environment and Rural Affairs (MAFF, 2001), are national schemes funded by the government and targeted at specific landscapes. Within the scheme farmers and land managers may receive grants for adopting more environmentally friendly working methods work such as hedge laying and planting. In the English study areas farmers were highly critical of the bureaucracy involved in these large schemes, the key criticisms being the amount of time and commitment required by the farmer, the inadequacy of funding, the lack of flexibility and lack of acknowledgement of the farmers own knowledge of their farm (Oreszczyn and Lane, 1999). One of the key findings from the English study was the importance of trust, with farmers not necessarily trusting experts and members of the public not trusting framers. Trust was also a key feature within the Canadians data. However, whereas the English schemes appeared to act against trusting relationships concerning hedgerows, the scheme run by the DWFT specifically aimed to build trust. The Hedgerow Incentive Programme established by the DWFT as part of a wider stewardship initiative for Delta, aims to raise awareness of the value of existing hedgerows and to encourage new planting through a cooperative approach (Melnychuk, 1995). Unlike the English schemes, the DFWT's board of directors is made up of local stakeholders - long-term resident farmers, community wildlife conservationists and respected business representatives. Enabling and building trust, despite the time and commitment required, is considered to be a crucial element for success.

Assisting farm conservation

Like farm conservation advisors in England, the DWFT provide advice both on managing existing hedgerows and on planting new hedgerows. The Canadian farmer is financially reimbursed for land taken out of production and the DWFT pays for the plants, planting, design and construction of the hedgerows, and cares for them for the first 5 years. Thus unlike planting

schemes in England, the DWFT bears all responsibility for planting and establishing the hedgerows and covers all the costs. Trust was again a key aspect of their work. It was felt that farmers could be 'taken for a ride' by nurserymen over stock for planting, as they did not have the experience that the advisor had. Experience had shown that it was crucial for the farmers to witness success with the planting so as to gain their faith in the scheme. Therefore, any plant that died in the first 5 years was replaced by the DFWT and the newly establishing hedgerow irrigated and cared for by the Trust to ensure its success. This is an interesting contrast to the English methods which are designed to enable the farmers to do hedge work for themselves.

Landscape designing

It was felt by the DWFT that one of the difficulties they faced was that farmers could not envisage what a hedgerow would look like once fully grown. Therefore, planting schemes were carefully designed by a landscape architect and detailed plans drawn up so that the farmer can visualise the fully grown hedgerow they were agreeing to. The hedgerows were designed to provide a diversity of structure and species. Different sizes of hedgerow were offered to the farmer, for example tall/medium and medium/small, or they were encouraged to have lines of trees which could provide shelter. Planting up field corners was also encouraged. Although in theory the hedgerows should consist of native species, in practice if the farmer was particularly keen to have a species he especially liked then this was included in the planting scheme. One farmer, for example had a liking for willows and although perhaps not a suitable species, this had been included in the planting. Although it was reported as being difficult to encourage arable farmers to take up the scheme, the DFWT did not adopt a proactive approach. This was linked to the importance attached to the need to build relationships and trust. They did not want to appear 'pushy', preferring 'word of mouth' and curiosity as a means of attracting farmers.

Although the English Countryside Stewardship Scheme has to deal with a much larger area the differences in approach provide an important insight into the way that hedgerow conservation is tackled in different cultures. For example, it is likely that designing a whole agricultural landscape in a similar way to the way in which we in England design our gardens, is unlikely to be something our wildlife experts would have considered. The idea of assisting farmers to such an extent is also foreign to us. Hedgerows in England are considered as necessary parts of the farmed landscape and as such are the farmers responsibility. Legislation is also in place to protect the most important hedgerows. Farmers in the English study were found to have a preference for a more cooperative, participatory, small scale approach to farm and hedgerow conservation, preferring the more flexible, locally run schemes which operated with local trusted advisors providing trustworthy advice. The stakeholder approach of the DWFT thus offers an insightful contrast to the way things are done in the English context.

Discussion

Although these findings are presented rather tentatively, this study offers some interesting cultural contrasts on the difficulties of re-establishing a hedged landscape. Many aspects of the Canadian data were similar to those found in the English data. For example, farmer concerns over hedgerows, feelings of being misunderstood, and a feeling of lack of recognition for what they do. As in England, the experts felt that education of farmers and the public on

environmental issues was required. Interestingly the way that hedgerows provided a human scale to the landscape was also important for several of the Canadian respondents. There were also many similarities in the way people felt about hedgerows aesthetically and visually. The Canadian public respondents particularly appreciated the hedgerows that were local to them and that they saw while out walking. They also particularly valued their urban hedgerows and those around their homes. Like the English data, there was also evidence that expert advice and encouragement had increased farmers' awareness and enthusiasm for wildlife conservation, particularly for birds. However, there were also some very obvious differences.

In common with the English respondents, trust and relationship building were found to be very important. However, unlike the English Schemes, farmers in Canada were actively involved in the work of the Trust at all levels of the decision making processes and were treated as 'partners-in-stewardship'. Although some scepticism was detected about this among some of the people interviewed, the philosophy was to treat them as equal partners, and for the farmers appeared to appreciate this approach. As with the English farmers the Canadian farmers were concerned to be treated equally and for their need to run a business to be respected.

The most revealing aspect of the Canadian data was the way that it highlights the importance of the cultural aspects of hedgerows in England. While the Canadian perspective possesses many aspects which are similar to those of the English perspective, it lacks an extra dimension. The aspects representing the commonality found within the English data, such as hedgerows as part of the English sense of place and landscape history, are not present in the Canadian data in the same way. The Canadians did not possess a common cultural view of hedgerows. Although the Canadian respondents found hedgerows important for their visual, aesthetic and wildlife aspects, the feelings of heritage and strong sense of place and landscape character, which are associated with English hedgerows, were missing. The consequence of this was evident in the way that the DWFT felt compelled to assume responsibility for the whole process of establishing hedgerows and to care for them for the first 5 years of their life. In contrast the cultural factors operating in England mean that partial incentives are sufficient in many cases to encourage hedgerow planting and management. Further, many English farmers are currently caring for their hedgerows with no financial assistance and with little recognition of the work they do.

Cultural differences are also able to throw light on other English perceptions regarding hedgerows. For example, within the evidence put before the Government's Select Committee (House of Commons, 1998) and responses to the DOE/DETR consultation concerning hedgerow legislation, there was an overwhelming prevailing perception of fences as being unacceptable as field boundaries, i.e. that hedgerows are necessarily a planted landscape feature. However, hedgerows that have established as a result of the fence lines, as in Delta and other parts of the world, can also be valuable landscape components. With appropriate field margin management fences could also be important field boundaries in England, contributing to the visual landscape and providing wildlife habitats. The Canadian study also calls into question the English perception of the need for continual hedgerow management. While, as noted by Baudry et. al. (2000) a 'hedgerow' by definition is a row of vegetation that requires some human management as part of a farms activities, the DWFT were constructing what they perceived to be hedgerows that would grow to their full extent and then require little future management. The Canadian respondents, were incredulous at the way English farmers felt that they had to be constantly

trimming their hedgerows to keep them to an appropriate shape and size, viewing it as “*gardening*”. The lack of the cultural significance of hedgerows made it hard for them to understand why the English should go to such lengths to protect our hedgerows. In many respects the Canadian example provided a demonstration of how things might be without the cultural aspects portrayed within the English data. Rather than being appalled by their loss, it could be argued that it is amazing that we still have any hedgerows and that farmers are prepared to manage them. This study suggests that much of why they remain a significant feature of the English landscape has to do with these deeper embedded cultural feelings towards them.

While the English perspectives may be considered to represent a snapshot in time (see Oreszczyn and Lane, 2000), the deeper cultural perspective represents continuity through time or an on-going cultural view running through more than one generation. The Canadian data highlights the importance of deeply held cultural views and indicates their importance for the way in which we manage hedgerows for the future. For example, the contribution to sense of place felt by English farmers may not be felt by absentee landlords or by farm management companies who may have little contact with the farm and its surrounding landscape. Further, absentee landlords from a different country and hence culture may not possess the same feelings of duty, responsibility and heritage.

Conclusions

This research suggests that while some aspects may be similar, different cultures may have very different relationships with their landscape. As a result care needs to be taken when attempting to establish any universally accepted definition of hedgerows. In this study, for example, the Canadian perceptions of ‘a hedgerow’ was not the same as the English perception. The approach to hedgerow establishment and management therefore differed as did their place within the country’s cultural heritage. Different cultures can therefore have very different perspectives and therefore quite different ideas concerning appropriate management and policies for hedgerows. Such findings emphasise the need for caution when attempting to transfer knowledge across cultures and indicates that there is likely to be a limit to the degree that transfer can occur or is even desirable. However, they also demonstrate how it is possible to gain important insights from other cultures into your own way of seeing and doing things.

It is important to recognise that hedgerows are not ‘natural’ ecological landscape features. They exist as a result of human activities on the land. It is therefore essential to incorporate the human aspects in their care, conservation and protection if such measures are to be successful. As noted by Nassauer (1995) culture and landscape interact in a feedback loop whereby culture structures landscape and landscape inculcate culture. Culture is central to hedgerow conservation and management, yet there has been little recognition of cultural aspects by policymakers and researchers, particularly in the UK. Neither has it been the focus of research in the field of landscape ecology generally. Research on conservation and management of our natural heritage tends to take priority over conservation of our cultural heritage.

This research has highlighted the way that culture and nature are intertwined. It has demonstrated the way that cultural studies of landscape and management are important for providing a fresh new perspective on landscape issues. They can challenge the way of thinking

of a particular culture and provoke consideration of the potential for different or more varied courses of action. Little cross cultural research has been attempted in this area and this short study suggests that there is much to be gained from cross-cultural exchange.

References

- Baudry, J. Bunce, R. G. H. & Burel, F. (2000)** Hedgerows: An international perspective on their origin, function and management. *Journal of environmental Management* **60**: 7-22.
- Checkland, P. (1981)** *Systems Thinking, Systems Practice*, Chichester, UK: John Wiley & Sons.
- Department of the Environment/WO/MAFF (1996)** *Protection of Important Hedgerows: Joint Consultation Paper*, Department of the Environment, The Welsh Office, Ministry of Agriculture, Fisheries and Food, London.
- Glaser, B. G. (1992)** *Basics of Grounded theory Analysis: emergence vs forcing*, California: Sociology Press.
- Glaser, B. G. and Strauss, A. L. (1967)** *The Discovery of Grounded Theory*, Weidenfield and Nicolson, London.
- House of Commons, (1998)** *HC969i,ii,iii*, Select Committee on Environment, Transport and Regional Affairs, October 1998, House of Commons Publications, London.
- Ison, R. I. and Blackmore, C. (1997)** *Environmental Decision Making: a Systems Approach*, Block 2, T860. Milton Keynes: The Open University
- Mabey, R. (1996)** *Flora Britannica*, Sinclair-Stevenson, London.
- MAFF, (2001)** <http://www.maff.gov.uk> and <http://www.maff.gov.uk/defra/texthome.htm>
- Melnychuk, D. (1995)** *The Delta Farmland and Wildlife Trust: Environmental Enhancement through Agriculture*, Proceedings of a Conference, Boston, Nov. 15-17 1995. Centre of Agriculture, Food and Environment. Tufts University Medford. USA.
- Nassauer, J. I. (1995)** Culture and changing landscape structure. *Landscape Ecology* **10**: 229-237.
- Naveh, Z. (1995)** Interactions of landscapes and cultures. *Landscape and Urban Planning* **32**: 43-54.
- Oreszczyn, S. (1999)** *Participative approaches to hedgerow conservation*, PhD thesis, The Open University, Milton Keynes.
- Oreszczyn, S. & Lane A. B. (2000)** The meaning of hedgerows in the English Landscape: Different stakeholder perspectives and the implications for future hedge management. *Journal of Environmental Management* **60**: 101-118.
- Oreszczyn, S. & Lane A. B. (1999)** How hedgerows and field margins are perceived by different interest groups. N.D. Boatman, D. H. Davies, K. Chaney, R. Feber, G. R. de Snoo and T. H. Sparks (Eds). *Field Margins and Buffer Zones: Ecology Management and policy. Aspects of Applied Biology* **54**: 29-36.
- Phillips and Buckley, date (unknown)** *Harvesting the Fraser: an Early History of Delta*. Delta Museum and Archives, Ladner, BC.
- Qualitative Solutions and Research Pty Ltd. (1997)** *QSR NUD*IST 4*. Qualitative Solutions and Research Pty Ltd., Australia. Distributer: SCOLARI: Sage Publications Software, London.
- Rackham, O. (1986)** *The History of the Countryside*, J. M. Dent Ltd., London
- Robinson, M. (1978)** The problem of hedges enclosing Roman earlier fields. *British Archaeological Report* **48**: 155-158.