

## Divorce or reconciliation: History and Historical Archaeology

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*Historians made an important contribution to the establishment of historical archaeology in Australia but more recently have come to question what historical archaeologists are doing and whether archaeology has provided the illumination they had originally expected. The article argues for a rapprochement of archaeologists and historians to set a new agenda and identify the problems which historical archaeology can usefully and fruitfully tackle.*

The value of historical archaeology in Australia is currently subject to new scrutiny.<sup>1</sup> This is a reflection of reassessment elsewhere in the world. Developments in Australian culture and academic life have never been autonomous and with the global electronic network (super-highway or supertollway) upon us are less than ever likely to be. Understanding the shifts and strains to which local historical archaeology has been subject can only be achieved in a world context, for even the present adoption of a post-colonial approach is a reflection of world ideological fashion.

The questioning of historical archaeology's role and direction in the Australia of the 1990s is paralleled elsewhere and is intelligible only as a variant of a wider problem. If it is more intense, it is perhaps because the post-settlement period is relatively short and shifts in technology during that period occurred fairly rapidly which makes the archaeological work both more difficult and perhaps less useful. At the shale mining site of Joadja for example, there are three layers at least of technology in less than forty years and they are hard, in an absolute sense perhaps impossible, to distinguish. The costs of such work are increasingly being questioned when understanding of the basic processes can be obtained from archival and printed material.

In Europe, the greater need for archaeological work to uncover material from remote times and areas where documentation is scantier and where slower changes make stratification clearer provides a persuasive argument for continued funding for medieval and post-medieval historical archaeological work. It has not in the post-medieval period led to its integration into the wider historical context. In 1990 David Crossley expressed both concern and alarm at the relative indifference and even ignorance of historians to the material which archaeology has contributed over the last twenty years to our information on the past.<sup>2</sup> With few exceptions, it has not been absorbed into the general body of historical knowledge and it has not influenced central historical perceptions.

He was pointing to the making of the crisis. While archaeologists have been integrated into the political process of cultural heritage and the management of material culture, few historians have become seriously involved in such work, if one separates material culture from the traditional study of fine arts. Although cultural studies have become the academic fashion of the 1990s, most post-medieval historians working in the field focus their attention on icons and symbols, visual and aural, rather than on the products of archaeological work. There has been great interest in architectural and spatial studies of colonial exchange rather than in excavation.

The development of the crisis has been concealed by the trappings of apparent success. In the 1970s and 1980s the demands of an environmentally conscious public were conve-

niently met by the services of archaeological rescue teams, the job creation involved suited increasingly functionalist governments all over the world and this pragmatic approach saw post-medieval historical archaeology take a respectable place in academic studies. The journal *Post-medieval Archaeology* indicates the academic acceptability of an archaeological approach. A variety of more specialist journals permit the publication of detailed descriptive investigations. The *Industrial Archaeology Review* for example, has recently covered textile mills, the food industry, railways, canals, mining and metallurgy, glasshouses, gunpowder mills, dyeworks, abattoirs and gas-works. Regular international conferences on the conservation of Industrial heritage (nine so far) bring specialists together. The subject seems adequately legitimated and suitably functional. Its attraction was increased by the promise of certainty offered by specialist scientific techniques such as analysis of iron, pollen samples, plant macrofossils, dendrochronology and the like. Provision of evidence useful to scientists seeking a long-term understanding of human health such as human stools which show parasitic worms and reveal diet, evidence of fleas; or bones which show leprosy, syphilis, or arthritis, evidence of consanguinity and age at death, further strengthened its apparent utility.

Why then do some historians who committed themselves with great optimism to this fledgling interdisciplinary venture in the 1960s now feel that this alternative approach to the past is not delivering the insights they had hoped for? The potential for recovering the unrecorded lives of ordinary people and the physical context of their existence, which archaeology seemed to promise, seems to have been turned inside out so that it is the scant and ambiguous historical evidence which is being uncritically exploited by archaeologists to explain the isolated artefact at a time when the collapse of various metahistorical approaches is forcing historians to reassess their own position in relation to their texts.

Historians frequently today question whether the very considerable expense of excavation has been justified by the outcome. They suggest that what has been demonstrated with much commitment of resources is what might have been expected - the survival of more bottles where the means of reprocessing was too distant; a limited demand for luxury bottles and the probability that old bottles were re-used and broken bottles recycled as 'cullet' which historical material suggested from the start.

While one might expect some of the promises of an engagement period to be broken during the subsequent relationship it may be worth considering whether the grounds for mismatched expectations were present from the beginning. What most distinguishes academic disciplines is not their subject matter but their methodology and to a lesser extent their preferred sources. Interdisciplinary, multidisciplinary or

transdisciplinary approaches thus promise a three dimensional view of problems and subjects whose position within a wider matrix is more or less distorted by a single viewpoint. Merging the separate images produced by two eyes, however, requires the careful focussing of each and a brain educated to assimilate and reconcile the slightly divergent pictures. There was perhaps too little initial discussion of the contributions and expectations which the disciplines brought to the work. The hypotheses which a combined approach might usefully test and elaborate were not clearly spelled out.

When history and archaeology came together, each had a sophisticated understanding of their own discipline and some more or less naive expectations of the other discipline. What each believed they could contribute was not necessarily what the other hoped to obtain. Historians were well aware of the delicate balancing act required to interpret written records created for purposes which differed in various ways from the use which they hoped to make of them. They regularly wrestled with conflicting texts. They believed that archaeologists should consult them before attempting to produce a viable narrative depending on ambiguous historical materials. For example, the longstanding archaeological and anthropological use of missionary diaries as straightforward accounts of events, with no recognition of the religious culture which had produced them, the formal demands of the missionary societies and churches for their production, and the models set down for their construction, had long worried historians who saw them as semi-fictional pieces of propaganda designed for a number of identifiable and specific audiences.<sup>3</sup>

What frustrated historians was the limited light most available records cast on ordinary lives and they hoped that archaeology might produce artefacts which could be read as alternative texts. To some extent they were prepared to concede that material remains were less affected by subjective processes of selection and presentation than documentary texts. They thought that artefacts would be unproblematic.

Historians' familiarity with archaeological success stories tended to be dominated by a 'time-capsule' expectation produced by work on sites where catastrophe preserved not only the framework but also the contents of the living context. Most archaeological sites, however, are not Pompeii. Shipwrecks have some of that potential and perhaps significantly material from underwater archaeology has been quite widely used in marine history. Even so, quite successful contemporary attempts by the owners to salvage goods and equipment and later attempts to recover wood, especially black oak, often leave limited remains for archaeologists and the wreck's physical survival is also affected, as Carl Olof Cederlund pointed out, by such things as the geographical outline of coast, the position of the wreck in relation to the surface, the topography and geological makeup of the sea bottom, the existence of ice, currents or heavy wave movement.

What, above all, historians did not really realise was that while archaeologists might be well-trained in generic techniques they also needed specific training in the particular field they would study. If they were wholly unfamiliar with the materials and practices of the period and place they were recording their powers of interpretation would be severely impaired. Understanding and even preservation might suffer if archaeologists had little idea or experience of what they were finding and what they could expect to find. The archaeologist's problem of 'what am I looking at — and what am I looking for' — and the danger of missing the relevant because of ignorance of the technology was not well understood. Where too few identified exemplars of a forgotten process have survived there were problems of interpretation. In the iron industry, for instance, archaeologists confused bloomeries with fineries.

While historians hoped for time-capsules, archaeologists were well aware that much archaeology involved reconstruction from surviving partial foundations, and that often material remains were fragmentary, disturbed and statistically insignifi-

cant. They hoped history would help to explain the incomprehensible artefacts they found and assist with the chronological problems. They looked to history for the things an archaeologist can rarely know, for example where the inhabitants came from; what language they used; what laws and customs they practiced; what their religions taught and which were authorised. They knew that they might then find evidence of counter-culture or sub-culture which did not conform (as at Roman Bath where excavations recovered petitions to the local Celtic gods for health or redress of grievances) but they had an established physical, cultural and temporal 'map' to guide and advise them.

So far as nineteenth- and early twentieth century Australia was concerned there were no 'maps' and, as it proved, established archaeological techniques were of limited value. Archaeologists had no effective guides to things as basic as brick types; historians found that many of their standard sources of information either did not exist or were a quite different sort of compilation. The problem of imported material and local adaptation in the context of a political urge to assert an independent colonial and national identity, if possible from 1788, raised further 'mapping' problems in the absence of overseas catalogues and the compilation of a careful database of imports.

Those involved in launching the new venture were rapidly caught on the horns of a familiar dilemma. Ideally, some years should be devoted to mapping of various sorts before any serious excavation was undertaken. In practice, grudging university support had been obtained in terms (bluntly laid out by one history professor) of a cheap alternative training to the costly business of taking students to 'real' digs in classical and prehistoric Europe. Digs were what caught and retained student enthusiasm and digs attracted media attention. To establish the subject, ventures into the unknown were necessary. Occasionally disasters occurred in which important material was through ignorance destroyed. Typically such sites were never written up.

For a time, historians, geographers and archaeologists seemed to co-operate without too much friction but as time passed disagreements became more frequent. The archaeologists' claims that archaeological evidence of the past was independent in a way which text-based history was not, so that history should be handmaiden to the more authoritative archaeological re-creation of daily life, discouraged historians who saw equal difficulties in the partial but non-random availability of archaeological sites for examination. Archaeologists seemed, to historians, to be unwilling to develop skills in new areas and to give preference to small domestic sites with which they felt comfortable.

Many archaeological reports continued to detail the aspects with which their training made them comfortable, such as pottery sherds, and refrained from speculating on the wider context. Australian excavations of settlement sites not surprisingly generally showed very shallow and often disturbed stratified levels. The reasons for this were not analysed with any sophistication as the explanation seemed 'obvious'. Stratified levels at very long-occupied European sites, however, might be equally shallow — at Abergavenny the earliest Roman layer is 1.5–2 metres below the present ground surface while in Cardiff medieval pits were within 300mm of modern surface which suggests that length of occupancy is not the only possible explanation.<sup>4</sup>

The ordinary small scale archaeological methods were clearly impossible to apply to huge mining sites and there were disagreements over how these should be handled. A growing reluctance to use invasive techniques and the impossibility of moving and storing, let alone cataloguing and recording in classical form the innumerable artefacts typically found on a large site added to the search for alternative techniques. The recording, use and analysis of surface scatter was an innovation but raised chronological problems which

archaeologists and historians did not discuss with one another.

In any relationship there is a dominant partner — the noun not the adjective — and historical archaeology was always likely to be directed from the archaeological side, but the value of the combination may decrease for both sides if there is no continuing dialogue about the contributions that can be made by both parties. The confrontation of archaeology and historical sources on which so much faith had initially been founded was thus distorted from an early stage. The issue of balance and the value of superimposing the alternative images was lost in disagreements about priorities.

Retrospectively, the Australian success in the 1970s was limited. It did not match the scope and scale of operations elsewhere although it followed a similar pattern. The building boom of the late sixties and early seventies, and a growing surge of middle-class enthusiasm for once despised early Australian houses and terraces, produced a conservation movement which for a time even the unions supported. Historical archaeologists found they were in professional demand for work on sites in which developers were interested. Ironically the very success and pressures of this 'Heritage Push' added to the increasing distance between archaeologists and historians. What short archival searches could uncover about specific sites was usually limited and often purely legal and relatively mundane. Routine and antiquarian, it did not interest the historian, was carried out by research assistants, and contributed to the archaeologists' assumption that historical material was unproblematic. The archaeologists were kept busy but the work was uncoordinated. There was no proper, overall planning and no effective legislative control.

In contrast Europe saw the professionalising of archaeology in urban settings — especially in the Netherlands. Major systematic recovery programs like the Swedish medieval town projects saw improvement in the scale and sophistication of historical archaeological research. The true costs of excavation then became apparent as permanent full time properly insured professionals were employed and costly work involving the underpinning of existing buildings undertaken. More stringent project planning, safety demands, post-excavation and publication contracts required a business approach to the process.<sup>5</sup> The number of interested parties — site owners, local councils, central governments and departments of administration, conservation groups, local communities; academics, and the public at large — created a whole new bureaucratic structure and formal decision-making process.

As all sites could not be fully covered, sampling was inevitable and the question of how to choose a site for detailed study became a pressing issue. The role of public perception in selecting sites with a popular, often mythical, association as well as the total destruction which modern building techniques involved produced ethical problems which demanded an instant solution. Historical arguments for preservation frequently lost the battle to the pragmatic needs which preferred to promote the survey and record approach.

These large scale efforts revealed the inadequacies of archaeological record keeping. Australian archaeologists began to wrestle with problems of the sort which had emerged in Europe in the 1960s in which the volume of artefacts and their dispersed nature made classification and analysis an interminably slow process. The excavation of medieval Dublin was the classic example. The value of the finds required the reunification of artefacts which had been re-used in widely diverse sites. This 'inevitably produced problems in processing the vast quantities of material excavated especially in later years'. Locational identifiers were of only marginal use as most finds had been 'either re-used in building of waterfronts, houses, drains or causeways...or had been discarded as fill behind the waterfront structure'. Distinguishing on the spot the original uses of partly rotten pieces of wood raised problems of diagnostic attributes — again, the existing 'maps' were inadequate. There was no catalogue of idealised forms of

different pieces used in these boat types. Indeed, known names could barely be attached to them. Publication of the material was delayed for decades as scholars agonised over the material. Long painstaking study has led, however, to a tentative step forward.<sup>6</sup> Australian archaeologists under pressure from their employment contracts had to fall back on fairly facile explanations which rapidly became accepted doctrine. Unproblematically accepted historical material frequently provided the basis for the interpretation.

To some extent, the archaeology of these later sites became little more than confirmation as it had in Europe where excavation of comparatively recent wrecks like the *Amsterdam* enable the building techniques to be compared with the original plans. Even though it contains an interesting cross section of eighteenth-century life and crafts its cargo and equipment can also be established from its the VOC records and its interest lies in matching the physical object to its description.<sup>7</sup>

Australian archaeology in the late seventies and eighties became focussed on urban sites. One of the important issues in urban studies concerns town patterns and how their layout reflected cultural expectations, the focus of public and private life, the social structure and the relationship of the town with the country around it. The effects of colonisation on urban layout was a possible question for Australian historical archaeologists. It has been an enormously fruitful subject in Latin America and India where excavations have cast new light on shifting power relations and social segregation.<sup>8</sup> Issues such as defence might have attracted some attention.

The potential role of archaeology in clarifying hypotheses was recognised in England where Brown wrote nearly twenty years ago:

Here as throughout this survey of the topography of early medieval Canterbury, the historian and topographer may conjecture; but only the archaeologist can hope to resolve the problems of interpreting the influence of the Roman past and of the church on the emergence of the medieval city.<sup>9</sup>

He went on to outline some of the questions that the archaeologists needed to ask for the benefit of historical study — the distance from source of some goods, the layout of buildings, the date and timing of rebuilding and changes to the layout of towns. The shifting use of sites was another matter of interest in town development which was advanced by excavation.<sup>10</sup> Archaeological work could also cast light on building practices and designs and totally revise the image of earlier towns. The revelation that early Aberdeen housing on the fifteenth and sixteenth century was predominantly wattle and daub is a good example.<sup>11</sup>

Beyond the unproblematic contributions which archaeological work evidently made to our understanding of the past lay the possibility of exploring the ways in which combining approaches might improve the insight of more than one discipline. What remained on the ground of the historical identifiable 'liberties' inside towns? Was their layout identifiable and if so was there anything distinctive about their physical remains? Historians were interested in classifying towns by function: were they a place for exchange of goods and services or for defense; were they social and/or religious centres; were they the location of specialised trades. How could these things be identified. Could archaeological work cast light on how were they organised and managed? In most cases there seems to have been little deliberate attempt to answer historians' questions although the survey of Winchester was a demonstration that successful integration could be achieved.<sup>12</sup> Frequently, from the historians' viewpoint, the most interesting work was being done by geographers like Conzen whose careful study of the building blocks of towns like Ludlow, Alnwick and Conwy revised traditional ideas about town development.<sup>13</sup>

Increasingly, in the 1980s Australian historians and archaeologists did not seem to want to see the same questions asked and did not see the value of the work the other was engaged in. Rescue digs became a common feature of archaeological work in the capitals. The usual result was the uncovering of foundations and a range of small, lost and broken items. Historians were concerned with material culture, but not solely, exclusively or primarily with material culture. Sewers, privies, a clean water supply, garbage collection and good house foundations are important and interesting but historians increasingly wondered whether this was the basis on which a civilisation should be judged? Australian urban excavations, unlike some of the work done on medieval houses in places like York, produced relatively little evidence of how houses were used, the crafts practiced in them such as the cloth industry - or separate workshops.<sup>14</sup> Australian archaeologists therefore were slow to develop similar standardised tests for correlation which enabled important conclusions about craft practices to be adduced. Interest in secondary industrial sites was fitful and often unproductive.

From the outside, the historical archaeological mind seemed increasingly introverted. Learned discussions based on artefact analysis, mainly of imported crockery, demonstrating that what underlay consumer choice was not simply economic functionalism seemed irrelevant to historians who had never assumed consumers were wholly ruled by economics. The ideas of architects and anthropologists about the built environment were largely ignored although the complicated business whereby a particular activity was linked to a set area of space, thus creating a place, and all that humans then emotionally attach to that place creating 'a primary text for handing down a tradition, for presenting a view of reality' or of a built up area as 'a diagram of cosmic and social order' seems potentially fruitful.<sup>15</sup>

The focus of archaeological attention was increasingly dominated by the market-place rather than by any impartial evaluation of what had been significant in Australia's past. The commitment to religion, even in terms of capital invested, might be seen to be important but archaeological work concentrated on burial grounds and apparently neglected churches. Yet, the shape and layout of churches, chapels, mosques, temples; alterations to the fabric with changing internal use; the location of the font or other significant pieces of religious furniture such as altars or communion tables; the identification of houses used as private or secret places of worship were aspects of human life which should surely deserve as much attention as their sanitary practices. Funding, however, was increasingly driven in the eighties by a government perception of relevance which included recreating an Australian national identity. Such supra-national structures, reflecting participation in a world-wide network, were difficult to fit into the construction of the fabric of a multi-cultural nation and as such may not have attracted the funding which drove historical archaeology's activities. The hypotheses the archaeologists framed as a result were constrained by a specific vision of which they do not seem to have been aware at a time when traditional historical analysis was submitting to 'deconstruction'.

The shifting concerns of history, as philosophical analysis moved through structuralism to deconstruction in a post-modernist environment, affected approaches to the reading of a text and the artefact as text made some of the archaeologists' framing of hypotheses, such as Sir John Jamison's self-conception, problematic in themselves. Moreover, much of the archaeologists' methodological worries over the desirability, nature and function of conservation seemed more a matter of different 'readings' than urgent absolutes. This was probably unfortunate as the successful pressure for heritage preservation required urgent answers to issues of priorities in an area of limited resources to which a greater historical input would have been valuable.

Escalating availability of new instrumentation and scientific

techniques to provide 'secure' dating and analysis of material also squeezed historical training from the academic curricula of historical archaeological courses until it seemed to historians that historical and especially industrial archaeology was not concerned with history, however much it might be a different way of looking at the past. Courses offered in the United Kingdom, at places such as Ironbridge or in the USA at places like Michigan Technological University which offers a postgraduate Industrial Archaeology course, which is significantly a Master of Science (archaeology) not an MA, seem obsessed with the history of technology and to a lesser extent, anthropology. The critical theoretical approaches seemed wholly archaeological and the use of primary historical texts the only unproblematised areas.

In some ways, the historians' criticisms were unfair. An emphasis on technical problems was inevitable in a period when existing work-practices were proving increasingly unsatisfactory but when the potential use of new technology like computers for data recording or retrieval not only required the acquisition of a new skill, but frequently proved unsatisfactory. The clumsy and rigid programs of the mainframe added a further element of confusion. Uncertainty over program design and application, rapid change in hardware and software and issues of standardisation led to unsatisfactory systems and debate. The stand-alone personal computer and the early portables for field use presented a new set of problems. Only with the 1990s networks of workstations and PC terminals, the use of standard databases like ORACLE, the growing simplicity of data-transfer, and ARC/INFO as GIS system has the computer become a really manageable archaeological tool.<sup>16</sup>

If historical archaeology is to obtain a significant role in history it is time that a new approach to the wider problems is attempted. At present practitioners, beset by practical problems, seem increasingly preoccupied by fine points of technical detail rather than wider questions. Historians find it difficult, if not impossible to read the body of the articles in which archaeologists published their findings. The issues involved are increasingly distant from the major significance of cultural influences which they had hoped that archaeology might reveal.

Cultural Resource Management and heritage issues concerning recording and preservation need a wider historical input if the very real problems of culling lists and financing preservation is not simply to lead to dissatisfaction if not outright opposition by historians to the whole process. The increasingly problematised issue of the function of museums between knowledge and information politicises in a whole new way a question which once seemed to have a simple answer: 'What are we keeping them for?' The switch in conservation practice from the early 'restoration' to expensive attempts to prop up buildings in their existing apparently terminal stage of decay raises further concerns about purpose.

The educational, economic and social roles are bound up with presentation and the nature of public interest. The sheer size, scale and complexity especially of mining or industrial sites and their potential danger if left to moulder requires historical input as well as archaeological if resources are to overcome the present lack of coherence in the handling of material which cannot reasonably be maintained without resulting in incompleteness of records. IRIS (the listing of all industrial sites) in England is providing a better basis for selection.<sup>17</sup> The Australian databases need to be improved in a similar way. The issue of listing and the law needs reconsideration. In an increasingly user-pay society selling off of all but profitable sites is the most probable outcome so that the enormous flexibility of electronic hypermedia need to be brought into play to turn disappearing sites into 'virtual reality'. Systematic appraisal of the value of re-use must be undertaken. To what extent does the Powerhouse Museum preserve any sense of its original use? What will survive of a

vanishing technological process at the railway workshops at Everleigh, in their revamping as part of a twenty-first-century technology park?

A great deal of the basic 'mapping' has been done especially the establishment of a sequence for dating artefacts such as pottery and glass in Europe much of which for the nineteenth century is relevant to Australia. The factual information about what can be expected at particular types of site has been pieced together making the identification of the exceptional or aberrant easier. Excavations have clarified technology, changes in practice and provided the basis for further documentary research. A book like David Crossley's, virtually a handbook of what one can expect to find, is now possible.<sup>18</sup>

It is time for historians and archaeologists to tackle the problem of too much specialisation and for the results of excavations to be discussed in a broader context with a real attempt to integrate written and physical evidence. This is not an easy trick. The problem of relating a micro-excavation to the broader canvas is a very real one but it is essential if the value of the work is to be perceived by the public. The challenge which Judy Birmingham issued in 1990 must be taken up. Specific questions for which archaeology is a necessary solution must be identified.<sup>19</sup> Eventually the public will not pay for sheer antiquarianism — what it wants is something which contributes to our understanding of how things are now. To do this, there must be some agreement on the most critical questions for which answers should be sought. These should surely relate not only to urban lifestyles but to the whole structure of colonial and post-colonial life in Australia.

Identifying questions which should be given priority will doubtless take much time and argument but one advantage would be a more focussed, systematic, team approach to problems now being handled piecemeal. Any specific suggestions can be no more than my personal thoughts. Concern for the environment might have some relevance for co-operation between historical archaeology and a range of other disciplines. The landscape changes (which some geographers are investigating) and particularly the effects of European forestry, the impact of mining, the effectiveness of regeneration and the management of waste, are matters of abiding importance. The effects of the relationship between rural practice and industry in terms of the use and distribution of such things as lime kilns deserves examination.<sup>20</sup> The nature of the garden in Australia and its role in the spreading of exotic species, not all of them desirable, is another area whose study would illuminate the effect which cultivation has had on the land. Whatever is selected, however, needs coordinated work if unnecessary duplication is to be avoided.

## NOTES

1. This paper is my response to two decades of reading the published work of historical archaeologists. I have deliberately refrained from citing particular works by name as it might imply a specific criticism which is not my intention. In themselves most have merit. It is the overall, general trend of the approach which causes me concern.
2. Crossley 1990:vii.
3. E.g. Tibawi 1961 and 1966.
4. For Wales see Delaney 1975:42-3.
5. John Oxley in Addyman and Roskans 1992:24.
6. McGrail 1993.
7. Mardsen 1974.
8. For a recent useful summary see King 1990.
9. N.P.Brown in Barley 1977:495-6.
10. Hall, McGregor and Stockwell 1988.
11. Elizabeth Evans in Addyman and Roskans 1992:113.
12. Hassall 1975:4-5.
13. Slater 1990.
14. Hall, Kenward, Williams and Greig 1983; Dominic Tweddle in Corfield and Keene 1990:Chapter 2.
15. Tuan 1977:112-4.
16. Ambrosiani in Addyman and Roskans 1992:27-8
17. *Industrial Archaeology News* 89, summer 1994:7 and *AIA Bulletin* 20.3, 1993:1-3.
18. Crossley 1990:153-4.
19. Birmingham 1990.
20. Pearson 1990 indicates how important this rather neglected practice potentially is.

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