A RECENT PHASE OF ABORIGINAL OCCUPATION IN LAWN HILL GORGE: A CASE STUDY IN ETHNOARCHAEOLOGY

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INTRODUCTION

The use of ethnography in Australian archaeology has become an accepted device for the formulation of arguments to assist archaeological interpretation. The 'ethnographic background' forms a chapter for almost every archaeological thesis and many of the articles produced in the Australian archaeological 'trade journals' relate archaeology to ethnography in some way. One interesting and paradoxical aspect of Australian archaeology is the overwhelming use of ethnohistorical or ethnographic sources in preference to ethnoarchaeological ones. Reduced to its simplest form this means that archaeologists undertaking research on Aboriginal archaeology and who rely on ethnographic analogy to develop their arguments, prefer to do so from ethnohistorical or ethnographic sources rather than undertaking ethnographic research themselves. A survey of articles produced within the past ten years in the journals Australian Archaeology, Archaeology in Oceania and Queensland Archaeological Research indicates an overwhelming emphasis on ethnohistory. Twenty-seven percent of these articles have an Australian ethnohistorical component as opposed to 3.4% with an Australian ethnoarchaeological component, a ratio of 8:1. However, all but two of the ethnoarchaeological papers also included ethnohistorical data. That is, of all the articles published in these journals during the period of the survey, only 0.7% use arguments generated exclusively from Australian ethnoarchaeological research. Of the ethnoarchaeological work done in Australia many of the case studies have been undertaken in remote desert areas and much of that done by non-Australians (Hiscock 1980:176).

The question can be posed: if archaeologists working in Australia need ethnographic analogy, and it would appear many do, why is so little ethnoarchaeological work undertaken to obtain data which may offer new insights to assist the interpretation of the archaeological record? Answers to this question relate to a complex set of issues, including an ambivalent attitude to the relationship between social anthropology and archaeology in Australia which varies from seeing them as separate disciplines to viewing archaeology as a subdiscipline of anthropology. In some universities social anthropology is not taught as part of training in archaeology and archaeologists may lack the anthropological skills to conduct ethnoarchaeology. Other factors include the expense of undertaking long term research in remote areas, access to those remote areas and effective supervision by archaeologists of projects that may include a significant social anthropological component. Answers to the questions that archaeologists ask may simply not require an ethnoarchaeological perspective. In this
paper it is argued that the lack of ethnoarchaeological work also relates to poorly defined notions of ethnoarchaeology, analogy and Aboriginality.

The issue of the roles of ethnography and ethnoarchaeology in archaeology has generated considerable, although at times, confused debate. Part of the baggage of this debate is a plethora of confusing and conflicting terms including ethnoarchaeology, ethnography, living prehistory, ethnographic archaeology, action archaeology, living archaeology, archaeology of ethnographies, hybrid ethnoarchaeology, ecological ethnoarchaeology, archaeological ethnography, ethnohistory and historical ethnography to name a few. There are no accepted conventions associated with the use of these terms, and authors may apply different meanings to the same term.

For the purpose of this argument we use Davidson's (1988:24) definition of ethnoarchaeology:

... a study of modern people which concentrates on the relationship between the material which people discard and the behaviour which precedes the discard in order to understand the formation process.

Some authors (e.g., Davidson 1988; and Hayden 1978) have clearly illustrated that certain approaches linking contemporary ethnographic behaviour to explanations of the archaeological record have more validity than others. It is thus possible for an archaeologist to describe an ethnographic event without it becoming ethnoarchaeology, while an ethnoarchaeological description is also an ethnographic one. The critical issue for archaeological interpretation then becomes not which of the competing 'ologies' is the more appropriate, but whether particular theoretical and methodological approaches within the framework of ethnoarchaeology will be more effective than others.

Arguments about the role of analogy have also created their own impedimenta in the form of 'Rules of Application' (cf. Gould 1978b:816). Rules of application concentrate on defining the appropriate context within which ethnography might or might not be applied to a particular situation. Some are formulated to distinguish between different types of analogy and their appropriate use. For example: 'relational' versus 'formal' (Hodder 1982:16); 'continuous' versus 'discontinuous' (Gould 1978a:255); 'direct resemblances' versus 'displaced resemblances' (Oswald 1974:6); 'contrastive' versus 'analogous' ethnography (Gould 1978a:253); and 'general comparative' versus 'direct historical' (Peterson 1971:240). Other rules relate to the appropriate spatial and temporal 'distance' in the use of analogues. A commonly applied rule, for example, is that the further removed in time or space an archaeological feature is from an ethnographic event the more careful one has to be in the use of ethnography to interpret the archaeology. Pearson (1986:94) for example, states that

... analogy has greater validity when continuity of artefact and cultural context can be assured. The safest use of ethnographic analogy must be in studying the recent past.

Walker (1986:133) believes that
It is undeniable that the ethnographic paradigm may offer insights which help us to interpret patterning in prehistoric remains, especially when that patterning mimics ethnoarchaeological observations.

In contrast to these rather narrow interpretations of the role of ethnographic analogy, other authors suggest less constrained alternatives. Salmon (1982:82) sees no objection to the use of analogy for (a) providing strong generalisations, (b) suggesting hypotheses, and (c) providing counter-examples to previously accepted generalisations. Binford (1967:1) suggests that:

Analogy should serve to provoke new questions about order in the archaeological record and should serve to prompt more searching investigations rather than being viewed as a means for offering 'interpretations' which then serve as the 'data'.

If archaeologists perceive the role of ethnoarchaeology as one of providing case studies that mimic the archaeology (either materially or by inference, behaviourally), it is inevitable that the Aboriginal population who will best satisfy these needs will be perceived as those who approximate the 'real and original Aboriginal people'. These groups will be found only in remote and isolated parts of Australia where European contact and influence is minimal. Maintenance of this view will see ethnoarchaeology follow a path of ever diminishing returns in direct proportion to the diminution of people who follow 'traditional' lifeways. Furthermore, by this view ethnoarchaeology will be seen as relevant only to archaeological problems that relate to the recent past, and since that represents such a small portion of the archaeological record, ethnoarchaeology can be dismissed as nothing more than a passing fad, an esoteric appendage to mainstream archaeology.

Mimicry, or the interpretation of archaeological sites by transposing the ethnographic form directly onto the archaeological one, is a weak interpretive method. The 'dinner camp' provides a good example. As Meehan (1988) has pointed out, on the basis of her descriptions of small piles of shells left as the residue of dinner camp behaviour, other archaeologists have interpreted small piles of shell found in the archaeological record as 'dinner camps'. There is, in fact, no way of testing the 'dinner campness' of any small pile of shells on the basis of its similarity to an ethnoarchaeologically recorded example. This is particularly so as there are counter examples of non dinner camp behaviour that also result in small piles of shell (Anderson and Robins 1988).

Taking a firm view of what constitutes 'traditional Aboriginal' behaviour as the criterion for whether ethnoarchaeological research is appropriate is problematic in theoretical terms. In the context of contemporary Aboriginal societies, what does 'traditional' mean? Is a new belief or practice any less 'traditional' than an old one? As has been argued for some time in the social anthropological literature (Chase 1981; Langton 1981; Trigger 1983), change in contemporary life does not necessarily entail acceptance or adoption of non-Aboriginal lifeways. Much of this debate concentrates on continuity of distinctively Aboriginal beliefs and practices, but without a great deal of discussion about continuities in distinctively Aboriginal camping arrangements and associated use of bush (and other) material resources. However, most archaeologists are specifically interested in these latter aspects of social life, and their associated material residue. What then might be an ethnoarchaeological definition of tradition?
We suggest that the notion of 'traditionality' is not the critical issue for current ethnoarchaeological practice. What is apparent, and important for ethnoarchaeology, is that many Aboriginal groups throughout Australia continue to carry out practices different from non-Aboriginal Australians. These differences vary depending on the extent of non-Aboriginal influences (e.g. Anderson and Robins 1988; Godwin and Creamer 1984). Davidson's definition of ethnoarchaeology does not prescribe a notion of 'traditionality' or, indeed, of 'Aboriginality'. They are simply not relevant. Where then does this leave ethnoarchaeology? Studying chop consumption and disposal at the annual Anthropology Department barbeque?

The answer is yes, provided useful principles bearing on formation processes that assist archaeological interpretation can be formulated. Whether such a barbeque study will be as productive as one that studies meat butchering, cooking, consumption and disposal in an Alyawarra campsite (e.g. Walters 1985) depends ultimately upon the methodological and theoretical basis for each study and the nature of the argument. However, if archaeologists are looking for analogies '... that prompt more searching investigation ...' (Binford 1967:1), the former example is less likely to generate questions or provide answers concerning formation of the Aboriginal archaeological record than the latter. This is not for any reason of proximity between contemporary Aboriginal behaviour and the archaeological record, but because the archaeologist may be confronted with perspectives about the relationship between objects and human behaviour that will challenge old notions and prompt the search for alternative explanations.

In the following section a case study is presented which describes the formation of two temporary campsites at Lawn Hill Gorge, northwest Queensland in 1980. From the study a number of questions with archaeological implications will be generated to '... provoke new questions about order in the archaeological record and ... serve to prompt more searching investigation ...' (Binford 1967:1). This brief case study is not intended to represent a model for all ethnoarchaeological research. It is intended to indicate the potential for a less rigid approach towards ethnoarchaeology by eschewing notions of mimicry (i.e., transposing the ethnographic form directly on to the archaeology), rules of application (such as the closer in time or space the more relevant the analogy) and the 'real' or 'traditional' Aboriginal behaviour (which entails the conviction that the less contaminated by European influences the 'truer' the analogy).

In 1980 the authors participated in a field trip with Garawa/Waanyi people from the Aboriginal settlement of Doomadgee, northwest Queensland, to Lawn Hill Gorge and Colless Creek some 100 km to the southwest. The aim of the trip was to document contemporary Garawa/Waanyi social and resource knowledge of the Lawn Hill area to complement the archaeological work undertaken in the region (Hiscock and Hughes 1984:117-19). Knowledge of the language group that occupied Lawn Hill Gorge before European invasion is difficult to determine although the consensus among old Waanyi people is that it was Injilarija country. Around the turn of the century social dislocation and movement occurred throughout this region. This resulted in eastward migrations of language groups from the west down watercourses such as the Nicholson River and Lawn Hill, Elizabeth and Musselbrook creeks. Many Garawa/Wanyi people stayed in these areas after finding employment on stations and have
acquired knowledge of this country. It was this knowledge, as well as a general knowledge of bush resources, that the trip was intended to document. But because an archaeologist was making observations about site formation processes it was also an exercise in ethnoarchaeology.

THE CASE STUDY

Two distinct camps were formed. The first group, who had arrived by vehicle from Mt. Isa early on the first day camped on a ridge on the southern side of Colless Creek (Fig. 1). This group comprised Robins, a botanist and his daughter, and an Aboriginal Ranger. Here a European style camp was established with tent, table and chairs, gas lamp and boxes of store food, tin trunks of equipment and a range of tools including shovels, picks and axes. A single cooking fire was established (Fig. 5). The meal that night and breakfast the following morning consisted of packet foods. Members of this camp slept in tents or in swags on campbeds.

Trigger, together with another anthropologist and a party of Garawa/Waanyi people comprising a young married couple, two women (one elderly), a young girl and three men (two middle-aged and one elderly) arrived at Colless Creek by boat. They established camp late on the first day on a triangle of level ground bounded by Colless Creek to the south, Lawn Hill Creek to the east and a low escarpment to the northwest (Fig. 1).

Figure 1  Lawn Hill Gorge location
They brought their swags, some billies and basic supplies — flour, tea, sugar, tins of beef and salt. Three fires were established: one for the married couple, one for the females and one for the men. These fires were used for cooking, warmth and light (Fig.2). The people in this party slept in swags spread out around and between the fires. Their meal that night consisted of store bought food.

![Figure 2 North camp day 1](image)

The second day was spent documenting a range of bush foods, social and historical information and some aspects of the archaeology. A lunchtime camp was established several kilometres up Colless Creek where a number of fish, tea and damper were cooked on small fires and shared by members of both parties. In the afternoon two wallabies were shot and these, along with 55 fish caught in Colless Creek during the day were brought back to the main camp for the evening meal.

One wallaby was discarded 50 m to the northwest of the camp because it was badly bruised by the high powered rifle bullets that killed it. The other wallaby was cooked in an earth oven or *dandi*. A large hole (approximately 2 m x 1 m x 1 m) was excavated with shovels in a clear area some 30 m to the east of the camp. A fire was ignited in this hole, and rocks brought from the creek were placed in it. The wallaby was gutted, singed over the flames, placed on the coals, and hot rocks were placed strategically in and around it. It was then covered with tree bark and the whole covered with dirt so that the oven was sealed. The wallaby was allowed to cook for several hours (Fig.3).
The large number of fish were also cooked in an earth oven but at the opposite, western end of the camp. A smaller hole than that excavated for the wallaby was dug with shovels. A fire was lit in it and then allowed to die down and the ungutted and unscaled fish placed on the coals. They were then covered with tea-tree bark and earth and allowed to cook for between 30 and 40 minutes. The fish and wallaby were consumed that night by members of both parties.

Fish bones were scrupulously discarded into the fire while the wallaby bones were thrown over the shoulder some one to four metres into the surrounding bush, in localities that were not being used. All participants were requested to observe these rules.

By the morning of the third day two distinct trails, one to the female washing area and one to the male washing area, were evident at the north camp (Fig.3). Breakfast at this camp consisted of left over fish and wallaby, tinned meat, tea and damper cooked on the fireplaces established on the first night. At the south camp breakfast comprised packet cereals. The majority of the male members of both parties spent the morning inspecting Lawn Hill Gorge during which a goanna was extracted from its hole with a spear. In the process the spear was broken. The portion with the metal ('wire') prongs was retained until a new spear could be manufactured. The women and two of the men remained behind at the camp. At lunchtime a rest area was established by the women underneath shade trees near the wallaby oven.
That night members of the southern camp ate packet foods at that camp. At the northern camp a small number of fish were cooked in ashes in the smaller earth oven. Care again was taken to dispose of the fish remains in the fire. The goanna was cooked over coals on one of the original fires and a turtle caught that afternoon on a line was cooked in a small earth oven. The remains were discarded in the vicinity of consumption. The turtle carapace was later taken back to Doomadgee. By this time sleeping and rest areas had expanded around the new fireplaces. Shavings were visible where one man had made a new spear to replace the broken one (Fig. 4).
individuals for particular activities, such as the sharing of food. No attempt was made to 'clean up'. The only burning of material that took place was of some bone. What was left behind was a reflection of the activities that occurred there. Then the members of the southern party gathered all the rubbish, placed it in a garbage bag and buried it. Pigs duly disinterred it (P. Hiscock pers. comm.).

![Diagram of a camp setting](image)

Figure 5 South camp

This setting compares starkly with the European style camp on the southern bank of Colless Creek. Here, the small camp stayed static in size with fixed locations for all activities. Only one fire was used for cooking tinned food and packet mixes and for paper and cardboard rubbish disposal. All other rubbish generated during the duration of the camp was placed in a garbage bag and later buried.

b) The manner of rubbish disposal can be influenced by Aboriginal beliefs about the consequences of disposal methods. Garawa/Waanyi people have strict proscriptions regarding the association of particular foods. Foods from one domain should ideally not be mixed with another either in the cooking, eating or disposal processes. For example, foods from a freshwater domain may not be mixed with those from saltwater. Those from freshwater cannot be mixed with those from a terrestrial environment. Fish remains are always burnt but they are never burnt with other remains.
This pattern of use and disposal stems from the beliefs that the burning of fishbones will ensure the continued availability and catch of 'fat' fish and that the mixing of different domains will create illness.

Bones other than those of fish may also be burnt although this depends on current circumstances and is rarely carried out. It is not articulated with the same imperative as is the rule for the disposal of fish bone. Behavioural rules regarding acquisition, consumption and disposal apply not only to animals but also to several plants.

In all societies, ideals are not always practised. Thus there are often discrepancies between stated beliefs and actual practices. For example while the wallaby and fish at this camp were cooked separately they were consumed together by the same people at the same time. In other cases different practices might be carried out at the same time. For example, although Ganggalida people (coastal people in the southern Gulf of Carpentaria region) observe much the same domain rules as do Garawa/Waanyi people, instances have been observed in the coastal country where men burnt fish bone on one fire while two women carefully placed fish remains to one side on a bed of leaves. In another case we observed a Ganggalida woman during a visit to her country carefully gather all the shell remains from a meal and place them in the ashes of the fire before departing. Generally, shell single remains are said to have been just 'chucked anywhere'.

Variability of cooking arrangements are not attributable to notions of domain alone. The size or number of animals, the style of cooking and the personality of the person who obtained the food all contribute to the character of the camp structure and the consequent pattern of remains.

DISCUSSION

This case study illustrates that contemporary Aboriginal behaviour with respect to use and discard of bush resources can be very different from contemporary non-Aboriginal behaviour. Although the Aboriginal people in this case used items of non-Aboriginal origin such as aluminium boats, rifles and swags, these were used in a distinctive (Aboriginal) way. It is this difference in behaviour and its ability to suggest hypotheses, provide strong generalisations and produce counter-examples that is important for archaeological interpretation, regardless of the temporal or spatial proximity of the archaeological site to the ethnographic example. Ultimately, however, ethno-archaeology cannot solve archaeological problems, only archaeology can do that. The following are issues and questions arising from the above ethnoarchaeological example that might '....prompt more searching investigation ...' (Binford 1967:1) about the archaeological record and the way archaeologists interpret it.

Dietary Reconstruction

How might we ensure comparability between site components, particularly faunal remains, when comparing archaeological sites? It might be the case for example, that an archaeologist examining the contents of two sites in close proximity, finds that one contains fishbone and one does not. What archaeological strategies might they devise
to distinguish between site differences resulting from seasonal use of resources as opposed to distinct disposal methods?

**Taphonomy**

The above example may indicate a taphonomic problem. What are the taphonomic implications of the different disposal methods? How do fishbones respond to exposure to moderate temperatures? What parts of the fish are more resilient after firing? Does bone burnt in an oxidising and reducing situation differ significantly from that not burnt in such situations? How does this affect preservation? This question could result in a series of well controlled burning experiments on species of fish that are commonly found in archaeological excavations as well as others that are not.

**Methods**

What type of excavation would have to be carried out on the Northern Camp to attempt a dietary reconstruction and would that differ significantly from that undertaken on the southern bank? We suggest that it would. On the southern camp the location of two small areas within close proximity, the fireplace and the garbage hole, would give a reasonable indication of what was eaten. However, the northern camp would require extensive excavation over hundreds of square metres to resolve the same question. A similar point has been made by Jones (1980), also based on ethnoarchaeological observations.

**Methodology**

Where do archaeologists obtain the templates they carry with them into the field and how does this influence their approach? Could the above examples influence the types of strategies undertaken? Many of the models created and used by archaeologists are based on documented open sites yet they excavate and interpret rockshelters or caves. What differences to patterns of disposal would result from rock shelter topography and what strategies could the archaeologist devise to accommodate these differences or test their interpretations?

**Counter-example**

Walters (1988) in a discussion on bone discard and fire usage at Utopia Station, central Australia, pointed out that Aboriginal fires are always kept ‘clean’ and that bone and rubbish is never discarded into fires. For Garawa/Waanyi people this rule also operates — with the exception of fish remains. Although other bone is discarded in a way similar to that described by Walters, care is exercised to keep food domains separate. However, this rule may not preclude mixing of material from different domains over long periods of time.

The above questions and discussion illustrate that, freed of unnecessary constrictions, ethnoarchaeology can, and should continue, to play an important role in Australian archaeological research.
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