

Introduction: archaeology and the totality of human behavior

For several years it has been fashionable among prehistorians to refer to archaeology as “fossilized human behavior,” following a call to arms issued by Binford in 1964 (p. 425). Enough has happened in the field since then to cause archaeologists working on both sides of the Atlantic and in the Pacific as well to start asking whether such a goal—namely, the application of deductive arguments to archaeological evidence in order to discover how human beings in different prehistoric societies behaved in the past—is realistic. Certainly, to someone outside the field of archaeology, this goal might seem to be the height of presumption. One does not have to be a trained archaeologist to understand how the ravages of weathering and decomposition affect perishable remains of past communities; and when one adds to this the recognition that material remains account for only a small part of the total range of human behavior, most of which consists of symbols (i.e., language, social organization, ideas) that are manipulated in various ways, most of which are nonmaterial in nature, the problem must seem insurmountable.

The trained archaeologist knows, too, that the obvious limitations posed by decay and the material nature of the evidence are further compounded by other sources of error that can affect his behavioral interpretations. Sampling error, faulty or imprecise chronologies, disturbed sediments and site deposits, and a multitude of other factors rise up like armed men to obstruct the archaeologist in his quest for satisfying knowledge about past human behavior. The question is: Are archaeologists engaged in such a quest really informing us about past human behavior? Or are they merely sowing more dragon’s teeth; that is, creating more ambiguities and difficulties for themselves by attempting to study behavior? Perhaps, as some might argue, archaeologists would be better off to confine their efforts to constructing chronologies and recording the spatial distributions of various artifacts and other remains. Why do we persist in this difficult quest when it would be so much easier to limit our interests to the traditional time–space frameworks that have been a basic part of

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archaeology from the beginning? No one is seriously suggesting that the need for such time–space frameworks in archaeology is over, so why not leave it at that?

More and more archaeologists today would answer this question by stating that archaeology simply for the sake of chronicling past human events is the dullest form of intellectual stamp-collecting imaginable. While time–space relationships are a necessary first step in understanding the prehistory of any region, they would argue that these are only a means to a larger end, namely, the behavioral explanation of those relationships. Can one discover why the material remains of prehistoric peoples vary in time and space? Inevitably even the dullest chronicler of events must wonder how these events came to be the way they were, and such wonderings lead one, willy-nilly, to consider processes of human behavior that might account for such events.

So the problem is not one of deciding whether or not archaeologists should attempt to understand past human behavior. Rather, the problem is basically the same as it has always been since the beginnings of archaeology as a discipline—finding and improving ways to overcome the limitations posed by the nature of archaeological evidence. The application of principles of stratigraphy to archaeology, the use of various kinds of sequence dating, radiocarbon and other radioactive decay dating techniques, fossil pollen studies, faunal analysis, and many other methods stand as landmarks in this process. Each of these methods calls for particular skills and training, and as a result there has developed within archaeology a natural tendency to specialize. In other words, as archaeologists develop different ways to overcome the limitations posed by their evidence, they move in different directions according to the special demands imposed by their choice of approach. It becomes more and more difficult for archaeologists to obtain useful results in their own particular specialties and still keep a wider view of archaeology as a social science. Other social scientists, too, find it increasingly difficult to understand what is happening in archaeology as the literature becomes more diverse and specialized. What possible relevance, they ask, does archaeology have for their kind of social science?

Anthropologists in particular have been ambivalent toward archaeology. In part this ambivalence arises from basic differences in the histories of archaeology and anthropology, especially in Great Britain and America. Until recently, as Leone (1972:16) and Smith (1976:275–6) point out, social and cultural anthropology usually were the “donor disciplines” when it came to the development of a new theoretical framework, with archaeology acting as a kind of passive “recipient” of these ideas. Archaeologists persistently mined the anthropological literature in search of useful ideas about human

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behavior that could be used to interpret the prehistoric evidence. Social and cultural anthropologists, for their part, could not help but wonder if archaeology could ever be as rewarding as their approach, since archaeologists were limited to studying the material remains of human behavior. Only in living human societies, they might argue, could one expect to understand the operation of the really important and interesting aspects of human behavior, namely those having to do with the human use of symbols. Since these are mainly nonmaterial in nature, it seemed reasonable to conclude that archaeologists, with their reliance on material remains, could never hope to do more than deal with a limited and rather unimportant part of the story of the human species. Indeed, the historic precedent for such a view within archaeology was strong, since the pioneering work of Radcliffe-Brown and Malinowski was as much concerned with supplanting earlier preoccupations with conjectural history by evolutionary and diffusionist anthropologists as it was with developing new analytical approaches to the study of living human societies. The problem more recently has been that, as archaeologists have shown an increased interest in understanding processes of past human behavior, they have also increasingly run the risk of adopting a kind of client relationship toward social and cultural anthropology in order to obtain ideas that would enliven their discipline. Such a dependency relationship is always uncomfortable for both the donor and the recipient discipline. For a time, then, archaeology has seemed directed toward an inescapable dilemma. The more archaeologists tried to enliven their interpretations of the past by applying ideas about the past derived from social and cultural anthropology, the more they exposed themselves to the criticism of social and cultural anthropologists whose studies encompassed a wider and presumably more satisfying range of human behavior. Was archaeology destined ever to become anything more than either a collective attempt at chronicling human prehistory or a kind of conjectural history based at second hand upon social and cultural anthropology?

With this question in mind we can perhaps begin to understand a phenomenon that has grown into an important new development within archaeology during the last decade—the detailed ethnographic study of contemporary, living human societies by trained archaeologists. Termed ethnoarchaeology in most quarters, this approach represents an attempt by archaeologists to overcome the limitations of their data in interpreting past human behavior without a correspondingly increased dependence upon the theoretical approaches favored by social and cultural anthropologists. Or, to put it even more simply for the sake of argument, *we are now seeing the development of a new kind of anthropology that is based upon the observational and interpretive skills that are peculiar to archaeology.* The rise of

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this approach signals an effort by archaeologists to apply a theoretically self-conscious set of methods to the discovery and testing of general principles about human behavior in relation to materials and material residues. Archaeologists, for so long dependent upon social and cultural anthropologists for ideas about human behavior upon which to base their interpretations, are now in the process of developing an approach which will enable archaeology to make its own unique contribution to social science. This is not to suggest, of course, that archaeologists must limit their explanations to purely material aspects of human behavior; as we shall see later on, the archaeologist is always concerned with explaining the totality of human behavior, including social and symbolic relations and “unique” events in prehistory.

What probably distinguishes this approach more than anything else from earlier efforts by archaeologists to use anthropological data and theory is the importance placed upon the archaeologist or archaeologically trained ethnographer doing his or her own first-hand field studies of living, contemporary societies. This activity I shall call *living archaeology*, as opposed to the wider definition of ethnoarchaeology as a theoretical and methodological subdiscipline. That is, I shall primarily explore how archaeologists do¹ ethnoarchaeology, rather than worrying at length about what ethnoarchaeology is. The ethnoarchaeologist is concerned primarily with examining human behavior in relation to materials and material residues as a means of discovering relationships within contemporary societies that allow him to specify when and under what circumstances certain kinds of behavior may have been important in relation to overall processes of human adaptation. Hence the title of this book and also the emphasis on fieldwork, both of my own and that of colleagues, done in Australia. Using Australian Aborigines as a source of case studies and primary observations, I shall demonstrate what seem to be key principles in carrying out and applying this approach to our wider understanding of the behavior of the human species in general. I have published some of the ideas and data presented in this book in other places, but there does seem to be value in trying to unify this work by bringing it together as a coherent whole.

At this point I should note that much valuable research in ethnoarchaeology is currently going on among living people in many different parts of the world and at every level of sociocultural complexity. There is no necessary reason for ethnoarchaeologists to limit their interests to traditional or semitransitional hunter-gatherer societies or to one particular geographical area like Australia. Right now, valuable work of this kind is continuing among several hunter-gatherer societies (for example, by Wilmsen and by Yellen among

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the !Kung of the Kalahari Desert in Africa; by L. Binford among the Eskimo of the Anaktuvuk Pass region of Alaska; by Griffin among the Agta of northeast Luzon in the Philippines; by Meehan and Jones among the Anbara Aborigines of Arnhem Land, Australia; and by O'Connell among the Alyawara Aborigines of the Central Desert of Australia) as well as among farming and herding societies (for example, by Longacre among the Kalinga of Luzon, Philippines; by Stanislawski among the Hopi Indians of Arizona; by Hole among the Baharvand nomads of Iran; by Kirch among Western Polynesian farmers and fishermen; by David among the Fulani of Africa; by Hodder among the Pokot and other societies of West Kenya; and by J. P. White, Lauer, and others in New Guinea) and even among modern, complex societies (like "Le Projét du Garbage" by Rathje in Tucson, Arizona). While these and other studies will be referred to, the primary emphasis here is on Australia for the rather arbitrary-sounding reasons that this, too, has been a productive area for this approach and happens to be this author's main area of regional competence. The general principles derived from an examination of living archaeology in Australia should, however, be applicable anywhere in the world and to a wider field of social science than just archaeology.

These general principles and demonstrations of them by means of material derived from recent work in Australia constitute a first step toward an unified theory of ethnoarchaeology. So much discussion has occurred recently about the nature and direction of ethnoarchaeology that it seemed timely to attempt this exercise. This will not be an attempt to reconcile all of the differing views that currently exist about ethnoarchaeology, since many of these views are contradictory and cannot be reconciled. Instead, I shall try to select and develop those views that appear to point in the direction that will be most productive. I realize that an overly doctrinaire presentation could have a chilling effect on the use of this approach, so I should make it clear now that my aim is to open doors to productive research rather than to close them. While my theoretical and methodological eclecticism will be tempered by personal preferences and choices, I hope this personal effort on my part will give a unity to this approach that could not be attained by any group of scholars attempting to do this jointly. Ethnoarchaeology, and its offspring, living archaeology, are not beasts that can be bred successfully by a committee.

With these general comments in mind, let us now examine how living archaeology is done and what its importance might be for our understanding of human behavior in general.

I

TIKATIKA

Nothing should begin to reveal the essential problems of archaeological interpretation in relation to behavior better than a close look at contemporary behavior in the context of a reasonably well-bounded physical locus comparable to what archaeologists habitually refer to as a site. The locus I have chosen for this exercise is the habitation camp at the waterhole called Tikatika in the Western Desert of Australia, as it was occupied by a group of 13 Ngatatjara-speaking Aborigines on one day during the summer of 1966. This fine-focus description of the activities occurring at that site will then be compared with the physical remains left at the site following its abandonment.

In this description I am taking several literary liberties that should in no way affect the validity of the observations. Not all of the social activities described here actually took place on this single day, but they did occur in the context described, mainly at or close to the time that I have chosen, and they involved the actual people included in this account. In a limited sense, this “day in the life of. . .” is a composite account of behavior observed over the course of several days, since it was clearly impossible for my wife and me to have all thirteen people directly in view continuously during this period. As Wobst (1978:303–5) correctly notes, even the most empirical attempts at observation must necessarily have certain gaps and discontinuities. These can be filled in as one observes a community over a period of time and gets to know the people better. Also, I shall not be using the personal names of individuals in this camp but will refer to them instead by their subsection names. While nothing of a compromising nature is being reported here, this kind of anonymity for one’s informants is now accepted practice among anthropologists in matters of publication. The use of subsection instead of proper names should adequately preserve confidentiality without affecting the verissimilitude of the situations I shall be describing.



A Western Desert Aborigine habitation base-camp near the Clutterbuck Hills, about 65 kilometers west of Tikatika, February 1967. Despite the cast-off European clothing they wore, these people were entirely dependent upon wild food products for their subsistence.

As it was . . . Tikatika: December 26, 1966

Among the Western Desert people, activity began at first light. As the first band of yellow light appeared on the horizon, the morning bird chorus commenced along with the appearance of the first of what became hordes of flies later in the day. In each family's camp one could hear stirrings and conversation as someone in each camp built up the fires and threw out the dogs. The air was dead still, so voices carried easily between camps. The smoke rose straight up, creating a filmy layer of blue haze over the camp that seemed to be part of the landscape itself. Yet this fine smoke haze was as transient here today as the hunting-and-gathering way of life that my wife and I were observing among these desert Aborigines. It was still quite dark, but a shout from Tjupurula's camp brought everyone over. Tjupurula and the younger of his two wives, Nyapanyangka (2), had a baby daughter, Nyakamara, who was approaching the age when she should be able to take her first steps and start to walk.

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Tjupurula and Nyapanyangka (2) were seated about 2½ meters (8 ft.) apart on opposite sides of their camp. In the firelight, Tjupurula held little Nyakamara out at arms' length while Nyapanyangka (2) extended her arms toward Nyakamara, urging her to walk across the gap of about a meter on her own.

This had been going on for some time each morning, but the reason for all the excitement this morning was that, for the first time, Nyakamara had succeeded in walking across the gap. Tjupurula called everyone over to have a look at Nyakamara's footprints in the sand. With some excitement, he and Nyapanyangka (2) pointed to the tiny tracks, and everyone looked and commented. The interest was more in the tracks than in the act of walking for the first time. This did not surprise us, considering the importance of tracks and tracking in the lives of these people. European observers have remarked on the almost uncanny ability of Aborigines to follow and identify the tracks of individuals whom they know by the sight of their tracks. These accounts do not exaggerate, but, of course, there is nothing uncanny about this skill either. From the very first steps a child takes, the entire community takes an interest and notes the tracks so well that, in a short time, they become as much a part of a person's social personality as his or her physiognomy and kinship.

After this initial excitement, people retired to their own family camps and ate some leftover food from the previous day's foraging. There are no formal meals or mealtimes among these desert people, but some plant foods that are processed after collection are always kept around and eaten the following morning. In this case, the only hot item on the menu was tea boiled in a billycan. (Tea, along with the billycan, tobacco, and various colored yarns, is among the few nonnutritive gifts that we could give these people as a partial reward for their patience in allowing us to camp with them and make these observations. Tea is not a traditional part of the Aboriginal diet.) This morning, large balls of *kampuṛarpa* (*Solanum centrale*), fashioned by grinding the raisinlike, sun-dried fruit into a paste and compressing the paste into a ball about the size of a large grapefruit, were passed around within each family camp while each family member broke off a piece and ate it. The other item on this morning's menu consisted of the sun-dried husks of *ngaṛu* (*Solanum chippendalei*), which were pulled off long sticks on which they had been strung and eaten. Like *kampuṛarpa*, the *ngaṛu* husks were shared with everyone in each family camp, and only a small amount of both of these wild plant foods was left by the time everyone was finished. Meanwhile, a child from each of the two family camps was sent over to the waterhole, about 180 meters (600 ft.) away, to get water for more tea.

Once it became light enough to see around, we could assess the



A Western Desert Aborigine woman grinding kampurarpa (*Solanum centrale*) at a habitation base-camp near the Clutterbuck Hills, Western Australia. This is one of several edible plant species that provide the bulk of the diet for these people most of the time.

physical surroundings with greater clarity. Tikatika is, in fact, a “native well,” that is, several holes in the ground where there is a localized subsurface water table (in this case about 2½ meters below the ground surface) in a relatively impermeable layer of conglomerate with a hardness intermediate between soil and true rock. Water sources like this are enlarged by people and no doubt by animals,

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too, as it becomes necessary to dig deeper for water, and also whenever the camp is revisited and one needs to clean out slumped soil and other debris that has accumulated since the last visit.

The habitation campsite at Tikatika on this occasion contained five windbreaks: three large ones (for Tjupurula's, Tjungurayi's, and Tjampitjin's families, respectively) and two small ones (one for Tjapaltjari, an as yet unattached young man, and the other for Nyungurayi, Tjungurayi's widowed sister). Each windbreak consisted of a row of mulga boughs arranged in a linear fashion alongside an oval-shaped area of cleared ground and a series of hearths. Each of the three larger windbreaks had a large stone seed-grinding slab and one or two hand-held seed-grinding stones, either next to the windbreak or cached not far away in some grass. The center of the cluster of windbreaks was situated 186 meters (610 ft.) southeast of the waterhole, in an area that was burned clear of spinifex and other grasses in order to drive away snakes. As the weather got hotter, the men said they would construct slightly more substantial shade-shelters made of mulga boughs. But for now the shade of the mulga trees around the camp was sufficient for comfort during the heat of the day. The remains of two shade shelters from a previous summer occupation were visible about 30 meters (100 ft.) southwest of the waterhole, along with the scattered remains of a hunting blind of boughs that was formerly constructed close to the waterhole.

When these people first arrived here on this visit, the women immediately went to the old camps and dragged their large seed-grinding slabs out of the grass, where they were cached, to their new camps. In a couple of instances, they also tore down old bough shelters and dragged the boughs over to their new camps for firewood. They also lit small fires around the bases of about a dozen large, dead mulga trees at various distances from camp up to about 240 meters (800 ft.), and during the first few nights here the stillness of the night air was punctuated with the sound of falling trees as one after another of these mulga trees was burned through at the base and toppled over—providing an ample source of firewood, which was dragged into camp when needed.

The three families, totaling thirteen people, had been camped here for the last eleven days, having walked to this location via a series of smaller, surface waterholes to the east. To reach Tikatika they crossed open terrain that is flat except for low undulations of clay conglomerate knolls alternating with rows of parallel sandhills. Close to Tikatika there is a low outcrop of conglomerate that serves as a landmark for people crossing this otherwise relatively featureless area, and about 64 kilometers (40 miles) further to the west, there is a series of low rocky ridges (indicated on the map as the Clutterbuck Hills) separated from Tikatika by a further series of