

# I

## Introduction: the nature of material cultures

This book presents a series of ethnoarchaeological studies of material culture patterning and the background to the enquiry and the reasons for undertaking the fieldwork will be described in this introduction. The initial aim of the research was to see what material ‘cultures’ (geographical areas with recurring associations of artifacts) represented and were related to in a living context. The concern was to shed some light on the analysis and interpretation of cultures in prehistoric archaeology. In this the aim was similar to my interests in *The spatial organisation of culture* (1978), but in that book, a combing of the ethnographic and anthropological literature failed to produce detailed evidence of material culture patterning and its relationships. While many ethnographic cultural studies in North America (in particular the work of Kroeber and the Californian studies of cultures) and Africa were referred to in that book, few had examined cultures in the detail and manner suitable for answering the questions of the prehistoric archaeologist. When do ethnic units identify themselves in material culture? What is the spatial patterning that results? What happens at material culture boundaries? After compiling *The spatial organisation of culture*, it seemed that it might be valuable to carry out the series of ethnoarchaeological studies presented here.

My interest in finding out more about the nature of ‘cultures’ can be related to a widespread disillusionment within European prehistoric archaeology about the value of the term. In the 1960s and 1970s many archaeologists expressed embarrassment about the use of the word, and some reacted by finding alternatives (e.g. Cunliffe’s (1974) use of ‘style zones’). Since the ethnoarchaeological studies were a product of these doubts and disillusion, this chapter will begin by examining how the concept of cultures developed and came to be questioned in prehistoric archaeology. The major interpretive model currently available for cultural similarity, that is, flows of information and degrees of interaction, will then be discussed. In the final part of this chapter I will show how the aims of the ethnoarchaeological work came to be expanded by the realisation that the interpretation of cultures was just one example of a more widespread problem in archaeology.

**1.1 Cultures**

In continental Europe, the Austro-German school of anthropological geographers (1880–1900) was concerned with the mapping of cultural attributes and correlation of the distributions with environmental variables (Frobenius 1898; Ratzel 1896), and the geographical tradition has had a long and major influence in European prehistoric studies. For example, between 1950 and 1963 a journal entitled *Archaeologica Geographika*, started by H. J. Eggers in Hamburg Museum and University, was devoted to the collection of large numbers of distribution maps of different types of prehistoric artifact. The main contributors, such as Kossack, Hachmann and Jankuhn, in line with other workers in Europe at the same time, were content to catalogue and to build up a more complete set of distribution maps. Gross correlations were made with environmental features, and changes through time were noted. But there was little attempt at explanation. The emphasis on description has been argued through the seventies (e.g. Lüning 1972), with, for example, Knöll's (1959) exhaustive account of the northwestern European Trichterbecher culture distributions being refined and filled in by Bakker (1979).

The explanatory models which have been used in western continental Europe have largely concerned the relationship between cultural distributions and peoples. Yet the main aim of the *Archaeologica Geographika* was to develop and refine cartographic methods and there has on the whole been little emphasis on making ethnic correlations. This hesitancy is partly the result of the nationalism and racism associated with Gustaf Kossinna's (1911; 1926) interpretation of cultural distributions. In Germany the efforts made to demonstrate by maps and collections of distributions that the different components of culture did not always coincide helped in the rejection of Kossinna's ethnic correlations. Interpretation in terms of peoples came to be little discussed (see however an article by Sturms in *Archaeologica Geographika* for 1950, and Bergmann 1968). In Russia and eastern Europe, on the other hand, the sixties and seventies witnessed a large number of articles (listed by Klejn 1977) debating the explanation of cultures in terms of ethnic groups. Here the emphasis was on the importance of understanding the archaeological culture theoretically rather than on the summing of traits to produce archaeological entities.

The interpretation of archaeological cultures in continental Europe developed with little integration of the anthropological functionalism and cultural ecology of England and America. There was an archaeological, geographical and historical interest in the definition of cultures and cultural distributions, and few attempts were made at interpretation in any other way than in terms of ethnic groups. In England and America, on the other hand, the closeness of the links with functionalist anthro-

polological traditions led to a different line of development, with a gradually decreasing interest in cultures and with an emphasis being placed on ecological relationships.

Early in the twentieth century, archaeologists in Britain often assumed an immediate relationship between peoples and things in that cultural material indicated races of people. Macalister's (1921) *Textbook of European archaeology* used phrases such as 'the Mousterian type of humanity' and the 'race called Mousterian' (*ibid.*, 575, 581). Burkitt, while realising some of the difficulties involved, also used the terms 'Neolithic races', 'Upper Aurignacian race', 'Solutrean race' (1921, 44, 135, 189; 1923, 116–117). Crawford had used the word 'cultures' as early as 1912 (p. 192), and in 1921 (p. 79) he defined culture as 'the sum of all the ideals and activities and material which characterise a group of human beings'. Thus, distinct human groups could be identified by their particular material culture.

These early ideas of the relationship between material culture and people were taken and greatly developed by Childe. While he rejected, in line with contemporary work in Europe, any general racial, linguistic, political or 'tribal' interpretation of cultures, he still retained the notion that cultures in some sense represented peoples (Childe 1951). The artifact types which make up cultures were seen as being inventions that had been socially successful. The invention became a 'type' by being accepted as a norm of behaviour for the members of a group. Types make up models which present accepted and successful ways of doing things and which can be passed from generation to generation. Types thus represent a collective and tested wisdom and groups of types distinguish peoples. But in asserting that the peoples so represented were rarely linguistic, political or tribal, Childe expressed the beginnings of a doubt that increased in later workers in Britain, such as Daniel (1962, 114–115) and Higgs (1968). Childe had to conclude that the 'people' forming a 'culture' had no other reality. A social unit of people was represented, but 'what sort of unit that society was – a tribe, a nation, a caste, a profession – can hardly be decided from purely archaeological data' (Childe 1956, 19). In the end, the 'people' producing a 'culture' was only definable by the material 'culture' itself. The 'culture' was a purely archaeological entity.

An abstraction of material cultures so that they had no relationship to other realities was taken further by David Clarke (1968). Archaeological entities such as cultures were not necessarily of any relevance to entities defined in other sciences such as social anthropology. Although Clarke examined the relationship between material culture and linguistic and tribal similarity, his main theoretical stance in 1968 was that archaeological entities could be studied as entities in their own right. Like Childe, he saw material culture as representing coded survival information passed from generation to generation. While information theory could be used

to examine the transfer of cultural data, the characteristics of the information flow could be studied in abstract, with less attention paid to the relationship between material culture and the people who produced it.

At the same time as the expression of doubts concerning the relationship between cultures and ethnic units increased, prehistorians in Britain began to emphasise the importance of an alternative ecological viewpoint less concerned with cultural norms and more attracted to studies of environmental relationships. Despite his frequently diffusionist interpretations, much of Childe's work was concerned with local processes and development in an ecological setting. He declared (1951, 16) that 'a culture is the durable material expression of an adaptation to an environment, human as well as physiographical, that enabled the society to survive and develop. From this point of view the buildings, tools, weapons, ornaments and other surviving constituents are interrelated as elements in a functioning whole.' Renfrew (1974, 36) is quite justified in viewing Childe as a precursor of a systems approach to cultural change. Childe saw cultures as organic wholes 'whose constituent elements are integrally related' (Childe 1950, 177) so that a change in one facet affected all others. For example, a change in economy inevitably affected most other aspects of social behaviour (Childe 1958, 294). 'Material culture is...largely a response to an environment: it consists of the devices evolved to meet needs evoked by particular climatic conditions, to take advantage of local sources of food and to secure protection against wild beasts, floods or other nuisances in a given region' (Childe 1948, 20–2). Childe saw cultural variability as 'divergent adaptation to local conditions' (1962, 55). Childe clearly had the utilitarian view of culture so clearly examined and criticised by Sahlins (1976), but this is not to say that he was an environmental determinist. Geographical factors are just the background, the constraints within which change occurs.

Grahame Clark presented similar views. Much of his explanation of culture change used ecological and economic factors. Culture was seen as 'essentially no more than a traditional medium for harmonising social needs and aspirations with the realities of the physical world, that is with the soil and climate of the habitat and with all the forms of life, including man himself, that together constitute the biome' (Clark 1968, 175). However, Clark accepted that environmental factors only set certain limits within which there is room for behavioural variety. The importance of ecological adaptation was continued in Britain in the work of Higgs (1972; 1975) and in Clarke's (1968) view of material culture as holding survival information.

In North America a similar line of development led to a decreasing interest in cultures and to an emphasis on ecological relationships. By 1914 Holmes had already divided North America into 'cultural characterisation areas' based on archaeological data. Students such as Holmes

defined geographical areas based on pottery and other artifact types, but their concern was descriptive rather than explanatory. During the twenties and thirties work by, for example, Kidder (1924) and the Gladwins (1934) established cultures which could be fitted into spatial and chronological 'slots'. The main purpose of such studies, as for early cultural research in Britain, was to provide analytical units for the establishment of a chronological scheme. Description and spatial-temporal location were also the reasons for the definition of 'cultural tradition' by Willey in 1946. But during the thirties and forties there was also an emphasis on explaining what cultures represented, and there was from the beginning a divergence between 'normative' and 'behavioural' explanations. As examples of the 'normative' approach, Martin felt that culture concerned a body of meanings held by a society and transmitted by tradition (Martin, Lloyd and Spoehr 1938), and Rouse (1939) entertained similar views. The emphasis was on cultures and types as mental templates in the minds of the original makers and users of the artifacts, but there was also disillusion with attempts made to correlate cultures with other entities. Childe's doubts noted above may have been influential, and by 1958 Willey and Phillips (p. 49) could suggest that cultures had little social reality. As Willey and Sabloff (1974) have demonstrated, the normative view has always had to contend with an alternative behavioural or functional approach in American archaeology. Artifacts were early listed according to functional category, and by the fifties, in parallel with the ecological emphasis of Grahame Clark's European prehistory, a concern with functional links with the environment was widespread in North America, from the specific studies of Wedel (1941; 1953) to the more general influences of Julian H. Steward's *Theory of culture change*.

White's (1949) emphasis on culture as man's extrasomatic means of adaptation was developed in archaeology by Binford who, in his 1965 article, suggested processual definitions of cultural variation. He indicated that culture should be viewed as a system composed of subsystems, and that different parts of the cultural system function in different ways. He separated adaptive techniques from interaction spheres, large areas with stylistic similarity and within which social interaction occurs. Yet to identify cultures as adaptive systems or interaction spheres is not to interpret them in social terms. If discrete cultural units in a range of technical and non-technical traits do exist in geographical space, what social units do they represent and what precise adaptive value do they have (Renfrew 1977b)? The functional approach does not really answer the normative question, 'What do cultures relate to?' The functional argument has taken away the emphasis from such questions, concentrating instead on the adaptive role of the components of cultural systems.

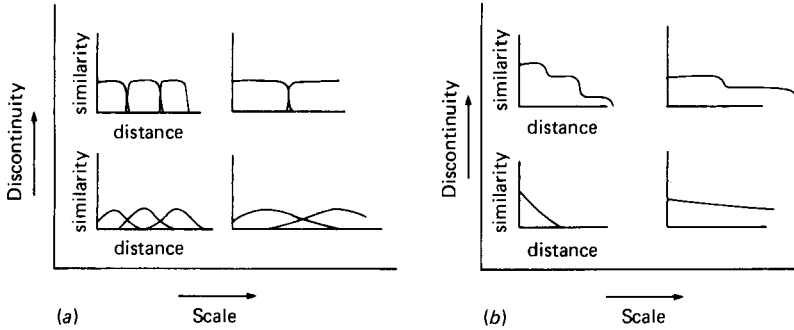
In both England and America there has been a move away from a concern with cultural entities and an increasing awareness that cultures

do not always equal ethnic groups. The trend has been towards an examination of the ecological and adaptive significance of cultural items. But the culture concept has also decreased in use for another reason: the empirical realisation that distinct cultures may not exist in the archaeological data anyway.

All definitions of cultures from Crawford to Childe and Clarke have been very similar. They concern geographical areas in which traits are repeatedly associated. Yet monothetic blocks of culture seemed hard to find. Childe (1951) noted that the various fields of material culture did not necessarily coincide. Clarke (1968) formalised the idea that cultures were made up of overlapping distributions by giving them a polythetic definition. He emphasised that lists of traits at neighbouring sites might not be identical but that quantitative analysis would still recognise general cultural affinities between sites within a region. The different and overlapping artifact distributions could be related to different subsystems in much the same way as Binford had suggested.

Doubt about the the existence of cultures was further developed by making a distinction between random and non-random association groups (Hodder and Orton 1976). Hodder and Orton suggested that a continuous trait distribution could be likened to a circular disc. The discs, of varying diameters, could be thrown at random over a region, to produce a complex series of overlaps. Imagine a series of sites within the region, each site with the array of artifacts represented by the discs which happened to overlap at that point. Because the distributions (discs) are continuous, any two nearby sites in the region would have similar assemblages. At least, the nearby assemblages would usually be more similar than distant assemblages. Such 'random' association of overlapping cultural distributions produces a continuum of cultural similarity across the region. As we move from site to site over the area, cultural assemblages gradually change. Starting from any one point within the area we can produce a 'culture' by moving outwards to arbitrary boundaries. Within the 'culture' so defined sites *are* more similar to each other than they are to sites outside the 'culture'. But the culture is an arbitrary construct (random association group) within a continuum of variation over space. This theoretical expectation has been identified in practice in Shennan's (1978) elegant study of European Beakers.

Doubts about the empirical existence of distinct cultures encouraged Renfrew (1977b, 94) to suggest the total abandonment of the notion of culture as a recognisable archaeological unit. Yet there is another type of culture little discussed in Renfrew's abandonment. His concern was mainly with random association groups. But there are also non-random association groups. Spatial analysis can distinguish whether artifact distributions are randomly overlapping or whether they overlap in a non-random way to form distinct groupings. Analysis can distinguish whether cultural similarity between sites is spatially continuous or



1. Patterns of regional similarity at different degrees of discontinuity and scale: (a) site-to-site similarities and (b) decreasing similarity with reference to a single site.

discontinuous with marked boundaries. It can also identify the spatial scale of cultural variation. Two aspects of material culture distributions (scale and discontinuity) are shown in figure 1. Analysis of late Iron Age distributions in southern England (Hodder 1977b) has indicated non-random overlap and discontinuities in material culture similarity around such small-scale groups as the Durotriges. If Renfrew is right in abandoning random association groups as cultures is he also right in abandoning these more distinctive non-random groupings?

It has been shown that two general approaches to the interpretation of cultural distributions can be identified in both England and America. The first concerns the question, 'What do cultures indicate in terms of people and norms?' Such considerations, often labelled 'normative', have recently been thought to be lacking in explanatory value. The second approach has emphasised the importance of answering questions concerning the adaptive role of cultural items in different environmental contexts. Within such a processual approach the value of defining cultures as norms has decreased. But whether a normative or a processual stance is taken, it is necessary to differentiate between the two types of cultural distribution shown in the lower and upper parts of the graphs in figure 1. What factors cause some societies to be associated with random association groups and others with non-random association groups?

One aim of the ethnoarchaeological studies in this book was to examine whether the disillusion and doubts concerning the use of the culture concept should really lead to a rejection of interest in the normative explanation of cultural entities. Could anything be salvaged from 'cultures'? At least the question could be asked: under what conditions do marked cultural discontinuities relate to the boundaries of ethnic groups? But as well as examining the normative approach, it was also necessary to consider the value of particular processual interpretations

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of spatial cultural variation. Beyond the general statements about the adaptive role of cultural distributions, some specific hypotheses had been suggested which needed to be tested in the ethnoarchaeological work.

*1.2 Cultural similarities as reflecting degrees of interaction*

In rejecting the normative view of culture and in substituting a functional or ecological emphasis many archaeologists have recently aimed to relate cultural and behavioural variability. One example of this trend which is directly relevant to the interpretation of cultures is that the spatial patterning of material culture is seen as reflecting degrees of interaction. At the within-settlement scale, the interaction hypothesis was used in the Longacre–Deetz–Hill matrilocal residence theory (to be discussed in chapters 7 and 9). Daughters learn potting from their mothers and because of this close contact and interaction, similar pots are made. At the regional scale the hypothesis again suggests that cultural and stylistic variation reflect variation in degrees of interaction (see Plog 1976 for a range of examples), and that social boundaries hinder the movement of objects (Ericson 1977, 118; Sidrys 1977). Alternatively, artifact similarity is functionally related to the information and communication network (e.g. Wobst 1977). The nature of the interaction and information flow is often related in turn to the pattern of available resources.

The direct relationship assumed between resources, interaction and cultural similarity is evident in many studies. Yellen and Harpending (1972, 251), for example, state that poor and highly variable resources lead to cultural homogeneity among hunter-gatherers because of the greater need for contact between specialised groups, while rich or uniform resources favour differentiation. Similarly, Sherratt (1981) relates the greater variability in the resource base in the later Neolithic in Europe to the widespread pottery styles found at that time. In these and other studies (Struever and Houart 1972; Sherratt 1972, 525; Hodder 1978) a straightforward relationship is assumed between interaction and cultural similarity. Clarke (1968, 414) notes that one of the main factors affecting artifact similarity is the 'efficiency of the person to person contact' and 'the extent and continuity of contact'. Cohen (1977, 82) suggests that widespread homogeneity of ceramic styles should occur in hunter-gatherer societies when there is considerable movement of individuals from camp to camp. 'Conversely, local specialisation in artifact styles should be indicative of relative isolation among populations' (*ibid.*).

Stephen Plog (1976) has attempted to provide an independent archaeological test for the hypothesis that cultural similarity reflects degrees of interaction, by taking distance and geographical models as measures of interaction. This would seem to be a difficult line of argument since there is little evidence that social interaction and distance are



directly correlated in traditional societies. If it is impossible to examine the relationship between interaction and cultural similarity in an archaeological context, it is necessary to turn to ethnoarchaeology, and the studies in chapters 2 to 7 specifically examine the assumptions involved in the interaction hypothesis. The aim of the ethnoarchaeological work was not only to examine the relationship between peoples and cultures, but also to find out if cultural similarity reflected interaction and, if it did not, what other factors intervened.

But before moving on to the ethnoarchaeological studies some indication will be given of the way in which the aims of the fieldwork studies came to be expanded. A widening of focus resulted from the fact that the interaction hypothesis is just one of many similar hypotheses that are applied in all fields of archaeological work.

### 1.3 *Culture as reflecting behaviour*

According to the interaction hypothesis, cultural similarity 'reflects' degrees of interaction. By 'reflects' is meant that direct predictive links are assumed between culture and human behaviour. Given a higher degree of interaction one could ideally predict a higher degree of cultural similarity. Such direct links between culture and behaviour are assumed in many spheres of prehistoric archaeology.

For example, direct links are assumed in much of the work on the relationship between artifact styles and the nature of the production of the artifacts. In chapters 4 and 7 it will be shown that the scale of production of pottery and metal items is often assumed to have a direct relationship with the scale of stylistic similarities. The scale of the former can be deduced from the scale of the latter.

In recent studies of burial traces in archaeology it has frequently been asserted (Binford 1971; Tainter 1978) that variability in mortuary practices is related to variability in the form and organisation of social systems. For example, a direct link is assumed between the complexity of the status structure in a society and the complexity of differential treatment of people in burial ceremonies. As with the study of interaction, the study of burial now seems to be suggesting relatively straightforward links between behaviour and artifacts.

The same point is relevant to recent work on refuse and discard. This may seem a surprising claim since much of, for example, Schiffer's (1976) important contribution is concerned precisely with showing how behaviour in respect to discard can distort the relationship between, on the one hand, activities and social organisation and, on the other, distributions of artifacts on archaeological sites. But, in a sense, the link between behaviour and artifacts is still seen as direct in Schiffer's work. Discard behaviour is related directly to variables such as size of site, length of occupation, and life-span of artifacts, while Binford (1978) has

emphasised the role of curation. The artifact distributions are interpreted directly, using laws, in terms of the functioning and organisation of the site system.

In settlement studies, the size of sites is often assumed to have some statistical relationship to population size (Wiessner 1974) and there have been many attempts to relate the organisation of house and other structures within settlements to social organisation (e.g. Clarke 1972). At the regional scale, it is now commonly accepted that settlement patterns reflect social organisation (Renfrew 1972; Hodder 1978).

In studies of regional exchange systems, it has been suggested that there must be some direct relationship between the spatial patterning of the artifacts exchanged and the process of exchange (Earle and Ericson 1977). For example, fall-off curves have been studied in attempts to suggest relationships between the shapes of the curves and reciprocal, redistributive, down-the-line and prestige exchange (Hodder 1974; Renfrew 1972; 1977a).

All these examples, which will be examined more fully in chapter 9, demonstrate the attempts made by archaeologists to set up predictive links between culture and social behaviour. This emphasis on the reflective nature of material culture patterning has been associated with a functional and behavioural trend in prehistoric archaeology. Artifacts are seen as assisting people in their articulation with the world around them (both physical and social; Flannery 1972). Material culture is made up of tools functioning between man and his environment. Such an emphasis has a long history in America, as has already been shown, and in prehistoric studies in Britain as the works of Childe, Clark and Clarke attest. But the idea of culture as man's extrasomatic means of adaptation is better known today through the work of Binford (1972). Since artifacts and cultural features are seen as being involved in the adaptive strategies of the prehistoric people who made them (Cordell and Plog 1979, 409), 'laws' can be used to set up links between material culture and society. For example, Schiffer (1976, 13) describes 'correlates' which relate behavioural variables to variables of material objects. The link between people and things concerns utility and function. The link is predictable, lawlike and fairly direct.

But the functional link is now seen as only 'fairly' direct because of the recognition of the importance of depositional and post-depositional effects. Schiffer's (1976) cultural transformation processes demonstrate that archaeological remains are a distorted reflection of past behavioural systems. But the degree and nature of this distortion can be ascertained by the application of cultural and non-cultural laws. As with the 'correlates', these laws of artifact deposition are related to adaptive strategies. There are, for example, predictable behavioural relationships between artifact patterning and site size and intensity of use. Binford (1973, 242) suggests: 'it is clear that the character of the archaeological