Reading the past

Current approaches to interpretation in archaeology

Third edition

Ian Hodder

and

Scott Hutson

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1 The problem

Many people are becoming increasingly aware that the so-called New Archaeology of the 60s and early 70s was flawed. Though the New Archaeology met resistance from its inception, a tradition of substantial epistemological critique began more than thirty years ago (Bayard 1969; Kushner 1970; Levin 1973; Morgan 1973; Tuggle *et al.* 1972). However there is little consensus as to the nature and scale of these flaws. It can be claimed that the New Archaeology actually inhibited the development of archaeology itself by trying to subsume it within other realms of study, such as anthropology and the natural sciences. In fact, within anthropology, the type of materialist, neo-evolutionary approach from which New Archaeologists drew inspiration had already lost much of its ground to interpretive, symbolic and structural approaches. Despite David Clarke's insistence on 'archaeology is archaeology is archaeology' (1968), his own approach, based on the importation of ideas from statistics, geography and the information sciences, has not led to a viable and distinctive archaeology.

Despite the great methodological contribution of the New Archaeology, many of the central concerns of the pre-New Archaeology era need to be rediscovered if an adequate *archaeological* discussion is to take place. Of course, the traditional approaches themselves had flaws, and these have to be dealt with. But the older approaches do not have to be thrown out totally, in the way that the New Archaeology sometimes rejected 'normative' archaeology (Flannery 1967; Binford 1962; 1965).

Our own route to this viewpoint was substantially drawn by the ethnoarchaeological fieldwork reported in *Symbols in Action* (Hodder 1982a). The three main ideas which developed out of that work, all of which have parallels in pre-New Archaeology, were (1) that material culture was meaningfully

constituted, (2) that agency needed to be part of theories of material culture and social change, and (3) that despite the independent existence of archaeology, its closest ties were with history. We wish now to summarize these three 'problems'.

Cultural meanings and context

Schiffer (1976; 1987) has already argued that cultural transforms affect the relationship between material residues and the behaviour of the people who produced them. *Symbols in Action* showed further the importance of these 'c-transforms', as Schiffer called them.

At first sight such realization offers no threat to archaeology as a generalizing scientific discipline. Schiffer showed how one could generalize about c-transforms. For example, it can be shown that as the duration and intensity of use of a site increase, so there is more organization and secondary movement of refuse away from activity areas. In Hodder's work in Baringo it became clear that material culture was often *not* a direct reflection of human behaviour; rather it was a transformation of that behaviour.

For example, it had earlier been suggested that the stylistic similarity between objects increased as interaction between people increased. In fact, at the borders between ethnic groups in Baringo, the more interaction between people, the less the stylistic similarity. But, again, such findings can be incorporated within New Archaeology because it is possible to generalize and state the 'law' that material culture distinctiveness is correlated with the degree of negative reciprocity between groups (Hodder 1979). So the more competition between groups the more marked the material culture boundaries between them.

Another case in which it became clear that material culture was neither a simple nor a direct reflection of human behaviour was burial. Binford (1971) had suggested a general correlation between the complexity of mortuary ceremonialism and the complexity of social organization. As Parker

Pearson (1982) elegantly showed, in a study of modern and recent burial practices in Cambridge, such generalizations failed to take into account the cultural transformation of the relationship between burials and people. Even a highly differentiated society of the type found in Cambridge today might choose to bury its dead in an 'egalitarian' fashion.

Once again such work does not necessarily result in the final spanner being thrown in the works of New Archaeology. It might be possible to find some law-like generalizations about why societies represent and express themselves differently in burial customs. For example, at early stages in the development of a more highly ranked society, social status might be exaggerated and 'naturalized' in death, while at later stages the social ranking might be 'denied' in burial variability.

But in the case of burial practices, such generalizations are unconvincing and the force of the notion that material culture is an *indirect* reflection of human society becomes clear. Moreover, if we conceive of material culture as active – and the grounds for doing so are strong, as we will argue later – then the term 'reflection' misrepresents the relation between material culture and society. Rather, material culture and society mutually constitute each other within historically and culturally specific sets of ideas, beliefs and meanings. Thus, the relation between burial and society clearly depends on attitudes to death.

Much the same can be said of cultural boundaries and refuse deposition. Whether a particular artifact type does or does not express the boundary of an ethnic group depends on the ideas people in that society have about different artifacts and what is an appropriate artifact for ethnic group marking. The relationship between refuse and social organization depends on attitudes to dirt. Thus even short-term camps may have highly organized rubbish and long-term camps may allow refuse build-up of a type that we today would find abhorrent and unhygienic.

These cultural attitudes and meanings about material culture seemed to frustrate the generalizing aims of the New Archaeology, since all material culture could now be seen

to be meaningfully constituted. If material culture, all of it, has a symbolic dimension such that the relationship between people and things is affected, then *all* of archaeology, economic and social, is implicated.

The problem then becomes, not 'how do we study symbolism in the past?', but 'how do we do archaeology at all?'. Within New Archaeology the methodology to be employed in interpreting the past was 'hard' and universal. Simplistically put, one could correlate material culture patterning with human patterning, and 'read off' the latter from the former by applying general laws and Middle Range Theory. Ultimately material culture could be seen as the product of adaptation with the environment, both physical and social. So, if one kept asking *why* the material culture patterning is as it is, one was always taken back to questions of material survival. With such a 'reductionist' approach one can always predict what the material culture means, what it reflects, in any environmental context.

But to claim that culture is meaningfully constituted is ultimately to claim that aspects of culture are *irreducible*. The relationship between material culture and human organization is partly social, as we shall see below. But it is also dependent on a set of cultural attitudes which cannot be predicted from or reduced to an environment. The cultural relationships are not caused by anything else outside themselves. They just are. The task of archaeologists is to interpret this irreducible component of culture so that the society behind the material evidence can be 'read'.

How does one go about such 'reading'? It is often claimed that material objects are mute, that they do not speak, so how can one understand them? Certainly an object from the past does not say anything of itself. Handed an object from an unknown culture archaeologists will often have difficulties in providing an interpretation. But to look at objects by themselves is really not archaeology at all. Archaeology is concerned with finding objects in layers and other contexts (rooms, sites, pits, burials) so that their date and meaning can be interpreted.

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As soon as the context of an object is known it is no longer totally mute. Clues as to its meaning are given by its context. Artifacts are found in graves around the necks of the skeletons and are interpreted as necklaces. Objects found in elaborate non-settlement contexts are termed ritual. Clearly we cannot claim that, even in context, objects tell us their cultural meaning, but on the other hand they are not totally mute. The interpretation of meaning is constrained by the interpretation of context.

In *Symbols in Action*, the emphasis on context led to discussion of burial, style, exchange, refuse discard, settlement organization. All these realms of material culture could now be seen as different contexts in relation to each other. Artifacts might mean different things in these different contexts, but the meanings from one realm might be related, in a distorted way, to the meanings in other realms. The 'reading' of the archaeological record had to take such cultural transformations into account.

A number of problems and questions arose from such a viewpoint. First, what *is* the context? Context itself has to be interpreted in the data, and the definition of context is a matter for debate. Is the context of a particular artifact type found in cemeteries a part of the body, the grave, a group of graves, the cemetery, the region, or what? How does one decide on the boundary which defines the context?

Second, even assuming we can construct meanings from contextual associations, similarities and differences, are these cultural meanings in people's minds? Certainly much of the cultural meaning of material objects is not conscious. Few of us are aware of the full range of reasons which lead us to choose a particular item of dress as appropriate for a given context. But do we need to get at the conscious and subconscious meanings in people's minds, or are there simply cultural rules and practices which can be observed from the outside? Do we simply have to describe the unconscious cultural rules of a society or do we have to get at people's perceptions of those rules? For example, is it enough to say that in a particular cultural tradition burial variability correlates with social

variability or that burial is organized by a culture/nature transform, or do we need to understand people's attitudes to death, getting 'inside their minds'?

The third question has already been touched upon. To what extent can we generalize about ideas in people's minds? Certain general principles concerning the relationships between structural oppositions, associations, similarities, contexts and meanings are used in interpreting the past and the world around us today. Even the notion that meaning derives from contextual associations is a general theory. To what extent are such generalizations valid? And further, what is the aim of archaeology? Is it to provide generalizations? If we say that meanings are context dependent, then all we can do is come to an understanding of each cultural context in its own right, as a unique set of cultural dispositions and practices. We cannot generalize from one culture to another. Even if there are some general propositions we need to use in interpreting the past, these are, by their very general nature, trivial – hardly the focus for scientific enquiry. To what extent can we generalize about unique cultural contexts, and why should we want to generalize in any case?

These questions are also relevant in relation to the second problem that derived from *Symbols in Action.*

Individuals and agents

Material culture does not just exist. It is made by someone. It is produced to do something. Therefore it does not passively *reflect* society – rather, it creates society through the acts of social agents.

The question of agency arises from an older dialogue about the place of the individual in society. On the one hand we have John Donne's famous words, 'No man is an island, entire of itself, every man is a piece of the continent, a part of the main.' We concur and stress that we need to explore how society affects the individual. Yet Donne's view ultimately

says that individuals are of little significance in the tide of human history. On the other hand J. S. Mill, a classical individualist, said 'Men are not, when brought together, converted into another kind of substance.'

In the New Archaeology, the possibility of agency was avoided, argued out of social theory. As Flannery noted (1967), the aim was not to reach the individual Indian behind the artifact, but the system behind both Indian and artifact. It is argued by the processual school in archaeology that there are systems so basic in nature that culture and individuals are powerless to divert them. This is a trend towards determinism – theory building is seen as being concerned with discovering deterministic causal relationships. There is a close link here between discarding notions of cultural belief and of agency. Both are seen as being unassailable through archaeological evidence, and both are unpredictable and inhibit generalization.

In the 1980s, a number of authors reacted against the trend towards determinism in the New Archaeology (Hodder 1986; Shanks and Tilley 1987a, b). However, in their passion to re-construct the relation between structure and agency, some writers uncritically erected a particular version of agency that privileged only a certain form of agent, namely, the individual. Critical and philosophical scholarship has documented that the 'individual' is a very recent construct, tied closely to the development of modernity in the West (Foucault 1970; Handsman and Leone 1989). People in other cultures and at other times may be constructed in a very different way from the individual subjects of our own society, which means that the notion of agency should not be restricted to 'the individual'.

By emphasizing agency in social theory we do not mean to suggest that we should identify 'great men' and 'great women'; but that each archaeological object is produced by an individual (or a group of individuals), not by a social system. Each pot is made by specific actors forming the shape, inscribing the design. Archaeology thus raises in acute form

the problem of the relationship between agency and society. What is the relationship between the individual pot and the society as a whole?

Within the New Archaeology this central question was simply bypassed. Individual pots were examined solely as passive reflections of the socio-cultural system. Each pot, each artifact could be examined to see how it functioned for the system as a whole. For example, the pot reflected status and thus helped to regulate the flow of energy and resources within the system. In addition, the system was seen as developing 'over the long term'. Thus individual instances of variability which did not act for the good of the system as a whole would be of no significance for the long-term survival of the system and would in any case hardly be visible archaeologically.

These two notions – the overall adaptive system and the long term – led to a rejection of the individual in archaeological theory. As a result, material culture became a passive reflection of the social system. Whatever agents had in their heads when they made a pot, the only thing that was important was how that pot functioned in the social system. What the individual was trying to do with the object became irrelevant.

The ethnographic work reported in *Symbols in Action* showed the inadequacy of this view. For example, in a Lozi village, pottery similarities did not passively reflect learning networks and interaction frequency. Rather the pottery style was used to create social differences and allegiances within the village; it was produced to have an active role. Similarly, some artifacts indicate social boundaries in Baringo, in Kenya, but spears, for example, do not. This is because spear styles are used by young men to disrupt the authority of older men. They play an active role.

That material culture can act back and affect the society and behaviour which produced it can readily be accepted within processual archaeology (Rathje 1978, p. 52). In particular, town and house architecture clearly channels and acts upon later behaviour. On the other hand, material culture cannot of itself do anything: if it does 'act back' on society it

must do so within the frameworks of meaning within the society itself. The way in which material culture acts on people is social; the action can only exist within a social framework of beliefs, concepts and dispositions.

Material culture and its associated meanings are played out as parts of social strategies. Agents do not simply fill predetermined roles, acting out their scripts. If they did, there would be little need for the active use of material culture in order to negotiate social position and create social change. We are not simply pawns in a game, determined by a system – rather, we use a myriad of means, including material culture symbolism, to create new roles, to redefine existing ones and to deny the existence of others.

It could be argued that processual archaeology is indeed concerned with individual variability. After all, did it not react against normative approaches and emphasize the importance of situational adaptive behaviour? The question of whether processual archaeology escaped a normative position will be discussed throughout this volume. For the moment it is necessary to set the scene by clarifying some of the meanings given to the term normative in archaeology. First, it is often used to refer to the culture-historical approach. In this context it sometimes has pejorative connotations; it refers to descriptive culture history. This is not the sense in which we will use the term in this volume. Second, 'normative' refers to the notion that culture is made up of a set of shared beliefs. The implication is sometimes present that the shared ideas (the norms) hinder situational variability. Third, there is a prescriptive component to norms – they indicate what should be done. In this sense norms refer to rules of behaviour. Of course one can be critical of the normative approach (in the first sense) while still being interested in norms in the second and third senses, but both these latter meanings of the word give little in the way of a role to individuals as social actors. A more general critique of normative positions will be required in this volume.

The renewed emphasis on agency in archaeological interpretation is not designed to argue that prehistoric change was

the result of 'free will' or that particular individuals in the past can or should be identified. Rather, the aim is to integrate both meaning and agency into archaeological theory. Our interpretations of the past need to incorporate cultural meanings, intentions and purposes (see above). Societies are not purposive (Shanks and Tilley 1987a, p. 124), but individual agents are. It is certainly possible to argue that the purposes, meanings and intentions are themselves always already structured within historical trajectories, but the notion of agency allows for the ability of individuals to transform the structures in concrete situations. Positioned subjects manipulate material culture as a resource and as a sign system in order to create and transform relations of power and domination. Determinism is avoided since it is recognized that in concrete situations contingent situations are found and structures of meaning and of domination are gradually restructured (Giddens 1979; Bourdieu 1977). Johnson (1989) has provided a constructive critique of discussions of the dialectical relationship between structure and agency in recent archaeological writing. He notes that theoretical accounts have not been backed up by applications which include a truly reflexive relationship between social structure and human agency. (In chapter 5 we will discuss structure and agency in greater detail.) Detailed small-scale studies of variability are needed in order to examine the link between individual, meaningfully constituted events and long-term structures. Johnson's own example derives from historical archaeology and is part of a wider trend towards small-scale historical studies (e.g. Ladurie 1980; Le Goff 1985; Duby 1980; see also chapter 7) but similar small-scale methodologies are relevant in prehistoric contexts (Hodder 1987a and b) where the opposition between individual event and long term structure is accentuated.

Historical context

In the reaction against culture history and normative archaeology, processual archaeologists turned to anthropology.

Ultimately the main reason why the New Archaeology never really took hold in Europe to the extent that it did in America may be that in Europe archaeology is intellectually and administratively (in universities) closely linked to history, not anthropology. In American processual archaeology, the new approach was to be cross-cultural, looking at systems in relation to their environments and producing universal statements. In effect a timeless past was produced. System trajectories were examined, but time was sliced into segments and attention was focussed on the cross-cultural regularities in changes from type *a* to type *b* (for example from mobile hunter-gatherers to settled farmers).

While the discussion so far in this chapter has implied that cross-cultural laws which are more than trivial are unlikely to exist, what is the possibility of historical laws – that is generalizations valid through time in a particular context? Since action in the world partly depends on concepts, and since concepts are learnt through experience in the world, in which one is brought up and lives, it is feasible that long-term continuities in cultural traditions exist, continually being renegotiated and transformed, but nevertheless generated from within. Part of the aim of archaeology may be to identify whether such long-term continuities exist, and how they are transformed and changed.

It was noted earlier that an emphasis on cultural meanings is here taken to imply that culture is not reducible to material effects. In explaining why a cultural form has a specific meaning and use, it is necessary to examine its previous associations and contexts, its diffusion and sequence. While diffusion and cultural continuity are social processes, the pre-existing cultural form also influences what comes after. This is because human beings can only perceive and act through a cultural medium which they both create and live within. As Childe (1936) put it, man creates traditions, but traditions make the man – man makes himself.

It might be thought that there is a danger here of a new type of reductionism. Rather than reducing cultural behaviour to survival, there is the possibility of an infinite regress as

cultural forms are interpreted in terms of previous cultural forms, backwards until we get to the first stone-tool ever made, in the temporal mists of the Palaeolithic. While it will rarely be necessary to go to such historical lengths, it is difficult to see why one should want to deny the importance of culture-historical work. There is something in all of us of the decisions made in the flaking of the very first hand-axe. Only archaeology can achieve this grand design. But even when we get to the origin of some idea it is not reduced to something outside itself. The cultural form remains created, specific and irreducible.

While it may ultimately be desirable to trace the creation of the present out of the distant past, the transformations of meaning over such time periods are considerable. More frequently we can gain adequate insight into cultural meanings by examining the more immediate historical context.

It *is* important, therefore, to examine where things come from. This was the focus of culture history within traditional archaeology. We now have to see the diffusion of traits as a social and meaningful process; the associations of an item in another or in a previous cultural context affect the use of that item within a new context. Diffusion is thus explanatory, not descriptive, as is so often claimed.

While placing an emphasis on cultural meaning and the simultaneous maintenance and active 'invention' (Hobsbawn and Ranger 1984) of cultural traditions we do not wish to argue that history consists only of conceptual structures and we do not wish to claim an idealist history (see p. 20 and chapter 7). Environmental and technological constraints and social relations of production also structure change. They contribute to the historical potential for social transformation and they provide the resources with which change can be built. The split between the ideal and the material is best seen as an historical dialect in which the material resources and relations are meaningfully embedded so that neither the ideal nor the material are privileged.

While it is argued that archaeology should reassert its European ties with history, it is also important to see the

differences between archaeology and history. To the extent that historical explanation can be defined by its reference to antecedent contexts and events (an inadequate or incomplete description, as we will argue in chapter 7), archaeology is part of history. Yet archaeology is about material culture not documents. The writing of ink on paper is itself one type of material culture, and the inference of meaning from such evidence is equivalent to that for material objects in general. In this sense, history is part of archaeology. Even though historical documents contain considerably more contextual information when we recognize the language they are written in, the process of inference is still one of giving meaning to the past material world. Of course, in those cases where texts are readable, the archaeological record should not be considered impoverished in comparison with the historical record. Texts record the voices of select segments of the population, depending on the (often low) rates of literacy in the past, therefore putting the archaeologist in an excellent and sometimes unique position to uncover the actions of the less powerful (Deetz 1977).

This archaeological approach has become influential in a number of disciplines. Prompted by, among other things, the recognition of ruptures between self and other, whether the other is conceived of as cultural, psychological or historical, a wide variety of writers, including Freud, Foucault, Lacan and Benjamin, have claimed an affinity towards 'archaeological' approaches or expressed their methods using archaeological metaphors (see also Shanks 2001).

Conclusion

In the course of this volume we hope to discuss the problems raised in this first chapter. The aim is to meet the challenges posed to archaeology by a recognition of the importance of cultural meaning, agency and history. In summary, we can see that such recognition has effects in the three central areas of archaeological debate. These are (1) the relationship between

material culture and society – how material culture relates to people, (2) the causes of change – what causes social, economic and cultural change, and (3) epistemology and inference – how archaeologists interpret the past.

1 Behaviour–material culture

It has always been recognized that the relationship between behaviour and material culture is the central difficulty to be resolved in archaeology. The problems in this relationship were early recognized in the only partial correspondence discovered between material 'cultures' and 'peoples' (Childe 1951).

The contribution of processual archaeology was an attempt to think systematically about the relationship between behaviour and material culture. In much early work the dominant theme was: behaviour → material culture. Material culture was the passive by-product of human behaviour. This view is seen in the matrilocal residence hypothesis (Longacre 1970) and in theories about the relationship between population and settlement area (Naroll 1962) and between style and interaction (Plog 1978). The attempt by Binford (1983) to identify Middle Range Theory, insofar as this can be applied to cultural processes, recaptures the same desire for secure, unambiguous relationships, essentially equivalent to Schiffer's (1976) laws, between material culture and human behaviour. More recently, as was shown above, this cross-cultural approach has been extended (Rathje 1978) to include the notion that material culture acts back upon society, forming a two-way relationship: behaviour ↔ material culture.

In this book we wish to go further and argue that the relationship between behaviour and material culture depends on the actions of people within particular culture-historical contexts.

behaviour ⟷ material culture
↑
agency,
culture,
history

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There is thus no direct, universal cross-cultural relationship between behaviour and material culture. Frameworks of meaning intervene and these have to be interpreted by the archaeologist. This endeavour must be undertaken by all of those who want to examine the past as archaeologists, even if we are mainly interested in economics and social organization rather than symbolism. Even if we want to say that the economy at a particular site was based on hunting many wild animals because of the high percentage of wild animal bones on the site, we need to make some assumptions about attitudes towards animals, bones, and waste. For example, we need to assume that people ate, or discarded the residues from the animals they ate, on sites (rather than eating and discarding off sites, throwing bones in rivers where they would not survive archaeologically, or burning the bones to ash). Whatever we want to say about human behaviour in the past, cultural meanings need to be assumed. In chapter 9, we will discuss the suggestion, grounded in phenomenology and psychology, that material culture plays such a fundamental role in constituting culture, agency and history that our existence as subjects cannot be intelligibly disentangled from the material world in which our behaviour is embedded.

2 Cause–effect

The second major area of research is the causes of social change. Again, simple notions of cause → effect (technological change leads to population increase, for example) have been replaced by cause ↔ effect relationships through the introduction of systems, feedback loops, multiplier effects and multiple causality. Most archaeologists today would accept that the causes of social change are complex, involving many different factors – economic, social and ideological – and there have recently been many interesting attempts to relate these factors into complex interlocking systems (chapter 2).

Within such work, however, there remains the notion that causes have effects which are to some degree universal and predictable. On the other hand, the central importance of the individual perception of causes leads to a different view.

cause ⟷ effect
↑
agency,
culture,
history

Causes in the form of events, conditions and consequences (intended and unintended) in the world cannot have social effects except via human perception and evaluation of them. Thus land erosion may be a *cause* with the *effect* that people abandon their village and disperse. But the fact of land erosion does not by itself determine any particular response because there are many ways of dealing with or avoiding or preventing land erosion. How land erosion or its effects are perceived, and how the possible responses are evaluated, depend on how land erosion is involved in individual social strategies within particular culture-historical contexts.

This is saying more than that ideology is important in human adaptation and that it functions in various ways. Within most archaeological discussion of ideology, the belief system is seen as a predictable response of the adaptive system (chapter 2); it is claimed here, however, that the particular content of the postures and practices that are constructed within historical channels is the medium through which adaptation occurs. Thus causes (social or physical) do not have social effects; rather, an historical tradition reproduces itself in relation to events in the world.

3 Fact–theory

Through much of the early development of archaeology an empiricist stance was maintained, in which the facts were seen to speak for themselves – 'let the pots speak'. Thus Colt Hoare, a British archaeologist writing in the 18th century, said that we speak from facts not theory. It was held that by staying close to the facts certain things, though by no means all things, could be known with security. As we shall see later, this is a simplification of a complex set of beliefs held by archaeologists prior to the emergence of processual

archaeology (Wylie 1989a, b; 1993). But in general, inference could be seen as following the design: data → theory.

More recently an alternative view has been emphasized, in which data are collected in relation to a theory. The hypothetico-deductive approach involved deducing from a theory various implications, and testing these implications against the data. Binford's (1967) smudge-pit example provides a good illustration of this procedure. Renfrew (1982) has depicted the relationship between theory and data as data ↔ theory. Fact and theory confront each other but each changes in relation to the other (Wylie 1993).

Binford and Sabloff (1982) have in fact suggested that the relationship between theory and data is so close that data are observed within theory, and that therefore observational data are really theories (in Binford and Sabloff's terms the observational data are paradigm dependent). Thus, while all the approaches mentioned above would argue that the real world exists separate from our observations of it, more and more of the observational process is seen as being theory dependent. The bare bones that are left are the facts in the real world which we can never observe.

The problems of observation raised by post-positivist philosophy can be exemplified in the diagrams shown in Fig. 1. Before we can measure and compare such objects we have to decide what they are. For example, if we decide to measure the front faces of all such boxes, which is the front face? Or if we decide to measure the length of the rabbit's ears, we have to be able to differentiate between rabbits and ducks.

Such problems are particularly acute in the study of prehistoric art, but they pose a major difficulty for all archaeology since before one can measure or count, compare or contrast, one has to form categories (types of pots, contexts, cultures and so on). These categories are formed through the process of perception.

The solution followed by Binford and Sabloff (1982) is to invoke Middle Range Theory. They argue that independent instruments of measurement can be brought in to test the relationship between material culture and the society which

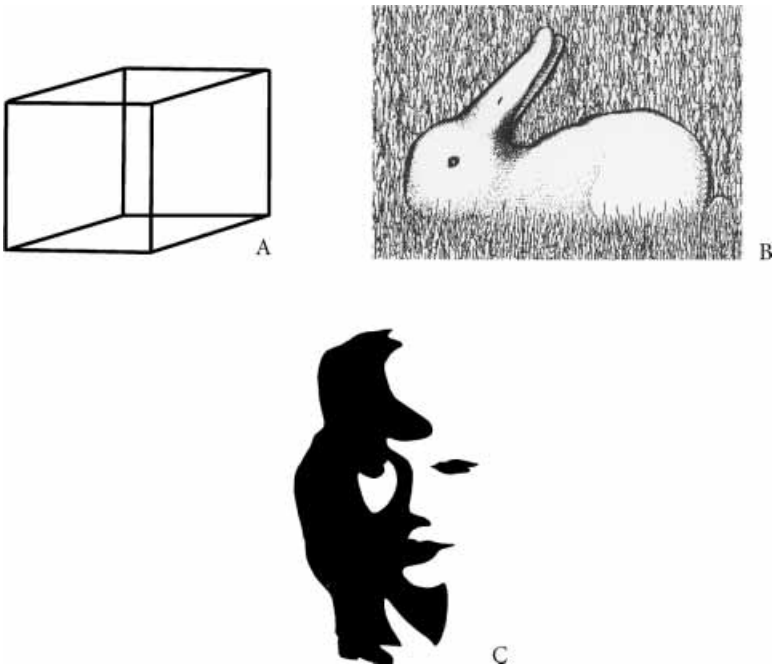

Fig. 1. The relationship between data and theory. (A) Which is the front edge of the box? (B) Is this an image of a duck or a rabbit? (C) Do you see a face or a person playing a horn? B and C from *Mind Sights* by Roger Shepard, © 1990 by Roger Shepard. Reprinted by permission of Henry Holt and Company, LLC.

produced it, and that in this way one can 'objectively' test between paradigms. This answer is inadequate (a) because what one measures depends on perception and categorization, and (b) because there can be no *independent* instruments of measurement since methodology is itself theory dependent.

Although it will be argued in this volume that the real world does constrain what we can say about it, it is also clear that the concept of 'data' involves both the real world and our theories about it (see chapter 8 for discussions of objectivity and relativism). As a result, the theories one espouses about the past depend very much on one's own social and cultural context. Trigger (1980), Leone (1978) and others (see also Arnold 1990; Conkey 1997; Handsman and Leone 1989;

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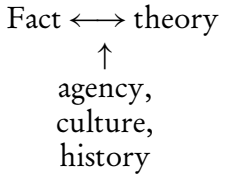
Kehoe 1998; McCafferty and McCafferty 1994; Tilley 1989b) have shown with great effect how changing interpretations of the past depend on changing social and cultural contexts in the present. Individuals within society today use the past within social strategies. In other words, the data–theory relationship is conceived and manipulated within cultural and historical contexts.



Towards the end of this volume we wish to examine the varied implications of the realization that there can be no 'testing' of theory against data, no independent measuring devices and no secure knowledge about the past. It seems to us that most archaeologists have shied away from these problems since at first sight they seem destructive: the whole fabric of archaeology as a scientific discipline, accepted since the early development of archaeology, is threatened. We wish to argue that the problems need to be faced if archaeology is to remain a rigorous discipline and if archaeologists are to be socially responsible.