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THE INTERPRETATION OF DOCUMENTS AND MATERIAL CULTURE

◆ Ian Hodder

This chapter is concerned with the interpretation of mute evidence—that is, with written texts and artifacts. Such evidence, unlike the spoken word, endures physically and thus can be separated across space and time from its author, producer, or user. Material traces thus often have to be interpreted without the benefit of indigenous commentary. There is often no possibility of interaction with spoken emic "insider" as opposed to etic "outsider" perspectives. Even when such interaction is possible, actors often seem curiously inarticulate about the reasons they dress in particular ways, choose particular pottery designs, or discard dung in particular locations. Material traces and residues thus pose special problems for qualitative research. The main disciplines that have tried to develop appropriate theory and method are history, art history, archaeology, anthropology, sociology, cognitive psychology, technology, and modern material culture studies, and it is from this range of disciplines that my account is drawn.

◆ *Written Documents and Records*

Lincoln and Guba (1985, p. 277) distinguish documents and records on the basis of whether the text was prepared to attest to some formal transaction. Thus records include marriage certificates, driving licenses, building contracts, and banking statements. Documents, on the other hand, are prepared for personal rather than official reasons and include diaries, memos, letters, field notes, and so on. In fact, the two terms are often used interchangeably, although the distinction is an important one and has some parallels with the distinction between writing and speech, to be discussed below. Documents, closer to speech, require more contextualized interpretation. Records, on the other hand, may have local uses that become very distant from officially sanctioned meanings. Documents involve a personal technology, and records a full state technology of power. The distinction is also relevant for qualitative research, in that

researchers may often be able to get access to documents, whereas access to records may be restricted by laws regarding privacy, confidentiality, and anonymity.

Despite the utility of the distinction between documents and records, my concern here is more the problems of interpretation of written texts of all kinds. Such texts are of importance for qualitative research because, in general terms, access can be easy and low cost, because the information provided may differ from and may not be available in spoken form, and because texts endure and thus give historical insight.

It has often been assumed, for example, in the archaeology of historical periods, that written texts provide a "truer" indication of original meanings than do other types of evidence (to be considered below). Indeed, Western social science has long privileged the spoken over the written and the written over the nonverbal (Derrida, 1978). Somehow it is assumed that words get us closer to minds. But as Derrida has shown, meaning does not reside in a text but in the writing and reading of it. As the text is reread in different contexts it is given new meanings, often contradictory and always socially embedded. Thus there is no "original" or "true" meaning of a text outside specific historical contexts. Historical archaeologists have come to accept that historical documents and records give not a better but simply a different picture from that provided by artifacts and architecture. Texts can be used alongside other forms of evidence so that the particular biases of each can be understood and compared.

Equally, different types of texts have to be understood in the contexts of their conditions of production and reading. For example, the analyst will be concerned with whether a text was written as a result of firsthand experience or from secondary sources, whether it was solicited or unsolicited, edited or unedited, anonymous or signed, and so on (Webb, Campbell, Schwartz, & Sechrest, 1966). As Ricoeur (1971) demonstrates, concrete texts differ from the abstract structures of language in that they are written to do something. They can be understood only as what they are—a form of artifact produced under certain material conditions (not everyone can write, or write in a certain way, or have access to relevant technologies of reproduction) embedded within social and ideological systems.

Words are, of course, spoken to do things as well as to say things—they have practical and social impact as well as communication function. Once words are transformed into a written text, the gap between the "author" and the "reader" widens and the possibility of multiple reinterpretations increases. The text can "say" many different things in different contexts. But also the written text is an artifact, capable of transmission, manipulation, and alteration, of being used and discarded, reused and recycled—"doing" different things contextually through time. The writing down of words often allows language and meanings to be controlled more effectively, and to be linked to strategies of centralization and codification. The word, concretized or "made flesh" in the artifact, can transcend context and gather through time extended symbolic connotations. The word made enduring in artifacts has an important role to play in both secular and religious processes of the legitimation of power. Yet there is often a tension between the concrete nature of the written word, its enduring nature, and the continuous potential for rereading meanings in new contexts, undermining the authority of the word. Text and context are in a continual state of tension, each defining and redefining the other, saying and doing things differently through time.

In a related way, the written texts of anthropologists and archaeologists are increasingly coming under scrutiny as employing rhetorical strategies in order to establish positions of authority (e.g., Tilley, 1989). Archaeologists are used to the idea that their scientific activities leave traces and transform the worlds they study. Excavations cannot be repeated, and the residues of trenches, spoil tips, and old beer cans remain as specific expressions of a particular way of looking at the world. The past has been transformed into a present product, including the field notes and site reports. Ethnographic field notes (Sanjek, 1990) also transform the object of study into a historically situated product, "capturing" the "other" within a familiar routine. The field text has to be contextualized within specific historical moments.

I shall in this chapter treat written texts as special cases of artifacts, subject to similar interpretive procedures. In both texts and artifacts the problem is one of situating material culture within varying contexts while at the same time entering into a dialectic relationship between those contexts and the context of the analyst. This hermeneutical exercise, in which the lived experience surrounding the material culture is translated into a different context of interpretation, is common for both texts and other forms of material culture. I will note various differences between language and material culture in what follows, but the interpretive parallels have been widely discussed in the consideration of material culture as text (e.g., Hodder, 1991; Moore, 1986; Tilley, 1990).

◆ *Artifact Analysis and Its Importance for the Interpretation of Social Experience*

Ancient and modern buildings and artifacts, the intended and unintended residues of human activity, give alternative insights into the ways in which people perceived and fashioned their lives. Shortcuts across lawns indicate preferred traffic patterns, foreign-language signs indicate the degree of integration of a neighborhood, the number of cigarettes in an ashtray betrays a nervous tension, and the amount of paperwork in an "in" tray is a measure of workload or of work efficiency and priority (Lincoln & Guba, 1985, p. 280). Despite the inferential problems surrounding such evidence, I wish to establish at the outset that material traces of behavior give an important and different insight from that provided by any number of questionnaires.

"What people say" is often very different from "what people do." This point has perhaps been most successfully established over recent years by research stemming from the work of Bill Rathje (Rathje & Murphy, 1992; Rathje & Thompson, 1981). In studies in Tucson, Arizona, and elsewhere, Rathje and his colleagues collected domestic garbage bags and itemized the contents. It became clear that, for example, people's estimates about the amounts of garbage they produced were wildly incorrect, that discarded beer cans indicated a higher level of alcohol consumption than was admitted to, and that in times of meat shortage people threw away more meat than usual as a result of overhoarding. Thus a full sociological analysis cannot be restricted to interview data. It must also consider the material traces.

In another series of studies, the decoration of rooms as well as pots and other containers has been interpreted as a form of silent discourse conducted by women, whose voice has been silenced by dominant male interests. Decoration may be used to mark out, silently, and to draw attention to, tacitly, areas of female control, such as female areas of houses and the preparation and provision of food in containers. The decoration may at one level provide protection from female pollution, but at another level it expresses female power (Braithwaite, 1982; Donley, 1982; Hodder, 1991).

The study of material culture is thus of importance for qualitative researchers who wish to explore multiple and conflicting voices, differing and interacting interpretations. Many areas of experience are hidden from language, particularly subordinate experience. Ferguson (1991) has shown how study of the material traces of food and pots can provide insight into how slaves on plantations in the American South made sense of and reacted to their domination. The members of this normally silenced group expressed their own perspective in the mundane activities of everyday life.

Analysis of such traces is not a trivial pursuit, as the mundane and the everyday, because unimportant to dominant interests, may be of great importance for the expression of alternative per-

spectives. The material expression of power (parades, regalia, tombs, and art) can be set against the expression of resistance. The importance of such analysis is increased by the realization that material culture is not simply a passive by-product of other areas of life. Rather, material culture is active (Hodder, 1982). By this I mean that artifacts are produced so as to transform, materially, socially, and ideologically. It is the exchange of artifacts themselves that constructs social relationships; it is the style of spear that creates a feeling of common identity; it is the badge of authority that itself confers authority. Material culture is thus *necessary for* most social constructs. An adequate study of social interaction thus depends on the incorporation of mute material evidence.

◆ *Toward a Theory of Material Culture*

Having established that the study of material culture can be an important tool for sociological and anthropological analysis, we must attempt to build a theory on which the interpretation of material culture can be based. A difficulty here has been the diversity of the category "material culture," ranging from written texts to material symbols surrounding death, drama, and ritual to shopping behavior and to the construction of roads and airplanes. As a result, theoretical directions have often taken rather different paths, as one can see by comparing attempts to build a comprehensive theory for technological behavior (Lemonnier, 1986) and attempts to consider material culture as text (Tilley, 1990).

Ultimately, material culture always has to be interpreted in relation to a situated context of production, use, discard, and reuse. In working toward that contextual interpretation, it may be helpful to distinguish some general characteristics and analogies for the different types of material culture. In this attempt to build a general theory, recent research in a range of disciplines has begun to separate two areas of material meaning.

Some material culture is designed specifically to be communicative and representational. The clearest example is a written text, but this category extends, for example, to the badge and uniform of certain professions, to red and green stop and go traffic lights, to smoke signals, to the images of Christ on the cross. Because this category includes written texts, it is to be expected that meaning in this category might be organized in ways similar to language. Thus, as with words in a language, the material symbols are, outside a historical context, often arbitrary. For example, any design on a flag could be used as long as it differs from the designs on other flags and is recognizable with its own identity. Thus the system of meanings in the case of flags is constructed through similarities and differences in a semiotic code. Miller (1982) has shown how dress is organized both syntagmatically and paradigmatically. The choice of hat, tie, shirt, trousers, shoes, and so on for a particular occasion is informed by a syntax that allows a particular set of clothes to be put together. On the other hand, the distinctions among different types of hats (bowler, straw, cloth, baseball) or jackets constitute paradigmatic choices.

The three broad areas of theory that have been applied to this first type of material meaning derive from information technology, Marxism, and structuralism. In the first, the aim has been to account for the ways in which material symboling can provide adaptive advantage to social groups. Thus the development of complex symboling systems allows more information to be processed more efficiently (e.g., Wobst, 1977). This type of approach is of limited value to qualitative research because it is not concerned with the interpretation and experience of meaningful symbols. In the second, the ideological component of symbols is identified within relations of power and domination (Leone, 1984; Miller & Tilley, 1984) and increasingly power and systems of value and prestige are seen as multiple and dialectical (Miller, Rowlands, & Tilley, 1989; Shanks & Tilley, 1987). The aim of structuralist analysis has been to examine design (e.g., Washburn, 1983) or spatial relationships (e.g., Glassie, 1975; McGhee, 1977) in terms of underlying codes, although here too the tendency has been to emphasize multiple meanings contested within active social contexts as the various directions of poststructuralist thought have been debated (Tilley, 1990).

In much of this work the metaphor of language has been applied to material culture relatively unproblematically. The pot appears to "mean" in the same way as the word *pot*. Recent work has begun to draw attention to the limitations of this analogy between material culture and language, as will become clear in my consideration of the second type of material culture meaning. One can begin to explore the limitations of the analogy by considering that many examples of material culture are not produced to "mean" at all. In other words, they are not produced with symbolic functions as primary. Thus the madeleine cookie discussed in Proust's *A la recherche du temps perdu* (*Swann's Way*) was produced as an enticing food made in a shape representing a fluted scallop. But Proust describes its meaning as quite different from this symbolic representation. Rather, the meaning was the evocation of a whole series of childhood memories, sounds, tastes, smells surrounding Proust's having tea with his mother in winter.

Many if not most material symbols do not work through rules of representation, using a language-like syntax. Rather, they work through the evocation of sets of practices within individual experience. It would be relatively difficult to construct a grammar or dictionary of material symbols except in the case of deliberately representational or symbolic items, such as flags and road signs. This is because most material symbols do not mean in the same way as language. Rather, they come to have abstract meaning through association and practice. Insofar as members of society experience common practices, material symbols can come to have common evocations and common meanings. Thus, for example, the ways in which certain types of food, drink, music, and sport are experienced are embedded within social convention and thus come to have common meaning. A garlic crusher may not be used overtly in Britain to represent or symbolize class, but through a complex set of practices surrounding food and its preparation, the crusher has come to mean class through evocation.

Because objects endure, have their own traces, their own grain, individual objects with unique evocations can be recognized. The specific memory traces associated with any particular object (a particular garlic crusher) will vary from individual to individual. The particularity of material experience and meaning derives not only from the diversity of human life but also from the identifiability of material objects. The identifiable particularity of material experience always has the potential to work against and transform societywide conventions through practice. Because of this dialectic between structure and practice, and because of the multiple local meanings that can be given to things, it would be difficult to construct dictionaries and grammars for most material culture meanings.

Another reason for the inability to produce dictionaries of material culture returns us to the difficulty with which people give discursive accounts of material symbolism. The meanings often remain tacit and implicit. A smell or taste of a madeleine cookie may awake strong feelings, but it is notoriously difficult to describe a taste or a feel or to pin down the emotions evoked. We may know that in practice this or that item of clothing "looks good," "works well," or "is stylish," but we would be at a loss to say what it "means" because the item does not mean—rather, it is embedded in a set of practices that include class, status, goals, aesthetics. We may not know much about art, but we know what we like. On the basis of a set of practical associations, we build up an implicit knowledge about the associations and evocations of particular artifacts or styles. This type of embedded, practical experience seems to be different from the manipulation of rules of representation and from conscious analytic thought. Material symbolic meanings may get us close to lived experience, but they cannot easily be articulated.

The importance of practice for the social and symbolic meanings of artifacts has been emphasized in recent work on technology (Schlanger, 1990). Each technical operation is linked to others in operational chains (Leroi-Gourhan, 1964)

involving materials, energy, and gestures. For example, some clays are better for throwing than others, so the type of clay constrains whether a manufacturer can make thrown pots or hand-built statuettes. Quality of clay is related to types of temper that should be used. All such operational chains are nondeterministic, and some degree of social choice is involved (Lemonnier, 1986; Miller, 1985). All operational chains involve aspects of production, exchange, and consumption, and so are part of a network of relations incorporating the material, the economic, the social, and the conceptual.

The practical operational chains often have implications that extend into not only social but also moral realms. For example, Latour (1988) discusses hydraulic door closers, devices that automatically close a door after someone has opened it. The material door closer thus takes the place of, or delegates, the role of a porter, someone who stands there and makes sure that the door stays shut after people have gone through. But use of this particular delegate has various implications, one of which is that very young or infirm people have difficulty getting through the door. A social distinction is unwittingly implied by this technology. In another example, Latour discusses a key used by some inhabitants of Berlin. This double-ended key forces the user to lock the door in order to get the key out. The key delegates for staff or signs that might order a person to "relock the door behind you." Staff or signs would be unreliable—they could be outwitted or ignored. The key enforces a morality. In the same way, "sleeping policemen" (speed bumps) force the driver of a car to be moral and to slow down in front of a school, but this morality is not socially encoded. That would be too unreliable. The morality is embedded within the practical consequences of breaking up one's car by driving too fast over the bumps. The social and moral meanings of the door closer, the Berlin key, or the speed bump are thoroughly embedded in the implications of material practices.

I have suggested that in developing a theory of material culture, the first task is to distinguish at least two different ways in which material culture has abstract meaning beyond primary utilitarian concerns. The first is through rules of representation. The second is through practice and evocation—through the networking, interconnection, and mutual implication of material and nonmaterial. Whereas it may be the case that written language is the prime example of the first category and tools the prime example of the second, language also has to be worked out in practices from which it derives much of its meaning. Equally, we have seen that material items can be placed within language-like codes. But there is some support from cognitive psychology for a general difference between the two types of knowledge. For example, Bechtel (1990, p. 264) argues that rule-based models of cognition are naturally good at quite different types of activity from connectionist models. Where the first is appropriate for problem solving, the second is best at tasks such as pattern recognition and motor control. It seems likely, then, that the skills involved in material practice and the social, symbolic, and moral meanings that are implicated in such practices might involve different cognitive systems from those involved in rules and representations.

Bloch (1991) argues that practical knowledge is fundamentally different from linguistic knowledge in the way it is organized in the mind. Practical knowledge is "chunked" into highly contextualized information about how to "get on" in specific domains of action. Much cultural knowledge is nonlinear and purpose dedicated, formed through the practice of closely related activities. I have argued here that even the practical world involves social and symbolic meanings that are not organized representational codes but that are chunked or contextually organized realms of activity in which emotions, desires, morals, and social relations are involved at the level of implicit taken-for-granted skill or know-how.

It should perhaps be emphasized that the two types of material symbolism—the representational and the evocative or implicative—often work in close relation to each other. Thus a set of practices may associate men and women with different parts of houses or times of day, but in certain social contexts these associations might be built upon to construct symbolic rules of separation and exclusion and to build an abstract representational scheme in which mythology and cosmology play a part (e.g., Yates, 1989). Such schemes also have ideological components that feed back to constrain the practices. Thus practice, evocation, and representation interpenetrate and feed off each other in many if not all areas of life. Structure and practice are recursively related in the "structuration" of material life (Giddens, 1979; see also Bourdieu, 1977).

◆ *Material Meanings in Time*

It appears that people both experience and "read" material culture meanings. There is much more that could be said about how material culture works in the social context. For instance, some examples work by direct and explicit metaphor, where similarities in form refer to historical antecedents, whereas others work by being ambiguous and abstract, by using spectacle or dramatic effect, by controlling the approach of the onlooker, by controlling perspective. Although there is not space here to explore the full range of material strategies, it is important to establish the temporal dimension of lived experience.

As already noted, material culture is durable and can be given new meanings as it is separated from its primary producer. This temporal variation in meaning is often related to changes in meaning across space and culture. Archaeological or ethnographic artifacts are continually being taken out of their contexts and reinterpreted within museums within different social and cultural contexts. The Elgin Marbles housed in the British Museum take on new meanings that are in turn reinterpreted antagonistically in some circles in Greece. American Indian human and artifact remains may have a scientific meaning for archaeologists and biological anthropologists, but they have important emotive and identity meanings for indigenous peoples.

Material items are continually being reinterpreted in new contexts. Also, material culture can be added to or removed from, leaving the traces of reuses and reinterpretations. In some cases, the sequence of use can give insight into the thought processes of an individual, as when flint flakes that have been struck off a core in early prehistory are refitted by archaeologists today (e.g., Pelegrin, 1990) in order to rebuild the flint core and to follow the decisions made by the original flint knapper in producing flakes and tools. In other cases, longer frames of time are involved, as when a monument such as Stonehenge is adapted, rebuilt, and reused for divergent purposes over millennia up to the present day (Chippindale, 1983). In such an example, the narrative held within traces on the artifact has an overall form that has been produced by multiple individuals and groups, often unaware of earlier intentions and meanings. Few people today, although knowledgeable about Christmas practices, are aware of the historical reasons behind the choice of Christmas tree, Santa Claus, red coats, and flying reindeer.

There are many trajectories that material items can take through shifting meanings. For example, many are made initially to refer to or evoke metaphorically, whereas through time the original meaning becomes lost or the item becomes a cliché, having lost its novelty. An artifact may start as a focus but become simply a frame, part of an appropriate background. In the skeuomorphic process a functional component becomes decorative, as when a gas fire depicts burning wood or coal. In other cases the load of meaning invested in an artifact increases through time, as in the case of a talisman or holy relic. Material items are often central in the backward-looking invention of tradition, as when the Italian fascist movement elevated the Roman symbol of authority—a bundle of rods—to provide authority for a new form of centralized power.

This brief discussion of the temporal dimension emphasizes the contextuality of material culture meaning. As is clear from some of the examples given, changing meanings through time are often involved in antagonistic relations between groups. Past and present meanings are continu-

ally being contested and reinterpreted as part of social and political strategies. Such conflict over material meanings is of particular interest to qualitative research in that it expresses and focuses alternative views and interests. The reburial of American Indian and Australian Aboriginal remains is an issue that has expressed, but perhaps also helped to construct, a new sense of indigenous rights in North America and Australia. As "ethnic cleansing" reappears in Europe, so too do attempts to reinterpret documents, monuments, and artifacts in ethnic terms. But past artifacts can also be used to help local communities in productive and practical ways. One example of the active use of the past in the present is provided by the work of Erickson (1988) in the area around Lake Titicaca in Peru. Information from the archaeological study of raised fields was used to reconstruct agricultural systems on the ancient model, with the participation and to the benefit of local farmers.

◆ *Method*

The interpretation of mute material evidence puts the interactionist view under pressure. How can an approach that gives considerable importance to interaction with speaking subjects (e.g., Denzin, 1989) deal with material traces for which informants are long dead or about which informants are not articulate?

I have already noted the importance of material evidence in providing insight into other components of lived experience. The methodological issues that are raised are not, however, unique. In all types of interactive research the analyst has to decide whether or not to take commentary at face value and how to evaluate spoken or unspoken responses. How does what is said fit into more general understanding? Analysts of material culture may not have much spoken commentary to work with, but they do have patterned evidence that has to be evaluated in relation to the full range of available information. They too have to fit different aspects of the evidence into a hermeneutical whole (Hodder, 1992; Shanks & Tilley, 1987). They ask, How does what is done fit into more general understanding?

In general terms, the interpreter of material culture works between past and present or between different examples of material culture, making analogies between them. The material evidence always has the potential to be patterned in unexpected ways. Thus it provides an "other" against which the analyst's own experience of the world has to be evaluated and can be enlarged. Although the evidence cannot "speak back," it can confront the interpreter in ways that enforce self-reappraisal. At least when a researcher is dealing with prehistoric remains, there are no "member checks" because the artifacts are themselves mute. On the other hand, material culture is the product of and is embedded in "internal" experience. Indeed, it could be argued that some material culture, precisely because it is not overt, self-conscious speech, may give deeper insights into the internal meanings according to which people lived their lives. I noted above some examples of material culture being used to express covert meanings. Thus the lack of spoken member checks is counteracted by the checks provided by unspoken material patterning that remain able to confront and undermine interpretation.

An important initial assumption made by those interpreting material culture is that belief, idea, and intention are important to action and practice (see above). It follows that the conceptual has some impact on the patterning of material remains. The ideational component of material patterning is not opposed to but is integrated with its material functioning. It is possible therefore to infer both utilitarian and conceptual meaning from the patterning of material evidence.

The interpreter is faced with material data that are patterned along a number of different dimensions simultaneously. Minimally, archaeologists distinguish technology, function, and style, and they use such attributes to form typologies and to seek spatial and temporal patterning. In practice, however, as the discussion above has shown, it has become increasingly difficult to separate technology from style or to separate types from their spatial and temporal contexts. In other words, the analytic or pattern-recognition stage has itself been identified as interpretive.

Thus at all stages, from the identification of classes and attributes to the understanding of high-level social processes, the interpreter has to deal simultaneously with three areas of evaluation. First, the interpreter has to identify the contexts within which things had similar meaning. The boundaries of the context are never "given"; they have to be interpreted. Of course, physical traces and separations might assist the definition of contextual boundaries, such as the boundaries around a village or the separation in time between sets of events. Ritual contexts might be more formalized than or may invert mundane contexts. But despite such clues there is an infinity of possible contexts that might have been constructed by indigenous actors. The notion of context is always relevant when different sets of data are being compared and where a primary question is whether the different examples are comparable, whether the apparent similarities are real.

Second, in conjunction with and inseparable from the identification of context is the recognition of similarities and differences. The interpreter argues for a context by showing that things are done similarly, that people respond similarly to similar situations, within its boundaries. The assumption is made that within the context similar events or things had similar meaning. But this is true only if the boundaries of the context have been correctly identified. Many artifacts initially identified as ritual or cultic have later been shown to come from entirely utilitarian contexts. Equally, claimed cross-cultural similarities always have to be evaluated to see if their contexts are comparable. Thus the interpretations of context and of meaningful similarities and differences are mutually dependent.

The identification of contexts, similarities, and differences within patterned materials depends on the application of appropriate social and material culture theories. The third evaluation that has to be made by the interpreter is of the relevance of general or specific historical theories to the data at hand. Observation and interpretation are theory laden, although theories can be changed in confrontation with material evidence in a dialectical fashion. Some of the appropriate types of general theory for material culture have been identified above. The more specific theories include the intentions and social goals of participants, or the nature of ritual or cultic as opposed to secular or utilitarian behavior.

In terms of the two types of material meaning identified earlier, rules of representation are built up from patterns of association and exclusion. For example, if a pin type is exclusively associated with women in a wide variety of contexts, then it might be interpreted as representing women in all situations. The aspect of womanhood that is represented by this association with pins is derived from other associations of the pins—perhaps with foreign, nonlocal artifacts (Sorensen, 1987). The more richly networked the associations that can be followed by the interpreter, and the thicker the description (Denzin, 1989) that can be produced, the subtler the interpretations that can be made.

For the other type of material meaning, grounded in practice, the initial task of the interpreter is to understand all the social and material implications of particular practices. This is greatly enhanced by studies of modern material culture, including ethnoarchaeology (Orme, 1981). Experimental archaeologists (Coles, 1979) are now well experienced in reconstructing past practices, from storage of cereals in pits to flaking flint tools. Such reconstructions, always unavoidably artificial to some degree, allow some direct insight into another lived experience. On the basis of such knowledge the implications of material practices, extending into the social and the moral, can be theorized. But again it is detailed thick description of associations and contexts that allows the material practices to be set within specific historical situations and the particular evocations to be understood.

An example of the application of these methods is provided by Merriman's (1987) interpretation of the intentions behind the building of a wall around the elite settlement of Heuneberg,

Germany, in the sixth century B.C. (an example similar to that provided by Collingwood, 1956). In cultural terms, the Hallstatt context in central Europe, including Germany, can be separated from other cultural areas such as the Aegean at this time. And yet the walls are made of mud brick and they have bastions, both of which have parallels only in the Aegean. In practice, mud brick would not have been an effective long-term form of defense in the German climate. Thus some purpose other than defense is supposed. The walls are different from other contemporary walls in Germany and yet they are similar to walls found in the Aegean context. Other similarities and differences that seem relevant are the examples of prestige exchange—valuable objects such as wine flagons traded from the Aegean to Germany. This trade seems relevant because of a theory that elites in central Europe based their power on the control of prestige exchange with the Mediterranean. It seems likely, in the context of such prestige exchange, that the walls built in a Mediterranean form were also designed to confer prestige on the elites who organized their construction. In this example the intention of the wall building is interpreted as being for prestige rather than for defense. The interpretation is based on the simultaneous evaluation of similarities and differences, context and theory. Both representational symbolism (conferring prestige) and practical meanings (the building of walls by elites in a non-Mediterranean climate) are considered. For other examples of the method applied to modern material culture, see Hodder (1991) and Moore (1986).

◆ *Confirmation*

How is it possible to confirm such hypotheses about the meanings of mute material and written culture? Why are some interpretations more plausible than others? The answers to such questions are unlikely to differ radically from the procedures followed in other areas of interpretation, and so I will discuss them relatively briefly here (see Denzin, 1989; Lincoln & Guba, 1985). However, there are some differences in confirming hypotheses regarding material objects. Perhaps the major difficulty is that material culture, by its very nature, straddles the divide between a universal, natural science approach to materials and a historical, interpretive approach to culture. There is thus a particularly marked lack of agreement in the scientific community about the appropriate basis for confirmation procedures. In my view, an interpretive position can and should accommodate scientific information about, for example, natural processes of transformation and decay of artifacts. It is thus an interpretive position that I describe here.

The twin struts of confirmation are coherence and correspondence. Coherence is produced if the parts of the argument do not contradict each other and if the conclusions follow from the premises. There is a partial autonomy of different types of theory, from the observational to the global, and a coherent interpretation is one in which these different levels do not produce contradictory results. The partial autonomy of different types of theory is especially clear in relation to material culture. Because material evidence endures, it can continually be reobserved, reanalyzed, and reinterpreted. The observations made in earlier excavations are continually being reconsidered within new interpretive frameworks. It is clear from these reconsiderations of earlier work that earlier observations can be used to allow different interpretations—the different levels of theory are partially autonomous. The internal coherence between different levels of theory is continually being renegotiated.

As well as internal coherence there is external coherence—the degree to which the interpretation fits theories accepted in and outside the discipline. Of course, the evaluation of a coherent argument itself depends on the application of theoretical criteria, and I have already noted the lack of agreement in studies of material culture about foundational issues such as the importance of a natural science or humanistic approach. But whatever their views on such issues, most of those working with material culture seem to accept implicitly the importance of simplicity and elegance. An argument in which too much special pleading is required in order to claim coherence is less likely to be adopted than is a simple or elegant theory. The notion of coherence could also be extended to social and political issues within and beyond disciplines, but I shall here treat these questions separately.

The notion of correspondence between theory and data does not imply absolute objectivity and independence, but rather embeds the fit of data and theory within coherence. The data are made to cohere by being linked within theoretical arguments. Similarly, the coherence of the arguments is supported by the fit to data. On the other hand, data can confront theory, as already noted. Correspondence with the data is thus an essential part of arguments of coherence. There are many aspects of correspondence arguments that might be used. One is the exactness of fit, perhaps measured in statistical terms, between theoretical expectation and data, and this is a particularly important aspect of arguments exploiting the mute aspects of material culture. Other arguments of correspondence include the number of cases that are accounted for, their range in space and time, and the variety of different classes of data that are explained. However, such numerical indications of correspondence always have to be evaluated against contextual relevance and thick description to determine whether the different examples of fit are relevant to each other. In ethnographic and historical contexts correspondence with indigenous accounts can be part of the argument that supports contextual relevance.

Other criteria that affect the success of theories about material culture meaning include fruitfulness—how many new directions, new lines of inquiry, new perspectives are opened up. Reproducibility concerns whether other people, perhaps with different perspectives, come to similar results. Perhaps different arguments, based on different starting points, produce similar results. I have already noted that one of the advantages of material evidence is that it can continually be returned to, unexcavated parts of sites excavated and old trenches dug out and reexamined. Intersubjective agreement is of considerable importance although of particular difficulty in an area that so completely bridges the science-humanity divide. The success of interpretations depends on peer review (either informal or formally in journals) and on the number of people who believe, cite, and build on them.

But much depends too on the trustworthiness, professional credentials, and status of the author and supporters of an interpretation. Issues here include how long the interpreter spent in the field and how well she or he knows the data: their biases, problems, and unusual examples. Has the author obtained appropriate degrees and been admitted into professional societies? Is the individual an established and consistent writer, or has he or she yet to prove her- or himself? Does the author keep changing her or his mind?

In fact, the audience does not respond directly to an interpretation but to an interpretation written or staged as an article or presentation. The audience thus responds to and reinterprets a material artifact or event. The persuasiveness of the argument is closely tied to the rhetoric within which it is couched (Gero, 1991; Hodder, 1989; Spector, 1991; Tilley, 1989). The rhetoric determines how the different components of the discipline talk about and define problems and their solutions.

◆ *Conclusion*

Material culture, including written texts, poses a challenge for interpretive approaches that often stress the importance of dialogue with and spoken critical comment from participants. Material culture evidence, on the other hand, may have no living participants who can respond to its interpretation. Even if such participants do exist, they may often be unable to be articulate about material culture meanings. In any case, material culture endures, and so the original makers and users may be able to give only a partial picture of the full history of meanings given to an object as it is used and reinterpreted through time.