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*Habitus, Techniques, Style: An Integrated Approach to the Social
Understanding of Material Culture and Boundaries*

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The detection and understanding of social boundaries of various types in the archaeological record is a problem with which archaeologists have grappled for many decades. Interest in this issue first developed during the period when archaeologists began to abandon the construction of artifact typologies linked to a unilinear evolutionary model as the primary goal of the discipline and to move instead toward the exploration of regional diversity (cf. Trigger 1989; Willey and Sabloff 1993). Initially, this involved the delineation of archaeological units called "cultures" (on the basis of the regional spatial distribution of associated stylistic similarities in selected aspects of material culture) and attempts to reconstruct a "history" of the interactions between these cultures, of their movements over the landscape, and of changes in their configurations (e.g., Childe 1929, 1956).

In Europe, especially, this research program can be traced to the fact that archaeology developed as a discipline largely as a backward extension of history, meaning essentially national history. Hence, the search for national origins in "ethnic" groups of the past was a strong stimulus in defining research goals (e.g., see Cleuziou et al. 1991; Dietler 1994; Härke 1991; Sklenár 1983). The interpretation of these archaeological constructs termed "cultures" in a fairly straightforward manner as the remains of ancient ethnic groups resulted from an absorption of ideas from nineteenth-century Romantic nationalist historiography and of the *Kulturkreis* concept developed by Kossina; and this was later bolstered by the organic model of culture derived from the functionalist tradition in social anthropology (cf. Herbich 1981; Shennan 1989; Trigger 1978; Veit 1989; Worzka 1993).

During the 1960s, the overly simplistic aspects of this perspective were subjected to a withering attack by archaeologists such as Binford (1965) and Clarke (1968), and it appeared that the idea of a straightforward and predictable relationship between archaeological cultures and ethnic groups of the past had been dealt a fatal blow. However, while the conceptual framework under which this early research was launched has been largely abandoned, the reconstruction of the boundaries of ancient social groups has remained an important research goal for many archaeologists. What distinguishes a number of the more recent attempts to address this issue is a more explicit concern with the theoretical justification and methodology of the endeavor and, at least for some, a more nuanced conceptualization of the complex and fluid nature of social and cultural identities and of the contextual definition and negotiation of boundaries of various kinds. Nevertheless, it is our impression that progress in improving our understanding of this perennial issue has been elusive and often hampered both by the parochialism of different national and regional traditions of analysis and by the hasty adoption and perpetuation of simplistic, reductionist interpretive formulas.

More substantial progress in the pursuit of social groups and boundaries in the archaeological record, to the extent that this may be possible, requires that the problem be situated in a larger theoretical context that addresses the more general issue of the relationship between material culture and society. The imperative centrality of a social understanding of material culture stems from the twin facts that, as Trigger has noted, "prehistoric archaeology is the only social science that has no direct access to information about human behavior" (1989:357) and, as Appadurai has put it, things "constitute the first principles and the last resort of archaeologists" (Appadurai 1986a:5). All archaeological inference about past societies (including, potentially, the identification of social groups and boundaries) hinges critically upon an understanding of the relationship between material and non-material aspects of culture and society: left with only remnants of the former, we seek to use them to perceive and comprehend the latter. That is the essence of the archaeological endeavor.

Clearly, archaeologists with an interest in the exploration of ancient social groups can approach them only through the delineation of material culture patterns and boundaries in the archaeological record. But, an interpretation of those patterns and boundaries requires a theoretical understanding of the full range of social processes that might have produced them. Moreover, this theoretical understanding should also guide the further improvement of appropriate strategies for the identification of patterns. In other words, the attempt to study social groups and boundaries of the past requires a coordinated self-conscious consideration of both: (1) the conceptual tools by which archaeologists define patterns, and (2) in what ways, and to what extent, the patterns they define may be related to social

and cultural identity. However, coming to grips with these issues necessitates an exploration of two broader domains of anthropological inquiry. In the first place, it requires the pursuit of an understanding of the nature of material culture systems as social and historical phenomena. Secondly, it requires an ethnological understanding of the nature and reproduction of social groups, of the construction of identity, and of the nature and function of boundaries. For reasons of space, we focus here primarily on the former domain, and offer only a few comments on the latter.

THE SOCIAL UNDERSTANDING OF MATERIAL CULTURE

Over the course of the past couple of decades, archaeologists have become increasingly aware of the limitations of our rather rudimentary understanding of the crucial relationship between material and non-material aspects of culture and society. This has led a number of them to turn to the ethnographic study of material culture in living contexts, where both sides of this relationship can be observed, as a method of developing a set of theoretical tools by which to craft a more adequate window of entry for perceiving social relations and processes in ancient societies. The comments offered here stem from our experience of having undertaken several years of such "ethnoarchaeological" research among the Luo people of western Kenya.¹

In approaching the study of material culture in an ethnographic context with the pragmatic desire to better perceive and comprehend ancient societies, two questions impose themselves as being fundamental. The first is "how does material culture originate in its social context?" That is, what are the social processes and structures that condition the production and reproduction of material culture? The second major question is "what social and technical roles does material culture serve and in what ways does material culture, in the performance of these roles, reciprocally affect social structures and processes?" An understanding of the interactive nature of the relationship is essential for comprehending its dynamics, the forces which direct the course of change. Moreover, it is only in the context of these larger questions that one can begin to engage in the more specific attempt to understand the role of material culture in the formation, expression, and reproduction of identity and to assess the feasibility of using remnants of material culture to identify social groups and boundaries of the past.

Of course, these are ambitious questions, and we are not proposing to be able to answer them definitively here. More modestly, we wish to explore a theoretical perspective that holds some promise in explicating some of the connections in this complex relationship and suggests further productive avenues of research. It is unlikely that a realistic general understanding of these issues will come easily or that

such an understanding will produce some handy simple formula of ready utility to archaeologists (see also Lemonnier 1986, 1993b). Rather, we must be prepared to a rigourous long-term pursuit of the anthropological study of material culture.

Toward this end, we present here a critical comparative discussion of several recent archaeologically and ethnoarchaeologically derived approaches to the social understanding of material culture in order to identify both some key theoretical issues and various problems exhibited by these approaches in dealing with those issues. We then propose an alternative approach crafted from insights developed during our experience of ethnoarchaeological research in Africa and incorporating theoretically useful elements from (a) Bourdieu's (1977, 1980) theory of practice, (b) the study of material culture embodied in the French *technologie* or *techniques et culture* school, (c) the anthropology of consumption, and (d) an historically informed cultural economy perspective.² Finally, examples from the ethnoarchaeological research are used to demonstrate the utility of the proposed approach for understanding material culture as a social fact and to indicate the theoretical and analytical prerequisites to consideration of social groups and boundaries in the material record of the past.

MATERIAL CULTURE AND TECHNIQUES

In approaching the study of material culture one must begin by explicitly emphasizing a fundamental distinction between *things* and *techniques* which should be quite obvious, but which bears exhortation. The distinction is one between object and process. Things are physical entities that occupy space; they are what archaeologists recover as evidence. Techniques are those human actions that result in the production or utilization of things. From an archaeological perspective, they are one order of inference removed from things. Fortunately, things often preserve in their physical attributes and in their archaeological contexts clues that may inform, through a process of analogical interpretation, about the techniques employed in their creation and use. Moreover, things are made, exchanged, used, and discarded as part of human social activity. Hence, both things and techniques are embedded in and conditioned by social relations and cultural practice, and this fact holds out the promise that an understanding of this complex interrelationship may inform about society and culture in general.

However, this analytically and methodologically important distinction between things and techniques has been too often ignored by archaeologists (and even some ethnoarchaeologists) seeking to understand the social significance of material culture. Clearly, in order to adequately address the two fundamental questions

posed earlier, one must look first at the ways that things are created and used in daily practice. The mediating process between things and society, and the key to understanding their reciprocal relationship, is techniques. Unfortunately, those archaeologists (at least within the Anglophone community) who have focused most intensely upon the interpretation of the social significance of things have tended to pay little serious attention to techniques, and (as will be explained below) have attempted to infer (or "read") social and cultural information directly from what is called the "style" of artifacts without a full investigation of and a realistic appreciation for the processes by which style is created (e.g., Hodder 1982; Wobst 1977). But style results most immediately from techniques; and it is only by studying techniques, with the full range of social and physico-technical constraints to which they respond, that we can arrive at an understanding of the social forces and relations that condition material culture.

The concept of style has played a major role in archaeological approaches to the social significance of material culture (see below), and it illustrates very well the importance of what might risk being viewed as an overly fastidious insistence on the distinction between things and techniques. The term style is often used to describe either of two phenomena. It may be used to designate characteristic ways of "doing things" (i.e., performing actions), what Mauss (1933) referred to as *techniques du corps*. Alternatively, it is more commonly used to designate characteristic patterns of material attributes in objects resulting from *some* of those ways of doing things (i.e., from techniques of production). We will refer to these two senses as *style of action* versus *material style*. Very frequently the two senses are conflated without a recognition of the difference or its significance. This issue will be more fully explored later, but the importance of the distinction may be briefly hinted at here by noting that not all explanations of why people perform actions in characteristic ways can be related directly to intended effects in a material product. Like history, although style is always the product of purposeful human action, it cannot be simply understood, or "read," as the consciously intended product of that action. Moreover, it is well to remember that the static, frozen pattern of traits which constitute material style is not the result of an instantaneous act of creation, but rather of a temporally extended process that is best conceptualized in the *chaîne opératoire* model developed in the French school of *technologie*.³

ARCHAEOLOGICAL APPROACHES TO THE SOCIAL SIGNIFICANCE OF MATERIAL CULTURE

The most common way that Anglophone archaeologists have attempted to deal with the social dimension of material culture has been to separate out three dis-

crete aspects called "style," "technology," and "function" (cf. Braun 1983; Bronitsky 1986; Plog 1980a, 1983; Wright 1985). Frequently, analysts selectively specialize in the study of one of those aspects. By *technology*, in this narrow sense, is usually meant the techniques and materials used in the primary production of objects (most commonly, ceramics, stone tools, or metal goods). *Function* is usually taken to mean what might be called "utilitarian" or "instrumental" (as opposed to "social") function: it refers to those techniques that objects were designed to perform as "tools" acting upon matter. *Style* has a variety of meanings for archaeologists, although these are often somewhat ambiguously treated and are rarely very clearly or consistently defined. However, in the most general sense, whatever the differences in definition, it is usually considered to correspond to that aspect of material patterning which is thought to respond to primarily social and cultural demands or constraints (i.e., it serves a "social function" or is a residue of social action); hence it is the realm where most archaeological attention has been focused by those interested in the social significance of material culture. However, as the following discussion will show, exactly how one identifies style and how one interprets its social significance and role are subjects of considerable controversy.

Perhaps the most common way of identifying style has been to locate it negatively in relation to function and technology: it is thought to consist of those aspects of material patterning that remain after the latter two aspects have been accounted for. In other words, it is to be located in those attributes of objects that have no discernible role in affecting their utilitarian performance in the context of use (the domain of function) and that do not result from technical constraints in the context of their manufacture (the domain of technology). The presumption has been that these "residual" attributes were therefore included for reasons having to do with social processes. In the case of ceramics, since the possible effects of other attributes on performance are often difficult (or impossible) to evaluate, this has meant that studies of style have tended to focus almost exclusively upon what Sackett (1982) calls "adjunct form": traits that were presumably "added on" either to perform some social function or as a passive residue of social action. In practice, this has meant that the concept of ceramic style, by tacit definition, has become virtually synonymous with "decoration" (i.e., surface treatment patterns). In the case of stone tools, which have no obviously distinguishable decoration, style has generally been located in those patterned aspects of form that differ on implementations assumed to be used for identical utilitarian functions.

This negative approach to identifying style, in both its manifestations, has some serious problems. If one is interested in understanding the full social significance and roles of objects, then a focus on decoration alone is unsatisfactorily narrow: it is now clear from ethnographic studies that decoration is of highly variable significance in relation to other physical attributes and its meaning cannot be compre-

hended in isolation (see Dietler and Herbich 1989, 1994b; Lemonnier 1986, 1990; Sackett 1982, 1990). If, as in the case of stone tools, one is attempting to compare implements of the same utilitarian function to detect their stylistic differences, it is, at a minimum, necessary to have some means of verifying the similarity of function which is independent of analogies based upon the formal characteristics one wishes to study. Moreover, as Sigaut (1991) has pointed out, from an ethnographic standpoint, this basic conceptualization of "function" and its relationship to form is naively oversimplified and severely limited.

These difficulties highlight the dangers of artificially separating style, function, and technology in this way and correlating these domains of material patterning with separate social and techno-utilitarian domains of action. While this analytical strategy may have limited heuristic utility for addressing some problems (e.g., see Wright 1985), it is not a productive approach for understanding the social significance of material culture. In so doing, one has unrealistically limited the possibilities for comprehending interrelationships between the domains and for perceiving techniques as "social facts." For example, such a conceptualization masks the role of social and cultural factors in conditioning technical choices and functional evaluations (Lechtman 1977). Moreover, ethnographic evidence has shown that whole "technical systems" are embedded in social processes and relations: both broad system strategies and choices made at all stages of *chaînes opératoires* of production and use are aspects of social action and cultural concepts that result in the production of material style (see Dietler and Herbich 1989; Lemonnier 1986, 1990, 1992). This is why, as an essential prerequisite to developing a social understanding of material culture, we have argued vigorously for a more integrated view of material style encompassing patterning in technological, formal, and decorative aspects (Dietler and Herbich 1989; Herbich 1987; Herbich and Dietler 1991) and for a corresponding approach to the production of material style based upon the concept of the *chaîne opératoire* (Dietler and Herbich 1989, 1994b). Among the principal advantages of this approach is that it allows one to view the production of material style as a temporally extended series of interrelated operational choices rather than as an instantaneous act of creation.

Most archaeologists share the assumption that material style is a key to understanding the social dimensions of material culture and would concur with Mauss (1930:470) in his statement that "Le domaine du social, c'est le domaine de la modalité."⁴ However, granting that something like material style, by whatever definition, may be adequately identified within objects, there have been many conflicting interpretations of its social origin and roles. A primary division can be identified between those who see style as primarily a passive reflection of social behavior or of shared cultural concepts and those who see it as a more active "tool" in strategies of social action (cf. Sackett 1990; Wiessner 1990).

The former view of style as a passive residue represents a longstanding tradition in archaeological research. It was this implicitly accepted relationship that allowed Childe (1929) to identify archaeological "cultures" and correlate them with peoples. With the advent of the "New Archaeology" during the 1960s, craft-learning patterns were identified as a primary social mechanism underlying this view (albeit without much empirical investigation of the process in ethnographic contexts). Using an idealized version of this mechanism as a basis, several archaeologists (e.g., Deetz 1965; Longacre 1970) advanced interpretations of stylistic patterns as reflections of social organization (specifically, of post-marital residence patterns and kinship structures). These interpretations have now been shown to have suffered from a number of methodological and theoretical problems, including, most seriously, an overly static and stereotypic view of the process of craft learning and a rather limited understanding of its social context and relationship to material culture patterning (see Herbich 1981, 1987).⁵

Structuralist approaches to material culture (at least those which hold closest to the structuralism of Saussure and Levi-Strauss) may also be recognized as adopting an essentially passive, reflective view of style (cf. Deetz 1977; Glassie 1975; Hodder 1982:125-184). However, in this case, stylistic patterns are seen to be a surface manifestation of deep cognitive structures that also generate structures of social organization, myth, ritual, and other aspects of culture. Studies in this vein have tended to neglect intracultural variation as a significant phenomenon and to exclude the role in the production and reproduction of culture of socially situated subjects with different cultural competencies and different, often contradictory, interests. Where culture is viewed simply as a reflection, or an effect, of uniformly shared cognitive structure rather than as an historical social process, there is little scope within such an essentially static perspective for understanding change in either styles or society.

To a certain extent many of these problematic limitations are a result of the fact that little attention has been paid by structuralists to the actual processes by which material style is generated: the focus is on pattern rather than process. But a program that seeks to elucidate the relationship between different kinds of structures is severely limited to the extent that it fails to consider the activities that actually create the material manifestations of those structures. As Sahlins has observed more generally, "If structural/semiotic analysis is to be extended to general anthropology on the model of its pertinence to 'language,' then what is lost is not merely history and change, but practice—human action in the world" (Sahlins 1981:6). As will be discussed later, we hold this concept of practice as central to understanding the social significance of techniques.

Various other cognitive approaches to style have been developed without necessary reference to specific theoretical models purporting to explain the generative

basis of the phenomenon as a social fact. Many of these, such as Hardin's (1984) studies of decorative design schemes and Washburn's (1977) approach to design symmetry, have at least contributed greatly to the advancement of our methodological sophistication in characterizing decorative aspects of material style for comparative analysis. Perhaps the most explicit explorer of the passive perspective on style has been Sackett (1982, 1990). Generally eschewing the term style, he has championed an alternative conception called "isochrestic variation" to describe the different ways people have of making and using things for similar purposes and the resultant characteristic combinations of traits that constitute the distinctive material culture patterns produced within what he calls "ethnic" groups.⁶ A primary focus of his analysis has been the definition of where, in material patterning, style may be seen to "reside"; and he has made a valuable contribution in refuting the pervasive style/function/technology schism and corresponding focus on style-as-decoration in favor of a more realistic conception of the interrelated nature of material culture attributes. Sackett (1990), correctly, holds his definition of the locus of "isochrestic variation" to be independent of an explanation of its social origin. While recognizing the occasional active "iconological" use of material style for intentional signaling, he has argued persuasively that isochrestic variation should be viewed primarily as a result of the transmission within "ethnic" groups of largely unconscious perceptions of the way things should look and be used. Unfortunately, he has been reluctant to explore in satisfactory depth the ways in which social relations and processes condition the traditions guiding the production and reproduction of isochrestic variation. This hesitation most probably stems from a recognition of the limits of theorizing from an archaeological base: such understanding can only develop out of primary ethnoarchaeological research through which these social features can be observed. In any case, despite its insightful contributions, this perspective ultimately lacks explanatory power to provide a convincing social understanding of techniques and material culture.

Much of Sackett's argument was developed in critique of the more active approach to style. Again, there are several competing perspectives in this camp all of which agree in seeing style primarily and essentially as a medium of communication. Perhaps the most popular among American archaeologists has been a view of material style as a tool for "information exchange" (e.g., Hegmon 1992; Plog 1980a; Pollock 1983; Wobst 1977). Based upon a seminal paper by Wobst (1977), this approach hinges upon a narrow definition of style (as decoration) and a hidden premise that is an ethnocentric neoclassical economic argument (see Dietler and Herbich 1989 for a detailed critique). At the risk of schematizing to the point of caricature, the core of the argument runs as follows: style is seen as something "affixed" to objects at an extra "cost" in time and labor (Wobst 1977:326); it serves a social function of communicating information, but with greater "costs of emis-

sion" than other modes of communication (Wobst 1977:322); the target group of that information and its message content can therefore be inferred from a cost/benefit analysis of the energy expended in "stylistic behavior" (Wobst 1977:325). Because an investment in the use of style to communicate with people who are in daily personal contact would be a redundant "dysfunctional waste of energy and matter" (Wobst 1977:325), the most efficient use of such stylistic information has generally been located in the symbolic communication of group (particularly "ethnic") boundaries and identity to outsiders (Wobst 1977:328-330).

This perspective has some fatal flaws, and its application to archaeological cases has led to some rather curious conclusions, such as a direct (and necessary) correlation between increasing complexity of ceramic decoration and increasing complexity of political organization (e.g., Pollock 1983). Ethnographic studies have demonstrated that the exclusive identification of decoration as material style or as a communication medium is untenable (Dietler and Herbich 1989; Gosselain 1992b; Lemonnier 1986, 1990), and the economic argument depends critically upon this correlation (one can only assess the energy "cost" invested in the production of style if it is viewed as something extra added on to an object). Moreover, this reductionist functional perspective pushed to its logical conclusion has the effect of explaining the creation of material style as an intentional strategy exclusively for communicating social boundaries. It tautologically confuses one potential eventual role of style with a primary constitutive function and hence the cause of its creation. As will be explained later, it shares with some of the "text"-analogy approaches to material style a basic confusion between the concepts of *communication* and *signification*. Again, a central defect with this program is that no attention was paid to understanding the social context of manufacture. Assumptions about the generation of material style were simply extrapolated from observations derived exclusively from the context of use. These problems stem ultimately from a failure to appreciate the distinction raised earlier between things and techniques.

A related defect in Wobst's (1977) argument is that the general principle of using a sliding scale of the relative visibility of material media as a gauge of their efficiency for broadcasting messages of identity was extrapolated largely from a narrow range of observations about clothing in Eastern European peasant communities (see Bogatyrev 1971, for a more nuanced discussion of the social categories expressed in Moravian folk costumes and the function of clothing in reiterating status and role distinctions). However, the reasons that clothing (and other bodily adornment) is so often a medium for the expression of identity has much less to do with its relative position on some abstract scale of visibility and efficiency than with its uniquely close association with the body and the social inscription of concepts of personhood (cf. Comaroff and Comaroff 1992:69-91; McCracken 1990:57-70;

Sahlins 1976:179; Turner 1969, 1980). Clothing (along with cosmetics, body painting, tattooing, scarification, jewelry, headdresses, etc.) is part of "the social skin": the frontier between society and the self that "becomes the symbolic stage upon which the drama of socialization is enacted" (Turner 1980:112). Far from being a "dysfunctional waste of energy," the redundancy of bodily adornment in reiterating social status and role distinctions among closely interacting members of a group is an important mechanism for the naturalization of social categories and behavioral expectations in the formation of personal identity.⁷

An interesting alternative approach to material style as a communication medium proposed by Wiessner (1983, 1984, 1990) attempted to circumvent the severe limitations of the "information exchange" model (especially the exclusive focus on decoration and the ethnocentric economic reductionism) by identifying style in a more inclusive and positive way through its social function. She began with a restrictive definition of style as those aspects of material patterning that serve to communicate information about relative identity among individuals and groups. Style in this sense has two potential aspects called "emblemic" and "assertive." The former kind of style (emblemic) involves the existence of a distinct referent and conveys a clearly recognized message about the division of the social world into distinct groups with boundaries (cf. Davis 1985). The latter kind of style (assertive) has no distinct referent or clearly recognized meaning and is largely a matter of personal expression.

However, not all material culture patterning is necessarily related to these kinds of expression of identity. Hence, while this definition may be logically valid and operationally feasible in an ethnographic context such as the San case investigated by Wiessner, this is a problematical approach for archaeologists, which must lead them inevitably into tautology. This definition may be viable for ethnographers who can evaluate such communicative behavior directly (as Wiessner attempted to do in her ethnoarchaeological research). However, in the absence of a developed theory that explicitly demonstrates which aspects of material culture patterning will be consistently used for such communication and which will not, it is clearly untenable logically for archaeologists to identify material style within a set of artifacts on the basis of a social function that cannot be observed but which must instead be inferred from the data as an explanation of their patterning. Moreover, as Barth pointed out in his seminal article on ethnic boundary signaling, "one cannot predict from first principles which [cultural] features will be emphasized and made organizationally relevant by the actors" (Barth 1969b:14).

Other communication advocates operating outside Wobst's "information exchange" framework have also focused upon the concept of signaling ethnic boundaries. Hodder's (1979a) often cited ethnoarchaeological study in the Baringo area of Kenya, for example, posited a connection between the use of material cul-

ture to signal ethnic boundaries and the presence of "economic and social stress." If this were true and of more general validity, it would point the way toward developing the theoretical links that, by their absence, are a major problem for the archaeological application of Wiessner's approach. Unfortunately, the utility of Hodder's study is highly dubious. In the first place, there is an alarming disparity between the extremely brief period of fieldwork involved (and the methods employed) and the sweeping social interpretation offered. A few weeks of ethnoarchaeological work are simply not sufficient to give anything but a very superficial impression of the complex social forces underlying material patterns, particularly in the absence of investigation of the process and social context of production.⁸ Moreover, Hodder neglected to define clearly what he meant by "economic and social stress" in the numerous articles in which he presented this material, and no adequate measure of its relative intensity (or, indeed, even an adequate demonstration that it actually existed) was ever offered in the cases where it was invoked. Furthermore, there was no attempt to demonstrate or explain the critical social link between this vague "stress" and the production and use of material culture. The study simply mapped the spatial distribution of objects of quite disparate ages and then fashioned a nebulous synchronic correlation which was asserted as causation without ever moving beyond the context of use (or indeed, even exploring that social context in any depth).

A number of recent studies focusing on the communication function of material culture have attempted to identify a broader range of roles than broadcasting identity, including particularly the use of material style in the representation of the social relations of power and strategies of ideological manipulation. These studies, although often designated as "post-processual," actually vary far too greatly in theoretical inspiration and methodology to be usefully lumped under this unfortunate polemical rubric. The insightful work of Miller (1985, 1987), for example, is quite compatible with the perspective developed in this paper, especially in its exploration of the relevance of Bourdieu's concept of practice to the social understanding of material culture and its grounding in solid ethnographic research. Others, however, despite programmatic statements to the contrary, may be seen to hold in common a fundamentally idealist central concept that views material culture as essentially a medium of symbolic expression (cf. Hodder 1982; Shanks and Tilley 1987; Tilley 1989). Consequently, the analysis of material culture has been directed toward a quest for its "meaning." Often this has involved the analogical perception of material culture as a form of text, conveniently enabling the use of analytical methods derived from semiotics and textual criticism to "read" the encoded meanings.

This latter approach is subject to some serious criticisms. In the first place, analysis of material style has once again generally been focused narrowly on deco-

ration as the text to be read (cf. Hodder 1991; Shanks and Tilley 1987:146-171). There has been a failure to recognize the complexity of the ways that both objects and techniques are imbued with meaning, to situate technical activity within the scheme of analysis, and to examine the actual process of practice by which material style is created (see Lemonnier 1990, for a detailed critique; and Hodder 1991, for a particularly egregious example purporting to read the geometric decoration on calabashes as a form of silent discourse by women about their oppression). Moreover, the overly literal analogy between text and material culture and the consequent borrowing of methods of linguistic and textual analysis are highly suspect endeavors that stem from, among other problems, a confusion of signs and symbols (cf. Sperber 1975; Yengoyan 1985) and a confusion of the concepts of communication and signification.

One of the fundamental distinguishing features of symbols is precisely that they are not like language and are not subject to analysis by semiological methods: they don't "mean" but rather "evoke," and they are not articulated like language (Sperber 1975). Furthermore, material culture is not a text; it is not a coherent sequential string of connected signs with "referential meaning" (see Finegan and Besnier 1989:173-174) created expressly and exclusively as an instrument of communication. Material culture is embedded in systems of symbolic expression but also in systems of practical action on matter. Hence, although material culture participates in processes of *signification* (objects may provoke emotional and intellectual responses and be invested with significance of various kinds by users and makers), it is not primarily a system of *communication* like language. The relationship between the intentions of the maker of an object and the significance attached to that object in the context of consumption is far less direct and far more complex and ambiguous than in the reading of a text produced by a writer.

An understanding of the social origin and significance of material culture will not come from "reading" decorations as text (see Lemonnier 1990). It requires a dynamic, diachronic perspective founded upon an appreciation of differences in the contexts of both production and consumption (see Dietler and Herbich 1994a), upon an approach to material style centered on the *chaîne opératoire* concept, and upon a rigorous examination of the link between objects and techniques in the contexts where they are generated, reproduced, and transformed.

HABITUS AND TECHNIQUES

This quick survey was by no means intended to be exhaustive, but rather to schematically indicate a range of strategies archaeologists have developed for grappling with the crucial issue of the social dimensions of material culture and to

identify some problems with these approaches. Most of the theoretical debate concerning this issue has, of course, developed in the context of ethnoarchaeological research where, unlike archaeological cases, it is possible to actually evaluate the plausibility of one's concepts through participant-observation of social activity (even if, alas, this potential is not always fully realized).

The most frequently invoked basic difference in approach, that between the passive and active conceptualizations of style, may be recognized as a manifestation of the persistent central paradigmatic dichotomy of the social sciences, that between structure and agency (cf. Bourdieu 1977, 1980; Giddens 1979; Orner 1984; Sahlin 1976, 1985). Some scholars posit that stylistic patterns are predominantly an unconscious reflection of social or cultural phenomena. In the case of structuralist analyses, material culture patterns are thought to conform to deep cognitive structures underlying all social relations and cultural practices (e.g., Deetz 1977; Glassie 1975; Hodder 1982:125-184). Others see them as a largely unconscious behavioral reflection of social organization, interaction, or membership in "ethnic" or other social groups or categories (e.g., Longacre 1970; Sackett 1990; Washburn 1977). Those who emphasize a more action-centered view of material culture tend to view it largely as a medium of communication and to emphasize the manipulation of material symbols in strategies of group boundary maintenance, ideological representation of social relations, or cultural categorization (e.g., Hodder 1982; Plog 1980a; Wiessner 1983, 1984; Wobst 1977).

These views are not necessarily contradictory; they are merely partial. Some tend to perceive social action as determined directly from the level of structure, while others focus upon symbolic action without adequate reference to the manner in which broader socio-cultural forces and material conditions structure or constrain perceptions and decisions. However, a realistic theory of material culture as a social phenomenon that can address the two questions posed at the beginning of the paper must account for both structure and agency by showing how the two are mediated through practice: that is, both how practice is conditioned by structure and how it reshapes structure in the process of reproducing it.

For reasons which will be explained below, we believe that Bourdieu's (1977, 1980) theory of practice, and particularly his concept of the *habitus*, has a great deal of potential in pointing the direction toward such a bridging conceptualization for material culture.⁹ However, in order to effectively bring his ideas to bear on the domain of material culture we must reestablish a more holistic conception of material style and techniques incorporating the concept of the *chaîne opératoire* and focus analysis concurrently on both the contexts of production and consumption. This requires a foundation strategy pioneered in the French tradition of *technologie* or *ethnologie des techniques* (cf. Cresswell 1976; Haudricourt 1987; Lemonnier 1976, 1986, 1990, 1992; Leroi-Gourhan 1943; Mauss 1936; Schlanger

1991; Sigaut 1987, 1991), which pays close attention to the process of making choices at all stages of the *chaîne opératoire* of production. Finally, in order to fully understand the nature of the demands to which techniques respond, we must reject a vision that seeks structure and meaning in homogeneously shared, bounded cultures in favor of a view of culture as an historical social process. Our perspective here is shaped particularly by the anthropological literature on consumption (e.g., Appadurai 1986a; Bourdieu 1984; Douglas and Isherwood 1979) and by the somewhat fractious theoretical positions that may be loosely gathered under the label historical anthropology and cultural economy (e.g., Comaroff and Comaroff 1992; Mintz 1985; Roseberry 1989; Sahlin 1985, 1994; Wolf 1982).

Material style can serve as a useful concept for archaeologists attempting to investigate the social role and meaning of material culture only if it is seen as the objectified result of techniques (rather than as straightforward objectified information); and more specifically it must be seen as the result of characteristic ranges of responses to interlinked technical, formal, and decorative choices made at all stages of a *chaîne opératoire* of production (Dietler and Herbich 1989). Understanding material culture as a social phenomenon, including the processes of stability and innovation within their historical trajectories, then becomes a matter of understanding the factors that condition these choices, their interrelations, and the reciprocal effects stemming from new choices made at various stages of the *chaîne opératoire*. This approach requires that we understand craftspeople as social actors (rather than simply as products/bearers of culture or as acultural adaptive engineers) and that we understand the production and use of objects as social activity.

The theoretical work of Bourdieu (1977, 1980) offers a means of situating both material culture and the *chaînes opératoires* and social actors responsible for its production and transformation within a framework that mediates structure and agency. Bourdieu has argued that people develop "dispositions" to act in certain ways through the influence of the structures of material conditions in which they live. These systems of durable dispositions, called *habitus*, can generate patterned actions that appear regulated as if resulting from rules, but which, in fact, operate without reference to, or symbolic mastery of, rules. Techniques, as with other patterns of social activity, are formed through the *habitus*. This involves the development through practice of "tendencies" and cultural perceptions of the limits of the possible in patterns of choice at all stages of *chaînes opératoires*. These dispositions of choice and perceptions of the possible in the technical domain are interwoven with similarly formed patterns of choice and perceptions in the domain of social relations and cultural categories in ways that evoke and reinforce each other such that they come to be perceived as "natural."

This is a particularly useful way of viewing the process by which material cul-

ture patterns are assimilated and reproduced, particularly in the case of prehistoric (and pre-industrial) societies of the type usually studied by archaeologists where craft learning generally takes place through observation and emulation without the use of a formally articulated set of rules (see Herbich 1987). The reproduction of material culture then becomes more realistically situated in social life. Techniques are not seen as, in some sense, a secondary "product" of social activity or of social strategies, but rather it is recognized that dispositions which generate action in all domains of social life are formed together in the course of practice. This perspective would, for example, shift the focus of analysis from seeing material style as something intentionally "added on" in order to signal group identity (as do advocates of the "information exchange" approach), to seeing the process by which a sense of group identity is formed and transformed as being coeval with and identical to the process by which a sense of techniques is formed and transformed. Both appear to be a part of the natural order. This avoids the problem of confusing function with intention by recognizing that, while all social action is purposeful, the larger patterns that we perceive are the often unintended consequences of many choices made by social actors following different strategies but linked by certain common structurally conditioned tendencies toward action.

It should be emphasized that the *habitus* is not a static concept: one of its most attractive features is that, as the "generative principle of regulated improvisations" (Bourdieu 1977:78), it allows the perception of how practice both reproduces and transforms structure as it adjusts to demands. Rather than seeing practice as predetermined by a static set of cultural concepts or structures (e.g., some sort of rigid mental template), the *habitus* is a dynamic relational phenomenon which is both an historical product and agent. This is because, as a set of learned dispositions that allow the solution of daily technical and social problems through a process of structured analogical reasoning, the solutions to these problems influence the development of the dispositions. A certain latitude in action is thus possible as people respond to practical demands. Practice may alter gradually without marked consequence as long as there continues to be a close fit between the objective conditions and the subjective organizational system of dispositions.

This relation of correspondence results in a state of unquestioning perception of the "naturalness" of the social and material world that Bourdieu calls "doxa." However, demands sometimes lead practice into responses that call this correspondence into question in certain areas, leading to the formation of a domain of self-conscious discussion between positions that Bourdieu calls "heterodoxy" and "orthodoxy." When the arbitrariness of some of what was accepted as implicit axiomatic knowledge is exposed in this way it results either in rationalization and systematization of what was formerly an unconscious set of dispositions, or in overt social conflict. This is one way in which material culture and techniques can

have an unintended impact upon the social relations and structures which generated them, and this is particularly significant for social change when the arbitrariness of social institutions and practices embodying asymmetrical relations of power are exposed.

In order to understand the course of change in techniques and material culture, it is necessary to understand: (1) the apparatus that structures responses to technical and social problems, demands, or opportunities (i.e., the *habitus*), (2) the material conditions that influence the formation of the dispositions that constitute the *habitus*, and (3) the origin and nature of the problems or demands that provoke responses. It must be recognized that such demands originate simultaneously at several levels, from small-scale interpersonal relations to the supra-regional political economy. This means that, to reiterate once again, explanations of change that reside at the level of homogeneous, bounded cultural structures are inadequate. Concepts derived from anthropological work on consumption and historical cultural economy must be brought to play in exploring, at a range of scales in the contexts of both manufacture and use, the material conditions of the development of techniques and the transformation of strategies of choice in *chaînes opératoires*.

DEMONSTRATION OF THE APPROACH

In order to illustrate the utility of this perspective for understanding the social significance of techniques, it is necessary to very briefly examine a few empirical cases. The two examples used are drawn from ethnoarchaeological work among the Luo people of western Kenya.

Luo is a Nilotic language spoken by some two million people occupying a territory of about 10,000 sq km surrounding the Winam Gulf of Lake Victoria (Fig. 10.1). The regional settlement pattern is characterized by polygynous, patrilineal, three-generation extended families living in separate homesteads scattered over the countryside. Each homestead undergoes a life-cycle of foundation, growth, and abandonment, and the landscape is composed of interspersed homesteads representing all stages of the cycle. The economy is based upon horticultural production of a mixed assortment of grain, legume, and root crops. Fish from the gulf are traded widely over the area, and cattle also play an important role in the economy as a measure of wealth and as a source of milk and occasional meat. Cash cropping is poorly developed in the northwestern third of Luo territory where our study was focused (Siaya District), although it is more prevalent in the other two districts. In Siaya District the local economy is weakly linked to the national economy by a network of regular periodic rural markets and somewhat more strongly by a pattern of male wage-labor outside the region. The markets provide a source of cloth-

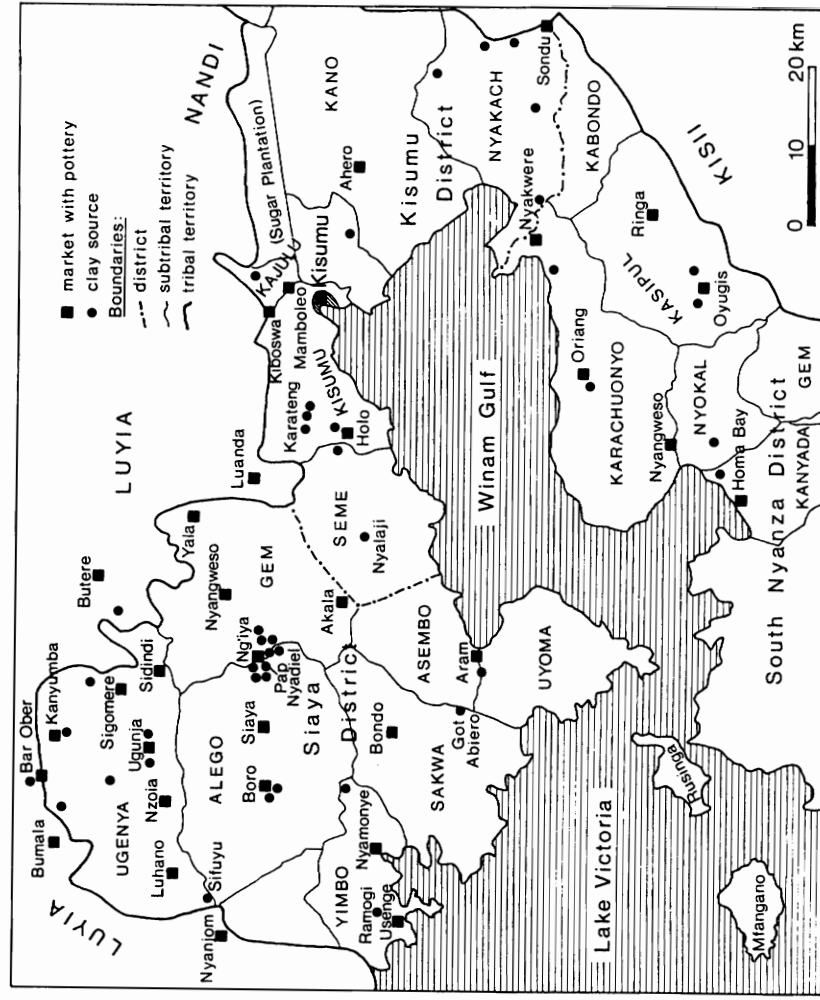


Figure 10.1. The Luo region (excluding some portions of south Nyanza) showing tribal and Luo subtribal boundaries, major markets with pottery, and major active clay sources associated with potter communities (from Dietler and Herbich 1989).

ing and other nonlocal commodities, but they do not result in a significant flow of crops or raw materials out of the region. They mostly serve to articulate local exchanges of crafts and foodstuffs.

The Luo traditionally had no central authority and, although there now exists a system of government-appointed administrative "chiefs," a strongly egalitarian political ethos has persisted. The current administrative divisions are based upon the territorial boundaries of the various Luo subgroups as they existed at the moment of the imposition of colonial administration. In the precolonial era, political organization was based upon fluid alliances among these shifting subgroups in an approximation of the segmentary lineage system (Evans-Pritchard 1949; Ogot 1967; Southall 1952).

The Luo produce a wide range of ceramic pots for household use, including cooking, storage, and serving vessels (see Dietler and Herbich 1989; Herbich 1981, 1987; Herbich and Dietler 1989, 1991). The pots are made exclusively by women, and moreover by a limited set of women who constitute a very small percentage of the total female population. In this sense, Luo pottery production is a specialized craft, although potters do not depend to any significant extent on the craft for their subsistence. Luo potters, like other Luo women, are full-time agriculturalists responsible for growing the food to feed their families.

Potters tend to live grouped in various network-clusters of homesteads that we call "potter communities." These women learn the craft after marriage from their mothers-in-law or other senior women in the husband's father's homestead, and this results in the production of distinctive local "micro-styles" (Herbich 1987). These micro-styles are defined not simply on the basis of decoration. Rather, they are characteristically patterned permutations of *technical*, *formal*, and *decorative* attributes. Figure 10.2 is an attempt to briefly and schematically convey a sense of the complex nature of these micro-style differences through selected examples of one pot category (a type of water storage/cooling vessel) from six different potter communities. Each drawing represents one typical example from a range of characteristic variants for this particular pot type produced within each community. (Figure 10.3 gives a corresponding sense of this internal variation by showing a typical range of variants for this pot type produced within the *same* potter community.) Each of the other pot types within the local repertoire for each community will also be distinctive from those produced by other communities, but not in the same way as the water pots: characteristic decorative motifs and structuring of the decorative field, for example, will differ considerably for different pot types within the same community (see Herbich and Dietler 1989, 1991 for a fuller explanation).

These patterns are the product of choices made at various stages of the *chaîne opératoire* of production (from clay procurement through to firing) by local sets of potters within a global population of Luo potters employing a very similar limited set of tools and basic techniques (Dietler and Herbich 1989). Each community producing a distinctive micro-style does so *not* through following a set of rules. In fact, although potters can distinguish their own local style from that of other communities, they are not usually able to self-consciously articulate the sets of attributes which constitute their style and they certainly do not teach or learn the craft this way. Moreover, the attributes that characterize pots falling within a style are not identical. Rather, potters share a set of learned dispositions that guide their perceptions of an acceptable range of variation in choices at the different stages of the *chaîne opératoire*.

This process can be partially situated within its social context by noting that these technical and aesthetic tendencies are learned as part of a general process of

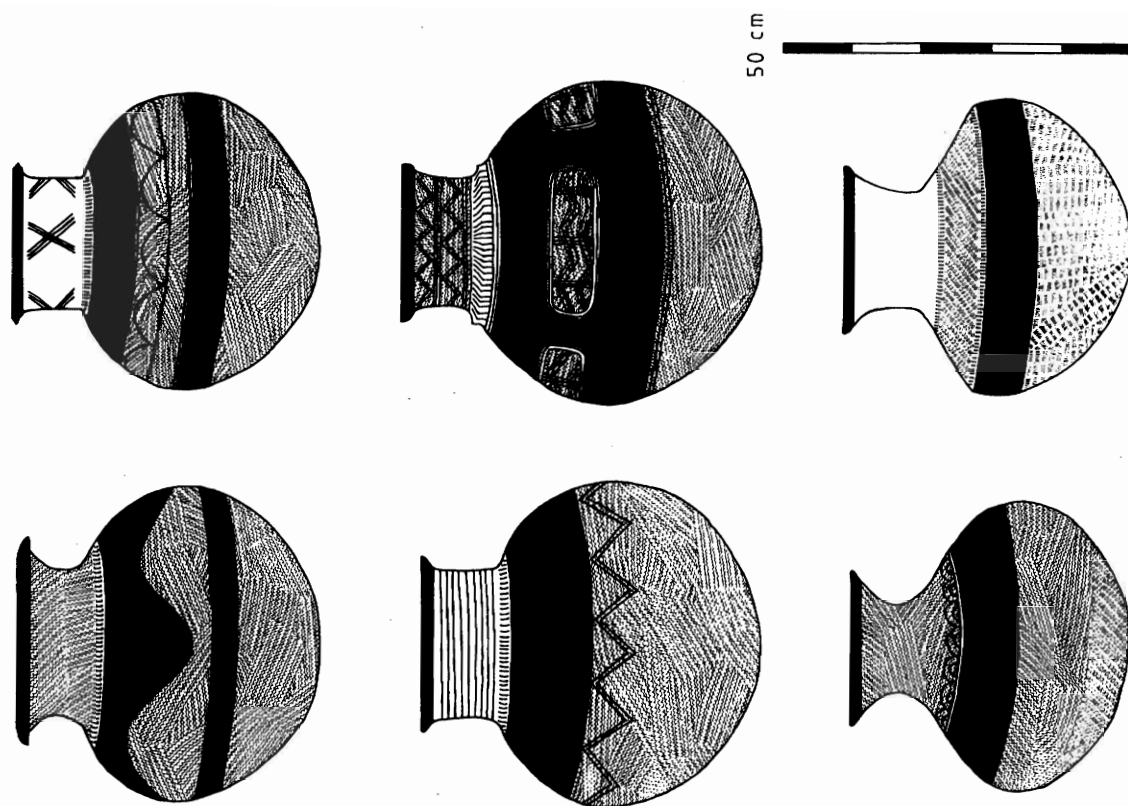


Figure 10.2. Examples of one pot category (water storage-cooling pot) from six different potter communities selected to schematically illustrate the nature of micro-style differences. Each drawing represents one example chosen from a range of characteristic variants produced in each community. Significant defining attributes include elements of form, decorative motifs, the structure of the decorative field, ceramic fabric, and technical aspects of production. Solid dark indicates burnished red-ochre paint (from Herbich 1987).

post-marital resocialization that occurs for all new brides under the authority of their mothers-in-law and other senior women in the patrilineal homestead (Herbich 1987). The actual process of learning takes place in the context of normal domestic labor and is structured by networks of personal interaction and authority among friends, co-wives, and mothers-in-law. It would be misleading to view the material style produced in this way as a medium intended to communicate group identity (although individual choices at any stage of the *chaîne opératoire* may sometimes be directed by the expression of individual or group identity). Rather, it is a function of the personal transformation of *habitus* through practice responding to certain demands of social relations.

It is important to note that these potting styles are not static. The tendencies responsible for shared patterns of choice in the *chaîne opératoire* of production reproduce the local style, but not slavishly as if dictated by a rigid set of rules. Rather, they allow practice to continually respond to demands in ways that are conditioned by the dispositions. Changes may occur at any stage of the *chaîne opératoire* in response to a variety of demands, and this is the reason that styles of the different potter communities cannot be differentiated on the basis of a single trait (such as decorative motifs). The operation of the dispositions in the course of practice results in separate historical trajectories of ranges of acceptable production choices for different groups of potters and a corresponding polythetic overlapping distribution of traits over the region. Such choices are not random: all of the clusters of traits are compatible with the evolving structures which generated the *habitus*. However, none of them can be "read" like a text to yield the "meaning" of the style.

A few specific examples may help to clarify this perspective. Potters living in several potter communities around Ng'ya market (see Figure 10.1) all use ground sherd temper in the preparation of their potting paste. This practice is due not to any lack of suitable natural temper (or incompatibility of local natural temper with the local clays) but to a technical disposition which guides practice. The relatively high cost of obtaining pots to grind up for temper (one new pot is exchanged for two old ones), has stimulated a few potters to attempt experimenting with other tempering materials. However, they have not tried the abundant natural temper which is known by some to work for potters in other areas, but have instead tried grinding up other fired artificial products such as bricks and the burned soil from charcoal production mounds. Others use blanks of clay that they have fired alongside their pots to meet this need. This pattern of choice is clearly "cultural" in origin rather than physico-technically determined. However, in such a process of innovation, perception of the limits of the possible is constrained not by considerations of communication functions or identity concerns, but by the historically molded inclinations toward action of the *habitus*, which are tied in through their mutual origin to perceptions of "natural" social relations within the

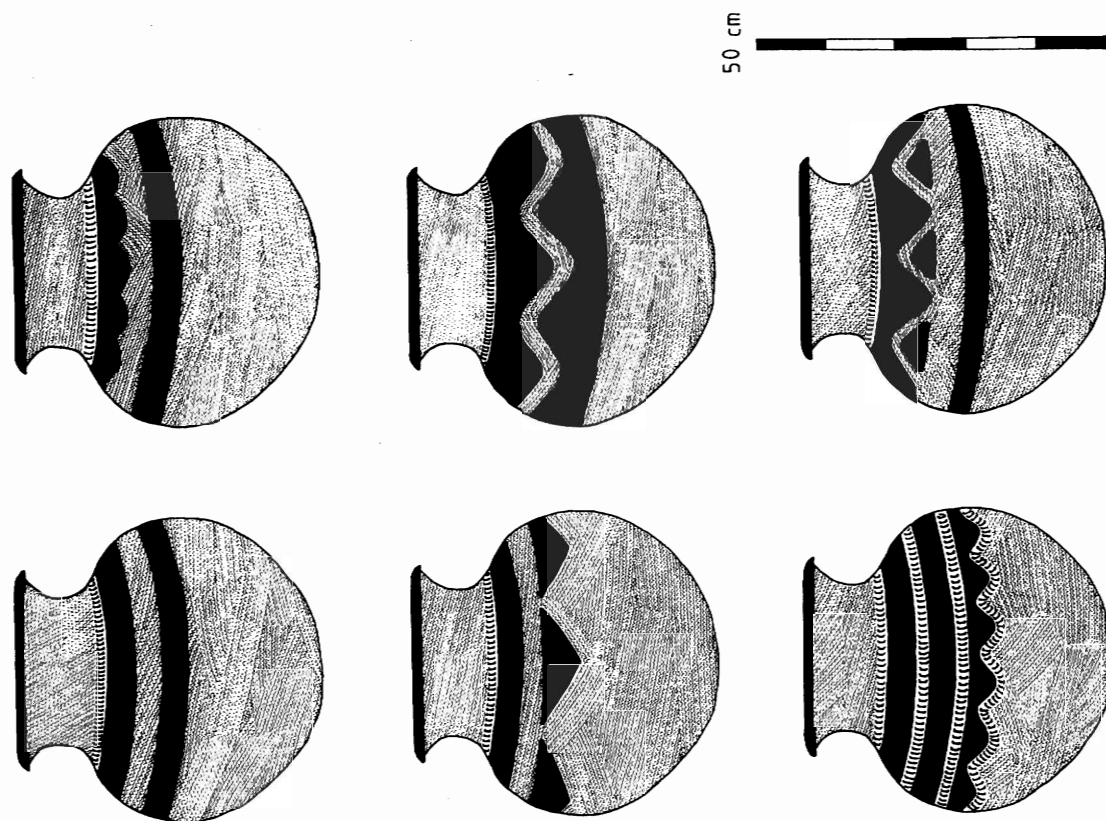


Figure 10.3. Selected examples of water storage-cooling pots produced within a single potter community near Ng'ya market, partially illustrating the range of variation. The upper left pot in Figure 10.2 is an additional example (from Herbich 1987).

homestead and the society. While it might be tempting for some to read this reflection of natural temper in favor of artificially fired materials as a symbolic reflection of opposed concepts of "raw versus cooked" and "wild versus domesticated," etc., this is far too simplistic. Potters of the same Luo subtribe living a few kilometers away use natural temper instead of sherd temper. Such an interpretation is powerless to explain how such variations can arise within the same culture, while a practice approach yields more plausible insights. What is necessary is an historical understanding of the demands to which choices in the *chaîne opératoire* respond and how choices at other stages or times are subsequently constrained.

Many of these demands stem from the level of the political economy, while others reside at the level of personal relationships. As an example of the latter, certain aspects of decoration may be cited. Every potter has a slightly varied repertoire of decorative motifs which she shares variably with other potters in the community and applies in a relatively consistent spatial configuration with a common set of tools and techniques. However, potters often try subtle experiments with new motifs or arrangements. Whether these innovations become incorporated into the acceptable range of choices for decoration for a community depends upon several factors, such as market acceptance. However, one of the most influential of these factors appears to be personal relations among potters. The innovations of popular potters are more likely to be imitated by others than are those of unpopular potters. Antagonism between potters can also result in increasing differentiation of aspects of their decorative repertoires. In this way, personal relations in the context of manufacture among small groups of potters operating with common dispositions and tools can result over time in significant stylistic changes which have little or no resonance in the context of use.

In fact, careful analysis of the eventual spatial distributions of pots after they are purchased and carried to the contexts of consumption shows that most of the resulting micro-style zones cut across important social and cultural boundaries, including Luo subgroup boundaries and the border between the Luo and the neighboring Bantu-speaking Luyia (Figure 10.4 shows such a distribution for over 1,000 pots emanating from Ng'ya market and the Luo subgroup boundaries that are traversed). Moreover, not only are the borders of territories and groups, which are clearly important to people not reflected in the distribution of ceramic styles, but the boundaries of the style zones fall in areas that are of no cultural or social significance (see Dietler and Herbich 1994a). Even when the community of origin of a particular micro-style is clearly recognized, this is of little concern to the people who use the pots: ceramic style plays little role in the expression of group identity in the context of consumption.

In summary, the Luo ceramic data present us with two distinct and important phenomena. The initial production of ceramic style and the historical develop-

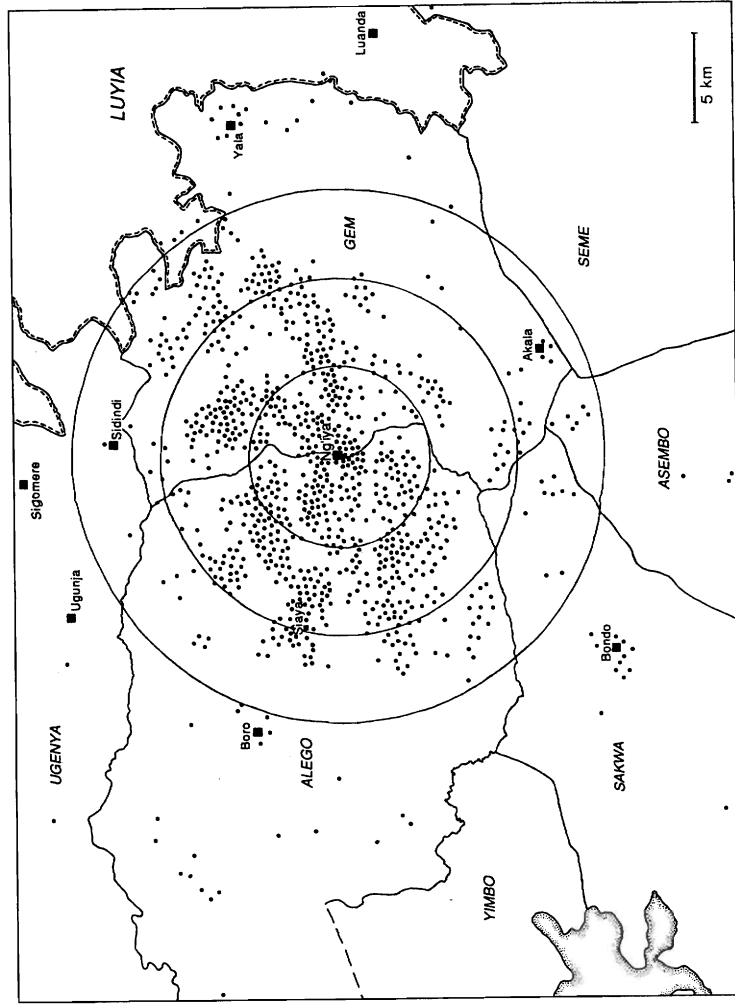


Figure 10.4. Distribution by primary consumers of 1,104 pots emanating from Ng'ya market (location precision is within 1 km) and the boundaries of major Luo subtribes traversed by the zone of distribution. The pattern represents aggregate data collected from multiple weekly market days over the course of several months. The rings represent radii of 5, 10, and 15 km distance from the market. Approximately 94 percent of the pots fall within a radius of 15 km (from Dietler and Herbich 1994a).

ment of changes in this domain are the result of traditions of production (shared dispositions guiding choices in the *chaîne opératoire* of production) characteristic of the different potter communities. These traditions are reproduced by women recruited from outside the potter community (through a system of patrilineal post-marital residence) by means of processes of craft learning in a domestic context and a more general resocialization after marriage (see Dietler and Herbich 1989; Herbich 1987; Herbich and Dietler 1991). Insofar as considerations of the expression of identity (group or individual) play a role in the creation of ceramic style, this is largely confined to the context of production and little understood outside these networks of personal interaction. Processes of distribution linking producers and consumers necessitate a change of context and of meaning; and the eventual

spatial distributions of ceramic styles, which are so important to archaeologists, tend to override and obscure the meaning of style within the context of production. Consequently, it must be admitted that for archaeologists neither the spatial distribution of ceramic styles nor regional resemblances in pot forms are necessarily very good indicators of group identity. Homogeneous style zones may pass across traditionally hostile borders and the boundaries of these style zones may bisect groups with a strong sense of mutual identity. And this is not only the case with obvious large-scale trade wares. The caveat applies even when, as with the Luo, such style zones are less than 30 km in diameter: a fairly typical pattern for pre- and protohistorians. A critical lesson for interpretation of ceramic data from this ethnoarchaeological case is the importance of understanding the distinction between the social contexts of production and consumption and the ways they are articulated (see Dietler and Herbich 1994a for a more detailed discussion).

Luo houses offer an interesting example of the reciprocal relationship between practice and structure. On a regional scale, they are in the process of undergoing a gradual transformation in form, technique of construction, and materials. The change is from houses of round plan to houses of rectangular plan (Fig. 10.5), and from wattle and daub construction on a post-built frame and a thatch roof to cement block construction with a corrugated iron roof. However, these aspects are not spreading as a package or at a uniform rate. While the traditional round house is found only in wattle and daub construction, the rectangular plan is found with wattle and daub construction and (far less commonly) in cement construction. Moreover, the wattle and daub version can be found with either a thatch roof or a corrugated iron roof. Some areas still have almost exclusively round houses, others are mixed (often in the same homestead), and in some areas it is rare to see a round house any more.

What is interesting about this situation is to see what demands are being responded to in these various changes, how inclinations of practice condition changes, and how some changes have unintended consequences for challenging "doxa" (the unquestioning perception of the "naturalness" of the social and material world) in other domains of social practice. All of these changes are ultimately a response to the impact of the world economy on the region, but in somewhat different ways. The rectangular form is an adaptation to the adoption of European furniture, particularly beds and tables, which do not fit very well in a round house. While it is also felt by many people to be "modern," it does not carry particularly heavy symbolic weight as a sign of unusual prestige or wealth (although, to a certain extent, the furniture "implied" by a rectangular house may have this effect). Because of their cost, corrugated iron roofs and, especially, cement construction do clearly and directly carry such implications.

The spatial and temporal organization of the Luo homestead (called *dala*) is an

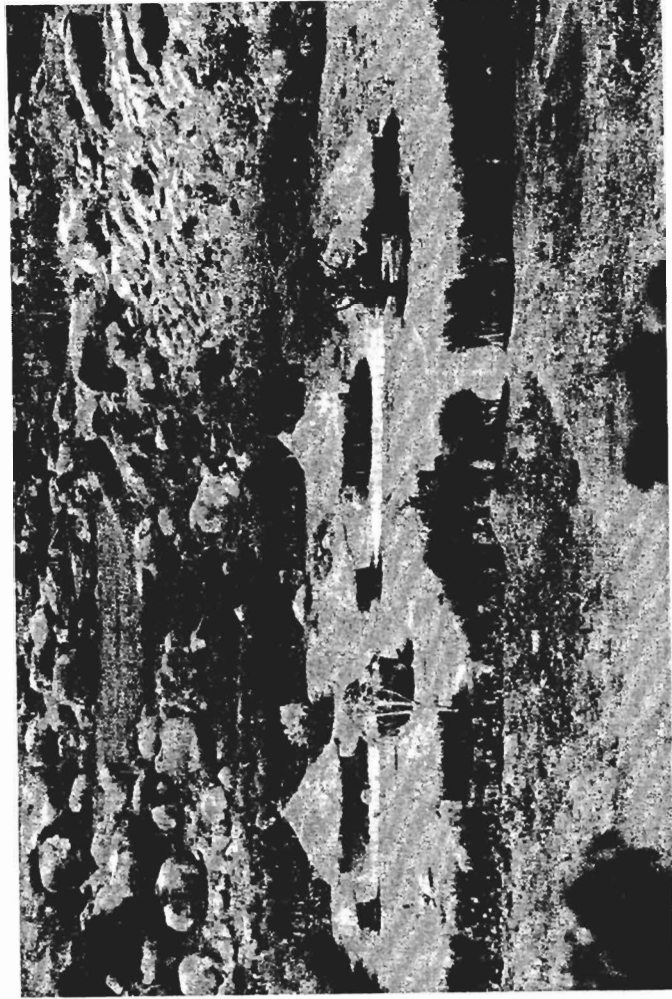


Figure 10.5. A Luo homestead (*dala*) with both circular and rectangular versions of houses. This homestead is in the early phase of its life-cycle (with a still short hedge-fence and few houses). The smallest structures are granaries, and the houses near the front gate are those occupied by unmarried sons of the founder.

extremely complex symbolic representation of the genealogical structure and the relations of authority in both the homestead and society that can be only briefly alluded to here (for a fuller account see Dietler and Herbich 1993; Herbich and Dietler 1993). In a very schematic way, one can say that seniority and authority, both generational and structural, is represented literally by elevation, with lower seniority individuals building downslope from more senior individuals. Lines of structural opposition and alliance between co-wives, and in the broader kinship and political system, are correlated with house placement on alternating sides of the homestead (see Fig. 10.6). Moreover, relations of seniority and authority are also represented and naturalized through temporal sequences of house construction, repair, and a host of daily activities and rituals that take place in the homestead. In view of the importance of spatio-temporal relationships, it may appear somewhat surprising that a change in house *form* could be accomplished with so little apparent concern or turmoil. Yet this seems to be the case. Experiments with changes in the position of the houses due to land shortage have been a cause of

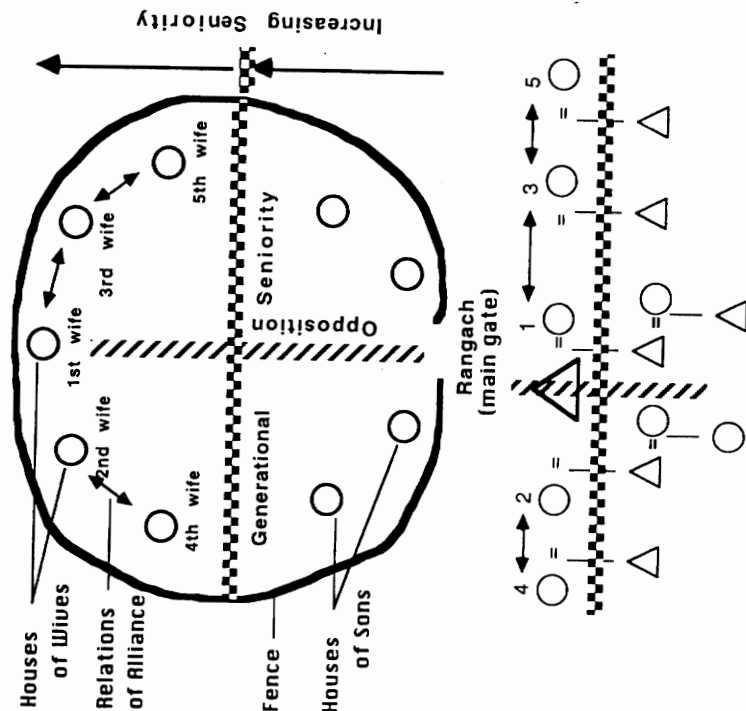


Figure 10.6. An idealized Luo homestead coupled with a kinship diagram showing the relationship of occupants and a schematic representation of lines of structural opposition and authority expressed in the spatial organization of houses (adapted from Herbich and Dietler 1993). The upper half is occupied by the male founder and his wives, each with her own house. Immediately succeeding wives are considered to be in a relationship of structural tension, while relations of cooperation are assumed to exist within the group of even-numbered wives and within the group of odd-numbered wives. Houses in the lower half of the homestead are occupied by unmarried sons and by married sons and their wives. A daughter-in-law is expected to cooperate with her mother-in-law and allied co-wives.

considerable anxiety, of concerns about supernatural consequences, and of discussions attempting to rationally establish an orthodoxy. But the form of the house appears to be a feature open to substantial variation without much comment or concern.

It should not be imagined that the spatial arrangement of the homestead is inflexible: in fact, there are possibilities for all kinds of contingencies in practice that even make the underlying regularity of structure somewhat difficult to perceive for

an outside observer. However, the range of choices is decidedly limited by the *habitus* and reinforced by ritual and the threat of supernatural sanctions. There are certain innovative responses of practice (such as, for reasons of land shortage, a man building a house behind that of his grandfather, i.e., upslope from it within the homestead) which have called the axiomatic nature of "doxa" into question and provoked a discussion of the logic of practice, particularly among senior men. Space and time are so important in the context of settlement organization because dispositions governing the relationship of houses are closely linked in their reproduction with dispositions governing the structure of seniority, kinship, and authority. The spatial structure of the homestead (as well as ritual and temporal sequences involved with acts of founding, building, etc.) constitutes a powerful symbolic representation of the structure of social relations because it forms the physical environment in which the *habitus* producing the perceptions of the "natural" order of social relations is formed in the course of daily social life. Changes in the form of the house have been less critical in this case because they have had less of an impact on daily relations of interaction. Moreover, the internal structural relations of domestic space remain unchanged from round to rectangular houses. There is still a female side of the house with the hearth and an opposite side for visitors. This structural principle even determines the proper function of rooms as the innovation of internal divisions appear in houses.

Curiously, changes in the materials from which houses are made have had more profound social consequences than the form of the house. This is, again, because it affects practices that underlie dispositions governing social relations. Traditionally, thatched roofs can be built and repaired only by men, while walls must be regularly smeared with clay by groups of women at least once a year. The need for periodic roof repair reinforces relations of dependence between women (the "owners" of houses) and men, and the smearing parties reinforce relations of mutual support and dependence among women. As a further illustration, upon the death of a male head of the homestead, none of the other co-wives is allowed to have her house repaired until the first wife's house has been repaired; and this is allowed only after she has undergone a ritual to mark the end of mourning. It is clear that the more permanent construction materials, by eliminating such practical needs for repair, may have a profound impact on relations of authority and dependence. Moreover, when the owner of a house dies, others are not allowed to occupy it: the house must simply be left to deteriorate and fall down or be pulled down. As noted earlier, homesteads themselves undergo a regular cycle of occupation by a three-generation family (a man, his wives, his sons and their wives and children). They are abandoned after the death of the founding generation and converted to farmland by the sons of the original male head of the homestead. These sons are obligated by custom to move out of their houses in the father's homestead and

found their own homesteads when their own sons are ready for marriage. The building of expensive permanent houses is creating strains in this system, which is again intimately tied in with kinship and political structures.

CONCLUSION

The intent of this paper was to suggest and explore a way of circumventing some of the problems that have troubled archaeologists attempting to grapple with the crucial relationship between material culture and society. Penetrating this relationship and understanding some of the social forces that produce material culture patterning is a fundamental requisite to engaging in the more specific attempt to understand the role of material culture in processes of identity formation, expression, and reproduction and to assess the feasibility of using remnants of material culture to identify social groups and boundaries of the past. This must, of course, be coupled with an improved understanding of the complex nature of social group identity and the shifting contextual definition of boundaries that takes full account of the political-economic dimensions of the process of interaction between groups. The nature of group definition, the strategies for signaling exclusion and belonging, and the shifting salience of different cultural elements in these strategies vary greatly according to the relative asymmetry of power relations among interacting groups (see Comaroff and Comaroff 1992:49–67).

It was suggested that the artificial division between style, technology, and function has become excessively reified and is not heuristically useful for the purpose of understanding the social dimension of material culture. These concepts and the approaches they entail cannot, for example, produce plausibly cohesive answers to the essential questions posed at the beginning of the paper: how does material culture originate in its social context and how does material culture reciprocally condition social structures and processes? A more integrated approach incorporating elements of the French tradition of *technologie*, with its emphasis upon techniques as the mediating factor between objects and society and upon understanding choices and demands at various stages of *chaînes opératoires*, holds much greater promise in producing a realistic perspective of the complexities of material culture patterning. Moreover, a theory of practice modeled on the work of Bourdieu may allow us to situate techniques more readily within their social context as products and producers of *habitus*. It provides a “temporal” approach to techniques that links structure and agency as mutually generative forces. Both the objective material conditions that generate dispositions and the demands to which practice responds are best approached from a perspective that views culture as an historical social process within a larger world of social and economic relationships.

Such a synthetic approach, it is hoped, may propel us to a new realization of the complex nature of the problem facing us. A social understanding of techniques is a crucial issue for archaeologists; we must address it realistically through both empirical ethnographic research and the development of theory. Our ability to propose and evaluate plausible interpretations of the past, including the delineation and understanding of social groups and boundaries, depends upon the progress of this endeavor.

ACKNOWLEDGMENTS

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NOTES

1. The research was carried out between April 1980 and January 1983. Funding was provided by the National Science Foundation, the L. S. B. Leakey Foundation, The Wenner-Gren Foundation, and the Boise Fund of Oxford University, for which we are extremely grateful. Our thanks also to the National Museums of Kenya, the Office of the President of Kenya, and the British Institute in Eastern Africa. *Erokamano madungu* to the Luo people and to our field assistants Monica Oyier, the late Elijah Oduor Ogutu, and most especially Rhoda Onyango. It should be emphasized for non-Francophone readers that our approach is not an orthodox recapitulation of the French *technologie* program, and it should not be used as a handy substitute for reading that rich and important body of literature. Rather, ours is a distinctive perspective that incorporates concepts derived from that “school” into a framework rooted in our ethnoarchaeological experience and informed by anthropological theory in the domains of consumption, historical cultural economy, and practice. One important difference between our approach and the *technologie* school is that our introduction of Bourdieu's theory of practice into the discussion of material culture is an issue of clear disagreement with most of its practitioners (we have had the pleasure of amiably wrangling about this and various

points of accord and disagreement over the past decade at various symposia and seminars at the University of Paris and the École des Hautes Études en Sciences Sociales).

3. The *chaîne opératoire* (or "operational sequence") is an analytical concept first developed by Leroi-Gourhan (1964), who was himself inspired by the work of Mauss (e.g., 1935). The concept has been further refined and elaborated in slightly different ways by various practitioners of the French *technologic* school, for whom it is a fundamental tool for approaching the anthropological study of techniques (cf. Cresswell 1976; Lemonnier 1986, 1992). We prefer to employ the original French term rather than a translated equivalent in order to indicate this historically specific usage. Basically, a *chaîne opératoire* is a technical process composed of a series of operations that result in the production of an object.

The description of particular *chaînes opératoires* is a very effective way of illuminating the series of choices involved at all stages of the process of production, of revealing the cultural and physico-technical context of those choices, and of characterizing differences in technical systems. Such description involves the sequential specification of the materials and tools used, the actions performed and their names (if any), as well as the identity of the maker and the place, time, and context of production. See Dietler and Herbich (1989) for an example of the application of the *chaîne opératoire* to the analysis of pottery production among the Luo of Kenya (cf. Gosselain 1992b; van der Leeuw 1993).

The term *technologie* is a potential source of confusion for a mixed French and English audience. Sigaut (1985, 1987, 1991) defines it as a social science of technical facts, or what might be called the "anthropology of techniques" (cf. Haudricourt 1987; Lemonnier 1983, 1986, 1989, 1990, 1992, 1993b; Schlanger 1991). This use of the term does not correspond to its common English use (or rather, given the root meanings of the parts of the word, its misuse) and certainly not to its accepted meanings within the Anglophone anthropological and archaeological community (cf. Basalla 1988; Fagan 1981; Pacey 1990; Renfrew and Bahn 1991; Rice 1987; Wright 1985). Unfortunately, nor is there, as yet, a developed or even recognized domain of Anglophone anthropological research corresponding to the French tradition denoted by this term.

4. The sense of this phrase is difficult to convey in translation, but it may be rendered approximately as "The domain of the social is the domain of repetitive similarity."
5. The same pattern of localized ceramic microstyles can result from several different systems of post-marital residence because design concepts are not immutably fixed in childhood. Potters can learn new patterns of production choices, and in patrilineal societies where women marry at a young age, they may learn potting only after marriage. Hence a patrilineal system with women recruited exogamously from outside the area of the potter community and a mother-in-law/daughter-in-law learning process will result in the same pattern of localized microstyles as a matrilineal system with women remaining in place and a mother-daughter learning process (Herbich 1981, 1987).

6. Sackett uses the term "ethnic" group to indicate, very generally, social groups at a wide variety of possible scales. This is a somewhat idiosyncratically broad usage even among archaeologists who tend to use the term in a much less specific and rather different sense than cultural anthropologists (e.g., Barth 1969b; Bentley 1987; Comaroff 1992:49-67; Nash 1989).

7. A further major difficulty with the application of Wobst's (1977) information exchange approach to ceramics is that the principle of relative visibility as a key to the investment of energy in "stylistic behavior" runs counter to common practice. Among the Luo, as elsewhere, one finds highly decorated pots that never leave the kitchen and are so covered with soot that one can barely see the original decoration. Clearly, the desire to communicate with outsiders cannot be invoked as an explanation of aesthetic elaboration of this kind, and considerations of efficient exchange of information are irrelevant.
8. In terms of its inappropriateness for achieving social and cultural understanding and, critically, for situating objects in their sociocultural context, work of this kind is really the ethnographic equivalent of Flannery's famous "telephone booth" excavation. As archaeologists, we must learn to resist quick simplistic formulas and become as sophisticated and critically demanding in our assessment of ethnoarchaeological studies as we are in evaluating excavations; and, as ethnoarchaeologists, we need to standardize a more rigorous set of field methods that includes long-term participant-observation and ethnohistorical research.
9. Although the term "habitus" has been employed in related ways by earlier anthropologists (e.g., Mauss 1935), we use it in the very specific sense defined by Bourdieu (1977, 1980) as part of his theory of practice. While recognizing the merits of other similar approaches mediating structure and agency, such as the structuration theory of Giddens (1979), we prefer to use Bourdieu's approach both because its formulation predated these other theories and because Bourdieu has been intensely concerned to develop, amend, and explicate the theory through repeated applications to a broad range of empirical domains.