A CONSIDERATION OF STYLE IN ARCHAEOLOGY

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Few concepts are more central to the endeavors of archaeologists, yet more ambiguous, than style. This is in part due to a general lack of theoretical and methodological consideration of the phenomena of style. However, despite the conceptual muddle style represents, most archaeologists have an intuitive feel for what style is. There is general agreement that style is some aspect of artifact variability and most researchers would accept decoration on pottery or the difference between corner notching and side notching of projectile points as being stylistic. This general intuition allows researchers to discuss stylistic variability with a fair degree of agreement on what formal properties of artifacts are in question. However, the lack of conceptual clarity results in ad hoc interpretation of the meaning of this variability for past cultural systems.

A residual model of style which opposes style and function underlies the intuitive feel that most archaeologists have for style. This model defines style as artifact variability which does not relate to function. Although this model has been a dominant view of style in archaeology for most of the discipline's existence, it has only been discussed in print recently (Sackett 1977; Dunnell 1978). As an alternative to the then intuitive residual model Binford (1962) proposed a sociological model of style. This model shares much with the earlier residual model but differs in specifying that style functions in the sociological subsystem and by explicitly linking style to enculturation and learning behavior. Quite recently Wobst (1977) has challenged both these models by presenting a third model derived from information theory. These models do not necessarily replace each other as in many ways they address different aspects of a complex whole. We cannot therefore judge these models as true or false but instead we need to evaluate their usefulness for solving analytical problems.

Generally archaeologists have attempted to use style as a means of gaining access to the ideological and sociological subsystems of past cultures. As will be discussed this is definitely true of the three models discussed. This paper attempts critically to evaluate the usefulness of each of these models as means of understanding the sociological and ideological subsystems of extinct cultures. Based on this critique an alternative model of style is presented which is derived from the symbolic functioning of artifacts in ideological and sociological sybsystems. This model does not include all variability archaeologists have labeled as stylistic but attempts to narrow the concept to include less and mean more.

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The Residual Model of Style

Archaeologists generally base their intuitive judgments of which aspects of artifact variability are stylistic from considerations of artifact use. If the variability considered cannot be related to the technological use of the artifact, then it is labeled stylistic. Style therefore becomes a residual category, i.e., that variability that does not result from the technological use of the artifact. This residual model, though rarely considered explicitly, has been the dominant view of style in cultural historical research and may in fact be the dominant view today.

Recently, Sackett (1977, n.d.) has explicitly developed the residual model of style. His model views style as inherent in all artifacts. This view differs from the implicit model which tends to limit style spatially or temporally diagnostic artifacts. Beyond this point Sackett's model does not differ significantly from the implicit model. As Sackett (n.d.:4) admits, "My thesis is in any event largely built from elements which are the common stock of the trade and which appear in at least piecemeal fashion in the writings of my colleagues."

Sackett (1977:370) defines style as a highly specific and characteristic way of doing things that is always peculiar to a specific time and place. Sackett, as most archaeologists, attempts to use style to account for some portion of artifact variability. In his model the totality of artifact variability is accountable in terms of the complementary aspects of style and function: "Style and function together exhaust the potential of this [artifact] variability, save for the fortuitous role post-depositional agencies may play in modifying the form of artifacts" (Sackett 1977:370).

Sackett's concept of function is broadly inclusive, encompassing not only the technological uses of an artifact but also its sociological and ideological functions. While recognizing that individual artifacts function in more than one of these subsystems, he suggests that for every artifact one subsystem is primary. He labels artifacts functioning primarily in the technological realm "utilitarian." Sackett labels a type of style cross-cutting these categories as adjunct form or decoration. This distinction appears somewhat forced if we consider the example of Yir Yiront stone axes. Given Sharps (1952) demonstration of the social importance of these artifacts and their essential technological function as wood chopping tools the identification of these tools as being either primarily "utilitarian" or "non-utilitarian" would be spurious. Having presented function as the "active voice" of an artifact, this model relegates style to a residual category as the "passive voice" of an artifact. This relegating of style to a passive role, i.e., lacking function, sets up an internal contradiction in Sackett's (1977:373) discussion as he refers to the functioning of style in the societal and ideational spheres.

The residual model is in many respects adequate for the traditional concerns of cultural history as it allows for the definition of temporally and spatially bounded units in archaeological context. However, such a model is inadequate for current concerns with long term cultural change. As Wobst (1977:318) has observed, to view style as a residual category makes style "a strangely self-contained, a-cultural, a-systematic variable within

the system that is culture." Considerations of cultural change require a perspective which relates the functioning of cultural systems to the material forces which induce change. Viewing style as a residual category would appear to relegate to style a trivial role in such considerations. This is clearly illustrated by Dunnell's (1978) recent attempt to move beyond the bounds of cultural history to a processual theory in archaeology. Dunnell (1978:199) accepts a residual model of style defining style as that part of the formal variability of artifacts that do not have detectable selective value. He maintains that style cannot be explained within a scientific and evolutionary framework with the laws of cultural change. Dunnell would have us seek explanations for style in stochastic processes and not in the evolutionary processes which explain cultural change.

Dunnell's arguments present a serious conceptual problem as alluded to by Wobst. All current anthropological theories of culture adhere to the basic tenet that culture is a system (Keesing 1974). Among anthropologists who define culture as an adaptive system, considerable effort has been expended to demonstrate that adaptation involves all aspects of cultural systems and not simply a cultural core or a technological subsystem (Rappaport 1968; Sahlins 1972; Bennett 1976; Keesing 1974). Contrary to this research, Dunnell's (1978:200) arguments suggest that only certain aspects of cultures relate to adaptation and that the non-adaptive aspects of cultures (including style) result from random processes. This position illustrates well the sterility of the residual model for an understanding of long tern cultural change. It forces the researcher to exclude style from the systemic matrix of culture censoring questions of how stylistic behavior may relate to sociological and ideological aspects of culture and the functioning of these subsystems in adaptation.

The New Archaeology and Style

Binford (1962) introduced to archaeology the theory of culture as man's extrasomatic means of adaptation and also defined style, integrating it as part of the adaptation. From Binford (1962:220) the stylistic characteristics of artifacts are

> "... formal qualities that are not directly explicable in terms of the nature of raw materials, technology of production, or variability in the structure of the technological and social subsystems of the total cultural system. These formal qualities are believed to have their primary functional context in providing a symbolically diverse yet persuasive environment promoting group solidarity and serving as a basis for group awareness and identity."

There are two important points to this definition that distinguish it from the residual model: 1) Binford defines style as an active form of artifact variability which functions to reinforce group solidarity; and 2) style by definition relates only to the sociological aspect of culture. It follows

from the second of these points that style is not inherent in all artifacts but limited to decoration and non-utilitarian objects. Since style is viewed as a sociological phenomena, explanation of style is to be found in enculturation and learning behavior.

This sociological model of style forms the basis of the hallmark studies of the New Archaeology, specifically the attempts by Deetz (1965), Longacre (1970), Whallon (1968) and Hill (1970) to reconstruct prehistoric social organizations. Deetz (1965:2), in his Arikara ceramics study, summarizes the logic of the sociological model for these cases:

> "A connection between social structure and ceramics might be seen in the possible changes in design configurations in ceramics as they reflect a change in the residence, reinforced by matrilineal descent, one might well expect a large degree of consistent patterning of design attributes, since the behavior patterns which produce these configurations would be passed from mother to daughters and preserved by continuous manufacture in the same household."

These hallmark studies have been criticized on a variety of levels including: 1) the assumption of mother-daughter micro-traditions (Stanislawski 1973); 2) failure to control for depositional processes (Schiffer 1976); 3) logical fallacies (Dumond 1977); and 4) statistical errors (S. Plog 1977). More crucial to the discussion of style presented here is that the New Archaeologists have attempted to relate style to cultural systems using two untested and questionable assumptions which are also basic to the residual model. The operationalizing of these theoretically opposed models utilizing common methodological principles reduces the differences between them to polemic. The theoretical differences become little more than alternative justifications for a common approach to stylistic behavior. These two assumptions form part of the intuitive approach of archaeologists to style and it might be argued that both the residual model and the sociological model are fabricated to fit these assumptions.

Two Assumptions of the Sociological and Residual Models

Sackett (1977:371) states the first of these assumptions as follows:

> "Because these [stylistic] choices (like all cultural behaviors) are socially transmitted, the degree of similarity among the choices that are made in two historically related loci depends upon the intensity of social interaction shared by their occupants."

As presented by Sackett, this assumption interprets the transmission of stylistic elements as a process akin to osmosis. Just as a cell must absorb water when the density outside the cell boundary exceeds the density within the cell, a society must absorb stylistic elements relative to the intensity with which it is exposed to those elements. The New Archaeologists

have approached this assumption in a much more sophisticated manner by providing a mechanism to account for it. They maintain a relationship exists between levels of social interaction and stylistic transmission due to enculturation and learning behavior. The specifics of this justification have already been presented.

Using the 19th century Hopi pottery making as an example, the inadequacies of this assumption are clearly demonstrated. Throughout the 1800s, Hopi pottery showed a marked Zuni influence. In terms of form and style of decoration, Polacca Polychrome was little more than an imitation of Zuni ware, and 20th century types such as Walpi Polychrome continued to use Zuni stylistic elements (Bartlett 1977). This Zuni influence in Hopi pottery is thought to have resulted from Hopis living in Zuni during smallpox outbreaks in 1775, 1853 and 1854 (Bartlett 1977:7-8). Hopi pottery during the 1800s clearly was stylistically much more similar to Zuni pottery than any other Pueblo group. The assumption of intensity of interaction appears sufficient to explain this, as due to spatial proximity, Hopi interaction was more frequent with the Zuni than any other Pueblo. However, the Hopi, through most of the 1800s, were surrounded by another pottery making people, the Navajo. There can be little doubt that, during the 1800s, Hopi interaction was much more intense with the Navajo than the Zuni. Throughout this period, the Hopi had daily contact with the Navajo whereas contact with Zuni was more infrequent. The genealogies presented in Stephen's "Hopi Journal," indicate Hopi-Navajo intermarriage was common and more frequent than Zuni-Hopi intermarriage on First Mesa in the late 1800s (Parsons 1936:1045-1060). Despite the intensive interaction between Hopi and Navajo, Navajo influence on Hopi pottery and Hopi influence on Navajo pottery have been slight. Although the Navajo accepted a number of Pueblo stylistic elements in other aspects of their material culture, very little of this stylistic transmission is obviously Hopi, and stylistic transmission from the Navajo to the Hopi has been slight.

The application of this assumption to determining social divisions within cultural groups is also subject to criticism specifically in reference to Longacre's (1969) and Hill's (1970) studies. Probably the most damaging criticism is the observation by Stanislawski and Stanislawski (1974:15) that the learning behavior of Hopi and Hano-Tewa pottery making involves a complex network of interactions within and between lineages, clans and ethnic groups. Steven Plog (1977) has considered this proposition archaeologically and notes that the social interaction assumption would predict: 1) a direct relationship between stylistic similarity and distance between contemporary archaeological sites; and 2) a greater degree of similarity between rooms in a site than between sites. In testing the first proposition against data from P III north central Arizona and Formative Oaxaca, Plog (1977) was forced to reject the validity of the first proposition. In testing the second proposition against data from P III sites in the Hay Hollow Valley, Arizona, Plog (1977) found that variability in pottery decoration was greater between rooms than between sites, causing the second proposition also to be rejected. From these analyses, Plog (1977:6) concludes that the social interaction assumption is dubious.

There can be little question that an explanation of stylistic variability must consider the effects of social interaction. Logically, stylistic transmission requires some sort of social interaction and social

interaction may well be the most important variable to such transmission, but the assumption that stylistic variability is explainable solely in terms of intensity of social interaction has not been confirmed. As shown by the example of Hopi, Hano-Tewa and Zuni 19th century pottery decoration, in some cases a direct correlation can be established between social interaction and stylistic variation. Comparison of Hopi and Navajo pottery manufacture, Stanislawski's data on Hopi and Hano-Tewa pottery manufacture and Plog's archaeological consideration illustrate that social interaction, although a necessary condition for stylistic transmission, is not necessarily sufficient explanation. Stylistic variability results from much more complex relationships than predicted by the social interaction assumption.

Sackett's second questionable assumption, which pervades the residual and sociological models of style, attempts to correlate stylistic variability to social and ethnic boundaries.

> "This [first assumption] accounts for the manner in which stylistic similarity tends to generalize and attenuate in direct portion to the extent such contexts happen to be removed from one another in space and/or time. . . As the lineaments of this chain of transmission begin to fade -- more properly as the degree of ethnic resolution with which we regard the archaeological record diminishes -- the scope of inquiry expands to encompass ever larger segments of the stream of Cultural History."
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> (Sackett 1977:371)

In traditional archaeological approaches, this assumption forms the basis of the classic taxonomies such as the Midwestern Taxonomic Method and the system of branch and root used in the Southwest. These taxonomies break the archaeological record into a hierarchy of levels based on degrees of stylistic similarity. That this can be done validly in archaeological context is not at issue, but what is questioned is the correlation of these subdivisions to systemic context (e.g., ethnic units), using the aforementioned assumption. It is assumed that just as each level of the archaeological taxonomy exhibits a given degree of stylistic similarity, so too do different levels of social organization, ethnic affinity and cultural tradition. Using this assumption, the traditional archaeologist assumes that a pottery type equates to an ethnic group and the New Archaeologists assume contemporary stylistic differences or microtraditions within a type equate to localized lineages or clans.

There is no question that style functions in boundary maintenance between social groups, but it cannot be shown that boundaries between given levels of social organization and ethnic groups are characterized by a set degree of stylistic similarity or difference. In specific regard to ethnic groups, Barth (1969:14) has noted:

> "It is important to recognize that although ethnic categories take cultural differences into account, we can assume no simple one to one relationship between ethnic units and cultural similarities and differences. The features that are taken into account are not the sum of objective differences but only those which the actors themselves regard as significant."

To illustrate this it is possible once again to draw on Hopi ethnography. Modern Hopi and Zuni are separate ethnic groups, speaking distinct languages and can be distinguished from each other on the basis of differences in pottery, dress and certain architectural features. The Hopi and the Tewa of First Mesa also represent distinct ethnic groups with different languages, but they cannot be distinguished by such overt stylistic differences as the Hopi and Zuni. As noted by Dozier (1954:259):"Tewa Village in village plan, in architectural features of the houses, and in dress and material possessions of its inhabitants, appears to be a typical Hopi Pueblo." Traditional archaeologists excavating First Mesa would probably not identify Tewa Village (Hano) as a separate village at all and New Archaeologists would probably interpret microtraditions in First Mesa pottery decoration as representing two different lineages, clans or moieties. In addition to this case, it is also notable that the distribution of historic Eastern Pueblo pottery styles does not directly correlate to ethnic or linguistic boundaries. For example, the Northern Rio Grande stylistic area included five Tewa Pueblos and two Keresan Pueblos. Furthermore the seven Keresan Pueblos were split between a total of three different stylistic traditions (Mera 1939:1; Harlow 1967:3).

The assumption that we can always expect ethnic groups to be differentiated by the same degree of stylistic variability and that other levels of social differentiations such as lineages, clans and families will also be differentiated by a given degree of stylistic variability has not been empirically demonstrated. The theoretical considerations of cultural anthropologists such as Barth (1969) and Spicer (1971, 1972) indicate this assumption is spurious, as boundary maintenance between such groups varies greatly in terms of intensity and choice of cultural traits for use in such maintenance. Finally, empirical cases contrary to the expectations of this assumption are easily produced, suggesting that the assumption does not provide a valid insight into stylistic behavior.

The Information Model of Style

Wobst (1977), recognizing the inadequacies of the social interaction assumption, has attempted to operationalize an adaptive model of style through the use of information theory. Wobst's model, like the sociological model, purports that style functions in the adaption of cultural systems. Wobst (1977:321) defines style as "that part of the formal variability in material culture that can be related to the participation of artifacts in the process of information exchange." This definition encompasses more than Binford's as it allows for style to function in more than just the sociological domain, but it does not include the totality of formal

variability archaeologists intuit as style. As with Binford, Wobst maintains that in a category of material culture stylistic message sending will be either absent altogether or all-pervasive. Unlike Sackett, Wobst does not posit style as a characteristic inherent in all artifacts. Wobst maintains that due to the energy investment required to encode messages in artifacts, only simple invariate and recurrent messages will normally be transmitted stylistically. The important variables in determining which classes of artifacts will carry messages according to Wobst are the visibility of the artifact and the social distance between the individuals who will see the artifact. In terms of visibility, the less publicly visible an artifact the less appropriate it is to carry stylistic messages of any kind. In terms of social distance, artifact encoded messages are wasted if the social distance is too great, and redundant if it is too close.

Wobst's example of dress style and ethnic boundaries in Yugoslavia clearly demonstrates that style can function as a mechanism for message transmission. Having demonstrated this function for style, style becomes of more than trivial concern to an archaeological theory of cultural change. It suggests differences in style result not from random variations around a functional mean nor from random errors in enculturation. Instead style changes in reaction to changes in the natural and social environment of the cultural system in which it participates. These changes are adaptive in the Yugoslavian case as they allow groups to alter the focus of their ethnic identification when shifting political forces make it advantageous. Wobst's information model of style clearly represents a theoretical and methodological advance over the earlier sociological and residual models. Despite its superiority to the information model, it does present two problems which suggest the need for further thought and research. The first problem is how to determine which artifacts function as message senders while the second problem results from the inappropriateness of the information systems analogy.

In the information model, style is not an inherent quality of all artifacts, creating the methodological problem of determining archaeologically what artifacts possess stylistic variability. Wobst suggests that two variables, visibility and social distance, determine if an artifact will exhibit stylistic variation. More specifically, part of Wobst's hypothesis is that artifacts used primarily in a home or neighborhood context and artifacts which are not publicly visible will show little stylistic variability due to their inability to transmit public messages. This hypothesis cannot be evaluated from Wobst's examples as he draws solely on public intra-ethnic group behavior and presents no data on inter-social groups behavior. Also, he admits to having no data concerning such low visibility artifacts (Wobst 1977:337). This hypothesis further ignores that such artifacts do not transmit messages solely in their context of use. Underwear, spoons, beds and other such items with a low public visibility when in use are publicly displayed at time of sale when they can transmit any number of stylistic messages. Markets are not the only contexts in which stylistic messages invisible during use will be revealed. While recently rebuilding an automobile carburetor I observed that the only place the manufacturer's logo and parts number was displayed was at the bottom of the float bowl. In this position, it is only visible when the carburetor is disassembled.

Logically visibility should be an important characteristic of any visual message sending phenomena, but crucial questions must be answered, such as visibility at what point in the artifact's uselife. Also Wobst does not consider that public visibility might not be an important variable depending on the nature of the message being sent and the intended receiver. In the case of the manufacturer's logo in the float bowl of the carburetor, the message being sent communicated information relevant to repair of the carburetor and of interest only to a mechanic attempting such repair. Wobst's discussion does not demonstrate that public visibility is a mandatory or exclusive feature of artifacts as message senders. Furthermore, the importance of public visibility logically is dependent on what the message being transmitted is and for whom it is intended.

In reference to artifacts that function specifically in ethnic boundary maintenance, Wobst's criteria are much more persuasive and well founded than their application to stylistic variation in general. They definitely form a basis for further research into the relationship of artifacts to ethnic boundary maintenance. However, Wobst does not consider whether stylistic variability which does function in ethnic boundary maintenance results solely from this function and if it is totally explainable in terms of this function. Arguing from the perspective of information theory, Wobst maintains messages sent by artifacts will be simple, invariant and recurrent. He also strongly suggests that for any given artifact type there will be only one message sent. Based on anthropological theory, this perspective appears overly simple and raises the second more serious problem of the appropriateness of information theory to understanding style.

The logic of information theory is based on analogy to modern communications systems and computer technology. Analogy from these highly efficient systems which function only to transmit and/or process information leads Wobst to make inferences such as: 1) for artifacts to be efficient communicators they can only send simple, invariate and recurrent messages; 2) that signaling in artifacts is either absent or all pervasive; and 3) artifacts will not carry messages if the artifact functions primarily in contexts where those messages will be redundant. The fact that cultural systems do not function simply to process or transmit information limits the insights which may be gained from this analogy to the relationship of style and adaptation in cultural systems. Furthermore, due to the more complex nature of cultural systems Wobst's stylistic attributes are required to and do encode far more information than possible for a transistor or a computer byte. By way of example, Wobst (1977:325) indicates that in American culture a crucifix indicates religious or political objectification and conveys the message "Jesus Christ is watching over you." If we examine a crucifix in a cultural context however, we find that its interrelationship with the ideological and sociological subsystems cannot be understood through the use of information theory. As an example, a crucific in an Ulster home identifies the occupants as members of a religious sect, Catholic, and a distinctive ethnic group given the same label. The crucifix further serves to reinforce Catholic religious beliefs and satisfies an aesthetic desire for decoration. Finally the elaborateness of the artifact, in conjunction with its technique of manufacture and material of manufacture, identifies the economic class of the household.

The messages sent by the crucifix to the family that views it daily are not redundant as the crucifix is not emitting simple messages like the signal to a computer byte to switch on or off, but also reinforces for the family members the ideational components of their Catholic identity. As a physical symbol of this identity the meaning the crucifix encodes and the messages it sends are not simple. Even as understood by a working class family in Northern Ireland, the theology of the Catholic church is quite complex. Equally important as the complexity of the messages is the fact that they are not necessarily recurrent.

Unlike an electronic signaling system where the impulse released by the emitter determines the message decoded by the receiver, human receivers select the message appropriate to the social context of a situation and ignore messages inappropriate to a given context. Returning to the Ulster crucifix, when interethnic tensions between Catholics and Protestants are high, the crucifix constantly reminds the family which side they are on and proclaims this identification to any that enter the house. At time of family stress, for instance a death, the religious content of the crucifix conveys hope for salvation and soothes emotional stress.

All of this is not to say that artifacts do not or cannot send the simple, recurrent messages Wobst wishes to limit them to. In Wobst's example of ethnic boundary maintenance in Yugoslavia ethnic groups have lived for centuries in a mosaic pattern of enclaves and such clear cut signals are essential for maintaining the integrity of these groups. Such signals need also be simple and unambiguous as personal survival could depend on quick identification of friend or foe.

In situations where ethnic segmentation and inter-ethnic conflict are not as intense as Yugoslavia, the signs which separate groups should not be as distinct and clearly defined. This position is supported by Spicer (1971) who indicates that the intensity and clarity with which ethnic boundaries are maintained by material culture traits varies greatly depending on the particulars of a given situation. More importantly, Wobst has treated artifacts as if they only functioned as signs, i.e., a physical thing or event which functions only to indicate some other thing or event, when in fact they also function as symbols carrying not only messages but also meaning. Artifacts do not function as symbols in a simple stimulus-response mode; instead the meaning bestowed on the artifact by humans determines the message signaled. Moreover, artifacts can have multiple meanings, and multiple messages can be derived from a single meaning. The relationship of sign and symbol, message and meaning is not as simple nor as efficient as information theory would predict.

Towards an Alternative Model of Style

The general goals of contemporary archaeology include the reconstruction of past human cultural systems and the explanation of long-term cultural change. In the context of these goals, a successful model of style must relate artifact variability to the social and ideological subsystems of culture. Limiting style to variability resulting from the symbolic character of an artifact provides the basis for such a model.

Dealing with style as a symbolic phenomena creates the potential of gaining access to a fundamental part of culture. As discussed by White (1949:33),

> "All culture (civilization) depends upon the symbol. It was the exercise of the symbolic faculty that brought culture to existence and it is the use of symbols that makes the perpetuation of culture possible. Without the symbol there would be no culture, and man would be merely an animal, not a human being."

Artifacts relate to the technological subsystem of culture as the physical means by which humans articulate with their natural and social environment. They accomplish this through their ability to transfer, transform or constrain energy or matter. One technological function of a knife is to cut, a chair to sit in and a Yir Yoront stone axe to chop wood. Those aspects of artifact variability which code for technological function can be labelled the utilitarian aspects of an artifact. Artifacts relate to the sociological and ideological subsystems of culture through their functioning as symbols. As symbols, artifacts can signal social boundaries and the other phenomena discussed by Wobst (1977), but moreover as symbols they reinforce complex ideologies, social relations, status roles and aesthetic desires. The sociological/ideological functions of a crucifix in an Ulster home have already been discussed. One such function of a sword is to signify an office and of Yir Yoront stone axes is to reinforce and maintain men's status in Yir Yoront society (Sharp 1952). If we conceive of style as the symbolic character of an artifact, then style is also that aspect of artifact variability which codes for sociological/ideological function.

As suggested by the example of the Yir Yoront stone axe, artifacts function in all three cultural subsystems and therefore utility and style are inherent characteristics of all artifacts. It is difficult to think of any artifact in our own culture that does not have some kind of symbolic loading and consequentially a stylistic aspect. This distinction between utility and style should not be confused with Sackett's (1977) distinction between function and style. Sackett's category of function includes both utility and style as conceptualized in this model. Also, contrary to Sackett, this model does not purport that utility and style exhaust the total sources for artifact variability other than the formation processes of the archaeological record. Artifacts result from the application of specific techniques to a range of raw materials. Neither style nor utility should be equated with technique as different techniques can be utilized to produce the same style/utility or the same techniques can be used to produce different style/utility.

For instance, a pottery vessel can be produced with a specific form and decoration using a coil and scrape technique of manufacture. The same style (i.e., attributes of form and decoration) could be replicated by manufacturing the pot with a mold. The two pots so produced would not differ in terms of style or utility but in terms of technique. By

the same token, two pots could be produced using identical techniques yet differ stylistically and/or in terms of use. This can clearly be seen in the Southwestern United States, where pueblo pottery-making techniques are comparable from pueblo to pueblo, yet throughout the historic period several distinctive styles are recognized and various utilitarian types were produced. This is not to say, however, that in a given artifact class any style can be replicated using any technique, i.e., square pots cannot be produced on a wheel.

Just as is the case with technique, artifacts of the same style can be produced using different raw materials or stylistically different artifacts can be produced using the same raw material. Furthermore, not all raw materials are suitable for all techniques, styles or utilities. Both technique and raw material can therefore produce variability that has no necessary relation to utility or style. Finally, artifact variability not necessarily related to the utility or style of artifacts can result from random factors. This would include the idiosyncratic variations in artifacts which Hill and Gunn (1977) have defined as subconscious or idial style. Therefore, artifact variability results not from a simple dichotomy of style and function, but from a variety of forces including technological function, sociological/ideological function, technique, raw material and idiosyncratic variability. Limiting the concept of style to include only that variability which encodes for sociological/ideological function narrows the range of variability recognized as style to include less and mean more.

Any of the sources of variation discussed can be used in chronological studies. A sudden change in artifact variability, whether it results from a change in artifact function, technique of manufacture or raw material, is a good chronological marker. By the same token each of these sources of variation represents a valid topic of study which will reveal different information concerning prehistoric cultures. By limiting style to that variation which results from the symbolic functions of an artifact, style becomes the major focus of studies attempting to understand prehistoric social organization and ideational networks. Traditionally researchers have attempted to utilize style for this purpose. Users of the residual model have been most concerned with defining cultural boundaries, the New Archaeologists with defining kin groups and Wobst the process of ethnic boundary maintenance.

Such analysis with ethnographic groups presents few methodological problems as the symbolic meaning of a style can be elicited from informants or the literature and the functioning of the artifact in relation to the ideological and sociological subsystems of culture observed. Deriving function from style in archaeological assemblages however presents a set of far more difficult methodological problems. A basic characteristic of all symbols forms the crux of these problems:

> "The meaning or value, of a symbol is in no instance derived from or determined by properties intrinsic in its physical form; . . . meaning is bestowed by human organisms upon physical things or events which therefore become symbols."
> (White 1949:25)

We can therefore never hope to establish a universal roster of symbols and meanings. For this reason also, studies such as those by Hall (1976, 1977) which attempt to infer meaning by postulating that styles in the past have the same meaning as similar forms in the ethnographic present, must be viewed with a healthy dose of skepticism. The basic approach which promises to be the most fruitful in relating style to sociological and ideological function is the same as used to relate artifact to use. We must look for patterned relationships between stylistic variability and other aspects of the archaeological record.

In the example of the Ulster crucifix, it would not be necessary to understand the theology of Catholicism to infer the artifact functions as a religious symbol nor would it be necessary to understand the prejudices and secular ideological differences between green and orange Irish to infer the artifact functions in ethnic boundary maintenance. Harris (1972) has discussed Protestant and Catholic interrelationships at a village in Western Ulster which she gives the alis Ballybeg. In this village both Catholics and Protestants share a common material culture assemblage and most variation in material culture between households results from economic status, not ethnic or religious differences. On a day to day basis the only material culture items used in boundary maintenance between the two groups were commonly worn badges of political and religious organizations and religious and political symbols used to decorate the interiors of households. This is contrary to Wobst's (1977:325) predictions concerning the use of household items in such boundary maintenance. In addition to this material culture symbolism, there is a marked difference in geographical distribution with the uplands to the Southeast of the village having a population 72% Catholic and 28% Protestant and the infields around the village having a population 65% Protestant and 35% Catholic (Harris 1975:21). These two large subdivisions of the district are further divided into Townlands which consist of 50 to 1,500 acres of fields surrounding tiny hamlets. Harris (1975:168) indicates there was a conscious and concerted effort to maintain ownership of a townland in the hands of a single group. The village itself consisted of a number of businesses (each with virtually exclusive Protestant or Catholic clientele), a few governmental buildings, three churches (Catholic, Presbyterian and Church of England), and an Orange Order Hall (an anti-Catholic fraternal order to which all but a handful of the Protestant men belong). There exists in this situation a pattern to the relationship of stylistic elements and other aspects of material culture which reflects the sociological and ideological divisions in the district. Stylistically similar artifacts, i.e., crucifixes, saints pictures and statues, appear in Ballybeg both in the religious context of a church indicating their sacred nature and in clusters of habitation structures thus indicating the religious identification of these households. As reported by Harris (1975:25), the houses which lack this stylistic pattern all share a different stylistic pattern including British national symbols on ceramics and pictures, and pictures of the British royal family. This pattern does not correspond to the content of the other two churches but instead to the content of the Orange Hall. The population of Ballybeg is clearly divisible into two groups based on stylistic variation in artifacts used to decorate house interiors. One set of styles is clearly associated with a religious structure indicating they symbolize both a social group

and a religious affiliation. A second social group is definable on the basis of a different stylistic pattern most clearly associated with a secular structure indicating that some type of political or social factor rather than a religious denomination unites this social group.

The sorts of relationships between style and material culture which are easily identified in ethnographic cases such as Ballybeg can only be identified with great difficulty in archaeological cases. As shown by this example, stylistic variation in material culture results from cross-cutting ideological and sociological factors, e.g., religious and ethnic identification. Even in considering two such factors this example oversimplifies the problems of establishing such relations archaeologically. Beyond the problem of controlling for the formation processes of the archaeological record, an archaeologist would have to sort these relationships out of a mass of artifact and architectural stylistic variation which results not from ethnic or religious differences but from differences in occupation, economic status and idiosyncratic variation. Before we can hope to sort out such relationships, we need to know more about how artifacts function in the ideological and sociological subsystems and identify the relationships which result from these functions. In doing this research it is important we explicitly and quantitatively consider relationships which have already been postulated. These would include the social interaction assumption, and Wobst's (1977) suggested relationships between style and the maintenance of ethnic boundaries. Although it has been shown that none of these relationships alone determine stylistic variability, all of the factors they include logically bear some relationship to stylistic variability. We must furthermore seek to establish relationships which have not been considered and give special attention to those aspects of stylistic relationships which distinguish one function from another.

The development of a productive model relating style to the sociological and ideological subsystems of culture represents a major research problem for archaeologists. The two models, i.e., the residual and sociological model, dominant in archaeology today, have attempted to this, but instead of approaching the problem from the perspective of determining how style functioned in cultural systems they made assumptions from the distribution of style in the archaeological record to fit their research goals.

These models have also ignored the ideological factors determining stylistic variation. Wobst's (1977) concept of style as the message sending aspect of artifacts offers a potentially valuable approach but the logic of information theory leads to oversimplification of artifacts as signs instead of symbols. Indeed the position of this paper is that the symbolic functioning of artifacts in the sociological and ideological subsystems forms the basis for a useful model of style. Style is best conceived as the symbolic aspect of artifact variation. In order for the model advocated to be developed, it is necessary to utilize this perspective in empirical studies of how artifacts function as symbols and to develop an understanding of the relationships of style to other aspects of material culture. It is hoped the approach advocated will provide a potential way of moving beyond the present conceptual muddle and intuitive confusion to a clearer understanding of one of archaeology's most basic concepts.

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