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What is This?
Ethnology Versus Ethnographic Analogy: A Common Confusion in Archaeological Interpretation

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Archaeologists must use analogies to interpret the archaeological record. In recent years a number of archaeologists have made a strong case that many of the analogies commonly used are inappropriate because they are based on contemporary societies with potentially very different worldviews, interactions, and even adaptations from ancient societies. However, the distinction between analogies based on single ethnographic cases and analogies based on holocultural comparisons is rarely made. Moreover, the distinction between various methods of holocultural comparisons is completely disregarded. This article argues that Murdock's method of ethnology produces analogies that are not as problematic as either single-culture analogies or other methods of holocultural comparison. The article goes on to describe a variety of ethnological findings that may be useful for archaeological interpretation, and gives an example from the author's research on the late prehistoric Mississippian culture of North America.

One of the fundamental problems faced by all archaeologists is that artifacts, ecofacts, and features—our data—cannot speak by themselves. They cannot tell us how or why they were created, and they
cannot tell us what they mean. Although a few archaeologists have run away from this problem by suggesting that archaeological sites are little more than mirrors reflecting ourselves and not the past, most archaeologists maintain a deep concern for interpreting and understanding the past. To do that we must find ways of making artifact, ecofacts, and features speak, speak accurately, and speak in a language we can understand—a daunting task.

Ethnographic analogy has been the primary method used to interpret artifacts, ecofacts, and features from the very beginnings of archaeology. Some have embraced ethnographic analogy uncritically, using an “anything goes” strategy, whereas others (and largely in reaction to the former) have become hypercritical of analogy, rejecting its application in archaeological interpretation outright. Most archaeologists both today and historically stand somewhere between these two poles, and are actively concerned with the legitimate use of ethnographic analogy in archaeological interpretation.

In this article I will review some of the ways archaeologists have approached the application of ethnographic analogy. I then will put forward a different method—that of ethnology as developed and practiced by George Peter Murdock—and identify how it differs from simple ethnographic analogy. These differences, I argue, make Murdock’s method uniquely suited for archaeological interpretation. Finally, I will outline a few results of ethnological research that can be used in archaeological interpretation today, and point to some directions for future research through an example from my current work.

ETHNOGRAPHIC ANALOGY IN ARCHAEOLOGICAL INTERPRETATION

The use of ethnographic information to understand and interpret archaeological materials has always been a part of archaeology. Indeed, because we can never actually “see” the past, one could argue that analogy must be a part of archaeological interpretation (Bloch, 1953, p. 48). However, the attempt to construct systematic methods for applying ethnographic information to the archaeological record has occupied archaeologists only since the 1950s (see Wylie, 1985, for an overview of pre-1950s use of analogy).
One of the first to propose a systematic method for constructing analogies was the British archaeologist J.G.D. Clark (1951). Clark (1953) suggested that analogies might be most accurately and appropriately drawn from ethnographically known cultures with similar subsistence technology and ecological setting to the archaeological culture of interest. Wylie (1985, p. 71) termed this a “neo-evolutionist” approach, as it has its roots in an older method of drawing analogies from cultures in similar positions within an evolutionary typology (particularly Morgan, 1877), but adds to it the idea that environment may play an important role in shaping a society's cultural forms.

In 1961 Robert Ascher took up Clark's idea and summarized problems many had found with it, including its overt environmental-determinist assumptions. He suggested that a method of “direct historic” analogy might be more appropriate than a neo-evolutionist one. By direct historic analogy, Ascher (1961, pp. 323-324) meant that analogies should be drawn only from ethnographic cases that could be directly linked to the archaeological cultures being interpreted. Ascher believed that where cultural continuity could be demonstrated, features of prehistoric lifestyles could be expected to be retained, and hence analogy would be more appropriate than in cases where cultural continuity could not be demonstrated.

Many archaeologists remained critical of the use of analogy. One reason was that a method similar to Ascher’s, called the “direct historic approach” to archaeology, had been in use in North America for more than 30 years, and was beginning to be severely questioned (Trigger, 1989, pp. 300-301). The direct historic approach proposed that archaeologists work back into the past from historically known cultures, basing interpretations on the previous period. It was quickly realized, however, that once one went past the latest prehistoric period, one was still completely removed from empirical analogy to known peoples, and one ran the danger of compiling interpretive mistakes as one moved further into the past (Trigger, 1989, pp. 391-395).

In the 1970s a movement, linked to the “new” archaeology and its emphasis on “middle-range” research (i.e., research focused on linking artifacts and artifact patterns to human behaviors), was initiated, involving field research among living peoples designed specifically to develop means to interpret the archaeological record. Termed “ethnoarchaeology” or “living archaeology,” many saw this
as the answer to the long-standing problem of ethnographic analogy in archaeological interpretation (Gould, 1980; Gould & Watson, 1982). It did not take long, however, for archaeologists, even proponents of ethnoarchaeology, to realize that this method had many of the same problems the others did (Wylie, 1982).

MURDOCK’S METHOD OF ETHNOLOGY

It is interesting that in all this discussion and debate about the use of ethnographic analogy in archaeological interpretation, few have put forward the idea that findings from cross-cultural research might provide an appropriate source for drawing inferences. As McNett (1979, p. 40) succinctly put it, “One is rather at a loss to explain why this method has not been used more for archaeological purposes.” One reason McNett (1979, p. 41) offered is that archaeologists are simply unaware of these findings. Another he hinted at was the wariness many cultural anthropologists have for cross-cultural research—a wariness that I have found to be steadily growing as interpretive and reflective approaches become more widely embraced.

One must recognize, however, that Murdock’s method, as outlined in Social Structure (1949) and refined in later works (e.g., Murdock, 1957), differs from other methods of ethnology, other methods that might well be held suspect by both cultural anthropologists and archaeologists. McNett (1979, pp. 42-47) outlined three schools of ethnology, an outline that nicely highlights this distinction. The first McNett (1979, p. 42) called the “California School,” in which data were collected on a variety of cultural traits with the ultimate aim of clustering cultures into descriptive groupings. Because the members of this school (Kroeber the most prominent among them) held diffusion as the primary source of cultural change, they hoped that describing and examining these groupings would help them understand evolutionary relationships.

The second school of ethnology McNett (1979, p. 46) discussed was the “Indiana School,” founded by Kroeber’s student, Harold Driver. The Indiana School took the California School into new realms of statistics, using cluster and factor analysis to define groupings of similar cultures. The emphasis was still on the search for evidence of diffusion to identify potential evolutionary relation-
ships, but the analyses used were much more sophisticated and powerful than the California School's. Indeed, Driver's *Indians of North America* (1961) remains a magnificent example of the utility of this technique for defining patterns of culture.

Murdock's method of ethnology, which McNett (1979, pp. 42-45) called the "Yale School," is completely different from the two described above. Although Murdock's method shares with the Indiana School a reliance on powerful statistical analyses, its purpose is not to define patterns or groupings of cultures or cultural traits, but rather to test relational hypotheses about human cultural behavior. As Ember and Ember (1995, p. 88) put it, underlying Murdock's method is the fundamental assumption "that if an explanation (theory or hypothesis) has merit, measures of the presumed causes and effects should be significantly and strongly associated synchronically." The importance of this approach is that if one can find such a strong association in a worldwide sample of cultures, then one can assume that the association reflects human behavior in general, and not the customs of a particular culture or historically related group of cultures. And, particularly important for the archaeologist, there is no a priori reason for this generalization not to hold for prehistoric cultures as well (but cf. Ember & Ember, 1995, pp. 95-96).

It is also important to point out that Murdock's method is not only different from the California and Indiana schools of ethnology, it is also quite different from the theoretically based attempts to predict associations between behavior and material culture that have been used in archaeological interpretation. These theoretically based arguments were developed to avoid the presumed problem that the ethnographic record lacks information on material culture or is so heavily biased that material culture indicators of behavior are necessarily flawed (McNett, 1979, pp. 46-54). A good example is an article by Christopher Peebles and Susan Kus (1977) in which the authors attempt to create archaeological correlates of social ranking and chiefdom political organization. Basing their correlates on the theoretical works of Service (1962) and Fried (1967), Peebles and Kus suggested that an important archaeological indicator of ranking and chiefdoms will be the presence of communal storage facilities—storage facilities used for redistribution. Unfortunately, recent ethnological work (Feinman & Neitzel, 1984; Peregrine, 1996c) has pointed out that redistribution is actually rare in these societies, and when present is a highly diverse
activity potentially lacking any material indicators. Hence Peebles and Kus's indicator was flawed because the theory they based it on was flawed. Murdock's method avoids this problem by empirically testing such indicators. The tremendous value of Murdock's method is precisely this: that material indicators of behavior are both developed through theoretical modeling and empirically demonstrated to hold true across a particular range of cultures (Ember & Ember, 1995, pp. 105-106).

ETHNOLOGY IN ARCHAEOLOGICAL INTERPRETATION

Ember and Ember (1995) outlined two kinds of archaeologically useful findings from Murdock's method of ethnology. The first of these are material correlates of human behaviors (Ember & Ember, 1995, p. 98), which McNett (1979, pp. 59-64) discussed as "proxy measures" of human behaviors. For McNett, these are the most important findings that cross-cultural research has to offer—ways to view human behavior using material remains as proxy measures of those behaviors. For the Embers, material correlates are certainly valuable for archaeological interpretations in and of themselves, but they are more valuable when used to apply causal and noncausal associations to the archaeological record.

Causal and noncausal associations refer to situations in which a particular variable can be used to predict variation in another (Ember & Ember, 1995, p. 97). Causal associations suggest a causal relationship between the variables (i.e., that variation in one causes variation in the other), whereas noncausal associations suggest simple covariation (either direct or inverse) between them. In either case, these are the most powerful findings for archaeological interpretation, because if two variables can be shown to be significantly associated in a diversity of cultures, then it would be difficult to argue that the same relationship would not hold for prehistoric cultures as well (see Wylie, 1985, p. 101, for a discussion). Indeed, this is exactly the kind of predictive ability many involved in ethnoarchaeology are seeking (e.g., see Gould, 1980, pp. 109-110; Gould & Watson, 1982, pp. 357-358, 363), but have apparently either missed or neglected in the results of cross-cultural research.
It seems very important for archaeologists to become more aware of the causal and noncausal associations that have been demonstrated through Murdock's method of ethnology. The articles by McNett (1979) and Ember and Ember (1995) both contain excellent overviews of cross-cultural findings with implications for archaeological interpretation, and I will not duplicate their efforts here. Rather, I will simply outline some of the more problematic areas within archaeological interpretation that cross-cultural findings may illuminate.

SOCIAL ORGANIZATION

Several studies have demonstrated strong associations between house form and aspects of social organization, particularly marital residence (Brown, 1987; Divale, 1977; Ember, 1973); polygyny (Whiting & Ayres, 1968); and degree of stratification (Whiting & Ayres, 1968; Blanton, 1993). Population size has also been shown to be directly related to the size of houses (Naroll, 1962; Peregrine, 1994).

POLITICAL ORGANIZATION

There have also been strong associations demonstrated between house form and mobility (Whiting & Ayres, 1968) and house form and economic activities beyond the local community (Blanton, 1993). Extralocal economic involvement has also been demonstrated to be associated with particular forms of community organization (Blanton, 1993), as has warfare frequency (Peregrine, 1993).

Clearly there are areas where further cross-cultural research would be helpful. One area in particular is in religion, where there are virtually no cross-cultural findings to help archaeological interpretation. A related one is ideology or cosmology, to help us get into the minds of the people archaeologists study, or at least to understand their worldview. This may seem an impossible task, but as Marc Bloch (1953, p. 194) put it: “There can be no psychology which confines itself to pure consciousness”—there must be material behaviors associated with it, and the task is to discover them.
A MISSISSIPPIAN EXAMPLE

Several years ago I began a research project aimed at developing archaeological correlates of religious and cosmological beliefs to help me better understand and interpret the culture of the late prehistoric Mississippian peoples of the midcontinental and southeastern United States (see Peregrine, 1996a, for an overview of Mississippian culture). As a first step I attempted to replicate Guy Swanson’s (1960) cross-cultural study of religious beliefs using a regional sample of North American Indian societies (Peregrine, 1996b). Although the results of the replication were mixed, the data I collected provide an initial set for exploring archaeological correlates of religious behavior among North American Indian peoples. Further research to refine these is necessary, largely because the small sample size makes some of the statistical results tenuous, but I offer them here as an example of the utility Murdock’s method of ethnology holds for archaeological interpretation, even for the interpretation of behaviors that would seem far removed from the material record.

The Mississippians represent the pinnacle of cultural evolution in eastern North America. Mississippian built the largest pre-Columbian structures north of Mexico in the form of flat-topped mounds used as platforms chiefly for residences. The Mississippians settled around these mounds in large communities, some with populations in the thousands. They traded extensively across the midcontinental region, and individual Mississippian polities were linked to one another through a complex of symbols and exotic artifacts known popularly as the “Southern Cult.” They were the first North American people to rely extensively on horticultural production, and they may have been the first to have social stratification.

My work has focused on the evolution of stratification as the starting point and underlying force leading to the evolution of the other characteristics of Mississippian culture (Peregrine, 1992). I envision the evolution of social stratification, in turn, as intimately linked to the manipulation of religion and cosmology—things not readily interpretable through the archaeological record. By looking at the religious and cosmological beliefs of ethnographically known North American Indians, I hoped to find causal and noncausal associations that might point to archaeological correlates of these beliefs.
The examples of archaeologically useful findings from cross-cultural research listed above, as well as my own experience developing archaeological correlates (Peregrine, 1993, 1994), make it clear that house forms and settlement patterns are a good place to begin when seeking archaeological correlates. In the Swanson data set, one variable on the type of basic settlement was coded (see Peregrine, 1996b, Appendix, Variable 5). To keep expected values as large as possible, I dichotomized this variable into settlement patterns like Mississippian (settlements with 300 or more people common) and unlike Mississippian (settlements usually with less than 300 people), and dichotomized all of the coded religious beliefs (present, absent). I then calculated gamma values based on the dichotomized variables. I chose the gamma statistic because it is a measure of prediction rather than simple association; that is, it allows one to estimate how well one's ability to predict the value of one variable changes when the value of an associated variable is known. In this case, the associated variable was the size of the largest settlements.

Two aspects of religious belief are significantly associated with settlement: belief in a high god (Table 1) and belief in reincarnation (Table 2). That belief in a high god can be predicted from settlement size is not really surprising, as I (Peregrine, 1996b) and others (Davis, 1971; Swanson, 1960) have argued that religious beliefs reflect the scale of social relations in a given culture. In cultures with large settlements, social relations are on a large scale, and the supernatural reflects this in the form of a high god. The association between settlements and belief in reincarnation is a bit more surprising, particularly because the data suggest that a belief in reincarnation is always absent in North American Indian societies with large communities. I cannot offer an interpretation without further examination of this relationship, but as an archaeological indicator, it certainly suggests that the Mississippians would have lacked a belief in reincarnation.

A second variable coded as part of the Swanson replication that had values measurable through the record of Mississippian settlement was the nature of the most inclusive territorial unit (see Peregrine, 1996b, Appendix, Variable 15). I again dichotomized the variable into territorial organization like Mississippian (chiefdom) and unlike Mississippian (villages, cities, districts); again, I calculated gamma values based on these codes. Two aspects of religious belief are significantly associated with chiefdom organization: be-
TABLE 1
Cross-Tabulation of Settlement Size with Belief in a High God

<table>
<thead>
<tr>
<th>Settlement size</th>
<th>Absent (exp. val.)</th>
<th>Present (exp. val.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 300</td>
<td>15 (11.4)</td>
<td>1 (4.6)</td>
</tr>
<tr>
<td>More than 300</td>
<td>17 (20.6)</td>
<td>12 (8.4)</td>
</tr>
</tbody>
</table>

$\chi^2$ value = 6.19407; $p = .01282$; Fisher's exact test = .01230.
$\gamma$ value = .82741.

TABLE 2
Cross-Tabulation of Settlement Size with Belief in Reincarnation

<table>
<thead>
<tr>
<th>Settlement size</th>
<th>Absent (exp. val.)</th>
<th>Present (exp. val.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 300</td>
<td>41 (43.3)</td>
<td>10 (7.7)</td>
</tr>
<tr>
<td>More than 300</td>
<td>15 (12.7)</td>
<td>0 (2.3)</td>
</tr>
</tbody>
</table>

$\chi^2$ value = 3.46639; $p = .06263$; Fisher's exact test = .06056.
$\gamma$ value = -1.00000.

Belief in a high god (Table 3) and belief in witches (Table 4). Once again, the ability to predict belief in a high god is not surprising, and I suggest is not a spurious result due to small expected values here. The ability to predict belief in witches is also not that surprising. In my replication of Swanson’s study, I argued witches follow the same pattern high gods do—that they reflect social relations on a large scale, where impersonal entities have an impact on individual lives. Witches reflect this power that unknown and unrecognized entities have over one’s life; in this case, witches are the supernatural parallel of chiefs and their retinue. This strong result suggests that the Mississippians had a belief in witches.

From these preliminary analyses, then, it appears that the Mississippians likely believed in a high god, in witches, and did not believe in reincarnation. These are important results, because they have no other clear archaeological indicators (that I know of), but make sense in terms of the ethnographic record of North
### TABLE 3
Cross-Tabulation of Chiefdom Organization with Belief in a High God

<table>
<thead>
<tr>
<th>Chiefdom organization</th>
<th>Absent (28.8)</th>
<th>Present (11.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>31 (28.8)</td>
<td>9 (11.2)</td>
</tr>
<tr>
<td>Present</td>
<td>0 (2.2)</td>
<td>3 (0.8)</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ value} = 8.33125; p = .00390^*; \] Fisher's exact test = .01783.*
\[ \gamma \text{ value} = 1.00000^*. \]

*The very low expected frequencies in this table make the value of these statistics questionable.

### TABLE 4
Cross-Tabulation of Chiefdom Organization with Belief in Witches

<table>
<thead>
<tr>
<th>Chiefdom organization</th>
<th>Absent (26.8)</th>
<th>Present (33.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>29 (26.8)</td>
<td>31 (33.3)</td>
</tr>
<tr>
<td>Present</td>
<td>0 (2.2)</td>
<td>5 (2.8)</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ value} = 4.36343; p = .03672; \] Fisher's exact test = .04564.
\[ \gamma \text{ value} = 1.00000. \]

American chiefdoms that in other ways appear similar to the Mississippian. Unfortunately, one area of religious belief that I have hypothesized was important in Mississippian political practice—the manipulation of active ancestral spirits—does not have a strong relationship with either settlement (Table 5) or chiefdom organization (Table 6). Indeed, Table 6 suggests that there is a tendency for North American Indian chiefdoms to lack a belief in active ancestral spirits, and this has forced me to reexamine my evidence for believing Mississippian held such a belief (which I do still think they did).

I hope this brief exercise has demonstrated three things: (a) Archaeological correlates can be found for behaviors that would seem completely nonmaterial, such as religious beliefs; (b) examining such correlates and the causal and noncausal associations...
**TABLE 5**

Cross-Tabulation of Settlement Size with Belief in Active Ancestral Spirits

<table>
<thead>
<tr>
<th>Count (exp. val.)</th>
<th>Belief in Active Ancestral Spirits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absent</td>
</tr>
<tr>
<td>Settlement size</td>
<td></td>
</tr>
<tr>
<td>Less than 300</td>
<td>14 (17.1)</td>
</tr>
<tr>
<td>More than 300</td>
<td>8 (4.9)</td>
</tr>
</tbody>
</table>

χ² value = 3.68196; p = .05500; Fisher's exact test = .05630.

γ value = -.51244.

**TABLE 6**

Cross-Tabulation of Chiefdom Organization with Belief in Active Ancestral Spirits

<table>
<thead>
<tr>
<th>Count (exp. val.)</th>
<th>Belief in Active Ancestral Spirits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absent</td>
</tr>
<tr>
<td>Chiefdom organization</td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>17 (19.1)</td>
</tr>
<tr>
<td>Present</td>
<td>4 (1.9)</td>
</tr>
</tbody>
</table>

χ² value = 3.69460; p = .05459; Fisher's exact test = .07589.

γ value = -.66990.

they are based on can help archaeologists establish or rethink their understanding of the structure and organization of the prehistoric culture they are examining; and (c) such activities can produce new ideas to help interpret and understand prehistoric cultures. In the Mississippian case, it seems clear that I should explore the idea that the Mississipians had a belief in witchcraft, and that witchcraft may have played an important role in Mississippian political life, as it does in many of the societies where beliefs in witchcraft are prevalent.

With these kinds of beneficial results available through Murdock's method of ethnology, I hope I have made a more important point as well: that Murdock's method of ethnology holds a unique and important key to the archaeological record—a key to unlock the voices of the artifacts, ecofacts, and features that archaeologists uncover and a key that allows these objects to speak to us from the past.
References


Peter N. Peregrine received his Ph.D. in anthropology from Purdue University in 1990, and is currently Assistant Professor of Anthropology at Lawrence University. His research focuses on the evolution of political centralization and, in particular, on the mechanisms used to legitimate new positions of political authority. Recent publications include Archaeology of the Mississippian Culture (Garland, 1996) and (with R. Blanton, G. Feinman, and S. Kowalewski, 1996) "A dual-processual theory for the evolution of Mesoamerican civilization," Current Anthropology, 37(1), 1-14.