Archaic Hunters and Gatherers in the American Midwest

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Archaic mortuary sites have rarely been examined in a regional context. Only one such synthesis exists for the central Mississippi drainage. Cook [1976] has summarized published reports in an investigation of chronological change in Archaic resource utilization patterns. No studies have explicitly focused on the spatial distribution of Archaic mortuary sites and their contents as a means of developing a coherent interpretive framework for the region. This omission is especially pronounced given the insights that have been gained from the analysis of Woodland and Mississippian mortuary sites in the same area [e.g., Asch 1976; Braun 1979; Brown 1979, 1981; Buikstra 1976b; Goldstein 1980, 1981; Kerber 1982; Tainter 1977a, 1977b]. To fill this void, we have drawn on the information available from published and unpublished mortuary site descriptions and analyses, supplemented by data from a cemetery excavated by the authors, to develop a more comprehensive view of the Archaic as characterized by the mortuary data [see Figure 7.1 and Table 7.1].

**THEORY**

A basic assumption in our study is that the occurrence of formal cemetery areas is associated with corporate lineal inheritance of crucial and restricted resources [see R. Chapman [1981] for arguments similar to the following]. This
Figure 7.1 Excavated Helton-like and Titterington phase mortuary and occupation sites (○, Helton, or related, component, +, Titterington component, and @, both components). (Modified from Cook [1976], map reproduced by permission of the Center for American Archaeology.)
idea was first articulated by Saxe (1970), and his analysis of three ethnographic examples generally supported his hypothesis. Goldstein (1976) tested the model with a much larger cross-cultural sample, which led to a tripartite reformulation of Saxe's hypothesis:

1. To the degree that rights of corporate groups to use and/or control crucial but restricted resource[s] are attained and/or legitimized by lineal descent from the dead (i.e., lineal ties to ancestors), such groups will, by popular religion and its ritualization, regularly reaffirm the lineal corporate groups and its rights. One means of ritualization that is often but not always employed is the maintenance of a permanent, specialized, bounded area for the exclusive disposal of their dead.

2. If a permanent, specialized, bounded area for the exclusive disposal of the group's dead exists, then it is likely that the corporate group has rights over the use and/or control of crucial but restricted resource[s]. This corporate control is most likely attained and/or legitimized by lineal descent from the dead, either through an actual lineage or through a strong, established tradition that the critical resource passes from parent to offspring.

3. The more structured and formal the disposal area, the fewer the alternative explanations of social organization, and conversely (Goldstein 1980:8, Goldstein's emphasis).

These comparative studies have found further support in a developmental case described by Saxe and Gall (1977) for the Temuan of Malaysia. The significance of this study lies in its demonstration that the structure of corporate groups in a society, and the concomitant mortuary behavior, will respond very quickly to changes in the relationship between that society and its economic environment. Prior to World War II, the Temuan did not tax the resources of the land that was available to them. At death, adults were laid out in their houses, which were then burned; children were buried under the houses. Since the war, governmental practices have taken over much of the land that had traditionally belonged to the Temuan. This fact, coupled with population increases resulting from the introduction of modern medicine, has produced a land shortage that has led to the emergence of "larger labor groups with increasingly corporate functions which, with all due caution, we may label 'proto-lineages'" (Saxe and Gall 1977:80). Tracts not suitable for agriculture have been demarcated as burial areas and, in some cases, kin cores have developed spatially distinct areas within each cemetery.

For the present analysis, we have generated four additional postulates from the ethnographically established relationship between cemeteries and lineal corporate groups:

1. Utilization of formal cemetery areas will correlate with sedentary subsistence strategies employed by the group[s] using the cemetery.

2. The degree of spatial structuring present in the mortuary domain will correlate with the degree of competition among groups for crucial resources.

3. Within the larger society, corporate groups will be distinguished by inclusion in separate cemeteries or in spatially distinct areas within a single cemetery.
4. Inclusion of individuals in the cemetery implies inclusion of those individuals in the corporate group.

The Relationship between Formal Cemeteries and Sedentism

The Archaic populations under consideration in this study are generally characterized as hunter-gatherers (e.g., Carlson 1979; Cook 1976). In the three ethnographic studies cited here (Goldstein 1976; Saxe 1970; Saxe and Gall 1977), the relationship between the occurrence of formal disposal areas for the dead and corporate lineal descent was demonstrated for sedentary agriculturalists, with land being the crucial resource. A survey of the data presented by these authors suggests that although hunter-gatherer populations do symbolize social relationships in mortuary contexts (see also, Binford 1971; Tainter 1975), none of the societies designated special areas as cemeteries. Given that central Mississippi Valley Archaic peoples clearly maintained formal burial grounds, in the sense expressed by Saxe and Goldstein, we are faced with an interpretive problem: Do the formal corpse-disposal areas maintained by these Archaic groups also reflect the presence of corporate units, or are we observing a relationship between mortuary behavior and social organization not represented among ethnographically known hunter-gatherers?

We would argue that the observed Archaic pattern does indeed reflect the presence of corporate groups among central Mississippi Valley hunter-gatherers. The available ethnographic literature concerning the mortuary behavior of hunter-gatherers is strongly biased toward groups who live in marginal environments and maintain a mobile existence. Environmental reconstructions of the lower Illinois Valley and surrounding regions during Archaic times (Asch, Ford, and Asch 1972; Zawacki and Hausfater 1969) clearly do not characterize this area as a marginal environment, although it may not have been as productive as these earlier studies suggest (Asch and Asch 1980). The relatively abundant resources of the region were harvested by Archaic peoples living in base camps, with possible year-round occupation, as early as 6000 B.P. Appreciation of the relationship between sedentism and environmental productivity permits a more general formulation of the model proposed by Saxe (1970) and Goldstein (1980, 1981): Societies residing in environments in which the natural or culturally modified resource distribution supports a sedentary mode of subsistence may ritualize corporate lineal descent through the use of formal disposal areas for the dead, whereas societies that must follow a more mobile mode of subsistence will not.

Corporate behavior in human societies is actually a form of territorial behavior, which is a near universal in the animal kingdom. Most, if not all, animals that exhibit social behavior regularly occupy and defend a specific area gener-
generally referred to as a territory. Territorial behavior is related to the general phenomenon of spacing between individual organisms, an occurrence even in plant communities. A territory is usually defined as a defended area, but defense of an area may refer to the use of scent glands, visual displays, and vocalizations as well as aggressive behavior.

The nature of territories varies widely. Individual animals or groups may occupy exclusive territories, relative to others of the same species, and utilize the entire area in their daily rounds. Alternatively, the greatest extent of the territories of individual animals or groups may overlap, in which case only the core of the area is fiercely defended. Finally, if the animal is mobile, the defended area can “float” as the animal moves along. An extensive review of the literature on territoriality is beyond the scope of this study, but Wilson (1975), from which the preceding was taken, provides a review of the subject. Several studies (Williams 1974; Wilsen 1973; Wobst 1974) have described territoriality in human hunting and gathering groups in terms similar to those used by investigators of animal behavior.

Corporate behavior, as used here, refers to a group of individuals who act as one with respect to the group’s interaction with its resource environment. Thus, when Williams (1974:4) postulates that a “species divided into social groups autonomous with respect to food supply or vital resources will exhibit territoriality,” where territoriality refers to the “tendency to occupy exclusive areas,” he is describing corporate behavior.

Ecological theory (e.g., Krebs 1978; Pianka 1978) would predict that those societies who inhabit marginally productive environments will be more mobile, whereas populations in more productive, diverse environments will be more sedentary. The former will tend toward “floating” territories, and the latter will defend fixed territories. In a mobile society, any corporate rights would determine access to a particular portion of the resources collected, for example, whereas in a sedentary society, those rights might define an actual hunting, fishing, or collecting area.

The relationship among corporate descent, sedentism, and formal cemeteries hinges on the fact that the rights in question involve a resource that is fixed in space, predictable, and in sufficient quantity, such that the group can localize its activities around that vicinity (Dyson-Hudson and Smith 1978). If a group wishes to claim rights of ownership or access to a specific plot of land, including lineal inheritance of those rights, a cemetery is one obvious means of ritually signifying that relationship. The remains of one’s ancestors on the land in question provide a very strong argument for ownership. The motivation to physically mark land would be missing among nomadic populations. Consequently, an ethnographic sample biased in favor of mobile (rather than sedentary) hunter-gatherers would obscure the importance of territoriality in the application of the Saxe-Goldstein model.

An obvious but important point is that the cemetery area set aside by the group will be placed within the territory of the group. The distribution of
contemporaneous mortuary sites will reflect the distribution of the territories of the social units utilizing the cemeteries. Archaeologically, territories have generally been characterized as catchments (Jarman et al. 1972; Vita-Finzi and Higgs 1970). The correspondence between cemeteries and catchments has been demonstrated for Anglo-Saxon interments in England by Bonney (1966) and Ellison and Harriss (1972).

Preliminary investigations in the lower and central valley regions of the Illinois River indicate a similar relationship between mortuary site distributions and village catchments for the Woodland period. Studies by Roper [1974, 1975] have demonstrated that catchments surrounding Middle Woodland habitation sites in the lower Sangamon River valley (a major tributary of the Illinois) can account for the subsistence remains recovered from those sites, and Styles (1981) has shown the same pattern for Late Woodland sites in the lower Illinois River valley. Work by DeRousseau (1973), Palkovich (1975), and Holliday (1977) indicates that contemporaneous Middle and Late Woodland burial mounds tend to occur in clusters along the lower Illinois Valley and the lower Macoupin Creek valley (another large tributary of the Illinois). Although specific one-to-one correspondences between village sites and mound clusters have not been demonstrated, arguments integrating these various studies have been developed in detail (Charles 1979).

The Relationship between the Degree of Spatial Structuring of the Mortuary Domain and the Intensity of Resource Competition

In as much as it has been argued (Goldstein 1980, 1981) that the use of bounded areas for the disposal of the dead constitutes a ritual affirmation of corporate groups and their rights, we would expect the elaborateness of that ritualization to correlate with the importance of the affirmation provided. Thus, the more important the rights of ownership or access to the crucial resource(s) are, the more pronounced will be the activities associated with the demonstration of those rights.

Studies of prehistoric cemeteries that followed the initial work of Saxe (1970) and Binford (1971) and attempted to measure or characterize the structure of the mortuary domain (e.g., Braun 1979; Brown 1971; Buikstra 1976b; Goldstein 1980, 1981; Tainter 1977a, 1977b) have met with varying degrees of success. The majority of the problems that have arisen relate to the difficulty of assigning meaning to the different attributes of mortuary behavior that are recovered archaeologically. For example, Tainter [1977a, 1977b] equated the amount of energy expended in the interment of the corpse with the status of the individual interred. Two problems immediately appear. First, not all expended energy necessarily leaves an archaeological residue. Second, it is very difficult to rank various forms of mortuary behavior in terms of energy expenditure—for example, processing of the corpse versus lining the grave with
limestone. The methodology used by Tainter has prompted a recent debate in the literature (Braun 1981; Tainter 1981).

Rather than attempt to examine in detail the methods used by previous investigators, which is beyond the scope of this paper, we simply offer supporting arguments for the methodology chosen. First, the nature of the data sets used presented certain problems. Every published report we examined suffered from at least one of several major limitations, thereby constraining the extent of the possible analysis. These problems included superficial descriptions of old excavations conducted by amateurs, the absence of site maps or osteological descriptions, and poor bone preservation due to soil conditions. In fairness, we must also indicate that we did not have access to a map of the Gibson Archaic material at the time this analysis was done, and because the Elizabeth material was still being analyzed, the stratigraphic relationships of the Archaic components were not yet understood completely. In all cases, therefore, only general statements about burial facilities can be made.

Formal analysis or other frequently utilized techniques invariably require virtually complete data sets to be effective. The majority of data published or otherwise available for the sites examined here did not meet the requisite criteria for these analytic methods. However, the spatial organization of the cemeteries was usually sufficiently well documented to permit comparison among the various sites using a more general approach.

Second, as was pointed out previously, most of the problems of the previous studies relate to the difficulties inherent in assigning cultural meaning to archaeological items or relationships, in either an emic or etic sense (Harris 1968:568–604). Elements of the disposal domain that are truly symbolic (arbitrary relationship between symbol and referent) pose extreme difficulties for archaeological interpretation. In the early stages of investigation into a prehistoric society's ritual, it would seem more profitable to concentrate on those elements that can more directly be understood in terms of other aspects of the society's behavior. As an example, strong theoretical arguments have been developed that relate the structure and organization of the mortuary domain to the structure and organization of a given society [e.g., Binford 1971; Brown 1971; Goldstein 1980, 1981; Saxc 1970; Tainter 1977a, 1977b]. The participants in the prehistoric burial proceedings were not necessarily cognizant of the archaeologically perceived correlations between elements of the mortuary ritual and aspects of the social organization of the society. Therefore, mortuary elements function as signs to the archaeologist as well as symbols to the bereaved.

However, identifying and interpreting those signs remains a major consideration. Methods of determining the degree of structure or organization in a given mortuary domain have yet to be adequately developed. The problems of equating various forms of burial treatment with energy expenditure have already been mentioned. Goldstein's (1980) use of burial attributes, such as right or left arm extended or not extended, represents another form of interpretive problem. Although the burial domain may be partitioned along the lines of
these or similar variables, their meaning is not clear. We would expect those variables that were important in distinguishing individual or group status to be items or activities to which access could be controlled by the individuals who held that status—as examples, (1) the inclusion of exotic or expensive items that individuals of lower status (or at least wealth) would not have possessed in life, or (2) burial in limited-access locations. The extension of one arm or the other, or the inclusion of more mundane items of general availability, might be expected to denote aspects of the social persona [Goodenough 1965] that are not status related but could refer instead to group memberships that crosscut status [e.g., Moerman 1968].

The present analysis does not provide a solution to these problems, but we are able to circumvent them to an extent, allowing us to utilize the correlation between the spatial components of mortuary activity and the intensity of resource competition. Previous studies have attempted to measure or characterize the degree of structuring or organization of cemeteries—with the stated or implied assumption that the more complex the society in question is, the more structured or organized the cemetery will be. We would argue that the degree of structure or organization of the mortuary domain correlates with the importance of the corporate structure ritual affirmation as well as with the actual degree of structure or organization of the society. It should be noted that there is a threshold effect operating in the model. At some point the degree of structure and organization of the cemetery will be nil—no cemetery exists. At this low range of complexity, it seems apparent that the degree of resource competition between various groups is the more important variable. It does not seem reasonable to argue that there is no structure to the society. Rather, it should be clear from arguments just presented, that the existence of a cemetery relates to the ritual affirmation of corporate structure and this affirmation is significant only within a context of resource competition.

The crossing of the competition threshold has been documented ethnographically by Saxe and Gail [1977] for the Temuan: the induced land shortage triggered the reorganization of the society and the concomitant burial behavior. By observing a region through time, documentation of an increase or decrease in the use of bounded disposal areas for the dead should correlate with the level of competition for crucial and restricted resources among the socioeconomic groups in the region. By treating the Titterington-like and pre-Titterington [Helton-like] Archaic [Cook 1976] as a continuous time segment, we were able to interpret shifts in the distribution and occurrence of cemeteries within an ethically and emically meaningful context.

The Relationship between Living Corporate Groups and Spatially Distinct Burial Areas

The relationship between functioning corporate groups and spatially distinct burial areas in Goldstein’s [1980, 1981] formulation does not specify how distant these distinct burial areas must be. Indeed, in her analysis of Moss ceme-
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tery (a Mississippian site in the lower Illinois River valley), she defines parallel rows of burials consisting of family or extended family groupings (Goldstein 1980, 1981). Structurally homogeneous cemeteries separated by kilometers probably represent corporate groups defined at the local village level, for example, and indicate group resource competition at the level of intervillage interaction. Widely separated cemeteries that show internal differentiation may indicate competition at two levels (e.g., among villages and among lineages within each village). As presented, then, the Moss example suggests family-group control of crucial resources at one level, with village autonomy at a higher level. Needless to say, a vast array of corporate structure permutations and concomitant mortuary behavior is possible in ethnographic samples and in the archaeological record.

It is perhaps appropriate at this time to point out that the model developed here, relating the spatial component of mortuary behavior to corporate group structure and competition for restricted resources, does not provide an absolute scale against which one can measure the intensity of competition operating among various corporate groups who interact at a given time. The model is most properly used within a diachronic framework as a relative scale. By viewing the social units in an area through time, it is possible to specify whether there is more or less competition at one time versus another. The inferences derived can then be tested against data relating to, for example, subsistence and settlement patterns for possible correlations among the changes undergone in the different subsystems of the sociocultural system.

Application of the model to a cross-cultural survey is more difficult to interpret, given that other factors can cause cultural variation. Because the content of mortuary data is largely symbolic or representativ behavior, similar referents, in this case the intensity of competition among corporate groups and the spatial distribution of those groups across the landscape, can be symbolized or represented differently on at least a partially random basis. As Goldstein (1980) pointed out, use of cemeteries is only one means of ritualization that can be employed to express the relationship. Adjoining cultures frequently utilize different or even opposite symbols to represent the same phenomena as part of the process of ethnic identification and differentiation (Barth 1969; Kroeber 1927).

Within a diachronic framework, tradition will minimize this problem. Cultural systems contain a form of inertia and will not change in a random manner. Rather, change will involve modifications of previously existing patterns. A representation system, such as a set of mortuary practices, should change as the set of phenomena it is representing changes or as the significance of those phenomena changes. The interpretation of observed changes in the representation system through time can be made along two major lines—we may predict that the nature of the referent system is changing or that the importance of that referent system is changing. We may then turn to other aspects of the archaeological record to test which set of predictions is more appropriate. This point will be elaborated further in the analysis of the Archaic data.
The Relationship Between Membership in the Corporate Group and Burial in the Cemetery

The burial of corporate group members in the group's cemetery is a simple and rather obvious notion following from the above points, but nonetheless it should be formally stated. Following Saxe (1970) and Binford (1971), most of the researchers of prehistoric mortuary practices cited above have relied on the concept of the social persona as developed by Goodenough (1965), such that various social identities of the deceased will be signified in the burial ritual. Thus, in our framework, exclusion of an individual from the main corporate burial facility indicates that some other aspect of the individual's set of social identities was considered more significant at the time of death than membership in the corporate group or that the individual was not a member of that group.

With the four postulates outlined in the preceding sections in mind, we can now turn to the analysis of the pre-Titterington and Titterington-like cemeteries in the middle Mississippi River drainage from which excavation data are available.

ARCHAIC MORTUARY PRACTICES IN THE MIDDLE MISSISSIPPI RIVER DRAINAGE

Sedentism

As is indicated in Table 7.1, formal pre-Titterington phase cemeteries were present in the Illinois and Mississippi river valleys, which implies that sedentary populations resided in the area by approximately 6000 BP. These populations were sedentary, either in the sense of year-round occupation of a site or a seasonal round contained within a stable territory. The Gibson and Elizabeth sites clearly represent major cemeteries, and Hempill and Godar may also. Only four skeletons were recovered from Hempill, but it is doubtful that the mounds were excavated completely. The number of burials encountered at the Godar site is not specified, and only 13 individuals were found at Joe Gay. The Helton-like remains at the Pete Klunk mound group consist of a single feature with only a few individuals represented. The proximity of the Klunk and Gibson sites may indicate that they are part of the same burial complex, with the interments originating from a single village or territory.

The preceding is in agreement with the findings of several other authors. The Helton phase Horizon 6 materials at the Koster site had a 1-m-thick midden with hundreds of features, facilities, and house floors (Cook 1976:69). Houart (1971), Cook (1976), and Carlson (1979) characterize the Helton occupations at Koster as base camps, continuously or repeatedly inhabited. The
### TABLE 7.1

**Archaic Mortuary Sites in the Central Mississippi Drainage**

<table>
<thead>
<tr>
<th>Phase and site</th>
<th>Location</th>
<th>Burials</th>
<th>Additional information</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Helton phase</strong></td>
<td></td>
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<tr>
<td><strong>Elizabeth</strong></td>
<td>Illinois River</td>
<td>48⁷</td>
<td>Three components: 2 large pits dug into knoll, other component near surface with context unclear, predominantly primary interments; on bluff, beneath Middle Woodland mound</td>
<td>Unpublished data in possession of the authors</td>
</tr>
<tr>
<td>Pike County, Ill.</td>
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<tr>
<td><strong>Gibson</strong></td>
<td>Illinois River</td>
<td>36</td>
<td>Knoll underlying a Middle Woodland mound; individual burial contexts not clear; primary interments; on bluff</td>
<td>Cook 1976, Perino 1974</td>
</tr>
<tr>
<td>Calhoun County, Ill.</td>
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<tr>
<td>Calhoun County, Ill.</td>
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<tr>
<td><strong>Hemphill</strong></td>
<td>Illinois River</td>
<td>4</td>
<td>Primary burials placed on surface, covered with earth and limestone slabs; on bluff; possibly 2 mounds, neither completely excavated, may underlie Middle Woodland mounds</td>
<td>Cook 1976, Knoblock 1939, Montet-White 1968, Titterington 1950</td>
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<tr>
<td>Brown County, Ill.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Joe Gay</strong></td>
<td>Mississippi River</td>
<td>13</td>
<td>Disturbed and fragmentary remains buried shallowly in ridge beneath Middle Woodland mounds</td>
<td>Perino 1974</td>
</tr>
<tr>
<td>Pike County, Ill.</td>
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<td></td>
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<tr>
<td><strong>Pete Klunk</strong></td>
<td>Illinois River</td>
<td>4-5</td>
<td>Single-pit feature in bluff-top ridge, articulated and disarticulated remains, beneath Late Woodland mound</td>
<td>Cook 1976, Perino 1968</td>
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<tr>
<td>Calhoun County, Ill.</td>
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<tr>
<td><strong>Mixed</strong></td>
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<tr>
<td><strong>Hartford Church</strong></td>
<td>Illinois River</td>
<td>“several”</td>
<td>Apparently primary interments in large pit, in terrace at base of bluff</td>
<td>Cook 1976, Montet-White 1968, Titterington, 1950</td>
</tr>
<tr>
<td>Jersey County, Ill.</td>
<td></td>
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</tbody>
</table>

[continued]
<table>
<thead>
<tr>
<th>Phase and site</th>
<th>Location</th>
<th>Burials</th>
<th>Additional information</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titterington phase&lt;sup&gt;d&lt;/sup&gt; (continued)</td>
<td>Sangamon River</td>
<td>13</td>
<td>Skeletons in 9- x 6-m area atop highest point in area; no pits observable; 1 primary, 12 bundle burials, poor preservation</td>
<td>Cook 1976; Roper 1978</td>
</tr>
<tr>
<td></td>
<td>Sangamon County, Ill.</td>
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<tr>
<td>Elm Point</td>
<td>Mississippi River</td>
<td>(?)</td>
<td>At least 6 multiple burials; primary interments in shallow pits; on bluff</td>
<td>Cook 1976; Montet-White 1968; Titterington 1950</td>
</tr>
<tr>
<td></td>
<td>St. Charles County, Mo.</td>
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<tr>
<td>Etley</td>
<td>Illinois River</td>
<td>24-54</td>
<td>Two &quot;mounds&quot; on bluff crest; 8 or 9 groups of 3-6 burials; primary interments</td>
<td>Cook 1976; Montet-White 1968; Titterington 1950</td>
</tr>
<tr>
<td></td>
<td>Calhoun County, Ill.</td>
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<td></td>
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<tr>
<td>Gronfeld</td>
<td>Missouri River</td>
<td>(?)</td>
<td>On bluff crest</td>
<td>Titterington 1950</td>
</tr>
<tr>
<td></td>
<td>St. Charles County, Mo.</td>
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<tr>
<td>Hatten</td>
<td>Salt River</td>
<td>109&lt;sup&gt;e&lt;/sup&gt;</td>
<td>Nine (or 14) primary interments, remainder bundled or disarticulated, on ridge overlooking river; adjoining Late Woodland mound</td>
<td>Chapman 1975; Cook 1976; Klepinger and Henning 1976</td>
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<tr>
<td></td>
<td>Monroe County, Mo.</td>
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</tr>
<tr>
<td>Kampsville</td>
<td>Illinois River</td>
<td>(?)</td>
<td>On terrace at base of bluff</td>
<td>Cook 1976; Titterington 1950</td>
</tr>
<tr>
<td></td>
<td>Calhoun County, Ill.</td>
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</tr>
<tr>
<td>Marquette Park</td>
<td>Illinois River</td>
<td>2</td>
<td>Primary interments; on bluff</td>
<td>Cook 1976; Titterington 1950</td>
</tr>
<tr>
<td></td>
<td>Jersey County, Ill.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Wieman</td>
<td>Cuivre River</td>
<td>40</td>
<td>Three layers of burials, all bundled, caches of artifacts, poor preservation; on prominent hill overlooking river</td>
<td>Bacon and Miller 1957; Cook 1976</td>
</tr>
<tr>
<td></td>
<td>Lincoln County, Mo.</td>
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</tbody>
</table>

<sup>a</sup>^{14}C dates from Koster place the Helton phase from 5720 to 4880 yr [Cook 1976], Napoleon Hollow has produced dates as early as 7050 yr [Wiant 1980]. Dates are based on an uncorrected Libby half-life of 5570 ± 30 years. Category includes all pre-Titterington sites.

<sup>b</sup>This is a partial count—minimum number of individual (MNI) determinations of fragmentary remains were not available at the time of this analysis.

<sup>c</sup>A <sup>14</sup>C date from Koster places the Titterington phase around 3950 yr [Cook 1976], a date of 4060 yr has been obtained from Napoleon Hollow [Wiant 1980]. Dates are based on an uncorrected Libby half-life of 5570 ± 30 years. Category includes all Titterington-like sites.

<sup>d</sup>Roper (1976) rejects Cook's (1976) Titterington phase assignment, based on the presence of a side notched Osceola-like point. However, as much as this point was recovered from the plow zone, we will accept Cook's assignment and place Airport in our later category.

<sup>e</sup>Klepinger and Henning (1976:106) state that there were "no less than 101 individuals," but age and sex information is provided for 109 skeletons.
existence of stable exploitation territories has also been argued from the habitation site data:

Thick middens at Koster, particularly Horizon 6, indicated the existence of permanent base camps persisting in one location for as long as a millennium. It is probable that villages within these territories were occupied for long portions of each year, perhaps year-round by less-mobile individuals. By implication, then, Archaic groups had stable and well-defined exploitation territories. Residential stability is also suggested by the wide range of exploitative, manufacturing, maintenance, and mortuary activities centered there (Asch and Asch 1980.2).

Asch and Asch (1980) also point out that Koster occupies a valley margin location and that numerous other Archaic sites are known from similar settings (Cook 1976). They note Struweer's (1968) suggestion that the valley margin is the ideal location for intensive harvest collection and that it was the location preferred by Middle Woodland peoples for their base camps. Charles (1979) has also argued the significance of a valley margin location for base camps in an environmental setting like that of the lower Illinois River valley.

**Competition**

The notion of sedentism as indicated by the existence of _formal_ disposal areas for the dead attains a greater significance when coupled with the relationship between the spatial structure of the mortuary domain and the degree of competition among various corporate units. The previous section noted that the habitation and mortuary evidence indicated sedentism in the lower Illinois Valley by at least 6000 BP. Perino (1974) reports an apparent Helton-like burial site underlying Mounds 3 and 4 at the Joe Gay site on the Mississippi River bluff, but he provides little information, and only 13 individuals were assigned to the Archaic component. This does suggest that similar conditions held for the Mississippi Valley, although settlement may not have been as intense. Pre-Titterington formal cemeteries have not been reported from upland areas adjacent to the lower Illinois Valley (Table 7.1).

Carlson (1979) has argued from Koster data that year-round base camps, as opposed to more mobile residential camps, began to appear around 7000 BP in the major river valleys of the Midwest. Furthermore, he has developed a set of expectations for additional research to verify, including:

As the Hypsithermal Interval progresses from its onset to its peak (about 7000 BP), there should be a marked trend toward depopulation of the upland areas of the midwest and a consequent aggregation of population in and adjacent to major river valleys.

Territoriality is more likely in the Middle Archaic since relatively aggregated resources have been postulated as providing a major food source. Furthermore, the increase in population density proposed makes warfare more likely. This should be reflected in mortuary populations when and if they are discovered (Carlson 1979:396–397).
Although no clear evidence of warfare is apparent in any of the Middle Archaic cemeteries reported—with the possible exception of the Elizabeth site—the actual existence of bluff-top cemeteries can be seen as territorial displays reflecting the increase in population densities in the major river valleys.

As mentioned previously, Goldstein [1980] stated that the maintenance of formal cemetery areas is only one way that rights of access may be ritualized. The appearance of bluff-top burial sites around 6000 BP may indicate a shift from a nonmortuary ritual form to a mortuary form. Alternatively, in as much as burials have been uncovered in Horizon 11 at Koster, an Early Archaic occupation, bluff-top mounds might simply represent a change in burial location. Because bluff-top mounds or mound-like cemeteries continue as the primary mode of burial activity through the Late Woodland period, we would argue that in either case, the appearance of elevated bluff-crest cemeteries is indicative of increased competition among neighboring economic units. Given the topography of the Illinois River valley, perhaps the most declarative way to indicate the relationship between a particular group and its inherited rights of access to a particular resource locale is for the group to place its ancestors in burial mounds or knolls atop the prairie-covered ridges at the edge of the bluff, where they would be clearly visible from the valley floor. The fact that this location was preferred for over 5000 years, until the advent of full-scale Mississippian maize agriculture, supports our arguments. Bluff-top cemeteries, whether in prominent knolls or constructed earthworks, are not arbitrary, stylistic symbols but are very functional indicators of hereditary rights to localized important resources. This functional aspect is crucial to our interpretation. Whether the appearance of these burial mounds represents a shift from one ritual to another, or whether it simply represents a change in the preferred burial location, the fact that bluff-top mounds originated and were then used consistently over a large area for 5000 years indicates the significance of this mode of mortuary activity beyond its corpse disposal function. Robert Chapman [1981] has argued the importance of monumental mortuary structures in the context of resource competition, and prominent bluff-crest cemeteries can be seen as monumental structures within the technology available to Archaic hunters and gatherers.

The importance of the notion of a formal cemetery must be recognized. A large number of burials in a single location does not automatically meet the criteria set forth by Goldstein [1980:8] of a “permanent, specialized, bounded area for the exclusive disposal” of the dead. For example, Jeffries and Lynch (this volume) report 154 burials (with a projected total of over 500) from the Black Earth site that can be attributed to the Middle Archaic component. However, because the interments occurred in midden deposits along with other features, the exclusive use requirement is not met and the burial population by itself would not support an argument for sedentism or territorial behavior on the part of the inhabitants of the site. Note that because the model being developed here can only be used as positive, and not as negative, evidence, the
lack of formality cannot be used to support the opposite—that sedentism or intense competition did not exist.

One suggestive difference is apparent between burial practices at the Black Earth site on the Saline River in southeastern Illinois and those typical of the central Mississippi drainage. In the latter area, most Middle Archaic burials are located in bluff-top cemeteries, and only those individuals unable to participate in subsistence activities are relegated to burial in living site middens (see below). At the Black Earth site, apparently all individuals, or at least the full range of age and sex categories, are represented in the midden burials. It would thus appear unlikely that distinct burial locations away from living sites were set aside by those populations inhabiting the Saline River area during the Middle Archaic.

Returning to the central Mississippi region, it is notable that by Titterington times, cemeteries in high, physiographically prominent locations are found along the major tributary rivers of the Mississippi and Illinois—such as the Cuivre, Salt, and Sangamon—as well as along these two major rivers and the Missouri [see Table 7.1 and Figure 7.1]. The Titterington-like cemeteries reported in the literature are Etley, Kampsiville, and Marquette Park on the Illinois River, Elm Point on the Mississippi, Gronefeld on the Missouri, Wies- man on the Cuivre, Hatten on the Salt, and Airport on the Sangamon. At least three explanations [plus their combinations] are possible to account for this distribution: (1) populations had expanded into the secondary valley or upland areas, (2) populations already present there had substantially grown, resulting in increased competition for resources, and (3) the subsistence base had changed such that the new strategy was more effective overall, but the importance of one or more of the elements had been altered, restructuring the competition relationships among groups.

The first alternative can be partially rejected on the basis of the evidence that Helton-like populations were present in areas away from major river trenches. Evidence that pre-Titterington groups were living in permanent facilities far from large rivers like the Illinois and Mississippi is provided by the Pabst [Lewis 1976] and Black Earth sites [Jeffries and Lynch, this volume].

There is insufficient evidence available at present to evaluate the second alternative. Looking at a wide region, there is little reason to suspect that population totals decreased or even maintained a constant level. One of the major trends in North American prehistory was population increase, and there is no evidence to suggest that this trend was reversed during the span we are considering. However, it is possible that small-scale population movements could have occurred within the larger region. For example, it has been suggested [Asch and Asch 1980; Asch et al. 1979] that population levels in the lower Illinois River valley were lower during the Early Woodland period than during either Late Archaic or Middle Woodland times. The data on cemetery distributions indicate a general expansion of population concentrations from the Illinois and the Mississippi valleys into secondary valley or upland areas.
Thus, we see a pattern of intense settlement of the major valleys during the Helton phase, with subsequent overflowing of populations into secondary drainage areas through the Titterington phase, culminating in a significant depopulation of at least the lower Illinois Valley by the Early Woodland period. Four Terminal Archaic but no Early Woodland bluff-top cemeteries have been reported from the lower Illinois and adjacent Mississippi valleys (Braun et al. 1982; Perino 1968)—as we would expect if competition for resources was diminished due to lower population densities (see also Charles and Buikstra 1982).

There may be some evidence to support the third explanation, that there was a shift in the subsistence base between the Helton and Titterington phases. The earlier period produced a large number of sizable base camps along the valley margins, whereas none are known for the Titterington phase (Asch and Asch 1980; Cook 1976). However, it is not clear how this difference in settlement pattern is related to a possible subsistence shift. Further, this differential distribution may result from geologic processes rather than cultural patterning (Wiant et al., this volume).

It is, however, possible to relate the differences in the burial programs between those populations in the main valleys and those in the secondary valleys to the differing nature of the respective resource distribution patterns. As one of us has argued previously (Charles 1979), the prehistoric resources in the lower Illinois Valley were distributed linearly, parallel to the river and the bluffs, and a perpendicular catchment territory extending from the river into the uplands with a width of only a few kilometers would have encompassed all major resource zones, leading to a linear arrangement of territories along the river. Along secondary streams, the resource distribution was not as compact, and larger collection territories would have been required to maintain a group of the same size.

The populations occupying the smaller secondary drainages, where the resources were more dispersed, would have ranged over wider areas during their seasonal rounds than would those populations inhabiting the major valleys, with their characteristic closely packed environmental zones. In the latter areas, the dominance of primary interments implies that death usually occurred at a location within close proximity to the cemetery, indicating little utilization of resource exploitation sites at any great distance from the burial site. On the other hand, the very high frequency of bundle burials and disarticulated remains at the sites in the tributary valleys may indicate that most deaths occurred at such a distance from the interment facility that the bodies required processing and storage at the occupied location until final burial could be completed when the seasonal round brought the group near the cemetery. It is not possible, with the evidence available, to discount a reasonable alternative explanation for the distribution of primary versus secondary interments—that this simply represents cultural variability across space. Further knowledge of the distribution of mortuary practices and more precise information on
7. Mortuary Sites in the Mississippi Drainage

the nature of the resource distributions in these different areas should allow testing of the alternatives.

Distinct Corporate Burial Areas

The general patterns of the Helton-like and Titterington-like mortuary sites are very similar. The burial facilities are frequently large, shallow pits with up to 40 individuals (over 100 at Hatten in several episodes) laid in them with no obvious spatial patterning, such as the tomb-versus-peripheral burial in Middle Woodland mounds (Brown 1981) or the rows in Mississippian cemeteries (Goldstein 1980). The actual relationship of possible mound structure to these pits is difficult to ascertain from some of the reports or was so modified by plowing and erosion that no determination could be made. At Hatten, there seems to be very little mound fill, with the upper cobble layer rising to perhaps 20 cm above the surrounding surface and the burial feature dug into the original ground surface. At Elizabeth, two large pits were dug into an isolated knoll projecting at least 75 cm above the surrounding ridge. At the Airport site, there may not have been an actual mound, although the presence of a small earthwork is likely. Structures may have been erected over these large pits, further enhancing their visibility.

At most of the sites surveyed, only one mound or cemetery is reported. However, at Etley, and apparently at Hemphill, there were two mounds present. It is not clear whether the presence of two mounds indicates two contemporaneous burial foci or whether one is sequent to the other. We will assume for this study that the mounds are temporally successive. Under our model, simultaneous use of two burial facilities would indicate some sort of corporate structure. This would seem contrary to most interpretations of Archaic social organization, so a clearly documented instance of dual bluff-top cemeteries is required before we would alter the pattern of corporate organization we are presenting.

As noted, there is very little internal structure observable in these Archaic cemeteries. Artifacts or caches of artifacts were often placed either in the facility, with no relationship to specific burials, or with juveniles. The indication is that the artifacts are frequently associated with the facility, and hence the corporate group as a whole, rather than used as individual status markers. The association with juveniles in particular probably supports this interpretation. Burial accoutrements placed with children who have not yet attained adult status often reflect the characteristics of the child’s family or other corporate classification (Braun 1979, Saxe 1970). This pattern of artifact association again differs from later Woodland patterns in which artifacts more frequently appear to function as individual status indicators.

Consequently, the overall pattern that emerges from the structural arrangement of both Helton and Titterington phase, or similar, burial sites is one of
large facilities containing many individuals, with little or no spatial segregation of bodies or groups of bodies, and few associations of artifacts with specific adult skeletons. We interpret this as reflecting a corporate structure such that inclusion in the corporate unit is of utmost importance, with individual status rarely deemed significant. Furthermore, because the cemeteries seem to be widely separated, the corporate unit probably corresponds to the village. Villages may have consisted principally of single extended families because it would seem unlikely that multiple unrelated family units would cohabitate a village with such little regard for group or individual differentiation. This pattern may differ from Middle Woodland village structure, in which the high degree of internal differentiation in the cemeteries may indicate habitation by individuals not closely related [Brown 1981].

We must admit, however, that the preceding is a simplified, general interpretation of Archaic patterns for this region and that in reality, the situation is more complex. For example, a major segment of the Elizabeth Archaic component was a large pit containing the remains of 4 young adult males, each with two or three large projectile points placed inside the chest cavity at some time after death (Figure 7.2), and with the additional remains of at least 12 partial or disarticulated individuals placed above or beside them (see also Figures 7.3–7.5). There is clearly some special significance attributed to these individuals, and we hope that our continuing analysis of the site will produce a more definitive statement.

Exclusion from the Corporate Facility

We have not yet dealt with one major component of the mortuary domain. A number of burials have been recovered from Archaic habitation sites in the region, specifically Modoc Rock Shelter [Cook 1976; Fowler 1959; Neumann 1967], Koster [Buikstra 1976a; Cook 1976], and Napoleon Hollow [Wiant 1980]. Buikstra [1981] has compared the skeletal material from Modoc and Koster with the skeletons from the bluff-top Gibson Archaic component. The burials from Modoc and Koster contain a remarkably high incidence of severe pathologies that would affect the abilities of the individuals to perform normal activities, whereas the mound interments from Gibson are not characterized by a high frequency of incapacitating conditions [cf. Neumann 1967]. This suggests, within our framework, that those individuals unable to contribute to the economic functions of the corporate group were excluded from its bluff-top burial facility.

We should note, however, that the only obvious pathology in the three adults recovered from the Helton-like component at the Napoleon Hollow site, located at the base of the bluff on which the Elizabeth mounds are situated, is periosteal reaction on the surfaces of the limb long bones [Michael D.
Figure 7.2 Primary interments in one of two large Middle Archaic burial features at the Elizabeth site. Projectile points, originally placed within the chest cavities, had been removed overnight for security reasons and replaced prior to this photograph. Individual "sashes" were composed of Anculosa praerosa beads.
Figure 7.3 Projectile points (a–g and k–m) associated with the Feature 4 skeletons shown in Figure 7.2 and Osceola-like points (h–i) associated with other burials in the Elizabeth Mound 1 Archaic component. The dark staining on h is red ochre.

Wiant, personal communication, 1980). Given the prevalence of this form of pathology in the Elizabeth series, the Napoleon Hollow sample would seem unremarkable. These results should be interpreted conservatively, however, given the poor preservation and small sample size of the remains from Napoleon Hollow and the fact that the study of the pathology in the Elizabeth series is in the preliminary stages.

Buikstra (1981) further inferred from the Gibson series, where infants and
of this form of disposal would seem likely, however, remains from Elizabeth sites suggest that the lack of subadults at Gibson is due to poor preservation rather than intentional aboriginal activity. A Chi-square comparison among the Hatten and Elizabeth Archaic components and the Gibson and Klunk Middle Woodland components (Table 7.2) showed no significant differences among the populations in terms of age distributions, although the
Figure 7.5 Worked-antler artifacts associated with Feature 4 (a, c, and e) or with other Archaic components (b, d, and f) in Elizabeth Mound 1. Three of the items (c, e, and f) each has a transverse hole drilled through its shank.

probability approaches .05. The Gibson and Klunk material was chosen because Buikstra (1976b) has shown that the populations from these two Middle Woodland sites approximate normal demographic profiles with all age classes represented. Due to the incomplete nature of the Archaic material, it was necessary to collapse the age categories into 0–9.9, 10–19.9 and 20+ years of age. Comparison of the Gibson, Hatten, and Elizabeth Archaic populations (Table 7.3) did produce a significant difference among these groups, but elimination of the 0–9.9 age class (Table 7.3) indicates that the difference is due to the discrepancies within that age class. Because this is the age group most
TABLE 7.2

Distribution of Individuals by Age from Middle Woodland and Archaic Sites

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Middle Woodland</th>
<th>Archaic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Klunk&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Gibson&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>0–9.9</td>
<td>101</td>
<td>51</td>
</tr>
<tr>
<td>10–19.9</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>20+</td>
<td>246</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>372</td>
<td>156</td>
</tr>
</tbody>
</table>

<sup>a</sup>Chi-square value (6 d.f.) equals 12.398, which is not significant at the .05 level (12.5916).
<sup>b</sup>Derived from Buikstra (1976b).
<sup>c</sup>Derived from Klepinger and Henning (1976).
<sup>d</sup>Unpublished data in possession of the authors. Data from fragmented, dispersed remains were not available at the time of this analysis.

susceptible to poor preservation (Gordon and Buikstra 1981), and because no other differences in the mortuary practices among the three sites, aside from those discussed above, are apparent, we suggest that this underrepresentation of the youngest age class is due to the quality of preservation at the Gibson site. It thus appears that although infants and young children probably did not contribute greatly to the subsistence activities of the corporate group, they were not excluded from membership in it in the same manner as those adults who had lost the ability to participate in economic functions.

In all three instances of habitation-site burials, the remains came from pre-Titterington components. No burials from Titterington components have been reported. An interpretation of this distribution based on mortuary practices is not apparent. Instead, we would suggest that the absence of habitation-site burials probably reflects a sampling bias relating either to differences in the respective settlement—subsistence programs or to the geologic history of the

TABLE 7.3

Distribution of Individuals by Age from Archaic Sites

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Gibson&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Hatten&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Elizabeth&lt;sup&gt;d&lt;/sup&gt;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–9.9</td>
<td>1</td>
<td>32</td>
<td>8</td>
<td>41</td>
</tr>
<tr>
<td>10–19.9</td>
<td>2</td>
<td>11</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>20+</td>
<td>33</td>
<td>66</td>
<td>31</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>109</td>
<td>48</td>
<td>193</td>
</tr>
</tbody>
</table>

<sup>a</sup>Chi-square value (4 d.f.) equals 17.137, which is significant at the .05 level (9.48773). With the 0–9.9 age class removed. Chi-square value (2 d.f.) equals 4.257, which is not significant at the .05 level (5.99147).
<sup>b</sup>Derived from Buikstra (1981).
<sup>c</sup>Derived from Klepinger and Henning (1976).
<sup>d</sup>Unpublished data in possession of the authors. Data from fragmented, dispersed remains were not available at the time of this analysis.
valley. As has been noted, large base camps have been found for the Helton but not for the Titterington phase. A single large base camp from the prior period represents longer term habitation than does a smaller Titterington camp that was not occupied year-round or even repeatedly. Consequently, the probability of finding interments is much greater at a Helton phase site. Alternatively, Titterington burials in large, multicomponent surface sites may not have been recognized.

CONCLUSIONS

This chapter expands our understanding of the Archaic through a regional analysis of pre-Titterington and Titterington phase mortuary practices in the central Mississippi River drainage. Because of the problems inherent in applying previously developed methods of mortuary site analysis to incomplete data sets, a different approach was needed. Based primarily on work by Saxe (1970) and Goldstein (1980), four postulates were developed that related the spatial structure of the mortuary domain to the corporate activities of the societies in question, including the degree of sedentism and resource competition and the actual structure of the corporate groups.

Archaic populations inhabiting the lower Illinois and adjacent Mississippi river valleys were found to display a significant degree of competition for resources within the framework of a sedentary settlement—subsistence regime by 6000 BP. This pattern was not observed outside the major river valleys before approximately 4000 BP, when the intensity of competition had increased in areas along the major tributaries of the Illinois and Mississippi rivers.

The functioning corporate unit throughout this period of the Archaic was apparently the village. There is little indication in the mortuary behavior that an individual’s rank within the group was important, at least in the economic realm. Membership in the corporate unit was based on an adult’s ability to participate in subsistence activities, whereas infants and children were accorded that right without the necessity of economic production.

The amount of information that could be derived from the data available is encouraging, but much of our interpretation is still tentative because of the paucity of excavated materials. Completion of the analysis of the Elizabeth site, in conjunction with the analysis of the associated Napoleon Hollow site, should provide a stronger set of conclusions, but additional excavations and analyses of Archaic cemeteries are needed to adequately test the models presented here.

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