THE DIMENSIONS OF STATUS IN THE BURIALS AT SPIRO

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ABSTRACT

Formal analysis is employed to express symbolically the behavior associated with disposal of the dead in archaeological contexts. Key diagrams are shown to economically express the partitioning of attribute space by a series of variables coded on independently measured dimensions. The attention of this paper is to explicate the analysis of formal-structural relations among archaeological materials from Spiro, a specialized Mississippian period site in eastern Oklahoma, without resort to analogies between cultural-historical configurations. The power of the analysis is extended by direct comparison of the Spiro key with keys made on the same dimensions that are drawn from the ethnohistorical literature of two southeastern societies.

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FORMAL ANALYSIS

A GENERAL PROBLEM that confronts the investigator attempting to draw general anthropological inferences from archaeological materials is that there has yet to be developed a comprehensive interpretive methodology that is not completely dependent upon the customary forms of analogy that depend upon the controls of comparative ethnography and ethnohistory.

Only until recently, with the increasing anthropological interest in formal semantic analysis on the one hand and the systemic approach on the other, has there even been a clear effort to develop interpretive techniques within such a general method (see Binford 1965; Gardin 1965; Hammel 1965). Formal analysis, which has been almost entirely restricted to explicitly semantic situations as in componental analysis of kinship (see Colby 1966; Hammel 1964), has a more general relevance in anthropology. Gardin (1965) has made it clear that formal analysis can properly be directed upon perceptual, non-linguistic data through an inversion of formal semantic analysis. In the latter, most customarily used case linguistic units are the objects of ordering through the medium of perceptual components. In the inverted case, which is of direct concern for the archaeologist, an order can be generated from perceptual data through an artificial language. Such a reversal in the object order of the designate entails no basic change in the theoretical problems of formal analysis (see Burling 1964) but rather a shift in the area of greatest weakness (Hammel 1965:1). In the application of formal analysis to archaeological data, Gardin (1965) has properly focused on the problem of relevant codification, since the difficulties in this area are severe for archaeology. As an approach to the problem of codification and the choice of which descriptive feature of attributes are to be used, this paper will concentrate on an organization of archaeological data that appear to have some utility, namely in the fact that statements can be established in a deductive framework that does not depend entirely upon archaeological content.

To offer a brief characterization, the procedure involves the transformation of physical attributes into more general system terms through the delineation of dimensions of a domain. In the example drawn upon below, the dimensionality of status will be examined in the burial forms in a Mississippian ceremonial center of the Caddoan tradition, namely Spiro in eastern Oklahoma.

The procedure of formal analysis provides the essential framework of this exposition. It is a means whereby a paradigm or model is generated by the correspondence between a “target language” or set of anthropological data and a “reference language” which may be either a natural or artificial language (Hammel 1965; Gardin 1965). The critical problems in the operation of formal analysis as paraphrased by Hammel (1965:4) from the statement by Gardin (1965) are three-fold: “(1) delineation of the corpus of phenomena to be investigated, (2) selection of the language of description and analysis, and (3) the relevance of the analysis.” That of the first pertains to the boundaries delimiting the set of data, which though this can usually be operationally carried out in archaeological analysis, its derivative problem of sampling can be very troublesome. It is evident that the completeness of the formal analysis is largely dependent upon
the size and representativeness of the sample, since it is this very set of available data that structures the formal paradigm. This means, in effect, that the completeness of the formal order is contingent upon the sample. But it does not follow that the paradigm is necessarily incorrect. Poor data results in obscure and undifferentiated structure. Instead, sampling defects tend to produce skewness which has the effect of truncating or distorting the paradigm. In any case, the universe of designata of the archaeologist must be carefully examined to reveal and take into account the effect of skewness or incomplete record in the resulting model. The archaeological investigator can rarely be certain that the complete set belonging to the pertinent domain is represented in the materials at hand. But information derived from outside the domain or site frequently gives the investigator pertinent information that guides his handling of the formal analysis. The second issue is a matter of codification for assembling an artificial language, and it will be the purpose of this paper to elucidate one such approach.

The third problem area is one that deserves greater attention than this paper can devote to it. But, for the present purposes, assumptions must be made about the correspondence of cultural behavior and the objects altered and manipulated by man. This study in formal analysis is necessarily committed to a systemic approach in which the natural, social, and cultural levels of organization as represented in arrangements of the human world are linked in a natural system. Such a system contains elements for its maintenance at both the physical and socio-cultural levels, and in any given situation it defines the abilities of its participants to cope with the external environment in its cultural, social, and physical manifestations. The use of systemic relationships allows for conceptual organization of elements drawn from different analytical levels both physical and material, and social and abstract. In these terms, the following approach involves a conversion of elements of diverse analytical levels into dimensions of comparable levels of abstraction. Whether or not a valid subsystem is represented by the formal paradigm is not in question, only that in fact subsystems and systems are potentially expressed by such formal arrangements.

In principle, the similarities and differences in behavior accorded individuals and their ideational supportive rationale by other members of a society will be revealed in a structural analog in the behavior attendant upon mortuary practices and disposal of the dead. The approach under consideration owes much to the procedures used in a structural analysis of social organization of behavior surrounding death and the funerary program, and it constitutes an extension of the universe of relevant data to include the fossil representations of the burial situation as it is uncovered by the archaeologist. Turning to the subject as it has been dealt with by ethnologists and social anthropologists, what little research has been devoted to the formal relationship between burial procedures and social structure in contemporary cultures offers encouraging possibilities (see Goody 1962; Mandelbaum 1954).

The gap separating the physical remains that are the raw material of the archaeologist and the behavioral data of anthropology and sociology is bridged by analogy, which as a logical procedure has been invoked in archaeological interpretation in quite different ways, often without regard to larger logical interpretations (see Ascher 1961; Binford 1966). The customary approach in archaeology has generally restricted attention to only a limited number of situations, namely, where there is historical continuity between archaeological and ethnomological record and where there is control in one cultural dimension (Binford 1966). There are, however, more diverse concerns in which analogy can prove to be a more effective logical tool in archaeology. One of these, upon which the argument of this paper will rest, posits that an analogy can be established between formal paradigms of different cultures as long as they are constructed from similar dimensions.

One of the major problems in formal analysis outlined by Gardin (1965) is that of establishing a suitable and relevant artificial language or descriptive code. This paper proposes to treat a domain of products of socio-cultural behavior as composed of a structure of class products or property space (Lazarsfeld 1961; Barton 1955) that are defined generally speaking by the juncture of dimensions, which for the archaeologist are physical attributes of cultural significance. This approach has been successfully used in psychology and sociometrics to provide a formal map of a domain in which the boundaries and the structure of the system are indicated by the relationships among the component spaces. The dimensions made up of variables of archaeological material are entered as co-ordinates that define a multi-dimensional cube of property spaces whose attributes
have been explicated by Lazarsfeld. It constitutes a model or paradigm of the relationship of the domains of dimensions. Although Lazarsfeld (1961) dealt explicitly with societal elements, the principles that are involved are directly applicable to the physical world. Accordingly, common ground is established when he speaks of types, which "when examined in detail turn out to be defined as clusters of many different attributes." Moreover, "the understanding of such types will often be assisted if we reconstruct the entire property space and see how they are derived from it." The procedure of finding the property space in which a given set of types are located organizes the relationship between the elements or types and yields matrices of possible relationships when different dimensions are considered. Since this technique, called substruction, relates elements to the contingency of certain dimensions, we have here a procedure whereby archaeological data can be transformed into dimensions, which by judicious selection can be those relevant to the partitioning of social structure. In other words, the conversion into dimensions of elements and types derived from different levels of abstraction provides a common ground for explicit comparison and eventually for a technique of controlled comparison with other systems defined archaeologically and ethnologically. In this presentation, a key type diagram will stand as the map for some of the dimension property spaces derived from a suite of archaeologically based dimensions. It, then, is constructed of the archaeological evidence pertaining to the funerary domain, which by its structure, whether hierarchical or egalitarian, segmental or unified, offers a clear indication of the types of possible behavioral correlates and the social structures to which they pertain.

THE ARCHAEOLOGICAL CASE

The site of Spiro has been demonstrated to be a multi-component site belonging to a single regional tradition of the Mississippian of the southeastern United States. The site consists of village occupation among a series of 9 mounds. The village belongs to the earlier components of this regional tradition. The earthwork features comprise platform mounds, accretional burial mounds, and buried house mounds that presumably covered abandoned charnel houses. There are remains of several public buildings with special attributes. The evidence upon which this paper draws is concentrated in the period of latest occupation (Spiro phase) when the community at Spiro was fully participating in the cultural interactions and exchange networks encompassing the whole Southeast (see Larson; Peebles, this volume).

The burials date within a wide range of the occupation reaching from the Evans phase (ca. A.D. 700-900) or an earlier phase and extending to the end of the Spiro phase (ca. A.D. 1450 or later). The concentration of burials is within the Spiro phase where the full diversity drawn upon in this analysis is found. The available burials represent an indeterminate proportion of the total since the extensive looting removed an unknown number. Burials have been found in several specific contexts that received different use during the occupation of the site: (1) in an open cemetery; (2) in the top and flanks of the platform mounds; (3) on a charnel house or mortuary floor; and (4) in accretional burial mounds that presumably represent the reinterment of the discarded contents of the charnel houses. The first context is restricted to pre-mound and to post-mound periods at the Craig mound and only in the latter situation are there burials that key out differently than the rest. Aside from the few primary interments from the late post-Spiro phase, all bear evidence of being secondary burials. Those found on the charnel house floor in the main unit of the Craig mound are very unusual in the archaeology of the Caddoan area, both because they are solely secondary and because of their excellent state of preservation. This provenience includes precisely the context which was looted for profit and made famous as the so-called "hollow chamber" (see Hamilton 1952; Brown 1966), and it has now been discovered to have been a large buried charnel house floor with contents that were formerly intact (Brown 1966)—hence the name, the Great Mortuary.

The funerary domain consists of a set of dimensions that key more than the archaeological expressions in the disposal of the dead (i.e., their details, forms, and patterns). The domain is potentially unlimited, but, for practical purposes, it is limited by archaeological knowledge and certain cross-cultural assumptions.

The dimensions that have been selected for are those represented in the physical world by
variable states measuring (directly or indirectly) demographic structure of the population, grave-side behavior, and the burial program. The dimensions have been arranged according to three major categories:

1. Handling of the burial: The dimensions that categorize the disposition of the body (skeleton) as such, and are a product of the burial program.
   (a) Degree of articulation of the skeleton(s).
   (b) Kind of disposition, whether grouped or not.
   (c) Number of individuals in a burial.

2. Burial context within the grave: The dimensions that categorize the burial arrangements.
   (d) Arrangement within the grave of specific bones with relation to grave goods and grave facilities.
   (e) Presence or absence of osseous containers or facilities, such as jars, baskets, or litters.
   (f) Occurrence singly or in multiple burials.

3. Population profile: The dimensions comprising the demographic structure of the population.
   (g) Sex
   (h) Age class, either adult (including adolescents, aged 12 and over) or child.

All burials are represented by descriptive categories identified by Roman numerals on the right-hand side of the paradigm except cremations (type XIV). The few cremations that are known from the site are not entered because our knowledge of burial contexts of cremations is inadequate at this time. The archaeological context of cremations at Spiro is largely, if not solely, restricted to phases prior to the Spiro phase. Table 1 represents a key diagram of the formal structure of the burial types according to the most economical arrangement of the coded alternatives of 8 dimensions. The order in which the burial types appear vertically is determined by the partitioning of the dimensions appearing from left to right. When read horizontally, the entries under each dimension comprise the alternatives present for each burial type. The roman numeral designator's refer to burial descriptions given elsewhere (Brown 1971).

The codable variables of each of the dimensions divide and arrange the population of available burials from the site in a significant way for interpretation. The most economical arrangement of burials places greatest emphasis on the degree of alteration of natural articulation. As a result of the uneven distribution of burial types among categories of degree of articulation, the least articulated account for the greatest burial diversity. The remaining two dimensions of burial handling virtually complete the partitioning of the burials in their final form, and it appears that the three handling dimensions of this account for most of the variation among the burials. The remaining dimensions reinforce the arrangement emerging from burial handling and essentially serve to isolate those particular burials that are specialized in arrangement, interred in facilities, found in composite graves, and have special configurations of sex and age. It is important to note that the burials conspicuously interred in facilities can be segregated in terms of attributes other than the particular container form (viz., jar, basket, and litter). Aside from those coded into the 8 dimensions of Table 1, litter and copper plate burials differ from the jar burials in skeletal parts recovered. The former consist largely of skull elements with the exception of the children represented in the copper plate burials, whereas the latter consist of hand and foot burials. The last two dimensions comprising sex and age group variables cannot be systematically keyed since appropriate information from the poorly preserved skeletons is insufficient, but skeletal analysis shows that the burial population is comprised almost entirely of adults, there being only 2.1% aged 12 and under (Brues 1971). Most of the children consist of scraps and are probably accidental burial inclusions, since deer bone was sometimes mistakenly interred in burials as well (Brown 1971). The exceptions are important and consist of two copper plate burials, which are clearly isolated in other respects, and one burial (IIIa) covered with shell beads. The adults are not noticeably divided disproportionately between the sexes. But there are some individual identifications that suggestively reinforce other keyed dimensional contrasts. These suggestions are taken up below.

Before proceeding further, it is important to bear in mind that certain of the disarticulated burial types represent intermediate stages in an interment program. Without going into the detailed argument that allows this statement to be made, it should be pointed out that at least two burial programs existed at Spiro (see Brown 1971). One was dependent upon the preservation of the
<table>
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<tr>
<th>Burial Behavior</th>
<th>Degree of Skeletal Disarticulation (Dissociating from bottom to top)</th>
<th>Arrangement of Burial Facility</th>
<th>Numbers in Burial</th>
<th>Disposition of Skeletal Remains</th>
<th>Inclusion as Occurrence as Group Burial</th>
<th>Burial Sex</th>
<th>Burial Type</th>
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<td>Single &amp; multiple</td>
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<td>Male &amp; female</td>
<td>Male &amp; adult</td>
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<tr>
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<td></td>
<td>Unspecialized—outside container</td>
<td>Single &amp; multiple</td>
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<td>N/A</td>
<td>Male &amp; female</td>
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<td>Articulated</td>
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Table 1. Key diagram of Spiro burial attributes.
articulated skeleton and probably the withholding of the preserved body for a specified time before final interment (Program A). In the other a bone cleaning procedure was performed after the body was allowed to partially decompose in the ground (Program B). All of the partly disarticulated burials can be attributed to the former program. Most of the disarticulated burials belong to the latter, and during the course of the bone-cleaning program the skull, teeth, long bones, feet, hands, and perhaps other elements were deliberately segregated from the rest of the skeleton which was given separate treatment. The skull burials (VII), the different bundle burial forms (VIII, IX), as well as the specialized burials (X, XI, XII, XIII) represent, at least in part, the final phase of the bone cleaning program. The specialized burials, in which the skeletal material consists of mere scraps and teeth, represent a final phase after protracted exposure. An exception to this sequence among the specialized burials is the child sub-group of the copper plate-burial (XII), since they have not gone through the bone-cleaning program. The burials belonging to the type VIA and VIB group of unspecialized and unspecific disarticulated remains consist predominantly of those bones not included in specialized burials. Hence, the extent to which they represent a complementary set to the specialized burials, they may be “left-overs,” especially in their contexts in the Great Mortuary and in stages of the overlying platform mound.

However, it is unlikely that these types are restricted to the “remainders” of the specialized burials since they account for the second largest number of tallible individuals in the sample (ca. 30%), and they are at least 7 times more numerous than all the specialized burials together. To assume equivalence would imply an unlikely situation in which a greatly disproportionate number of specialized burials have been destroyed in the commercial digging. The controlled excavations showed that the specialized burials were the more deeply buried and except for the burials in the Great Mortuary were the more protected. It is more likely that the disarticulated burials (VIA and VIB) are not exclusively equivalent to the specialized burials (X, XIA, XIB, XII, XIII) and that they represent a far more inclusive set, among them individuals not represented elsewhere in the skeletal population. Antecedent stages in each program cannot be identified archaeologically with certainty, but the primary articulated burials (I) represent a suitable equivalent for the bone-cleaning program. Those few (3) of this known from Spiro are actually unassociated with the mound and probably post-date the mound activity. Judging from the number of articulated extended and semi-flexed burials found in cemeteries near Spiro, these type I burials probably represent a third burial program (C), one that remains to be worked out in greater detail (see Orr 1946).

It is indeed fortunate that evidence bearing on burial program is available since it allows us to partially control a dimension that is usually not within the grasp of the archaeologist. Normally, the simpler assumption is that burials represent the final interment in the absence of evidence to the contrary. Although knowledge of the burial forms specific to different stages in the burial program adds a necessary interment factor, it does not jeopardize the usefulness of the key diagram but indicates that its interpretation is to be a compound of both status that is dependent on program as well as status unaffected by interment program.

The formal structure orders burial-defining status at Spiro by keying out co-variation among demographic and significant cultural variables as measured on dimensions. The manner in which this key achieves this end is incorporated in the following points.

1. The amount and duration of custodial care accorded burials is roughly proportional to ascending order along the vertical axis. The key, which incorporates primarily distinctions of degree of articulation, encodes in combination with the disposition of skeletal remains, numbers in a burial, arrangement of the burials, and inclusion within a container, additional elements of custodial care and places burial-defining status on a scale of custodial care irrespective of burial program. It should be noted that specialized burials isolate those interments that center the most explicit attention upon single individuals among the disarticulated burials, and it includes a special subset of single individuals that are placed in a container.

2. The key segregates burials by burial program (viz., A, B, C). The partly disarticulated burials belong to Program A, and most of the disarticulated burials belong to Program B. The probable distribution of burials by program is represented in Fig. 1. The articulated burials are not a product of the mortuary programs.
The key isolates the distribution of age classes among types within the mortuary programs, thereby allowing statements regarding age-dependent status determinants of membership to be advanced. Only socially defined adults are found among the burials of both mortuary burial programs. The exceptions are the children belonging to two burial types (IIIa, XII) only, each of which represent a different program. Juveniles are few in number and are restricted to the specialized disarticulated burials. It is evident that adult status is a necessary pre-condition to entry into either burial program. But this society evidently defines adult status (aged 12 and older) in terms of an individual's cultural and biological contribution or potential contribution to the society. Under such rules, individuals under puberty would not have a secure potential except for a small minority accorded a "potential" far outweighing their earned social contribution. This situation can only denote strong culturally reinforced ascribed status to the exceptions and by extension special status to other "adult" members of the particular types.

There are independent behavioral forms for defining rank within each of the two mortuary programs. The key does not indicate any isomorphism between the burials of each program either in terms of status slots or in terms of formal descriptive resemblances between the two sets. In point 3, the status of two types (IIIa, XII) has been shown to be special within both mortuary programs. Moreover, this status is of high rank since: (1) the position of Burial XII falls within the uppermost reaches of the scale of custodial care, and (2) both types (IIIa, XII) include a more inclusive portion of the population profile. That this parallelism happens to unite two ends of the key can be interpreted as a product of point 2.

Further analysis of the key diagram requires that other lines of evidence be marshalled to test the points that merge from the formal cast of burials in the key.

The first test lies in matching the ordering of the burials with their known proportions in the available population sample. The frequency of individuals is not distributed equally among the burial types. The greater proportion are found in what are essentially partly disarticulated burials (52%), another substantial number are disarticulated (44%), and only a minor number of burials recovered from the site are actually articulated (Table 2). Within the numerically predominating categories, the multiple (unkeyed) burials of Class A and B account for the majority of the partly disarticulated burials as well as some disarticulated elements. The disarticulated burials of VIa and VIb types compose the main part of the disarticulated category. There are some shortcomings stemming from the records, but what is essential here is that the specialized burials account for a small number and that even the total number of disarticulated burials amount to a smaller proportion than the partly disarticulated and articulated burials. That is, the number of burials per burial-defining status is roughly proportional to descending order in the key. Point 1 is confirmed and ranked status is even more strongly indicated as being embodied in the order of the key. The exceptions in the small numbers of type IIIa and possibly type II are important in confirming point 4.

The second test considers the burial arrangement in complete burials. Among the burial classes and in the Great Mortuary there are clear instances of different burial types combined in particularly significant ways for this study. A number of the burial classes bear evidence in the
records of being composed of separate burial components that have undergone different histories prior to final interment. They are called composite burials here. Among them is a special case (BrB-6) and the evidence from the Great Mortuary in which the disarticulated and selected remains of single individuals (in litter or conch shell burials) are placed on top of the disarticulated and partly disarticulated remains of numbers of individuals (13 in the case of BrB-6, and over 23 in the case of the Great Mortuary). Wherever burials of the litter and conch shell class co-occur with other burial types, they are superimposed on them. In the Great Mortuary, the litter burial shares its superordinate position with the specialized copper plate and the partly disarticulated extended burial. Elsewhere, the latter extended type (IIIa) compose composite burials in which physical super-position does not occur, and similarly, the copper plate burial is known to occur similarly in a burial context.

The evidence of the Great Mortuary as being an enlarged composite burial in which the whole mortuary space is stratified in status has important implications that reinforce the paradigm of status at Spiro. It demonstrates the status relationship of the copper plate burial (XII) and the partly disarticulated extended burial (IIIa) to the litter burial (XIA) (and elsewhere the conch shell burial XIB) whose dominance of the status hierarchy can be demonstrated in other ways. This information is congruent with the ranked scale of the key (point 1) and reaffirms the relative ranks within each program (point 3). It also establishes that: (1) 3 of the 4 burial forms designated as specialized and occupying the uppermost position in the key diagram are among the highest ranks; (2) that the specialized burials rank above both certain disarticulated and some partly disarticulated burials; that is, they rank above members of both mortuary burial programs (A and B).

The rank of the partly disarticulated extended burials (IIIa) can perhaps be clarified with resort to the miscellaneous sex identifications that are available. One of the litter burials contains a male adult skeleton, and the sex here is consonant with principal leadership; the only adequately preserved skeleton of the IIIa type is definitely female. Significantly, substantial numbers of conch
shell artifacts were interred with both. In the case of the litter burial 40 shell cup fragments composed a bed for the skeletal remains and in the latter interment 11 cups were massed over the burial. The significance of the conch shell contributions will be explained below. Although the evidence is insufficient to be self-supporting, it allows the possibility that sex differences are determinants of burial program, at least among the upper ranks. Such an explanation would help us understand how burials of similar rank in the Great Mortuary context exhibit such divergent degrees of specialized handling. As an alternative, it is quite possible that the partly disarticulated extended burial could be an intermediate stage in a burial procedure normally ending in a litter burial, and that the sex identifications represent fortuitous cases. It may be significant for the case for status distinctions (and more specifically sexual distinctions) as determinants for prescribed burial handling that the known proportion in our sample of the burial forms in question (IIIa, Xla, Xlb) is the same (8:8). Moreover, the sex ratio in the lower member skeletons is sufficiently close to identity [14:58%:10%(42%)]. Other details that reinforce this explanation are described in the burial analysis (Brown 1971).

When account is made of the chronological position of the burials, it is apparent that the greatest number of burials in the phases antedating the Spiro phase are made up of partly disarticulated burials. A few unspecific and unspecialized disarticulated burials, a jar burial, and some cremations loosely connected with jar burials, are known. The specialized burials are limited to copper plate burials, are few in number, and fall chronologically in the (Harlan) phase preceding the Spiro phase. It is only with the period in which the Great Mortuary and its structural antecedents fall (early Spiro phase) that the litter burials, the partly disarticulated extended burials (IIIa), and the specialized unspecific burials (Vlb) appear. It is the Great Mortuary that housed the largest aggregation of each. Following the closing of the Great Mortuary, a platform mound was erected over its site, and the top presumably became the location of succeeding mortuaries. At this time (late Spiro phase) the diversity of burial form reaches its greatest extent, and the corresponding social system reaches its greatest complexity. The burial paradigm (Table 1, Fig. 2) becomes complete. In a formal structural sense, the erecting of a platform mound in the mortuary space would appear to signify the physical reinforcement of ranked status in the community. The full complement of burials was maintained until the closing of the mounds and the virtual abandonment of the site. During the late Spiro phase, the two platform mounds on the site (the main unit at Craig, and Brown mounds) encapsulated in their organization of burial space important directional distinctions (Brown 1971). The facing sides of each mound were the sole location of burials of Program B. None of this program is to be found on the opposing face of Craig. Program A is found on both sides of Craig and at Brown, but it occurs only in composite burials, wherein they occupy the lower member of this "stratified" multiple burial. Again, location reaffirms the points derived from the key.

### Programs

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<th>D</th>
<th>A</th>
<th>A/B</th>
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<tr>
<td>CREMATION (XIV)</td>
<td>LITTER/CONCH SHELL BURIALS (Xla, Xlb)</td>
<td>PARTLY DISARTICULATED EXTENDED (IIIa)</td>
<td>COPPER PLATE BURIAL (XII)</td>
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<td></td>
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<td>JAR BURIAL (XIII)</td>
<td>REARTICULATED (X)</td>
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<td>SKULL, BUNDLE BURIALS (VII, VIII, IX)</td>
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<td>UNSPECIFIC FORMS (Vla, Vlb)</td>
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**Fig. 2.** Paradigm of burial types by rank, status, and burial program.
At this point, relatively little has been made of the artifactual associations of the burials, but we only need to briefly examine them to confirm the inferences drawn from other aspects of burial. A fuller discussion of artifactual behavior among burials will await the opportunity for a more extended and inclusive analysis. If we were to rank the artifacts proportionately to probable distance of transport to Spiro, the copper items and the conch shell cups and derived artifacts would rank first in value.

The items made from the exotic stones of the southern Appalachian region and Arkansas can be placed next, and blades of exotic flints third. Other materials are available from locations fairly close to Spiro and occupy the lowest order.

Copper is used in a wide variety of contexts, both as a major constituent of important sociological artifacts, such as plates (which are probably portions of headdresses), hairpins, and items that amount to status badges if not insignia of ascribed office, are associated with the copper plate, litter, and partly disarticulated extended burials, all of which belong among the highest ranks (Fig. 2). In the case of conch shell cups and shell gorgets, the associations show that they explicitly define a litter burial and a subclass of copper plate burial with some of the attributes of a litter burial. Furthermore broken shell are almost entirely associated with the stores of the charnel house. Likewise the ground stone ceremonial celts, monolithic axes, and stone effigy pipes are found with specialized burials although the number of contexts in which they appear is more diverse than in the case of the shell cups, the copper plates, and other headress items. The flint blades have the widest distribution of the series although like the preceding items they were found in greatest number in the Great Mortuary.

A comparison of the burial paradigm with the distribution of most important and precious grave goods shows that there is a correspondence that supports the ranked status inferences drawn from the formal analysis alone. Such a match implies that the interment of a large amount of valuable commodities with the dead at Spiro is related to the special behavior represented in the burials within containers. If this relationship were thought to be unrelated to the status of the dead, one need only examine the political and social implications of the formal-structural aspects of the litter burial to acknowledge that there are strong elements of differential status associated with this facility in its use of substantial manpower to transport either an individual or burial. In terms of these properties alone, the burial context in a special funeral bier (litter) clearly places it in premier rank above the other burials including the specialized copper plate burials. The latter presumably should be placed in second rank, which is a position that is confirmed by the overlapping of attributes between a few examples (Brown 1971).

The attributes of the litter, copper plate, and partly disarticulated extended burial form a matrix that is even more socially and culturally specific.

1. Overlapping grave good types can differ considerably in amount of burial type.
2. Only adults are present in the litter (conch shell) and equivalent burials although adults and children are present in the other two burial types.
3. The litter constitutes not only a facility but also contains elements of an office. Considering these statements together it can be advanced that the copper plate and extended burial define a special segment of the Spiro population with all ages and both sexes represented. Within this pool there are ascribed rights to copper plate burial available to some, possibly only males, and that adults (presumably males) are eligible for attaining the third status which is at the pinnacle of power. The latter status carries with it an office and the power to accumulate and distribute objects of high ascribed value.

Such a combination of variables in light of this paradigm suggests that the litter burial pertains to the status of chieftains and the copper plate burials to that of the members of the chiefly family, including children, near relatives, and perhaps a premier descent group. The other disarticulated burials that were handled and given the same bone cleaning procedure as the specialized burials with containers can be assigned to a lesser status category and possibly represent the burials of individuals holding high subordinate offices or those who either have achieved status through merit or have acquired power through effective leadership. However, the disarticulated burials cannot be clearly ranked with respect to the more common partly disarticulated and articulated burials. A more extended range of rank appears to be represented by the statuses designated by the partly disarticulated burials. In the first place, isolated instances of such burials
are interred with artifacts (conch shell cups) that are elsewhere associated with the premier status, whereas most are interred with a variety of objects or none at all. Second, the partly disarticulated account for the largest proportion of burials interred in the mound areas at Spiro, and it would appear that the greater proportion of the individuals with preferential rights to burial and burial treatment in the Spiro mortuaries are represented by this burial category. Access to the Spiro mortuary implies that such a right was denied others. They would be outside our discussion although their existence—which is highly likely, is probably indicated by the primary articulated burials in neighboring villages. The problem with these burials is their precise cultural age, which if it should prove to be at least contemporary with those in the mounds, would open the door for considering yet another status dimension, which would conceivably make up most of the primary substratum of the Spiroan population.

The status arrangements that have been advanced are not without analogs in the ethnological literature. The pyramidal arrangement of rank order by membership size of the statuses, the disproportionate access to valuable goods, as well as the existence of status groups of partly overlapping rank fulfill some of the requirements of an adaptive level of organization called a chiefdomship. The general attributes of such a level has been set forth by Fried (1960) and Service (1962), and some of the specific features of a subgroup common among the chiefdomships in Polynesia have been outlined by Sahlins (1958). It is the ramage type of kinship organization of the latter in which the seniority principle within the family is extended throughout the tribe that appears to account for the arrangement of statuses.

From the Spiro burial data, it can be concluded that a formal analysis of the burials in terms of culturally appropriate dimensions considerably aids in the analysis of such a complex cultural situation. At the same time, the construction of a paradigm of the property spaces representing the burials at such a site as Spiro enables one to draw upon a behavioral map of the archaeological situation when proceeding on an analysis of the cultural and social correlates rather than depending solely upon the arguments afforded by analogy.

The formal analysis of the burials from Spiro actually allows us to explore the dimensions of status and to outline certain parts of an extinct social system. The result is a description of the burials that emphasizes the structural relationship of the burial forms with respect to their component dimensions. With the step from classification to descriptive structure, a very distinct advantage ensues that allows the investigator to make structural comparisons between cultures and comparisons between descriptions generated from both archaeological and ethnological records.

The possibilities that can be developed by the more direct comparison between the structures of the burial forms of both the archaeological ethnological record deserve some attention. We are able to make comparisons that are more than simply those between lists of customs and correspondences between explicit forms. This is an important advantage since particular burial practices often differ between neighboring cultures within the same status. The comments and criticisms of Kroeber (1927) concerning the usefulness of burial customs for comparative purposes hinge on the attempt to explain explicit customs, which as he and others have pointed out cannot be fruitfully handled directly. The technical problems of structurally arranging the burial forms as well as outlining the formal differences in handling of particular sets of individuals is actually a far easier accomplishment with ethnological data. This paper proposes to illustrate the comparative value of formal analysis by treating ethnohistorical and complementary archaeological materials in a manner equivalent to the Spiro case.

THE ETHNOLOGICAL CASES

The mortuary practices of the historic tribes of the greater Southeast stand as well known examples of the differential treatment of the dead among internally ranked societies. Studies of the burial practices have shown that interment within a mortuary or charnel house was frequently observed as one phase of the interment program (MacLeod 1928; Swanton 1946). It figures prominently in several episodes recorded by the chronicles of DeSoto's party. Five tribes are specifically singled out as using the mortuary, and the famous mortuary house of the Cofachiqui has become well known through its detailed description (Garcilasco de la Vega 1951: 314, 337, 438, 493). When the French came to occupy the Gulf Coast area and the Mississippi River valley,
they found that mortuaries housing boxed and cleaned remains were still in use, though by no means universally, and that some were highly specialized and associated with important social and religious activities (see MacLeod 1928). That of the Natchez received voluminous attention because of its association with the practice of immolation at the death of the tribal and village chief, but the Natchez case by no means stands alone in its class. Moreover, there was considerable diversity in mortuary practices during the eighteenth century (see Swanton 1911; MacLeod 1928). In the Gulf Coast drainage, MacLeod (1928) has been able to distinguish two major mortuary house complexes, one identified with the Natchez-Taensa and the other with the Choctaw. Although our knowledge with respect to many dimensions appearing in the Spiro burial paradigm is lacking, a comparison of each with Spiro sheds light on the interpretive possibilities that formal analysis gives us.

Each complex can be summarized by the following points:

**The Natchez-Taensa Complex:**
1. Primary burial phase by inhumation and scaffold burial that is differentiated by status and rank. It is comprised of burial in a platform mound, in individual scaffold platforms, and in grave pits.
2. Reburial in mortuary houses as secondary burial for selected individuals.
3. Final interment in unspecified locations as tertiary phase.
4. Central mortuary house on platform mound for high ranking individuals; local village mortuaries for the others.
5. Mortuary house of the central village is the tribal temple, in which the sacred fire, the stone ancestor figures and other ritual objects for the well-being of the tribe are housed.
6. Mortuary house custodians are also the temple guardians, and are assistants of the presiding priest of high status (“Master of Ceremonies”).
7. The mortuary house custodians are the flesh strippers (see Swanton 1911:160).

**The Choctaw Complex:**
1. Primary burial phase by scaffold burial, apparently in undifferentiated form by status or rank.
2. Reburial in mortuary house as secondary burial for all.
3. Final interment in a dump covered by a mound as the tertiary phase.
4. Central mortuary house in unknown location, which may have had attributes separating it from the others. Not present in later part of eighteenth century. Village mortuaries used by general population. Sometimes constructed without walls.
5. Mortuary house is not used for other purposes. A temple with a sacred fire also unknown.
6. Mortuaries are located outside the villages and do not have resident caretakers.
7. The flesh strippers (“Buzzard Men”) are itinerant.

Among the Choctaw the mortuary house was evidently regarded as an extension of the village or of the farmsteads composing a settlement, and its proper maintenance was as important to the community as the dwellings of the living. Although the use of mortuaries came to an end in the early nineteenth century, we know from the collection of extant remarks that there were a series of observances and proscriptions surrounding the proper maintenance of the mortuary. Those that died away from the village were to be carried to their proper mortuary whether as a body, as bones, or ashes (Swanton 1931:183). Those that were lost were accorded substitute rites (Swanton 1931:175). Even after mortuary houses ceased to be used, the validation of the rights of the inhabitants of a village or hamlet was attested to by their proximity to the graves of their ancestors (Swanton 1931:181). In contrast, suicides (i.e., those that cut themselves off from their proper social world) and the enemy were buried without ceremony and presumably without the bone cleaning procedure (Swanton 1931:174).

Among the Natchez and the Taensa, the mortuaries of the central village were part of the tribal temple, which was the site of the important religious ceremonies of the tribe. The elements of superior status accorded those interred in the mortuary is further enhanced by its separation from ordinary men and their activities through elevation on a mound and imposition of secrecy in the temple. Although there are a number of descriptions of the chiefly funeral, there is a lack of general remarks on the behavior associated with the death and burial of the lower statuses.

The burial procedures associated with the two mortuary complexes are outlined below (Tables
The two differ in burial procedure principally in: (1) the formal differentiation by status among the primary or initial phase burials of the Natchez-Taensa, (2) the paramount position of a central mortuary that functions also as a tribal temple cared for by resident custodians, (3) selection among the society for individuals to be interred in the central mortuary.

Before considering the paradigms that can be constructed for the two mortuary complexes, it will be advantageous to consider the archaeological evidence that is pertinent to the Natchez situation. We are particularly fortunate to have archaeological excavations available for the very 

<table>
<thead>
<tr>
<th>Primary Burial</th>
<th>Secondary Burial</th>
<th>Tertiary Burial</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. On individual house-shaped platforms: “principal servants” (LP) (Swanton, 1911:143) in local village (DM) (Swanton 1911:157)+</td>
<td>Placed on temple shelves (?) : “principal servants”?, referred to as being carried to temple of own village after immolation ceremony (DP) general comment (DP) (Swanton 1911:143,149).*</td>
<td>Removed from temple (?) : not observed.</td>
</tr>
<tr>
<td>III. Pit burial: “ordinary servants” immolated during funeral (LP); placed in pits with “arms and clothes” after immolation (C) (Swanton 1911:142-143).</td>
<td>Existence unknown.</td>
<td></td>
</tr>
</tbody>
</table>

*The high ranked status interments in the temple were accompanied with new immolations (DM) (Swanton, 1911:156). 
**Also the Taensa (LP) (Swanton, 1911:269). 
+The mode of burial recorded among the Acolapissa (P), Bayogoula (DI, LM), and the Houma (LM) (Swanton, 1911:275-277, 282, 287). 
#Reinterment of the platform burials recorded among the Acolapissa (P) (Swanton, 1911:282) 

Table 4. The burial procedure of the eighteenth century Choctaw by phase and social segment.

<table>
<thead>
<tr>
<th>Primary Burial</th>
<th>Secondary Burial</th>
<th>Tertiary Burial</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Interred on a platform or coffin-shaped tomb situated near residence (RE) (Swanton 1931:170).</td>
<td>Wrapped in cane basket, placed in channel house outside village (RE, BA, RO, BY, CU) or near each “tribe” (AD) (Swanton 1931:171-176).</td>
<td>Interred in mound after mortuary filled (BA, CU, HA) (Swanton 1931:173,176-177,188).</td>
</tr>
<tr>
<td>II. Placed in a chest and kept in a central mortuary reserved for chiefs and possibly important warriors (RE) (Swanton 1931:171).*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The differentiation of mortuary location by status and its association with priestly offices is attested to by tradition which states that warriors were given special treatment and placed in a “Temple of Warriors” presided over by priests (CL) (Swanton 1931:182). 
location described by the French as the principal mortuary temple of the Natchez. This evidence together with a presentation of the ethnohistorical and archaeological correspondences has been ably set forth by Neitzel (1965). He has shown that the excavation of Mound C at the Fatherland site, near Natchez, Mississippi, by Chambers in 1931 and himself in 1962 provides an adequate and acceptable version of the temple of the Natchez described on numerous occasions, albeit in an indifferent manner without great accuracy.

The temple was, as we are informed by French sources, the principal mortuary house of the tribe in which resided the burials of high status individuals. At least two phases to the interment of the dead can be specified as involving the mortuary and its location (Table 3). In one, the dead were inhumed in the temple floor, which archaeological investigation shows stood on a pyramidal mound. In the second, the cleaned bones were stored in containers in the temple itself. The final disposition of the bones was never recorded, and they apparently were not kept in the temple permanently.

The excavations into Mound C disclosed 2 superimposed temples, in the floors of both were burials. The 5 burial pits of the lower temple were empty, and out of a total of 50 possible burial pits belonging to the upper temple, only 26 contained burials (Neitzel 1965:44). The upper structure is the historic temple of the Natchez, and its age is amply documented by the numerous early trade articles contained in the graves. The presence of solely empty pits in the lower level and both empty and undisturbed pits in the upper confirms the procedure given us in the ethnohistorical documents (see Table 3). The finding of burials in the floor of the upper structure is actually abnormal if the procedure had been strictly carried out, and it has been proposed by Neitzel (1965:84-85) that such burials represent those left in the floor for safe-keeping during the final crisis of the Natchez tribe. Highly pertinent to this explanation is the fact that it is just those pits placed outside the south or “inner” building that are empty. The only inhumations remaining are those which were inside the temple proper. The burials placed outside are supposedly those of tribal officials and individuals of lesser status (Swanton 1911:157). The burials include both “primary” interments which were never processed for mortuary storage or disposal and “secondary” interments (tertiary interments in the definition used here, Tables 3, 4), that had already been processed and had been in the mortuary. With this background data established, it is now proposed to construct a formal map based on the data from the 26 burials. The data that can be entered into the dimensions used for Spiro is limited by the fact that the materials are from old excavations. But a formal analysis is instructive.

The Mound C paradigm differentiates 3 of the 4 burial classes at the level of burial behavior and segregates the extended burials from the disarticulated burials along most of the codable dimensions (Table 5). It should be pointed out that the presence of children in an otherwise solely adult burial program in the single disarticulated category parallels the Spiro situation. A paradigm constructed from the ethnohistorical data from the Natchez yields a slightly different arrangement, but the kinds of entering information differ since data respecting certain dimensions are lacking. However, when the interment categories that are above ground in Table 6 are removed from consideration, a simpler arrangement emerges that duplicates the paradigm from the Mound C excavations with 2 exceptions, both of which are a product of informational gaps. On the one hand, the kind of disarticulation in the ethnohistorical record is not recorded, and, on the other, the burials “outside” the “inner” temple are not available although appropriate pits have been discovered archaeologically. The lack of information concerning the dimensions of number of individuals, presence of container, and particular age class is responsible for our inability to discriminate among the disarticulated burials in the ethnohistorically based paradigm. This situation reflects a more fundamental problem. These are differences in the boundaries of the field of reference between the ethnohistorical and archaeological records that will cause trouble unless explicitly recognized. They alone probably account for differences in the articulated category. Location assumes an important dimension in the ethnohistorical record that has not yet been brought to bear to the archaeological case. By the same token, details of burial behavior which provide the most internally differentiated series of dimensions archaeologically have not been set down in the historical record. With equivalent data from both dimensions there is no reason to believe that substantially different arrangements would emerge.

It is significant that there is a great disparity in the number of grave goods per burial. It is the
Table 5. Key diagrams of Fatherland Mound C burial attributes.

<table>
<thead>
<tr>
<th>Degree of Skeletal Articulation</th>
<th>Disposition of Skeletal Remains</th>
<th>Numbers in Burial</th>
<th>Arrangement of Burial</th>
<th>Inclusion within Facility</th>
<th>Occurrence as Solitary of Group Burial</th>
<th>Sex</th>
<th>Age Group</th>
<th>Burial Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulated</td>
<td>specific</td>
<td>single</td>
<td>unspecialized</td>
<td>without</td>
<td>isolated</td>
<td>?</td>
<td>adult</td>
<td>skull &amp; long bones</td>
</tr>
<tr>
<td></td>
<td></td>
<td>multiple</td>
<td>specialized</td>
<td>with</td>
<td>isolated</td>
<td>?</td>
<td>adult &amp; child</td>
<td>skull &amp; chest</td>
</tr>
<tr>
<td>Disarticulated</td>
<td>specific ?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>?</td>
<td>adult</td>
<td>extended</td>
</tr>
<tr>
<td></td>
<td>&amp; unspecific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>?</td>
<td>adult</td>
<td>extended</td>
</tr>
</tbody>
</table>

Table 6. Key diagram of Natchez burial attributes.

<table>
<thead>
<tr>
<th>Degree of Skeletal Articulation</th>
<th>Disposition of Skeletal Remains</th>
<th>Numbers in Burial</th>
<th>Arrangement of Burial</th>
<th>Inclusion within Facility</th>
<th>Occurrence as Solitary or Group Burial</th>
<th>Location</th>
<th>Sex</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulated</td>
<td>?</td>
<td>single &amp;</td>
<td>specialized</td>
<td>with</td>
<td>?</td>
<td>unknown</td>
<td>?</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>multiple</td>
<td></td>
<td></td>
<td></td>
<td>[temple shelf]</td>
<td>?</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>multiple</td>
<td></td>
<td></td>
<td></td>
<td>(inside)</td>
<td>male</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td>(Secondary &amp; Tertiary Burial)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>male</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[temple floor]</td>
<td>male</td>
<td>adult</td>
</tr>
<tr>
<td></td>
<td>(Primary Burial)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(outside)</td>
<td>female</td>
<td>female</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pit (removed)</td>
<td>male</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[platform ?]</td>
<td>male</td>
<td>adult</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>female</td>
<td>female</td>
</tr>
</tbody>
</table>
articulated burials, which are half as numerous as disarticulated, that are the burials with associated grave goods, as distinct from items of personal adornment. One burial alone contains the bulk of the grave goods, and Neitzel (1965:84) rightly singles out this individual as probably a chieftain.

The Choctaw paradigm contrasts strongly with the Natchez-Taensa as might be expected from the summary of the differences in the burial program of the two and in the associated social and cultural behavior. The arrangement is notably undifferentiated compared with the Natchez-Taensa (Table 7), and, neglecting the special status conferred those falling beyond socially normal behavior, the only ethnohistorical clue as to social differentiation resides in location, kind of death, and kind of container (see Table 4). The lack of strongly defined and formally distinct mortuary behavior is on the surface an apparent reflection of the relatively weak social stratification of the seventeenth century Choctaw. Certainly, the relative degree of differentiation among burials by dimensions embodying status designates appears to accurately reflect social differences in the society.

COMPARISON

Three paradigms have been constructed with which Spiro can be compared, and it is apparent that they are simpler and less internally differentiated than the Spiro paradigm. A substantial part of the difference derives from the particular dimensions entering each paradigm. Broadly speaking, the ethnological paradigms are stronger on the location specific dimensions at the expense of the formal differences in the handling and disposition of the dead, which is where the archaeological strength lies. The archaeological paradigms depend upon the skeletal evidence to such an extent that several burial handling dimensions can be specified that contribute to the keying of the burials. Fortunately, because of the circumstances attending the archaeological situations at Spiro and Fatherland, separate phases in the burial program can be described thereby eliminating much of the potential confusion derived from the presence of different aspects of the same program. Another source contributing to the difference is the extended period of time that burials were interred at Spiro. However, even if attention is restricted to the period after the Great Mortuary and the cremations are eliminated from consideration, there still remains a substantial difference between the Spiro and the other paradigms. The differences depend not only on the presence of at least 2 burial programs at Spiro but also on the proliferation of specialized burials. Such a difference is impressive considering that only a single burial program is relevant to the highest ascribed statuses in both the Natchez-Taensa and Choctaw complexes. Other programs are known to exist among our records for the early Choctaw, but they do not appear to relate to high status, rather just the opposite. Furthermore, the explicitly formal treatment and disposition of individuals of high rank among the Natchez-Taensa displays weak internal contrastive features in both the ethnohistorical and archaeological data that is far more limited than the Spiro situation.

Probably the best statement of the formal behavior entering into a chieftain’s burial in the Southeast comes from ceremony attendant upon the death of a Natchez village and war chief, Tattooed Serpent (see Swanton 1911). In Du Pratz’s description of the ceremony, which includes the transportation of the dead on a litter and the immolation of certain tribesmen, there is an account of the funeral bier as it lay in state:

On his bed of state, dressed in his finest clothing, his face painted with vermillion, moccasined as if to go on a journey, and wearing his crown of white feathers mingled with red. His arms had been tied to his bed. These consisted of a doubled-barreled gun, a pistol, a bow, a quiver of arrows, and a war club. Around the bed were all the calumets of peace which he had received during his life, and near by had been planted a large pole, peeled and painted red, from which hung a chain of reddened cane splints, composed of 46 links or rings, to indicate the number of enemies he had killed [Swanton 1911:144].

We are not told whether the funeral goods were interred with the deceased, but the litter was evidently not buried, since none of the pits on the top of Fatherland Mound C are sufficiently large to accommodate a complete litter of such dimensions. Judging from the grave goods and personal items accompanying at least one of the burials in the last phase of Mound C (Burial 15), it would appear that most—if not all—of the items on the bier were buried with the dead. The enumerated artifacts consist of articles of personal clothing and ornamentation, badges of office, weaponry, and such sociological items as pipes (calumets) presented in rites of exchange between
Table 7. Key diagram of Choctaw burial attributes.

<table>
<thead>
<tr>
<th>Degree of Skeletal Articulation</th>
<th>Disposition of Skeletal Remains</th>
<th>Numbers in Burial</th>
<th>Arrangement of Burial</th>
<th>Inclusion within Container</th>
<th>Occurrence as solitary or Group Burial</th>
<th>Location</th>
<th>Sex</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disarticulated</td>
<td>?</td>
<td>single &amp; multiple</td>
<td>specialized</td>
<td>with</td>
<td>?</td>
<td>mound</td>
<td>male &amp; female</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulated</td>
<td>?</td>
<td>single &amp; multiple</td>
<td>unspecialized</td>
<td>without</td>
<td>?</td>
<td>cemetery</td>
<td>male &amp; female</td>
<td>adult &amp; child</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
political leaders. The other accoutrements declare the status of the dead. The furniture includes the litter and the war-exploit pole, both of which do not appear to have been buried. Turning to Spiro burial forms occupying the same structural position (and representing equivalent status) there are some features of agreement in content and others that are not. A socially equivalent burial type at Spiro (XIIa, b) is defined by the remains of a litter and its contents which are largely sociological in functional context and have at least a few presumptive analogous forms (e.g., guns, arrows, club) among the Natchez example. Another specialized Spiro burial, the copper plate form (XII), does not clearly correspond to burials in the Natchez-Taensa arrangement although single burials in containers may have been present but unidentified. But, a container burial accompanied by such a major sociological artifact as a copper plate is, however, not represented. It is perhaps revealing of the formal similarity of the Natchez and Spiro paradigms that highest status burials and chiefly funeral biers should belong to the paramount status. However important this area of commonality, it is very significant to the overriding contention here that the treatment of the burial furniture differs so much as to result in quite different looking burials.

There is considerable similarity in the status of individual disarticulated interments among the Natchez-Taensa, Fatherland, and Spiro paradigms that suggest an association of deferential handling of single burials with high status in the Southeast of the Mississippian period. The one element relevant to the handling of the dead that is shared among the three cultural systems of the Natchez-Taensa, Choctaw, and Spiro is a burial program that involves the preparation of the corpse into a parcel of storable bones. The procedures particular to each are not identical since the Spiro and Natchez-Taensa take advantage of actual interment to facilitate the decay of the soft parts whereas exposure on a platform was practiced as an alternative among the Choctaw and other tribes including those in the lower Mississippi valley (Swanton 1911:276-277). The burial facilities recovered at Fatherland enclose multiple interments and are neither necessarily of the same rank nor equivalent to the specialized Spiro burials in containers. The exclusive use of the temple precinct by a minority for either burial storage in the temple-mortuary or temporary interment in the temple floor (mound top) constitutes another important similarity between the Natchez-Taensa and Spiro situations. A third similarity exists in the disproportionate distribution of grave goods, not only among all of the burials but also among those of first rank.

The contrast between Spiro and the Choctaw paradigms are even greater despite the fact that particular forms of mortuary behavior are shared, such as the use of chests as burial containers, the construction of separate burial mounds as deposits, and the practice of cremation. Although these particular cultural features appear in both systems, there is no reason by virtue of these correspondences alone to seek a historical relationship between them (contrary to Orr 1946:251). Moreover, a structural interpretation of the similarities and differences among the systems would not see such correspondences as at all relevant to a discussion of the kinds of social organizations represented.

The differences among the paradigms of the 3 systems are considerable, and Spiro stands much more formally differentiated than even the Natchez regardless of whether the ethnological or archaeological data are brought to bear. High status at Spiro is even more clearly set off and internally differentiated in a formal respect than for the Natchez who stand closer than any other system to Spiro.

GENERAL OBSERVATIONS

In a paper concerned with the reconstruction of social and religious systems from the archaeological material, Sears (1961) has reviewed the status of reconstructions and has given ample evidence that anthropologically relevant analysis of archaeological evidence must proceed within a deductive framework that exploits the potentialities inherent in the particular excavational situation. In a plea to free ourselves from ad hoc inferences, he pointed out that:

reconstruction (of burial ceremonies and procedures) stop considerably short of ceremonial, let alone social reconstruction and interpretation. Regardless of the number of bodies or the type and quantity of grave goods, a burial can only indicate the probability that some one person in a given culture at a given time was ascribed superior social status. It cannot tell, by itself, the sort of social or political-religious system of which this status was a part. Such reconstruction can only come from joint analysis of several lines of evidence [Sears 1961:229].
More recently, Binford (1967) has demonstrated the relevance of formal order in testing hypotheses generated from a deductive argument.

As a means of equipping ourselves with a suitable interpretive framework, this paper has explored the dimensions of status in the burials at Spiro and other systems with the aid of formal analysis. It is essentially a means of formally relating items in an explicit cultural domain by their membership within successively more inclusive sets, each stage of which is determined by alternatives of specific dimensions relevant to the domain. It is an attempt to consider the structural relations among members of the domain by transcending explicit cultural content and by transferring cultural observations to aspects of dimensions of higher order. In fact, formal analysis is characterized in a methodological sense by the overt recognition of what Hammel (1965:2) terms "a superordinate level of determinants in an analytical domain." The comparison of different paradigms and their associated cultural systems has already revealed the degree to which the pertinent cultural elements are actually eschewed for purposes of comparative analysis. The comparison also illustrates the analytical advantages that accrue from this position and that at the same time, substantiate the stand taken by other archaeological investigators (see Binford 1964, 1965, 1967; Chang 1958:324; Sears 1961). The specific difficulties experienced in handling and interpreting the 4 paradigms herein devolve principally around the definition of the domain and its boundaries and are, indeed, the same as those experienced by all other attempts (Hymes 1964:17). In archaeological situations, the determination of the relevant sets and component alternatives amount to not only defining appropriate dimensions but also carefully including all of the relevant parts of the domain. The latter requirement takes on the proportion of a conspicuous hurdle in archaeology because of the dependency on sampling. This difficulty exists precisely because the content of a site is so highly structured by social, cultural, and natural factors that a particular locale for many analytical purposes cannot be regarded as an "average slice" of prehistoric culture—as if all cultural elements have equal likelihood of being represented. In fact, repeated investigation has demonstrated—what is at least implicit in the ethnological literature—that major and significant socio-cultural aspects of an integral culture are frequently expressed by differences in the dimension of locality itself. Location hence assumes that status of an important concern for archaeologists one whose magnitude emerges in both formal analysis and other analytical procedures. The restrictions that archaeological excavations impose upon formal analyses are serious but the obstacles are not insuperable. It is merely that procedures must be adapted to archaeological conditions.

The call to more explicit, rigorous, and formalized procedures in archaeological interpretation expressed by Sears (1961) is one that clearly needs to be met. The analysis of settlement patterns, settlement systems, and aspects of the ecosystem have received a greater interest on the part of archaeologists than such sociological areas as mortuary practices have. This disproportionate interest has deprived us of the sociological contributions to our knowledge of prehistory with which analysis of mortuary practices rewards us. But, once there are procedures for analyzing such a block of human behavior, this gap in our understanding of the mortuary aspect of social behavior can be closed. The procedures of formal analysis offer us means of examining the structure of such understanding and at the same time allow us to seek out the generalizations regarding the cultural system that this procedure presupposes.

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Ascher, Robert
Barton, Allen H.
Binford, Lewis R.

Brown, James A.
1971 Spiro studies (Third annual report of Caddoan archaeology: Spiro focus research). To be published by the University of Oklahoma Research Institute.

Brues, Alice

Brown, Ralph W., Jr.

Brown, William.

Fried, Morton H.

Garcilaso de la Vega, Gomez Suarez de F.

Gardin, J. C.

Goody, Jack

Hammel, E. A.

Hymes, Dell

Kay, Paul

Kroeber, A. L.

Lazarsfeld, Paul F.

MacLeod, William C.

Mandelbaum, David G.

Neitzel, Robert S.

Sahlins, Marshall D.

Sears, William H.

Service, Elman R.
1962 Primitive social organization; an evolutionary perspective. Random House, New York.
Swanton, John R.

