This document has been checked for information on Native American burials. No images considered to be culturally insensitive, including images and drawings of burials, Ancestors, funerary objects, and other NAGPRA material were found.

UNIVERSITY OF GEORGIA
Franklin College of Arts and Sciences
Department of Anthropology
Laboratory of Archaeology

UNIVERSITY OF GEORGIA
LABORATORY OF ARCHAEOLOGY SERIES
REPORT NUMBER 91

SOCIAL COMPLEXITY DURING THE MISSISSIPPIAN PERIOD IN NORTHWEST GEORGIA

ERNEST W. SECKINGER, JR.

Athens

SOCIAL COMPLEXITY DURING THE MISSISSIPPIAN PERIOD IN NORTHWEST GEORGIA

by

ERNEST W. SECKINGER, JR.

A. B., West Georgia College, 1972

A Thesis Submitted to the Graduate Faculty
of the University of Georgia in Partial Fulfillment
of the
Requirements for the Degree

MASTER OF ARTS

ATHENS, GEORGIA

1977

SOCIAL COMPLEXITY DURING THE MISSISSIPPIAN PERIOD IN NORTHWEST GEORGIA

BY

ERNEST W. SECKINGER, JR.

Approved:

Donald H. Grayson Date 8/5/77
Major Professor

David A. Hollinger Date 8/5/77
Chairman, Reading Committee

Approved:

Hardy M. Edwards Jr.
Dean, Graduate School

August 8, 1977
Date

ACKNOWLEDGEMENTS

The accompanying text is the result of a meager attempt to develop good ideas brought out in conversations with many fellow students and others. A word of appreciation must be extended to those who listened to may random mutterings and who rephrased them into meaningful ideas. Of this group the following contributed most: Sharon I. Goad, Charles E. Pearson, Chung Ho Lee, and Richard W. Jefferies.

Much editorial work was performed by members of my committee, Dr. Donald A. Graybill, Dr. Bruce D. Smith, and Dr. David J. Hally. Special thanks are extended to Suzanne Fish for additional editorial assistance. Chung Ho Lee skillfully executed Figures 2-5. Drs. Graybill and Kent A. Schneider provided much needed encouragement during the final writing stages.

As meaningful as this assistance and encouragement has been this thesis could not have been completed without the unbelievable support of my wife, Betty. The joy of companionship with her and Eric successfully offset the pain of this project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Purpose

The purpose of this thesis is to consider and to offer insight into change in a component of social structure, that of social complexity, throughout the South Appalachian Mississippian Tradition in Northwest Georgia. Archaeological evidence relating to social complexity is discussed for all phases belonging to this tradition: the Etowah Phase, the Wilbanks Phase, the Lamar Phase, and the Barnett Phase. A method to determine the level of social complexity of a society is considered. Complexity at a Barnett Phase site, the King Site, will be assessed utilizing a portion of this method.

Background

Social complexity as elucidated from mortuary remains is becoming a recognized field of study within prehistoric archaeology. The current interest in the capacity of burial data to shed light on complexity dates from a symposium organized on the subject in 1966 (Brown 1971a) at which this potential was discussed (Binford 1971). Actual analyses of burial remains represented at the conference demonstrated

the usefulness of this approach (Brown 1971b, Gruber 1971, S. Binford 1968, Larson 1971, Peebles 1971, Saxe 1971).

The most important change in burial analysis that this new approach initiated was a concentration on the function of mortuary attributes within a total cultural system rather than only as sources of data for questions of a culture-historical nature (Sprague 1968). Brown and the other members of the 1966 symposium attempted successfully to shift attention away from a concentration on culture-historical questions to those questions pertinent to the archaeological reflection of the various components of social structure. Ethnographic information relating to these functions had seemingly just been discovered by archaeologists (cf. Adair 1930:189, Bendann 1930, Goody 1962, Hertz 1907, Kuper 1947).

Since the adjournment of this symposium many other archaeologists have followed suit by attempting to view the attributes of a mortuary population not in isolation, but as a reflection of social structure. Yet several major problems continue to plague mortuary studies in archaeology. These problems are method, result, and range of scope.

The problem which is central to the critical assessment of all studies of mortuary data and complexity is that of method. None of the analyses cited in this thesis are convincing in their method of evaluating the social complexity of extinct societies. Deficiencies in these methods are due either to concentration on a single variable (Tainter 1973) or to the presence of a logical gap between the statistical

significance of a particular test and the cultural significance of that test (cf. Peebles 1974).

End results of most analyses cited in this work are characterized by a certain sameness of conclusion. The society reflected by the burial remains is usually placed into one of the neo-evolutionary categories of Fried (1967) or Service (1971) in order to explain the nature of its mortuary remains. Too much energy has been expended on classifying these data in this manner which only indicates the value state of one to several variables. Relative complexity among societies of the same category is usually neglected.

Placing a society in one of these conceptual classes explains nothing and leaves much to be described, since the categories used are far too broad for some types of generalization. For example, the chiefdom classification is applicable to societies on very different levels of social complexity, as illustrated by the Tikopia at the lower chiefdom levels (Firth 1936) and Hawaii at the upper chiefdom levels (Sahlins 1958). The basic criticism implied here is that those individuals dealing with social complexity in the past have not considered enough variables in their determinations.

Range of scope is a problem encountered in all areas of prehistory, perhaps due to fiscal and time considerations. Yet it does create difficulties in any attempt to assess complexity. The tendency of researchers doing burial analysis has been to limit their work to one site (Lopez 1970) or to one phase (Hatch 1974). Rathje (1969) is an exception. That

complexity cannot be determined from a single entity is a major point of this thesis. Social complexity, to be defined later, is a realtive concept requiring more than one entity for determination.

The problems discussed above are hopefully avoided in this thesis. A comprehensive set of methods for determining relative social complexity is discussed. The kinds of information needed to evaluate complexity among social entities is suggested and applied. In the course of this undertaking, all available pertinent information from the Mississippian Period phases of northwest Georgia is presented.

Although complete data are not available from any of these phases, a detailed analysis of one kind of information is presented as an example of the application of a portion of the method.

Definitions

The specific meaning of terms and concepts are often unclear in any scholarly writing. This problem is particularly acute in anthropological writing in which there exists a body of terms which are not used with the same meaning. Various attempts to rectify this situation have been useful but have been unsuccessful in creating a tight conceptual corpus of anthropological terminology (Krober and Kluckhohm 1952; Willey and Phillips 1958). Therefore, the following section assigns meaning to the critical terms used within this thesis.

Site and component

Site, as used in this thesis differs from the definition of Willey and Phillips (1958:18) in that it is not the smallest unit of culture-historical space. It is an ahistorical reference to a specific locality of human behavior(s) and conveys no presumption of a single settlement.

Component, a manifestation of a particular phase at one site (cf. McKern 1939:308) is used herein as the smallest unit of culture-historical space.

Phase

Phase is used in this thesis as an organizing device for data from selected cultural units in the region under study. As a pragmatic concept of separation of data it is defined in the Willey-Phillips scheme as an archaeological unit characterized by attributes which distinguish it from all other similar units in time and space (Willey and Phillips 1958:22). The cultural units utilized in this thesis as such are the Etowah Phase, the Wilbanks Phase, the Lamar Phase, and the Barnett Phase. The defining criteria of these phases will be given in their respective sections.

Society

Society is defined as the largest system of behavior in which the behavior of an individual functions as a part (Bates and Harvey 1975:37). Due to a concentration on social questions in this thesis the temptation is strong to equate a phase with a society. Since the nature of this relationship is uncertain (cf. Willey and Phillips 1958:48-56),

caution is taken in the use of certain assumptions concerning this association between phase and society.

One such assumption concerning this relationship is made here. Ideally, a study concerned with change, as this study is, should concentrate on one society through time. The tentative assumption is therefore made that the Etowah Phase, the Wilbanks Phase, the Lamar Phase, and the Barnett Phase in the Coosa River Region, represent the physical remains of one society through time. No evidence is presently available to indicate the presence of extra-societal processes of change, such as conquest or site-unit intrusion except as is discussed in the context of the Barnett Phase. Were this assumption not at least tentatively accepted, the arguments and hypotheses within this thesis could only be concerned with differences among societies and not change, since change implies modification of the same entity through time (Bates and Harvey 1975:330).

Station

In dealing with the burials analyzed in this thesis the concept of station is introduced. This concept refers to "all the positions occupied by the person in society" (Bates and Harvey 1975:225).

Functional classes of artifacts

The phrase "functional classes of artifacts", refers to the 3 kinds of objects formulated by Binford (1972:23-25) from 3 of White's (1959:6-7)4 kinds of culture components, the technological, the sociological, and ideological. In

Binford's scheme, technomic artifacts are those objects which function in dealing with the natural environment. Socio-technic artifacts are those artifacts which function in the social environment. Binford's third class, ideotechnic artifacts, those artifacts which function in the ideational environment, has not been used in this thesis due to the difficulty of segregating ideational behavior from other kinds of behaviors in prestate societies.

Artifactual rank is defined by the numbers and kinds of artifact classes which are associated with a burial. A burial with several socio-technic artifacts would be higher in artifactual rank than another burial with many technomic artifacts.

Community plan

The arrangement of cultural features over space within one component of one site is referred to as community plan in this thesis.

Settlement pattern

Settlement pattern refers to the arrangement and nature of different types of sites within one phase in relation to the environment which the phase in question occupied. Environment refers to both the physical and social surroundings.

To assess the relative complexity of each of the phases discussed a tentative site hierarchy has been defined for this thesis. This scheme is speculative due to the lack of complete survey data and controlled excavation data on most sites within the framework of the discussion. Table 1 and

the accompanying phase maps (Figures 2-5) only reflect the previous work in the region, not the total Mississippian Period settlement pattern. Some insight may, however, be gained by considering this data. Parts of this hierarchy are 3 types of sites identifiable from the available information on site location and size (Wauchope 1966; Caldwell n.e.; Site files Departments of Anthropology, University of Georgia and Georgia State University).

First order sites in this hierarchy are those sites assumed to be functional centers of a settlement pattern. These first order sites (Table 1) are identified by the presence of more than 1 mound, with the phase in question represented by a component in each mound. Second order sites are those sites with 1 mound containing a component of the phase in question. Third order sites have no mounds. The utility of this proposed hierarchy can only be evaluated with excavated data from mounds and their associated habitation areas.

Activity variability

Activity variability refers to the number and nature of activities occurring at different sites (Graybill 1975). Little information is presently available in a form suitable for analysis of activity variability for the phases under study, although other studies have been made in Georgia (e.g., Lee 1976).

Social complexity

Social complexity, the central theme of this thesis, can be viewed as having 2 dimensions: sociological and technological. The sociological dimension is composed of the various parts of culture which determine how individuals within a society are placed in relative order and how that order is reflected in a mortuary population. Other parts of the sociological sphere determine how populations arrange themselves over space. While it is true that any settlement pattern also reflects the relationship of the human population to the distribution of resources, in this thesis the concern is with the sociological consequences of such patterns of site location.

The technological dimension of social complexity is composed of the parts of culture which determine the organization of the subsistence strategy and the kinds of activities which occur at different kinds of settlements and their distributions within those settlements.

Social complexity, then, is the cumulative complexity of the various cultural systems operating within a society. At present, the complexity of an archaeological society can be determined only in reference to other archaeological societies.

The archaeological reflection of social complexity

Social complexity, as discussed above, has 2 dimensions, sociological and technological. The purpose of this section

is to briefly outline or suggest ways in which these dimensions are reflected in the archaeological record.

Sociological dimension of cultural complexity

Most previous studies of social complexity have considered the sociological dimension sufficient to assess the relative complexity of a particular society. Yet the two classic modern anthropological models of social complexity are different and consider the sociological dimension at different levels. Service's model assesses social complexity by determining the number and interrelatedness of the parts of a society's social structure (Service 1971). This approach departs from the present one only in that Service then classified various levels of complexity into a number of discrete evolutionary categories: band, tribe, chiefdom, and the archaic state.

Fried on the other hand considers essentially only those aspects of culture which determine how individuals or groups are placed in relative order within a society (Fried 1960, 1967). Fried's method of determining complexity is different from the present approach in that ranking principles are only one aspect among several considered to reflect the complexity of a society.

Ranking principles are assumed in this thesis to be reflected archaeologically by the distribution of the sociotechnic and technomic functional classes of artifacts. Binford's (1972:24) third artifact class, ideo-technic

artifacts, those artifacts which function in the ideational environment, has not been used in this thesis due to the difficulty of segregating ideational behaviors from other kinds of behaviors in prestate societies. An assumption related to this statement is that in simple societies the 3 components of culture, sociological, technological, and ideological, are more closely interrelated and therefore less distinct archaeologically than is the case in more complex societies.

Viewed from one perspective, all artifacts associated with the burial ritual are socio-technic and/or ideotechnic in that they are functioning for the moment in the sociological (and ideational?) sphere of culture. The categories of socio-technic and technomic artifacts established for this analysis refer not to this ultimate function but rather to the primary functional system of the artifact before the end of original use (Binford 1972:204). The application of these categories to the King Site artifactual data is hypothetical and is based on ethnographic analogy (Swanton 1946).

Criticism of Binford's concepts has been loud, long, and in some cases warranted. Binford even seems to relent by considering the difficulties of operationalizing the concepts; an artifact may function in all 3 spheres of culture (1972:18). Doubt and operational difficulties aside, these concepts do offer insight into the proportional representation of kinds of behaviors in a highly emic event, burial. Below are statements designed to illustrate how

complexity may be evaluated utilizing these concepts. In creating a population of burial accompaniments over time, a society not only makes a record of the station of an individual but also the degree to which production departs from subsistence activities to more non-strategic activities. This statement refers to the whole person (cf. Radcliffe-Brown 1952:194) being removed from subsistence activities, not the ratio of work to leisure time. Societies on a low level of social complexity would have proportionally fewer socio-technic artifacts in relation to technomic artifacts while societies which are more complex would contain more socio-technic artifacts. Socio-technic artifacts in the latter case would serve as markers of social differentiation and "badges of office" (Sahlins 1958). The assumption is made here that the number and proportion of socio-technic and technomic items in a society's artifactual catalog is accurately reflected in its mortuary artifactual catalog.

Regardless of the absolute frequencies of these two classes in the artifacts of a society, another relationship holds. A society in which socio-technic artifacts are restricted to segments of the population and in which these artifacts cross cut age and sex categories is more complex than a society in which the above conditions do not hold (cf. Saxe 1970:67).

Another part of social complexity which can be detected archaeologically is that of community plan. The nature of a community plan, that is, the arrangement of different types of features over the site provides information on the separation of public and domestic functions (Seckinger 1975:68) and the nature of occupational specialization. In more complex societies activities tend to be spacially clustered depending on their range of scope within that society. Activities which, for example, engage a significant portion of the population are not located within domestic structures. Moreover, activities in which single individuals or single families perform are more likely to be located near the immediate domestic area.

The nature of an entire settlement system is an important part of social complexity in that the arrangement of the different kinds of sites within one settlement system contains potential information on the hierarchial nature of the pattern and the range of possible resources utilized. An assumption related to this is that as centralization of a settlement system increases so does complexity (Cowgill 1975:514). This centralization could occur through the process of linearization, which is defined as the bypassing of lower order controls by controls of a higher order (Flannery 1972:413).

The complexity of an entire settlement system could be evaluated through the use of central place analysis and activity variability which would result in a site-type

hierarchy. A feasible archaeological approach to an analysis of settlement hierarchy is by the manipulation of site size (Wright and Johnson 1975). This technique when used with archaeological data (site size), has been shown to fit well developed geographical models based on population of settlements (Pearson 1977).

The data for consideration of settlement hierarchy for this thesis consists only of sites with mounds and sites without mounds. Discrimination is too little detailed to perform a meaningful hierarchal analysis. More data in the form of site size information and artifactual data from the full range of sites are needed to evaluate the settlement hierarchy presented in this thesis (cf. Table 1).

Technological dimensions of cultural complexity

The technological aspects of social complexity have not been considered as often as the sociological in past studies. Under the method proposed herein each dimension must be considered equally in a systemic manner. This is to say that no cause-effect relationship exists between one of the variables mentioned and the level of social complexity of the society.

The organization of the subsistence strategy is an important part of the technological dimension of social complexity. Sedentary populations with a stable subsistence base (some variant of horticulture or intensive harvest collecting (Struever 1968) potentially could develop larger

Etowah Phase N=17

First order	Second order	Third order
Br1 (Etowah) 3 mounds	Br40	Br27
	Ck5	Br98
	Ck1	Ck9
	Pi3	Ck17
	Ck4	Ck19
	Fo3	Ck20
	Mul00	Ck23
		Ck63
		Ck85F
Row %: 5	44	50

Wilbanks Phase N=24

First order	Second order	Third order
Br1 (Etowah) 3 mounds	Br3	Br7
	Br6	Br9
	Br26	Br12
	Br40	Br27
	Ck5	Br37
	Pi3	Br41
	Ck4	Br56
	Ck1	Ck19
		Ck17
		Ck85A
		Ck106
		Co3
		Co52
		Co75
		Fl 1
Row %: 4	30	65

Table 1. Known sites utilized by phase (Emphasis should be on row percentages).

Lamar Phase N=21

First order	Second order	Third order
Br2 (Leak) 3 mounds	Br7	Br1
	Br40	Br4
	Br26	Br27
	Ck5	Br28
	Ck1	Br37
	Ck4	Br54
	F1100	Br56
	Mu101	Br98
		Ck9
		Ck23
		Ck24
		Ck26
Row %: 5	38	57

Barnett Phase N=8

First order	Second order	Third order
Mu102 (Little Egypt)	Go111	Mu100
2 mounds	Go120	Mu103
		F15
		Mohman
		Johnstone
Row %: 12.5	25	62.5

Table 1. (cont.)

groups with increased stability. These populations would be more complex than populations involved in transhumance (cf. McNett 1973).

Information on the exact nature of subsistence within the time frame of this discussion is lacking. Information does exist on the organization of historic horticulture, however, and something is known of the non-domesticated portion of subsistence. Southeastern ethnohistorical accounts present the subsistence pattern during the historic period as one of mixed riverine horticulture and hunting and gathering of non-domesticated resources. This type of horticulture relies on the availability of bottomlands that are frequently flooded and that are characterized by soil that is easily worked with simple technologies (Murphey and Hudson 1968:26).

Certain items of information would seem to indicate a similar pattern of subsistence within at least the latter time period of this discussion. Maize was found on the King Site 9F15 (personal observation) and several features on the site appear to represent a kind of granary (barbacoas) described by Elvas in the 16th century (Smith 1968:222).

The study of intersite activity variability has the potential of yielding information on the number and nature of activities occurring at different sites (Graybill 1975), an important part of the technological dimension of social complexity. Site classes generated by a site size analysis should be tested for goodness of fit with the classes

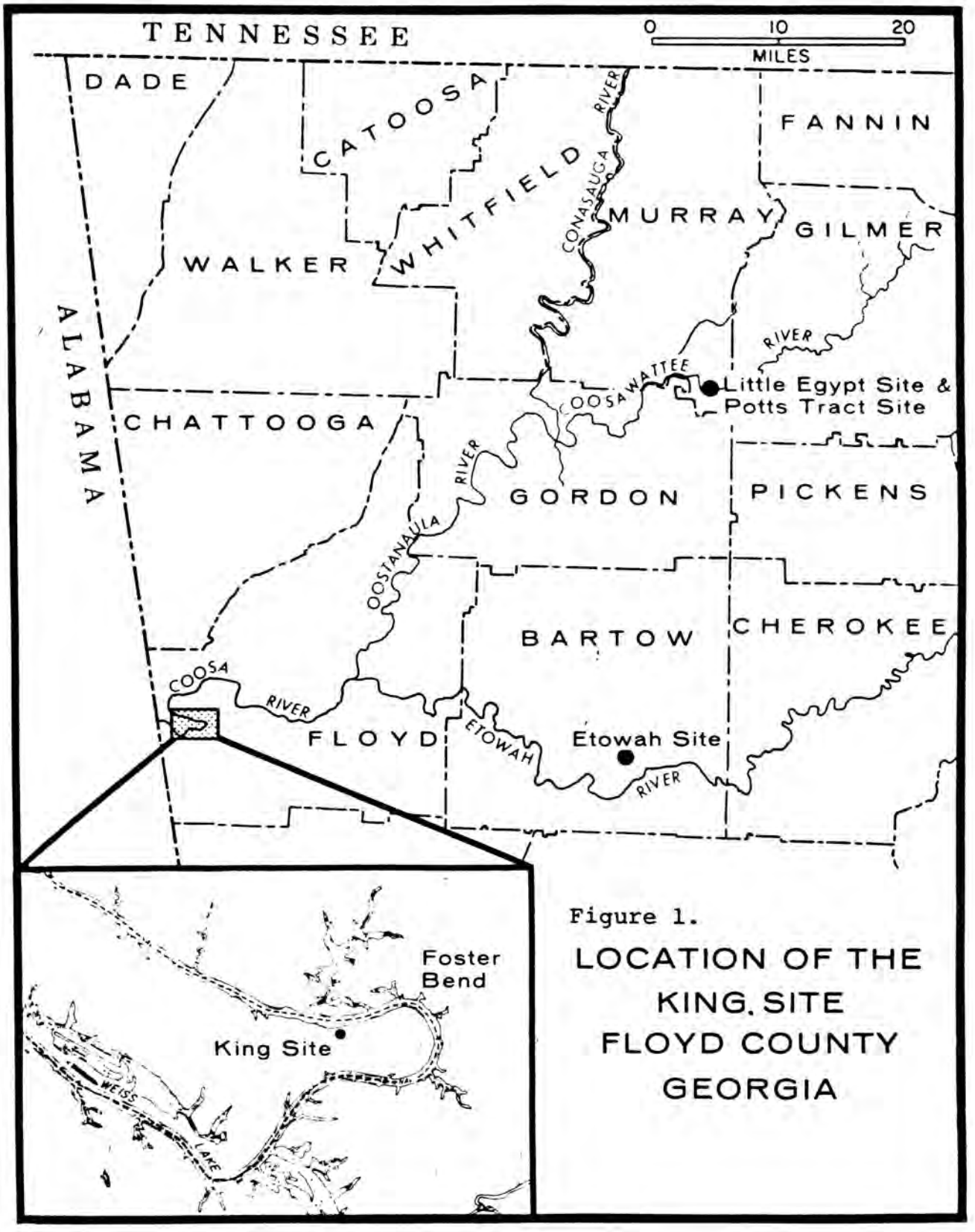

Figure 1.

LOCATION OF THE KING SITE FLOYD COUNTY GEORGIA

generated by an activity variability analysis. These data could be used to test hypotheses on the administrative functions of sites (Wright and Johnson 1975).

Social complexity is then, the cumulative complexity of various cultural systems operating within a society. These systems may be evaluated archaeologically by consideration of the distribution of socio-technic and technomic artifacts, the organization and focus of the subsistence system, the arrangement of features into a community plan, the hierarchal extent of a settlement pattern and the kinds and/or number of different activities occurring at different sites within a settlement system.

CHAPTER II

STRUCTURAL COMPLEXITY

Background

Statements exist in Southeastern ethnohistorical documents which describe the complexity of organization of Creek and Cherokee culture of the 18th and 19th centuries (Bartram 1858:22-24, Hawkins 1848, Adair 1930, Swanton 1928). These descriptions appear to place the two societies between the models of complexity formulated for segmentary tribes and those formulated for chiefdoms (Sahlins 1968, Service 1971). These historical Southeastern societies were similar to tribes in that each community maintained a great amount of autonomy apart from the larger linguistic or cultural aggregate. Their similarity to chiefdoms lies in unequal control over the distribution of production.

Accounts from the 16th century, principally those of DeSoto's chroniclers (Smith 1968, Sauer 1971), and several recent archaeological studies (Brown 1971b, Hatch 1974, Larson 1971, Peebles 1971, 1974) present a differing image of Southeastern social organization; that of ranked chiefdoms (Fried 1967, Service 1971).

This study differs from other recent analyses in that its central concern is not placing the society at the King Site into a broad category describing the level of socio-cultural integration. Central to this thesis is the development of a research plan which will, eventually, lead to archaeological verification of relative social complexity during the Mississippian Period in northwest Georgia. Implementation of this design, or one similar, will provide information for many questions, several of which have already been mentioned.

Four major archaeological projects have been conducted in the Coosa-Etowah-Oostanuala drainage; the Carters Quarters (Hally 1970), the King Site (Hally 1975a, Garrow and Smith 1974), the Etowah Site (Kelly and Larson 1957, Larson 1971) have resulted in major excavations, while the Allatoona Project (Caldwell n.d.) primarily involved surface survey. Sites located during these and other projects in the area considered in this discussion are listed in Table 1. From these projects information was gathered which relates to social complexity. A hypothesized regional scale of complexity is devised and is summarized in Table 2.

Social complexity in the Mississippian Period in Northwest Georgia: Phases

The concern of this thesis is a narrowly defined segment of the Mississippian adaptation. The term Mississippian Period as used in this thesis refers to that period of

A. Etowah Phase

(1) Earliest flattop mounds associated with this development
(2) Hierarchical settlement pattern ranging from small sites to small mound centers to large mound centers
(3) Beginning participation in "Southern Cult"
(4) Movement toward ranked society

B. Wilbanks Phase

(1) Additions to Etowah mounds
(2) Settlement pattern consisting of Etowah as central place with fewer 2nd order sites
(3) Peak of participation in "Southern Cult"
(4) Ranked society

C. Lamar Phase

(1) Center moves from Etowah
(2) Settlement pattern consisting of more smaller area sites at all levels
(3) Little participation in "Southern Cult"
(4) Movement toward egalitarian society

C. Barnett Phase

(1) Aggregation of population with concomitant increased complexity of social relations
(2) Few 2nd order sites
(3) Settlements are larger than preceeding phases.
(4) Ranked society

Table 2. Summary of social complexity developments during the Mississippian Period in northwest Georgia.

time during which certain artifact and feature forms were present in northwest Georgia. Specific discussions of this period are limited to 4 phases; the Etowah Phase, the Wilbanks Phase, the Lamar Phase, and the Barnett Phase. Table 3 indicates available C14 dates for each phase.

Those who are familiar with the prehistory of northwest Georgia may realize the presence of elements connected with 2 segments of the Mississippian adaptation, Middle Mississippi (Griffin 1967) and South Appalachian Mississippian (Ferguson 1971). The significance of this blending is discussed in Hally, et al. (1976:204) and will not be dealt with here. Each phase is assumed to be a functioning social unit without regard to outside influence. Evidence which relates to the nature of social complexity within these phases is the topic of discussion.

The Etowah Phase

The time frame of this discussion begins with the Etowah Phase, the earliest phase during which the development of complexity in northwest Georgia was associated with the concomitant development of Middle Mississippian. The Etowah Phase marks the beginning of this discussion since it appears to contain the earliest elements of this line of the development of social complexity. All mounds sites in this sequence, for which excavated data is available, display components no earlier than those of the Etowah Phase, later components almost always being present (Ferguson

Phase	Date	No.	Site
Etowah III	A.D. 830 ± 150	M-933	380c1
Macon Plateau	980 ± 150	M-940	9Bi10
III	1045 ± 50	UGA-70	9Mu100
IV	1265 ± 145	UGA-ML-3	9Co151
	$\bar{x}$ 1030		
Wilbanks	1040 ± 200	M-542	9Br1
	1225 ± 200	M-402	9Br1
	1284 ± 55	UGA-68	9Fu1
	1315 ± 75	UGA-ML-4	9Fu13
	1450 ± 250	M-543	9Br1
	$\bar{x}$ 1260		
Lamar	1120 ± 70	UGA-142	9F1100
	1150 ± 50		9Tp41
	1290 ± 70	UGA-143	9F1100
	1400 ± 60	UGA-357	9Sw2
	1400 ± 85	UGA-ML-7	9Go1
	1410 ± 110	UGA-ML-2	9Fu13
	1425 ± 50		9Tp41
	$\bar{x}$ 1314		
Barnett	1410 ± 55	UGA-307	9F15
	1415 ± 80		9Mu102
	1450 ± 70	UGA-205	9Mu102
	1525 ± 55	UGA-208	9Mu102
	1555 ± 65	UGA-210	9Mu102
	1644 ± 50	UGA-72	9Mu100
	1664 ± 45	UGA-56	9Mu103
	$\bar{x}$ 1523		

Table 3. C_{14} dates for the Mississippian Period in north Georgia

1971:189).

A point of contention in the southeastern literature has been the nature of social complexity during the Etowah Phase and the succeeding Wilbanks Phase. The content of this one-sided discussion (Sears 1958, 1962, 1968, Olah 1975) is that the height of social complexity was reached during the Etowah Phase, and that this time period demarks the existence of the Etowah State.

According to Sears' argument the Etowah Phase can best be described as a large population organized into a large political entity. Furthermore this entity structurally consisted of a system of classes under a theocratic state organization (Sears 1958:180). A major assumption underlying Sears' hypothesis is that Natchez social structure, as viewed through French military officers in the 18th century, represents a survival of general Mississippian social structure.

The above argument is rejected in this thesis for 2 reasons: first, it assumes the Mississippian adaptation was an adaptation of 1 society and secondly that French accounts are accurate on the details of Natchez social structure. If anything concerning the Mississippian Period and adaptation in the southeast is certain, in this writer's opinion, it is that the archaeological remains dating from this period are not the products of one society's behavior. Archaeological boundaries of extinct societies are at present unrecognizable in the Southeast; yet based on artifac-

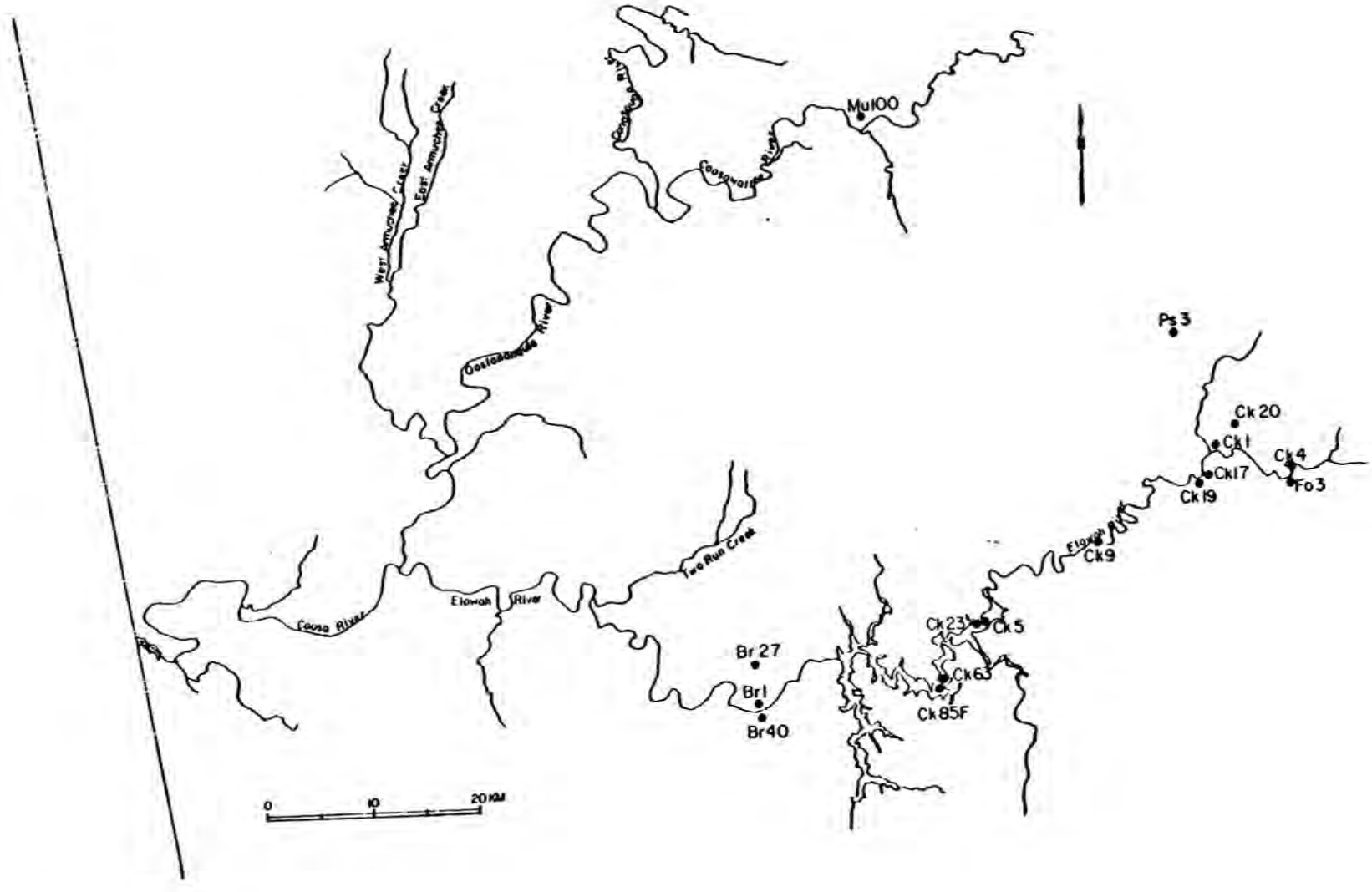

Figure 2. Etowah Phase settlement pattern.

tual form and other variables, Griffin (1967:185) has noted at least six variants of the Mississippian. Each of these in turn probably represents several societies.

A second reason for rejecting Sears' argument is the questionable reliability of the French accounts on the nature of Natchez social structure. A series of discussions on this question have appeared in the literature over the past 50 years (MacLeod 1924, Haas 1939, Hart 1943, Quimby 1942, Fischer 1964, Brain 1971, White, et al., 1971). These discussions center around the description of the marriage system abstracted by Swanton (1911) from DuPratz' accounts. Using this description Fischer (1964) calculated that the system could only operate for nine generations. These two factors, multiple societies and questionable accounts, suggest caution should be used in adopting ethnographic statements as explanations of observed phenomena (Binford 1967).

Sears' hypothesis for the peak of complexity occurring during the Etowah Phase has spawned some debate (Caldwell 1960). The single statement of justification for the peak occurring during this time is based on Southern Cult items supposedly associated with several Etowah Phase burials in an eroded context at Ck5 (Sears 1958:181). Furthermore, the definition of the state used in Sears' argument and its archaeological manifestations are so generalized that few societies would be excluded from the status of statehood.

It is herein hypothesized that during the Etowah Phase a process of linearization began which would peak in the succeeding Wilbanks Phase. As higher order controls bypassed mid-range decision centers these second order sites would have begun to decrease in importance. In line with this development it is hypothesized that socio-technic artifacts would increase in proportion at all sites through time in the Etowah Phase. The cross cutting of age and sex categories by these artifacts would also increase as an indicator of increasing social complexity.

The Wilbanks Phase

The Wilbanks Phase immediately succeeds the Etowah Phase. Ceramically, this phase is defined by the presence of Wilbanks Complicated Stamped and Wilbanks Plain (Sears 1958:172). Sites containing components of this phase are most numerous in the Etowah drainage (Figure 3) (Wauchope 1966, Ferguson 1971:225).

Although the sample for all kinds of sites for each phase is biased (Table 1) the following hypothesis is offered as suggestive of observed trends. The Wilbanks Phase is hypothesized to be the phase during which the peak of social complexity occurred in the region. Under this hypothesis the process of linearization of authority chains would have reached its peak during the Wilbanks Phase. Information flow through second order settlements decreased as third order sites increased in proportion. This linearization led

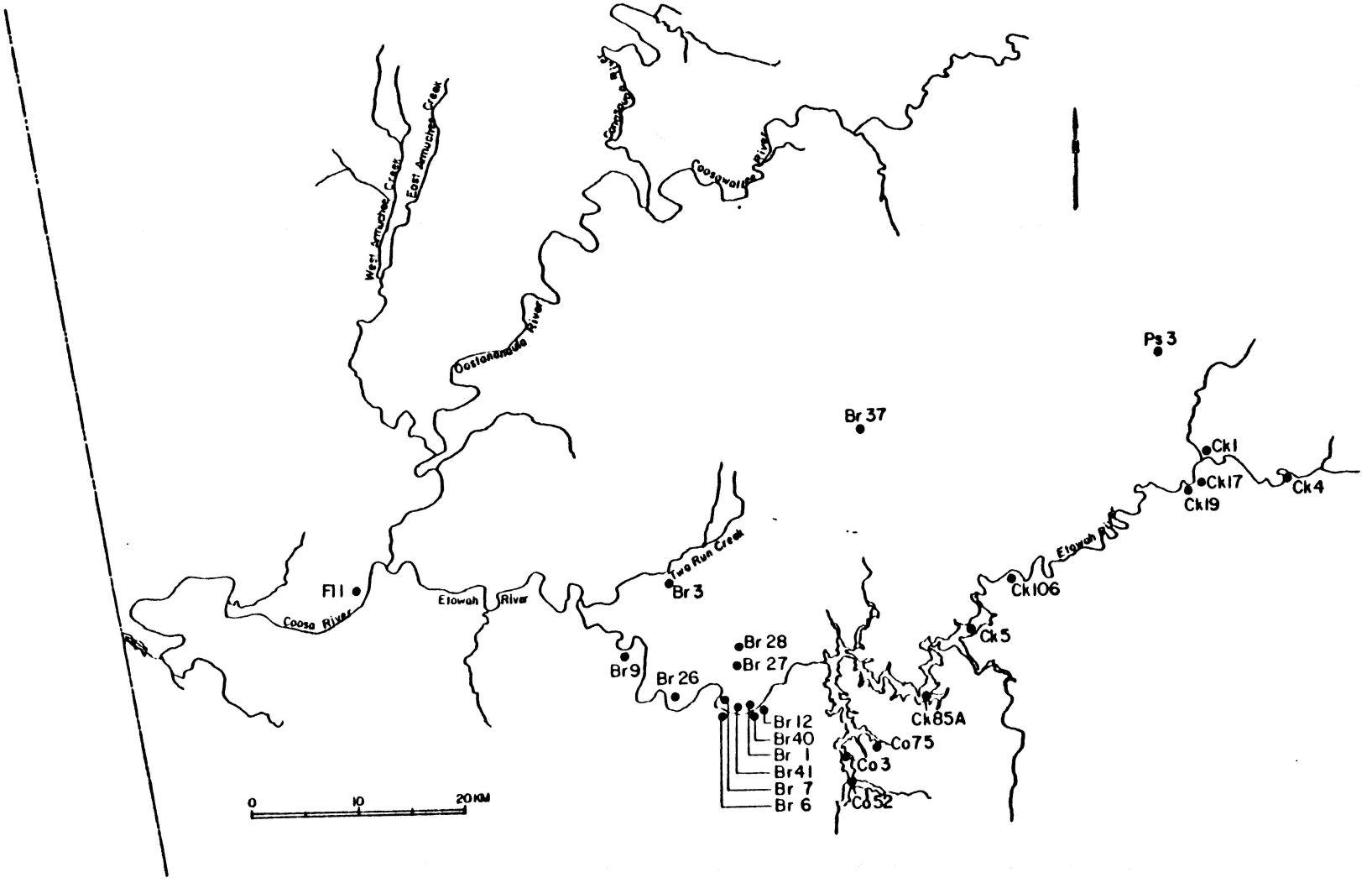

Figure 3. Wilbanks Phase settlement pattern.

to centrality in the settlement pattern of the Wilbanks Phase. Centrality is indicated by the data in Table 1, the number of mounds in use being somewhat fewer proportionally than in the Etowah Phase or the Lamar Phase.

At the Etowah Site (9Br1), excavations into the Wilbanks level of Mound C offer support for the above hypothesis. Elaborate artifactual accompaniments, crosscutting age and perhaps sex categories, were found in association with burials in this level (Kelly and Larson 1957:6, Larson 1954, 1971). The cost, in terms of energy expenditure, of the graves of these individuals was high. A line of posts segregated these burials and Mound C from the remainder of the site, each burial in turn having posts set around it, some with log coverings (Kelly and Larson 1957:4). Actual Southern Cult items (Warring and Holder 1945) were associated with these burials as opposed to representations of these items found in other burials.

Peebles (1971) has based his authority hierarchy of the Moundville Phase, in part, on the different distribution of actual items as opposed to representations of the items. At Moundville, the distribution of Southern Cult items followed an interesting trend. Actual items were encountered in greater proportions at the hypothesized major center, Moundville, than at second or third order sites. Second order sites contained proportionally more representations of personages with the items with third order sites containing burials associated with only representations of the items

Christopher Peebles, pers. comm. 1974).

A similar hypothesis is suggested for the distribution of Southern Cult items in the Wilbanks Phase. As stated above, actual items were associated with burials of the Wilbanks Phase at the Etowah Site. Possible second order sites, Br40, Br6, or Pi3 should contain individuals interred with representations of figures attired in Southern Cult fashion, such as copper plates embossed with representations of "Eagle Warriors." Since this last item has been found in excavations at the Etowah site (Larson 1959), the hypothesized major center, it is important to realize that this argument is referring to proportion. At third order sites such as Br27, Br41, and Ck19 it would be expected, under this hypothesis, to find few or no actual items such as copper bilobed arrows and maces. These sites would be more likely to contain individuals buried with representations of items, i.e., monolithic axe effigy pipes or gorgets depicting bilobed arrows.

The Lamar Phase

The culture-historical term Lamar Phase, is used in this thesis for convenience. No formal definition of any such entity has been made and will not be made here. In this thesis the Lamar Phase refers to those components in the region under study which are characterized by the presence of Lamar ceramics and the absence of Dallas ceramics. This definition is seen as sufficient to segregate the Lamar Phase from the

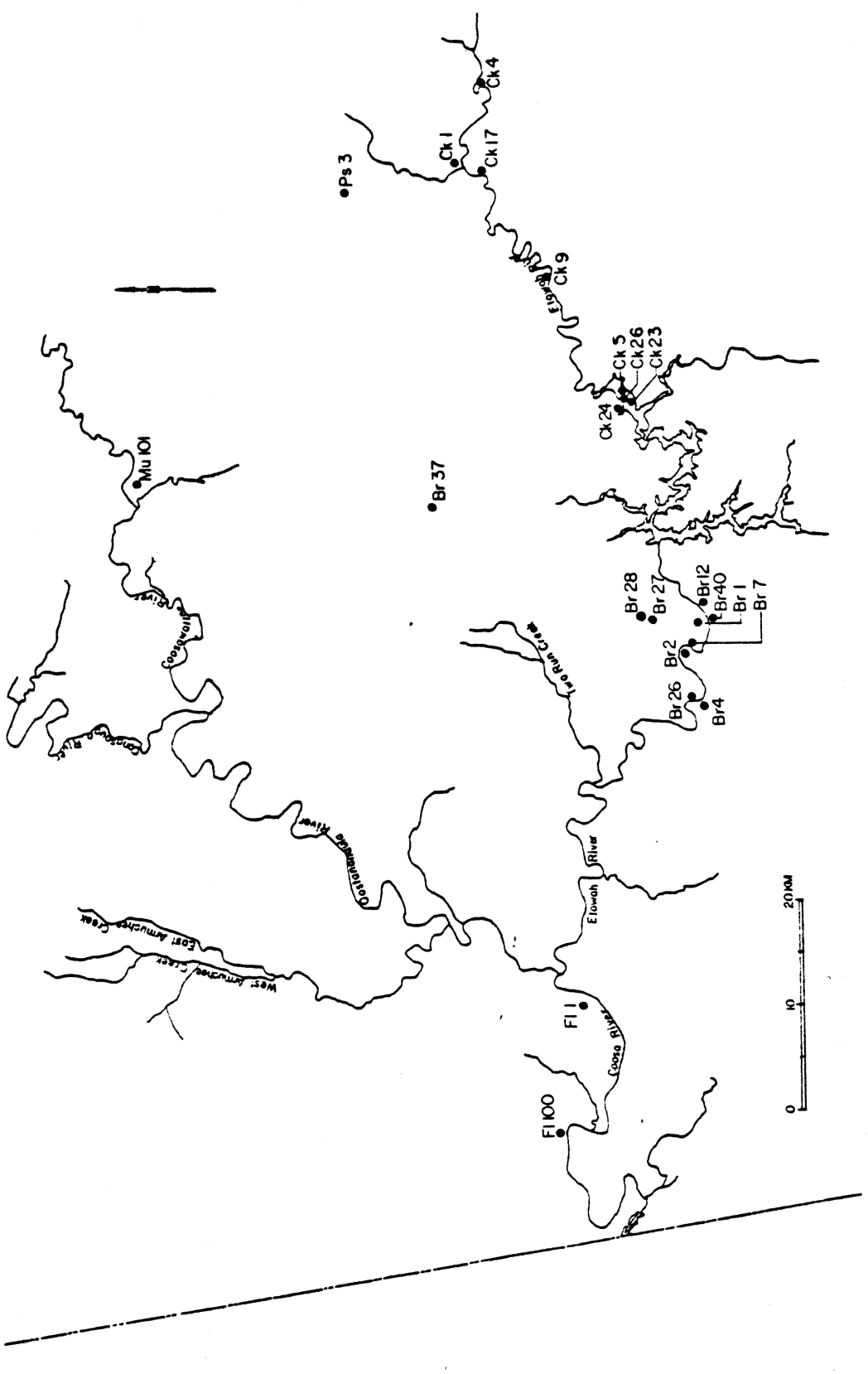

Figure 4. Lamar Phase settlement pattern.

Barnett Phase which is characterized by the presence of both Lamar and Dallas ceramics. Furthermore few Lamar Phase sites are located in the Barnett Phase area and conversely (Figures 4 and 5).

After the peak of complexity in the Wilbanks Phase there are archaeological indications of decreasing complexity within the Coosa region. From the limited data available, the organization of the Lamar settlement system appears to be more dispersed than the preceding phase, and the intrasite area of occupation of settlements is smaller. A larger proportion of mounds are in use than in the Wilbanks Phase, indicating less centrality in the settlement pattern.

Implications from this data suggest the hypothesis that there was a trend toward smaller settlements and single family dwellings arranged with respect to strategic resources rather than the older large village organization centered around first order sites (Figure 4). The climax of this trend is evident in the small, perhaps single family, dwellings of the Galt Phase in the Etowah Valley (Caldwell n.d.).

It has been suggested that DeSoto encountered aboriginal populations in the area at Lamar Phase sites (Griffin 1967:190). As an alternative hypothesis to Spanish contact with the Lamar Phase, it is suggested that the first aboriginal encounters with Europeans in the region occurred further north with Barnett Phase sites. No Lamar Phase components dating to the 16th and early 17th centuries which contained

historic goods could be located in the literature. Barnett Phase sites do contain historic items of European manufacture (Smith 1975). Perhaps sites of the Barnett Phase were located closer to the routes of early explorers and/or pre-existing aboriginal trade routes.

The Barnett Phase

The Barnett Phase, defined ceramically, consists of the combination of two separate ceramic traditions, Dallas and Lamar (Hally 1970:13). Dallas ceramics were in use in a cultural unit referred to as Middle Mississippi (Griffin 1967, Lewis and Kneberg 1946) in the eastern Tennessee region. Lamar ceramics are found in the Southern Appalachian Mississippian of Georgia (Ferguson 1971) (cf. Hally, et al., 1976:204, Hill and Kelly 1968).

Sites of the Barnett Phase, distributed along the Coosa and Oostanaula Rivers (Figure 5), are somewhat difficult to identify from surface remains due to the combination of the two ceramic traditions Lamar and Dallas, which is the essential part of this phase's definition. This fact may account for the small number of sites identified as containing a Barnett Phase component. An alternative hypothesis to explain the small number of Barnett Phase components is offered below.

The Barnett Phase appears to be more complex than the preceding Lamar Phase. Fewer mounds are in use in the Barnett Phase than any other phase in this region with the

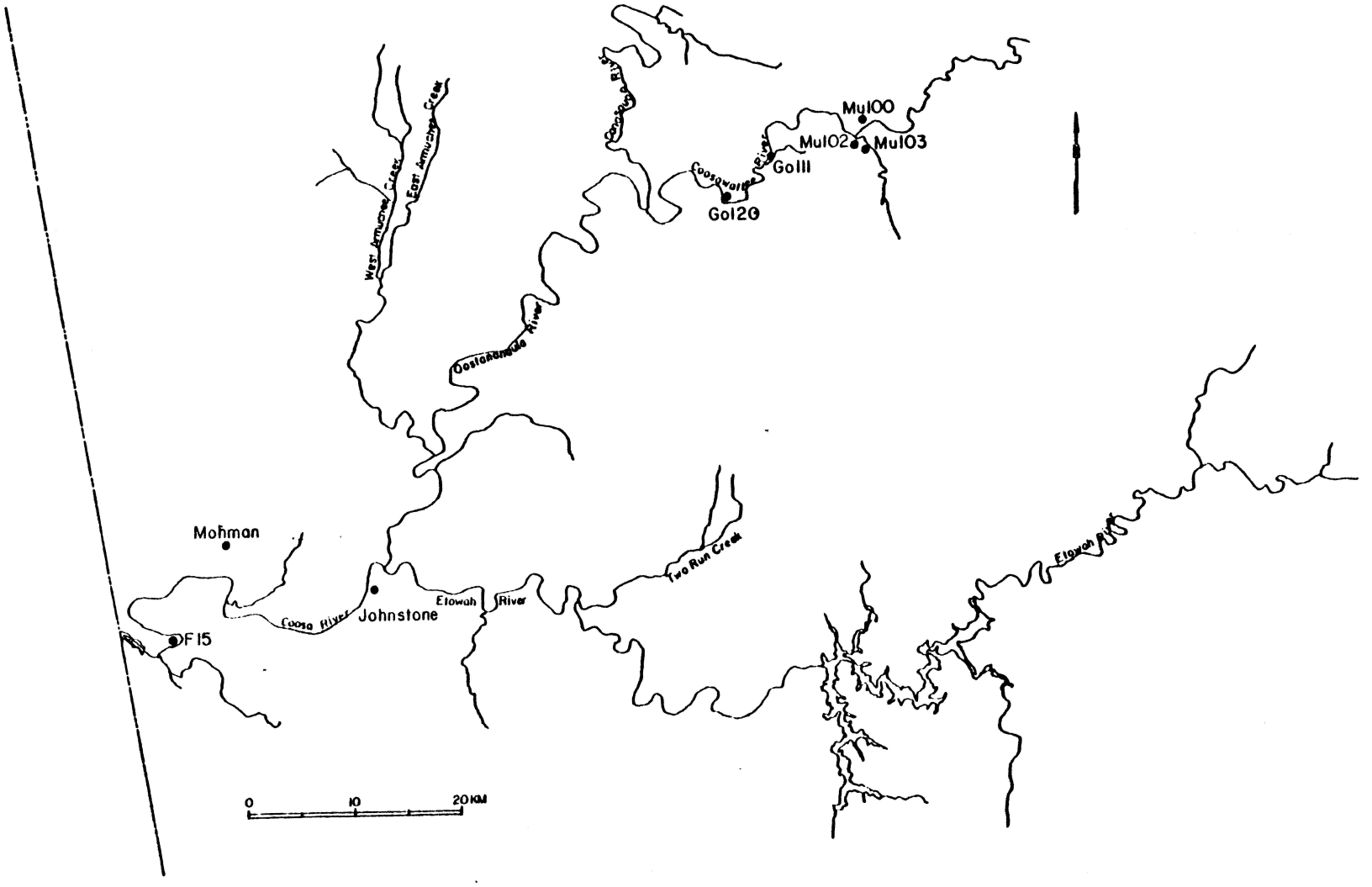

Figure 5. Barnett Phase settlement pattern.

exception of the Wilbanks phase. The majority of the components are large in area and no very small sites are known to exist. To explain the Barnett Phase settlement pattern and the hypothesized increased complexity a process of aggregation is proposed. All Barnett Phase sites thus far encountered through survey have been located in relatively broad flood plains of frequently flooded rivers. Sites of other phases considered in this thesis have been situated on small floodplains (Pi3, Figure 3). As the Barnett Phase settlement map (Figure 5) shows, few sites are found beyond the Coosa- Oostanuala floodplains. This change in settlement pattern is hypothesized to be a response to the Neo-Boreal (Baerreis and Bryson 1967) or Little Ice Age (Bray 1971), a cooling trend which occurred between approximately A.D. 1500 and A.D. 1900.

The significance of the Neo-Boreal with regard to agricultural production below latitude 40 degrees north is poorly understood at present yet it may have affected the productivity of maize. Southern varieties are adapted to warm temperatures both day and night. Any cooling trend may have affected crop yield resulting in an aggregation of protohistoric corn producing populations on the most favorable lands to minimize crop yield decrease.

Another factor possibly involved with aggregation is the perpetual state of Warre (Sahlins 1968) hypothesized to have existed in the Southeast during the late prehistoric - early

historic period. Palisaded villages on the most favorable land for agriculture may be a reflection of this (Larson 1972).

Contact between Europeans, most probably Spanish, and Barnett Phase society occurred (Smith 1975). The exact nature of this contact, whether direct or indirect, has not been determined. Numerous artifacts of smelted iron, several of which fit no known aboriginal artifacts models, were excavated from burial context at the King Site (F15) (Burials 15, 19, 40, 92, 117). Typologically, these iron artifacts are more similar to Spanish types than to French or English models (Smith 1975:64).

Little is known concerning the nature of European impact on Barnett Phase society. Artifacts resulting from this interaction at the King Site were few and were of a technomic character. Although identification was difficult due to factors of preservation, these items appear to be axes, knives, and iron spikes (Smith 1975:65). Several artifacts of an ideo-technic nature were recovered ca.150 years ago from Carters Quarters in the vicinity of Mul02, a Barnett Phase site. These artifacts, silver crosses, have been hypothesized to be related to the priestly component of the DeSoto entourage (Wauchope 1966:216). Spanish methods of proselytism could have had an impact on the nature of social relations in this area. These artifacts may be of more recent origin (Kelly n.d.)

Many more items of European manufacture have been recovered illegally from Carters Quarters by pothunters, however, little information is available as to their functional nature (M.T. Smith, personal communication, 1975).

Beyond these data cited above, further material is needed to evaluate the question of impact on late populations. Attempts currently being made to elucidate the health and nutritional status of the King Site and Etowah Site populations (M. Hurlich, personal communication; Blakely 1976) should contribute to answering this question.

CHAPTER III

ANALYSIS OF THE KING SITE MORTUARY PATTERNING

The purpose of this section is to present a paleo-ethnographic account of the King Site. Discussion will center on the mortuary remains, other aspects of the site being summarized from several sources. This account is to be considered as a partial description of the variability within the Barnett Phase populations in the Coosa region and as one case study relating to the development of social complexity during the Mississippian Period in northwest Georgia.

Description of the King Site

The King Site (9F15), a single component manifestation of the Barnett Phase, is located in Foster's Bend of the Coosa River in Floyd County, northwest Georgia (Figure 1). Description of this site is based on Hally (1975) and Hally, et al., (1975).

Excavations at the King Site uncovered a large block of the community, approximately 11795 m^2. Total area of the aboriginal occupation within the palisade and ditch was approximately 17700 m^2 as determined by resistivity survey (Hally, personal communication).

All occupational deposits with the exceptions of most burials and 7 intact house floors were destroyed by erosion and cultivation. Posthold patterns of approximately 27 structures and numerous other suprasurface features were encountered which revealed many elements of the community plan (Figure 8). This community plan may be summarized as follows: a barricaded perimeter consisting of a ditch and palisade, a ring of domestic structures just inside and parallel to the perimeter with a central plaza and associated public structures to the north of the plaza.

Two major difficulties in accepting the above community plan as final are the unknown nature of the western margin of the site and the erosion which occurred in the southwest portion of the site.

Each of the 210 burials encountered during excavations were excavated and recorded. This sample of burials is the largest such data set which has been collected in recent years in the Southeast. Variability, as observed, is discussed below.

Variables

Three classes of variables were considered in this study; artifactual, demographic, and locational. The significance and manner of coding for each is discussed below.

In considering the covariation of these three variables the following approach was taken. Initially two cluster analyses were performed, with the data set consisting of all

burials with artifactual data. The outcome of the two cluster analyses (to be discussed below) resulted in groups of individuals created by differences in artifactual associations. A series of chi square tests were made to evaluate independence of the clusters against the demographic and locational variables.

Artifactual variables

Artifactual data is usually considered to be the main body of archaeological data. This approach has been followed to the extent of creating clusters of individuals based on artifactual information (Table 5 and Table 9).

The immediate problem in the analysis was the coding of the over 1600 artifacts and other attributes of the burials. When viewed by artifact class the distribution is markedly skewed; the mean count per artifact class per burial in most cases is less than 1.0. Others have faced this same problem with the analysis of mortuary remains and have compromised by coding the attributes on a presence-absence basis (Peebles 1972:5; Hatch 1974:100). This procedure was also followed with the King Site data (Table 4).

In an attempt to elucidate data pertinent to social complexity the distribution of functional artifact types (Binford 1972) was calculated. Artifacts from the burials were classified as socio-technic or technomic based on Southeastern ethnographic analogy (Swanton 1946).

Columns	Data	Occurrences
1-3	Burial number	
4	Dallas ceramics	24
5	Lamar ceramics	13
6	Other ceramics	6
7	Disk	8
8	Pipe	11
9	Stoneworker's kit	11
10	Red ochre	5
11	Mica	1
12	Celt	7
13	Spatulate Celt	2
14	Cupstone	1
15	Projectile point	26
16	Blade	10
17	Bead	31
18	Shell Mask	5
19	Rattlesnake gorget	9
20	Shell head ornament	6
21	Conch shell	2
22	Mussel shell	13
23	Animal bone	29
24	Bone tool	14
25	Iron	5
26	Copper	1
27	Bacculum	3
28	Human teeth	1

Key to Table 4. Burial artifactual information.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
14	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
16	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
20	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0
21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	2	0	0	1	1	1	1	0	2	3	1	3	0	0	5	0	1	1	3	3	0	1	0	0

Table 4. Burial artifactual information.

	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0
13	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	0	0	1	0	0	4	3	1	2	6	1	1	0	0	2	4	0	0	0	1	0	0	0	0

Table 4. (cont.)

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	71	70	72
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0	0	0	0
15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	4	0	0	0	0	0	0	1	2	0	0	4	2	0	5	2	7	3	0	0	1	0	0	0

Table 4. (cont.)

	98	99	100	101	102	103	104	105	106	107	108	109	110	111	113	115	116	117	118	119	120	121	122	123
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
13	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	1	0	0
15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
20	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
21	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	0	2	1	5	6	4	0	2	0	0	0	0	1	0	0	0	0	10	7	0	3	6	0	0

Table 4. (cont.)

	149	150	151	152	153	154	155	156	157	158	160	161	162	163	164	165	166	167	168	169	170	172	174	175
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	3	1	0	0	2	0	0	0	2	2	2	0	0	0	1	0	0	0	0	0	1	0	0	1

Table 4. (cont.)

	176	177	178	179	180	181	182	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	1	0	1	0	0	0	0	3	0	0	0	2	1	0	0	2	2	0	4	1	0	0	0	0

Table 4. (cont.)

	201	203	205	206	209	213	211	212	213	214	215	216	217	218	219	220	221	222
1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUMS	0	0	1	0	1	1	1	2	1	0	1	1	1	1	0	2	0	0

Table 4. (cont.)

Demographic variables

The major demographic concern of this thesis is to determine whether mortuary treatments vary with age and sex, a determination crucial to the evaluation of social complexity. In simple societies social structure and the place of an individual in it at different points in his life cycle are determined by that person's age and sex. As social complexity increases a person's station depends less on age and sex.

The demographic variables were taken from the data sheets of the 1971-1974 excavations of the King Site as determined by Tally (1975). Morphology, sex and age characteristics of these individuals is currently under restudy (Marshall Hurlich, personal communication).

Location

Location of burial as a variable of social significance has been considered by others only in recent years (Hatch 1974, Peebles 1974). Useful information exists in the ethnological literature on the use of space related to kinship and status (Douglas 1972, Evans-Pritchard 1950) which is essentially untapped by archaeologists. Arthur Saxe, in his ethnographic survey of mortuary practices, formulated an hypothesis from this body of information which deals with the spatial issue:

> To the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimized by

> means of lineal descent from the dead, (i.e., lineal ties to ancestors), such groups will maintain formal disposal areas for the exclusive disposal of their dead, and conversely (Saxe 1970: 119).

Although this hypothesis cannot be directly tested with presently available archaeological data, the level of confirmation with Saxe's sample was sufficiently strong to warrant its consideration.

The notion of separate and unequal areas of burial for different kinds of people probably permeates all prehistory and history. Historic burial locations often are the key to determination of the socio-economic and/or religious affiliation of the deceased individual. Church yard plots for the remains of congregation members, moss-covered oaks shading the graves in prestigious cemeteries, and the unmarked graves of blacks might represent a cross-section of the 1890 burial population of a Southern city. Separate national cemeteries for veterans and Potters Field for paupers further illustrate that differences in life are reflected in differences in interment locations.

In prehistoric examples, Larson (1971) noted that during the Wilbanks Phase occupation at the Etowah Site, the burials differed in artifactual content between the mound and the village areas. Those burials in Mound C were endowed with the highly exotic Southern Cult paraphenalia while the Wilbanks burials in the domestic area of the site contained more technomic artifacts such as ceramic pots or

plain stone celts. Hatch and Willey (1974) have observed artifactual and physical differences between mound burials and domestic area burials in the Dallas Phase of eastern Tennessee.

Ethnographic evidence indicates additional dimensions of spatial separation in the Southeast. The "typical" 18th century Southeastern settlement might be organized into four functionally different areas, the council house, the plaza, the domestic areas, and the busk ground (Bartram 1858). Moreover, there are hints that the dual social organization of Southeastern society was reflected in the composition of the domestic areas, i.e., each moiety would have occupied one side of the village. The purpose in considering this variable is the discernment of spatial distinctions from an archaeological perspective.

To evaluate the issue of spatial separation with the King Site data, an assumption was made about the nature of the site. On the basis of ethnographic evidence (Hawkins 1848:68-72, Smith 1968:289) the site was divided into two distinct functional areas, a private or domestic area and a non-domestic sector. The private area includes the domestic structures and their surroundings (Seckinger 1975:68). Results of this evaluation are discussed in Chapter IV and shown in Tables 8 and 12.

Cluster analysis

Cluster analysis is a family of statistical algorithms designed to fuse or to divide observations into groups. This group of algorithms is usually segregated into two classes, agglomerative and divisive methods. Divisive algorithms progressively subdivide the population under consideration while agglomerative algorithms fuse observations into groups (Lance and Williams 1966:246).

The major difference in the two analyses performed on this data is not the agglomerative-divisive distinction but the polythetic-monothetic dichotomy. Polythetic classifications are based on a distance or other interobject measure scored over all observations. Monothetic classification is based on the presence or absence of a single attribute for each cluster (Williams 1971:310). However, a different procedure was followed in this thesis (Table 9).

A crucial question to the analysis deals with the organization of the society which occupied the King Site. Of particular interest in this analysis which utilizes both methods of cluster analysis, is the creation of relatively homogeneous groups of persons, i.e., burials, based on certain attributes of each person. The unique individual is of little or no interest in a study such as this which deals with broad patterns, rather the purpose is system centered. Net differences between persons is of little interest. For this reason outliers could not be split off from the population. The measure originally used with divisive algorithms,

Σx^2, is inappropriate in this study due to its sensitivity to data sets characterized by a high amount of variability. Although Σx^2 "provides the maximum information split", it does split outliers off from the population at an early iteration stage, creating a number of clusters with N=1 (Lance and Williams 1966:247). Results from the King Site data using this measure (Program TYPE (Whallon 1971)) demonstrated this problem. The analysis continued splitting off single individuals until a stopping rule was invoked. More traditional distance measures, when used with a divisive algorithm, result in similar outcomes. They are often quite sensitive to occurrences of rare attributes or rare occurrences of common attributes (Williams 1971:321). This phenomenon too was demonstrated with the King Site data utilizing Program DIVIDE (Wishart 1969) with average squared distance being the distance measure employed.

Several recent studies from archaeological and ecological perspectives have shown there is a measure which will not split these drastically different individuals off one at a time from the population. This measure is the information statistic (Peebles 1972:3, Tainter 1975:11, Lambert and Williams 1966, Lance and Williams 1968:195). The information value may be interpreted as the amount of disorder or randomness within the group (Shannon and Weaver 1964:12). As such, the value is zero if there is no difference among the constituents of the group. The information statistic, then, is

useful in this study, due to its evaluation of the homogeneity of the clusters.

Use of two cluster analyses

Artifactual data were manipulated with the aid of two different kinds of cluster analyses. Each of these two analyses are discussed below. Two reasons were involved in the decision to use both methods. The first was to further evaluate homogenity of the created clusters and the second was to test the effectiveness of both analyses used with burial data.

It was reasoned that if cluster information was similar from both analyses, the result would have more support. Due to limitations of the data discussed elsewhere, more traditional cluster evaluations (discriminant function analysis) could not be used with the King Site burial data.

A second reason for the use of two kinds of cluster analyses is the concern over the potential of misclassification at early iterative stages in polythetic-agglomerative analysis. Hopefully, the utilization of both polythetic-agglomerative and monothetic-divisive analysis will satisfactorily solve both problems.

Statistical significance of cluster analysis.

To date, no measure of classical statistical significance can be determined from a cluster analysis (Sampson 1973:456-457). As research in this area continues it

appears the information statistic will become useful in deciding upon the significant classes within a clustered data set (Field 1969:566-567). Its distribution approaches x^2 when the sample is large (Bottomley 1971:339).

Cluster analysis, then, is used in this thesis as a technique to objectively group individuals as an inductive search for structure and as a source for hypotheses (Williams and Dale 1965:44-45).

Polythetic-agglomerative cluster analysis.

Figure 6 is a dendrogram resulting from the polythetic-agglomerative cluster analysis performed on a matrix of 102 burials by 25 artifact classes (Table 4). Program HIERAR of the Clustan 1A package (Wishart 1969) was executed using Ward's Method and average squared distance. A view of the graph of the fall of error sum of squares by the number of clusters indicated five terminal clusters was a good solution. The dotted line crossing the dendrogram represents this solution.

Table 5 lists the constituents of the clusters and their significant defining artifactual attributes. Wishart offers a limited measure of significance of an attribute in a cluster with the Percentage Ratio

$$PR = P(C, J)/P(J) \qquad 1$$

where P(C,J) is the percentage occurrence for binary variable J in cluster C and P(J) is the percentage occurrence in the total data set for attribute J. The expected value for

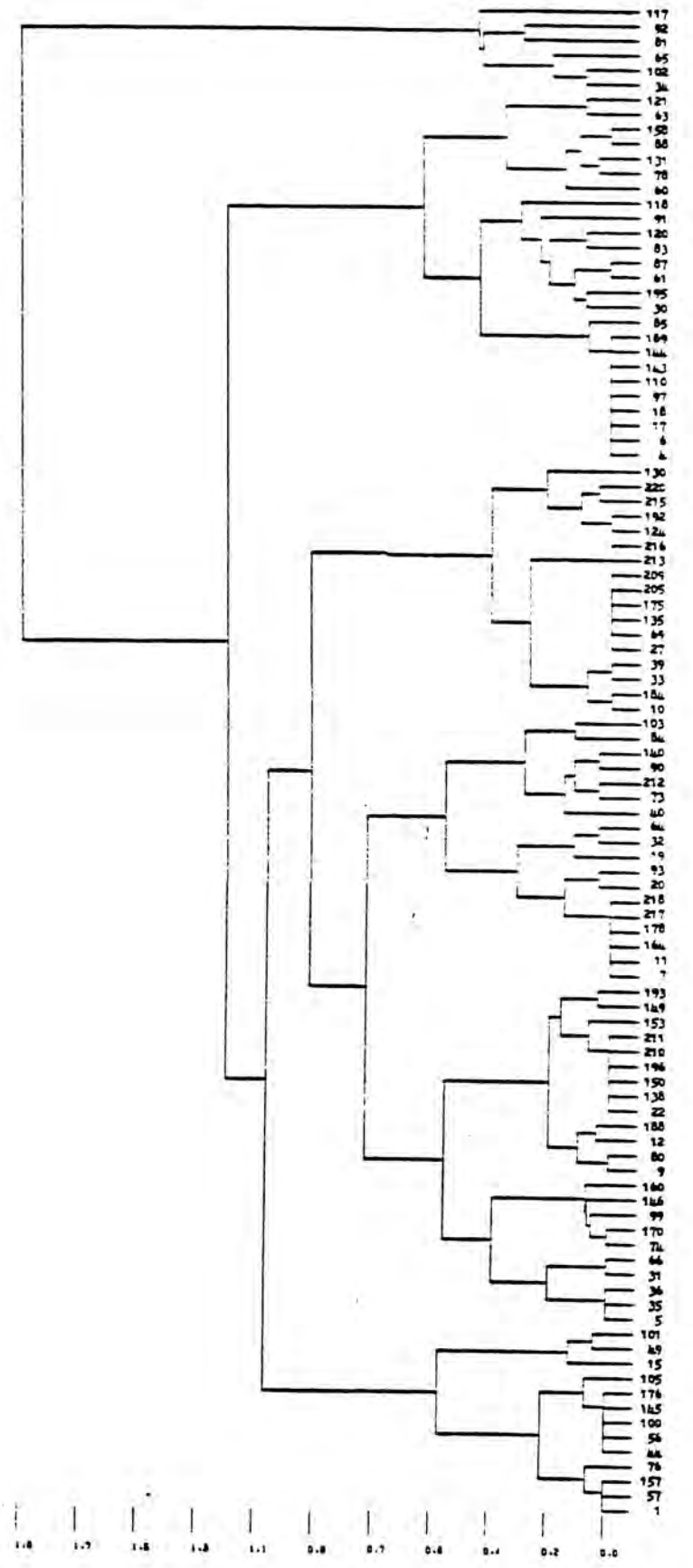

Figure 6. Polythetic-agglomerative dendrogram.

this measure is 1.0 (Wishart 1969:28). Following Peebles (1974:119) an attribute was accepted as significant if it was present in two or more individuals in a cluster with PR of 2.0 or more.

A summary of the polythetic-agglomerative cluster content is given below. More detailed information is available in Table 5.

Cluster I

Of the 13 individuals in this cluster 54% were located in the public area of the site. Adults comprised 92% of the cluster and 82% of the identifiable cases were male. The defining artifactual attributes were, for the most part, those which archaeologists traditionally assumed to be male associated (see, however, Appendix I).

Cluster II

Of the 25 cases in this cluster 68% were located in the public area. Only 9 individuals were amenable to sex identification, 5 male, 4 female, 56% of the cases were subadults. The artifacts significantly associated with this cluster were those usually considered to be associated with females.

Cluster III

The public area contained 39% of the individuals in this cluster. Of the remaining 61% located in the domestic area of the site, 46% of the total were inside domestic structures. The defining artifactual attributes are those

Cluster I N=13
Case numbers: 1,15,44,49,56,57,76,100,101,105,145,157,176

Defining attributes	% occurrence in cluster	% Ratio
Projectile point	92.4	3.63
Blade	30.8	3.14
Bone tool	30.8	2.25
Stoneworker's kit	23.1	2.14
Shell mask	15.4	3.14

Cluster II N=25
Case numbers: 4,6,17,18,30,60,61,63,78,83,85,87,88,91,97,
110,118,120,121,131,143,144,158,189,195

Bead	88.0	2.90
Mussel shell	32.0	2.52
Shell head ornament	20.0	3.40

Cluster III N=41
Case numbers: 5,7,9,11,12,19,20,22,31,32,35,36,40,64,66,73,
74,80,84,90,93,99,103,138,140,146,149,150,153,
160,164,170,178,188,193,196,210,211,212,217,218

Lamar ceramics	31.8	2.49
Rattlesnake gorget	19.6	2.22

Table 5. Polythetic-agglomerative cluster content

Cluster IV N=17
Case numbers: 10,27,33,39,69,124,130,135,175,184,192,205, 209,213,215,216,220

Defining attributes	% occurrence in cluster	% ratio
Dallas ceramics	88.3	3.75
Celt	29.5	4.29

Cluster V N=6
Case numbers: 34,65,81,92,102,117

Stoneworker's kit	100.0	9.28
Bone tool	100.0	7.29
Animal bone	100.0	3.52
Projectile point	83.4	3.27
Blade	66.7	6.80
Pipe	66.7	6.19
Red ochre	50.0	10.20
Conch shell	33.4	17.00
Bacculum	33.4	11.34
Iron	33.4	6.80
Celt	33.4	4.86

Table 5. (cont.)

Age Categories

Cluster	1	2	3	4	5	6	No Data	Total
I	0	0	1	3	7	2	0	13
II	8	4	2	7	4	0	0	25
III	10	3	2	11	7	4	4	41
IV	5	3	1	2	4	1	1	17
V	0	0	0	1	2	3	0	6
Total	23	10	6	24	24	10	5	102

1 Infant 1-6
2 Child 7-12
3 Adolescent 13-17
4 Young adult 18-30
5 Adult 31-40
6 Senile 40+

Cluster	Sub-Adult	Adult	Total
I	1 (5.23)	12 (7.77)	13
II	14 (10.05)	11 (14.95)	25
III	15 (14.88)	22 (22.12)	37
IV	9 (6.43)	7 (9.57)	16
V	0 (2.41)	6 (3.59)	6
Total	39	58	97

x^2 14.07 4 df p between .01 and .001

phi .38

phi square .15

Table 6. Age content of polythetic-agglomerative clusters.

Clusters	Male	Female	No Data	Total
I	9 (3.57)	2 (2.55)	2 (6.88)	13
II	5 (6.86)	4 (4.90)	16 (13.24)	25
III	6 (11.25)	12 (8.04)	23 (21.71)	41
IV	2 (4.67)	2 (3.33)	13 (9.00)	17
V	6 (1.65)	0 (1.18)	0 (3.18)	6
Total	28	20	54	102

x^2 37.15 8 df $p < .001$

phi .6

phi square .36

No data excluded

x^2 9.799 4 df p between .05 and .02

phi .45

phi square .2

Table 7. Sex content of polythetic-agglomerative clusters.

Clusters	Public Area	Domestic area	Total
I	7 (5.99)	6 (7.01)	13
II	17 (11.52)	8 (13.48)	25
III	16 (18.89)	25 (22.12)	41
IV	2 (7.83)	15 (9.17)	17
V	5 (2.76)	1 (3.24)	6
Total	47	55	102

x^2 17.38 4 df p between .01 and .001

phi .41

phi square .14

Table 8. Polythetic-agglomerative cluster distribution

considered to be usually associated with females and subadults.

Cluster IV

The domestic area of the site contained 88% of this cluster. Of the total 71% were inside domestic structures. Only 4 individuals were amenable to sex identification; 56% of the individuals were subadults. Of the two defining artifactual characteristics both are male associated at the King Site.

Cluster V

Of the 6 individuals in this cluster, 83% were located in the public area. The cluster is made up totally of males. The content of this cluster remained static regardless of the number of clusters requested from the population, indicating a high degree of homogenity. The artifacts associated with this cluster are those usually considered to be strongly male associated.

Monothetic-divisive cluster analysis.

Figure 7 is a dendrogram resulting from a monothetic-divisive cluster analysis of the King Site burial data. This analysis was performed using the same 102 by 25 matrix as was the polythetic-agglomerative analysis discussed above. Program Divide was executed using the information statistic (Wishart 1969:53-58). The analysis was allowed to divide until 10 terminal clusters were reached, where a

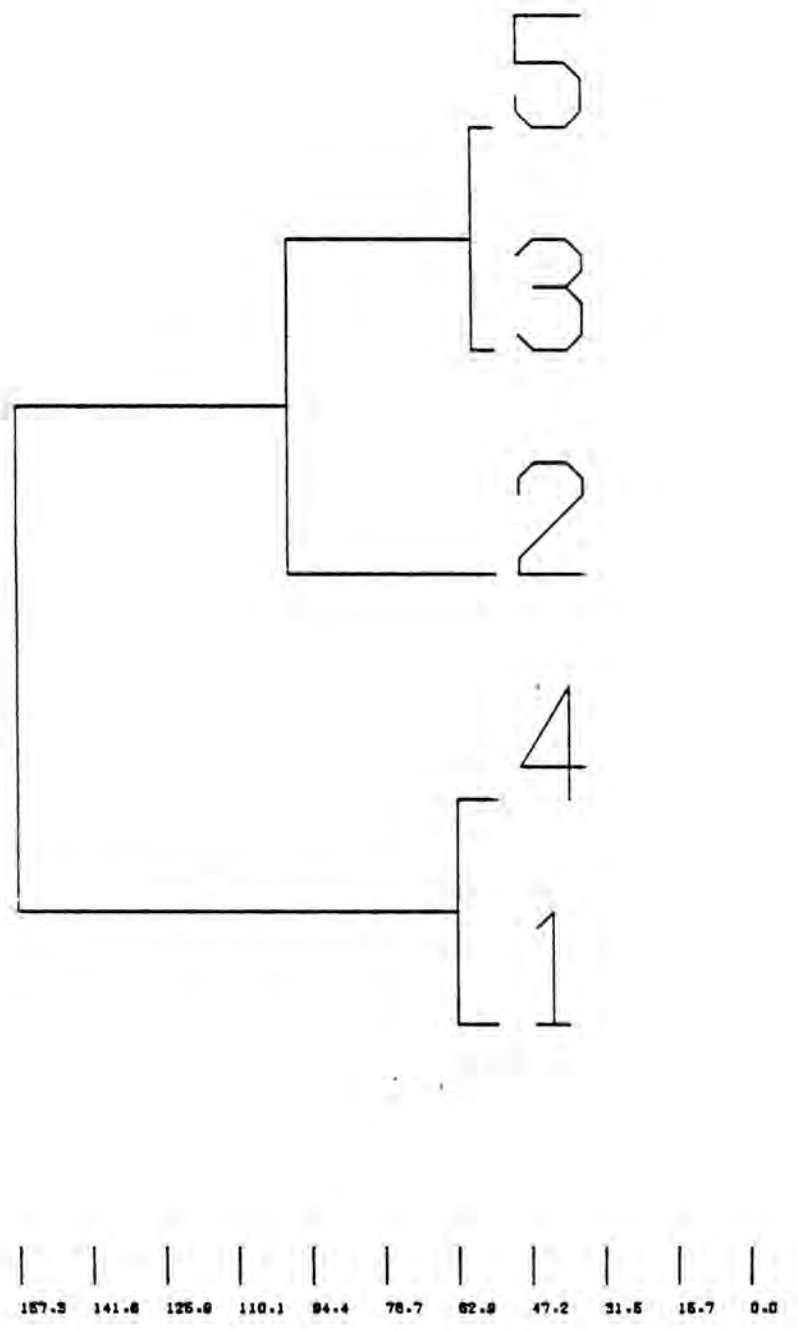

Figure 7. Monothetic-divisive dendrogram of 9FL5 burials

stopping rule was involved. The graph of information fall suggested 5 terminal clusters was a reasonable solution.

Table 9 lists the defining artifactual attributes in each of the 5 clusters. Significance was determined in the same manner as the polythetic-agglomerative analysis. The clusters resulting from the monothetic-divisive analysis are not defined on the basis of single attributes, but on the basis of artifacts contributing to the formation of the cluster in question. This information is calculated by Program Result (Wishart 1969). The classic model of divisive cluster analysis is portrayed in the dendrogram (Figure 7).

Cluster I

Of the 8 cases in this cluster, 63% were located in the public area. Of the individuals 100% were adult males. This cluster closely corresponds to Clusters I and V in the former analysis. The artifactual contents of this cluster are those usually assumed to be male associated. All European artifacts found in burial context at 9F15 were associated with individuals in this cluster.

Cluster II

The public area was the location of 70% of the 23 individuals in this cluster. Of the total, 57% are subadults, and of those identifiable the sexual proportion was equal. Beads, usually assumed to be female associated,

Cluster I N=8
Case numbers: 15,34,49,81,92,101,102,117

Defining attributes	% occurrence in cluster	% ratio
Stoneworker's kit	100.00	9.28
Projectile point	100.00	3.93
Blade	75.00	7.66
Bone tool	62.60	4.56
Animal bone	62.60	2.20
Iron	37.60	7.66
Red ochre	37.60	7.66
Discoidal	37.6	4.79
Pipe	37.60	3.48
Bacculum	25.00	8.51
Shell mask	25.00	5.11
Celt	25.00	3.65

Cluster II N=23
Case numbers: 4,6,17,18,31,60,63,64,65,66,84,85,88,90,
97,110,120,121,143,144,158,160,189

Bead	100.00	3.30

Cluster III N=19
Case numbers: 10,20,27,33,39,69,93,124,130,135,149,175,
184,192,193,205,209,213,216

Dallas ceramics	100.00	4.26
Mussel shell	26.40	2.07
Celt	15.80	2.31

Table 9. Monothetic-divisive cluster content

Cluster IV N=34
Case numbers: 5,7,9,11,12,19,22,32,35,36,73,74,76,78,80, 83,99,103,131,138,140,150,164,170,178,188, 196,210,211,212,215,217,218,220

Defining attributes	% occurrence in cluster	% ratio
Lamar ceramics	32.4	2.54
Rattlesnake gorget	17.7	2.01

Cluster V N=18
Case numbers: 1,30,40,44,56,57,61,87,91,100,105,118,145, 146,153,157,176,195

Projectile point	100.00	3.93
Shell head ornament	16.70	2.84

Table 9. (cont.)

are the only defining artifactual attribute of this cluster. Yet these artifacts are male associated at the King Site (Appendix 1). Burial 92 of Cluster I, an older adult male, contained over 200 shell beads. This cluster closely corresponds to Cluster II of the polythetic-agglomerative analysis.

Cluster III

Of the 19 individuals in this cluster, 84% were located in the domestic area, 68% within domestic structures. Of the sexable individuals, 2 were male, 3 female. There were 9 subadults and 8 adults. The artifacts significantly associated with this cluster are those usually considered to be female associated, Dallas ceramics and mussel shell, which are, however, male associated at the King Site. Celt, a third significant artifact is usually considered to be associated with males. Ceramics and mussel shell may be redundant attributes since ethnographic data indicates the frequent use of mussel shell as spoons. This cluster most closely corresponds to Cluster IV of the polythetic-agglomerative analysis.

Cluster IV

The domestic area contained 62% of this cluster. Of the identifiable individuals, 73% were female, 58% were adult. Lamar ceramics and rattlesnake gorgets (Citico style), the defining artifactual characteristics, are

Cluster	Male	Female	No data	Total
I	8 (2.20)	0 (1.57)	0 (4.24)	8
II	5 (6.31)	5 (4.51)	13 (12.18)	23
III	2 (5.22)	3 (3.73)	14 (10.06)	19
IV	4 (9.33)	11 (6.67)	19 (18.00)	34
V	9 (4.94)	1 (3.53)	8 (9.53)	18
Total	28	20	54	102

x^2 34.658 8 df $p < .001$

phi .58

phi square .34

No data excluded

x^2 17 4 df .01 $p < .001$

phi .6

phi square .35

Table 10. Sex content of monothetic-divisive clusters

Cluster	1	2	3	4	5	6	No Data	Total
I	0	0	0	2	3	3	0	8
II	8	4	1	6	4	0	0	23
III	6	2	1	3	4	1	2	19
IV	6	4	3	7	6	5	3	34
V	3	0	1	6	7	1	0	18
Total	23	10	6	24	24	10	5	102

1 Infant 1-6
2 Child 7-12
3 Adolescent 13-17
4 Young adult 18-30
5 Adult 31-40
6 Senile 40+

Clusters	Sub-Adult	Adult	Total
I	0 (3.22)	8 (4.78)	8
II	13 (9.25)	10 (13.75)	23
III	9 (6.84)	8 (10.16)	17
IV	13 (12.46)	18 (18.54)	31
V	4 (7.24)	14 (10176)	18
Total	39	58	97

x^2 11.54 4df p between .05 and .02

phi .34

phi square .12

Table 11. Age content of monothetic-divisive clusters.

Clusters	Public Area	Domestic area	Total
I	5 (3.69)	3 (4.13)	8
II	16 (10.6)	7 (12.4)	23
III	3 (8.75)	16 (10.25)	19
IV	13 (15.67)	21 (18.33)	34
V	10 (8.29)	8 (9.71)	18
Total	47	55	102

x^2 14.38 4 df .01 $p < .001$

phi .38

phi square .14

Table 12. Monothetic-divisive cluster distribution.

female associated items (Appendix 1). Cluster I and II of the polythetic-agglomerative analysis most closely correspond to this cluster.

Cluster V

Of the 18 cases in Cluster V, 56% were located in the public area. Of the identifiable individuals 90% were male and 78% were adult. This cluster exhibits no discrete sexual orientation with regard to the artifactual associations. Clusters I and II of the polythetic-agglomerative analysis most closely correspond to this cluster.

Results of the use of two cluster analyses.

As stated earlier, 2 cluster analyses were used to support the homogeneity of the clusters and to evaluate the use of each type with burial data. The information in the cluster content tables (Tables 5 and 9) indicate that both analyses are broadly similar in that the defining attributes of both sets of clusters are similar. However the 2 cluster analysis classifications are different. A test for goodness of fit with a null hypothesis of Cluster analysis 1-Cluster analysis 2 was significant beyond .001 (Sokal and Rohlf 1969: 561).

It appears that most variation may be explained by the different treatments of those individuals in Clusters I and V of each analysis. There is no clear cultural reason for the separation affected in these 2 clusters in the polythe-

tic-agglomerative analysis because these individuals are characterized by broadly similar classes of artifacts. The goal of this analysis was to create groups of individuals in which intracluster similarity was high while maximizing differences among clusters. For this reason the monothetic-divisive analysis seems to have performed better in separating these individuals.

The above findings support other recent findings concerning the use of cluster analysis with burial data. When the aim is to arrive at group structure, this research has indicated, as has Peebles' (1974) and Tainter's (1975) that a monothetic-divisive cluster analysis utilizing the information statistic provides more interpretable results than the classical polythetic-agglomerative analyses.

CHAPTER IV

SOCIAL COMPLEXITY AT THE KING SITE

A number of elements of social complexity were discussed in Chapter I. The task now is to relate the analysis of the King Site and the Barnett Phase to these generalizations in preparation for placing these entities on a regional scale of relative social complexity. Each element of social complexity will be discussed in turn.

Many ideas of current interest in the analysis of burial remains could not be addressed in this thesis. Differential treatment due to manner of death is not discussed primarily because of the lack of comprehensive data for a sufficient number of burials. Reasons for this lack of data range from oversight to lack of preservation.

Another major topic missing from this analysis is the treatment of infant burials. Upon preliminary age classification, no burials were found which were less than one year old. Reasons for the absence of infants may lie in preservation, and/or river or tree burial.

Sociological dimensions of social complexity

The sociological dimension deals with placement of individuals in relative order within a society and distribution of populations over space.

Ranking

The relative order of individuals within a society and the hierarchial nature of this ordering configuration have been the most frequently used criteria for evaluating social complexity. Archaeological reflections of this configuration may be observed via the distribution of the Binford's (1972) functional classes of artifacts; socio-technic and technomic.

Results of the tests on the distribution of Binford's artifact classes at the King Site are somewhat puzzling. The presence of socio-technic artifacts, technomic artifacts, and the absence of artifacts was tabulated for all burials. This tabulation resulted in a ratio closely approaching 1:1:1. This would tend to imply three different ranking groups each of a similar group size, an unlikely circumstance.

When these functional classes of artifacts are viewed in context of the cluster analyses a different picture emerges. In the polythetic-agglomerative analysis the cluster content of socio-technic artifacts is 2:2:1:0:6. The content of the monothetic-divisive analysis clusters is 7:1:0:1:1. These results are both another indication that the monothetic-divisive analysis produced "better" results and that the distribution of socio-technic artifacts is unequal.

The distribution of age and sex over the clusters provides information on the cross cutting of these demographic variables with the ranking system of a society. This kind of distribution is an important part of at least one model

of social complexity (Fried 1967). Age and sex data were tabulated for each cluster and were subjected to a test for independence with chi square. Demographic results from this study are meager due to a severe limitation of the chi square distribution. Siegel (1956:178) has noted that no more than 20% of the expected values should be less than 5 and no expected value should be less than 1 or x^2 becomes meaningless. This condition was only met with the variable of age.

Certain trends were, however, noted in the demographic analysis. As Table 6,7,10,11 indicate, there is an association between age and sex and the clusters as defined by the artifactual cluster analysis. These data would seem to indicate that since clusters cross cut age and sex categories the society at the King Site was not egalitarian.

The clearest pattern to emerge from these demographic tests are the age and sex content of the clusters highest in artifactual rank. In both cluster analyses the clusters of highest rank (Clusters I and V of the polythetic-agglomerative and Cluster I of the monothetic-divisive) were overwhelming adult males. This observation alone strongly argues for a less complex society at the King Site than at the Etowah Site during the Wilbanks Phase. In the latter situation ascribed, non-age and non-sex dependent, status is clearly evident (Larson 1971). Yet, the mere presence of a wide range of variability within the population indicates that this society was not organized with a completely egalitarian

structure. While the present lack of a detailed regional scale of social complexity does not allow the determination of the King Site ranking system's absolute complexity, the information discussed above does indicate that factors other than age and sex were variables in this ranking system.

During the early stages of excavation the hypothesis was advanced that the northern section of the site contained the high ranking individuals (Garrow and Smith 1973:9). The northern section came to be viewed in a special light not only due to burials with exotic items, but also due to the presence of structures formally different from those classified as domestic.

Structure 17, which stands out in this regard, is nearly twice the size of most domestic structures. Posthole patterns within this structure are likewise different from other buildings. Patterns imply the presence of either separate compartments or support for raised benches. Seven of these compartments contained a total of 10 burials all of which amenable to classification were adult (9) males (4). The present interpretation of this structure leans toward a ceremonial and public building similar to the Cherokee townhouse (Hally, et al., 1976:60-61).

The high ranking of individuals buried in the north sector of the site has not been challenged by continued excavation in the southern area, with a single qualification. Although Cluster I of the monothetic-divisive analysis, the cluster of highest artifactual rank, is located entirely in

the northern half of the village, it is also in this area that the greatest concentration of the population is located. Viewed from this perspective, the hypothesis of separate areas for interment of high ranking individuals is questioned.

The presence of all types of burials in the northern portion of the site led to a revision in the location of the symbolic boundary between high and low rank, public and domestic sectors. As discussed in Chapter III this new boundary was placed between the hypothesized public area that from the perspective afforded in tests discussed below, the public-domestic notion and placement of the boundary must be considered an assumption. This distinction will be used below as a framework by which to discuss several features of social complexity at the King Site rather than to act as an hypothesis to be tested here.

To consider implications of the public-domestic separation several attributes of the burials were scored over these two areas. The basic question asked was how these attributes (Table 13) varied with respect to area and what attributes(s), if any, were denotata of each respective area.

All ages do cross-cut the public-domestic boundary; however, a clear pattern exists in this distribution. Percentages of sub-adults in the public area do not approach a majority while adults do. This would seem to imply achieved entrance to the public area. Yet the percentage of infants in the public area is higher than that of infants in the domestic area.

Figure 5. Site plan of 9FL5.

Information on the distribution of males and females over the site is meager due to the lack of bone preservation of a quality to make such determinations. Ninety-one burials were sexed and contingency table results show no significant differences in placement of the sexes between the public and domestic areas. Realistically, evaluation of this attribute must await a new study of sex currently underway (M. Hurlich, personal communication, 3/23/77).

Semi-flexed is clearly the prevalent mode of positioning of all burials with extended, flexed, and bundled burials following in relative order of frequency. Several patterns are evident in these distributions.

Proportionally, position varies from the public to the private area of the site. More extended and semi-flexed burials are in the public area, while more flexed and bundled burials are located within the domestic area.

Three positions of roll were observed in burials at 9F15, on back, on right side, or on left side. Differences in distribution are seen in regard to only 1 category, roll of body on right side. The public area contains only 4 burials of this category while the domestic area contains 24 burials rolled to the right.

The placement of multiple burials follows a clear pattern. Most individuals buried with another individual are in the domestic area outside of structures. Inside domestic structures is second while the entire public area contains only 20% of the individuals buried in this manner.

Of those grave pits which incorporate log or plank siding or cover, 77% are inside public buildings, a majority in Structure 17. No log tombs occur in the general public area and only three occur in the domestic area.

The observations mentioned above both further substantiate the different qualities of Structure 17 and offer an example of restrictive mortuary behavior. If one accepts the assumption that cost of the grave facility implies rank of the interred individual (Tainter 1973), then individuals in log tombs occupied positions of higher rank than those individuals not in similar facilities.

With the exception of 5 structures (11, 13, 17, 25, and 27) burials inside structures are placed in the northern half of buildings (Figure 8. This pattern is particularly evident in Structure 23 where burial pits are closely spaced, with some overlap.

In Structure 17, however, three separate groups of burials exist, each group having a standard orientation. The burials are located in all but the western 1/3 of the structure.

Several alternative (but not mutually exclusive) hypotheses may be advanced to explain the above observations:

(1) All burials in the domestic structures were buried to the north of the structure.

(2) Burials on the ~~each~~ east side of the site were in the northern half of structures while those on the western side were buried toward a different wall of structures.

(3) The 3 groups of burials in Structure 17 represent public officials recruited from 3 different social groups.

If upon excavation of the western portion of the side, H1 is shown to be supported, this pattern could reflect a number of undiscoverable emic notions concerning burial or the northerly direction. If H2 is shown to be supported it may reflect a dual division of society into two moieties as observed in the ethnographic Southeast. H3 could possibly be elucidated if upon total excavation three patterns of placement were evident.

Summary

Observations discussed in this section relate to two broad sets of hypotheses and assumptions brought out in this thesis, the validity of the public-domestic areas distinction and the differences among individuals at the King Site. The creation of two functional areas in the site is vindicated not only by the different constructional aspects of the two areas, but also by the differences between the burials within each area. Burial tendencies in the public area can be described as follows: Adults in single interments in log tombs, in extended or semi-flexed position, not rolled to the right side (Table 13).

Characterization of the domestic area can be described as follows: Subadults in multiple interments not in log tombs, in flexed or bundled position, rolled to the right side (Table 13).

	Public	Domestic
Age	Adults comprise majority Majority of adults	Subadults comprise majority Minority of subadults
Position	More extended and semi-flexed	More flexed and bundled
Roll	Few on right side	Many on right side
Multiple burials	Few	Many
Log tombs	Most inside public buildings	Few

Table 13. Key to the two functional areas of the King Site.

That individuals are different, localitionally, artifactually and demographically, and are differentially distributed over the site substantiates the notion that the society operating at the King Site was not organized on an egalitarian basis.

Distribution of clusters

Both cluster analysis of the mortuary artifacts discussed in Chapter III separated areas of the site (Table 8 and 12). In both analyses Clusters I, II, and V are located in the public area based on a majority of cluster members. Furthermore, each of these clusters proportionally has more members inside public area structures.

There is considerable overlap of these clusters into the domestic area. Several alternative hypotheses may be advanced to account for this overlap:

(1) The areas are not well defined, i.e., there is overlap between the defined areas through the analyst's error.

(2) There was a diffuse and perhaps changing boundary separating the public and private areas during occupancy of the site (Seckinger 1975: 70).

(3) The site is not organized on the notion of public vs. private areas.

(4) The artifactual clusters are etic rather than emic in nature.

Future excavation of the western portion of the site should shed information on this question.

Access to burial space

In continuing to assess questions of limited access to specified areas, the decision was made to attempt to test or evaluate Saxe's Hypothesis #8 (Saxe 1970:119) quoted in Chapter III. It should be obvious that with presently available archaeological data this hypothesis is difficult or impossible to test. This difficulty derives from the unknown nature of the relationship between the corporate groups operating at the King Site and the groups of burials generated by the cluster analysis.

Although this hypothesis of limited access to burial space awaits a more definitive test through an improved nearest neighbor test (Graybill, personal communication), indications are that as artifactual rank of a cluster decreased the spatial spread on the site of that cluster increased. A plot of the clusters in physical space revealed that Cluster I, the highest in artifactual rank, occupied the smallest area. The burials without artifacts, referred to as Cluster VI, occupied the largest area. The interpretation of these observations is that there was some degree of restrictive behavior in burial patterns, but the analysis is not definitive due to the lack of preservation of more delicate artifacts. An unsupported assumption in this assessment is that more burials "belong" to the higher ranked clusters based on location and cost of the grave facility, but had perishable grave goods which would have

indicated their station in society.

Spatial nature of activity areas

In addition to the placement of burials over the site the spatial distribution of occupational specialization is a major component of community plan. The only quantified information so far available on this question deals with specialization of stone tool manufacture at the King Site. Of the seven intact house floors found on the King Site most contained areas of concentrated debitage. In a preliminary study on the nature of projectile point variability within a select sample of these concentrations, a stepwise discriminant function analysis (Nie, et al., 1975) correctly identified a majority of points of the correct provenience (William Mitchell, n.d.) implying that each user of projectile points was manufacturing his own. Structural equivalence and not specilization is implied by these observations. An individualistic production system such as at the King Site is less complex than a system of occupational specialization.

Settlement pattern

Little data is presently available on the nature of all types of sites within the Barnett Phase. The present configuration of large sites distributed along the Coosa and Coosawattee Rivers may be a result of two factors, the difficulty of identification due to the definition of the phase or as a result of aggregation.

To evaluate the complexity of the Barnett Phase settlement pattern, comparison must be made with other settlement patterns in the area. The data in Table 1 and Figure 5 demonstrate that the Barnett Phase settlement pattern is more centralized, and therefore more complex, than any other phase in the area.

Technological dimensions of social complexity

The technological dimension of social complexity is composed of the various sub-systems of culture which determine the organization and focus of the subsistence system and the kinds of activities which occur at different kinds of settlements and their spatial arrangements within those settlements.

Subsistence

As earlier discussed, little comparative information is available concerning the structure and content of subsistence systems during the Mississippian Period in northwest Georgia. That the broad pattern of subsistence was similar throughout this time period probably approaches consensus. However, to assess the relative stability of a population, the proportion of domesticates to nondomesticates in the diet must be formulated. This could be accomplished by quantitative expressions of floral and faunal remains within the site in conjunction with bone strontium content of burials. The latter analysis measures in quantitative terms animal protein intake (Sperber 1976:6).

At present the only information available for the King Site is the presence of maize and animal remains. Other floral remains were observed but await identification.

Intersite activity variability

A wide range of activities occurred on the King Site. In domestic structures several activity areas were located in a similar manner to Structure 4 at Little Egypt (Smith 1976). Milling stones in association with animal bone and ceramics probably figured in cooking activities. Projectile points and areas of concentrated debitage were probably associated with stone tool manufacturing activities. A full activity inventory of the site has not yet been made.

Information which would contribute to the question of intersite activitity is lacking. The question concerns the distribution of the full range of activities present in the Barnett Phase over all sites of that phase. Did the same set of activities occur at each site within each phase of the Mississippian Period in northwest Georgia? If this hypothesis is confirmed, autonomous units are indicated rather like the 18th century Greek model. Such a system would be less complex than a hierarchial distribution of different activities over the sites of one phase.

The phases in relative order of social complexity

This discussion leads to a relative scale of social complexity for the Mississippian Period phases in the Coosa River drainage of northwest Georgia. Based on the informa-

tion discussed on Chapter 2 and above the phases were ranked in terms of overall social complexity in the following manner:

1 Wilbanks Phase
2 Barnett Phase
3 Etowah Phase
4 Lamar Phase

Through time we have increasing complexity with the exception of the Lamar Phase. This phase, roughly contemporary with but spatially segregated from the Barnett Phase, seems to move toward a simpler structure.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

In this thesis data pertaining to the Mississippian Period in northwest Georgia has been examined in a search for variables relevant to social complexity. This search resulted in information which allowed a preliminary evaluation of each of the four phases in this segment of the Mississippi adaptation with regard to social complexity. The Etowah Phase, the Wilbanks Phase, the Lamar Phase, and the Barnett Phase comprise the northwestern Georgia manifestation of South Appalachian Mississippian (Ferguson 1971). The oversimplification of the elucidation of social complexity by others has been pointed out with suggestions regarding the kinds of data actually needed.

Data collected from burials at the King Site (9F15), a Barnett Phase community, have been placed within a descriptive framework designed to highlight features of social complexity. Observations on this data imply a certain degree of social complexity higher than egalitarian as indicated by meaningful variation within the sample of burials from the site. The complexity of the society represented by these remains cannot be evaluated finally due to the lack

of comparable data from other sites. Several other studies similar in approach to this (Peebles 1971, 1974; Tainter 1973; Hatch 1974) have convincingly shown that a single site or single phase analysis of the social dimensions of mortuary practices does not present a complete picture of social complexity. To evaluate the level of complexity of this society more data is needed from the King Site, the Barnett Phase, and the entire Mississippian Period in northwest Georgia. Information needed has been outlined previously as subsistence strategies, community plans, settlement hierarchies, activity variability, and ranking structures on the phase level with information on artifactual, locational, and demographic variables on the component level.

This thesis is not advocating a return to Boasian data collection. Hypothesis advanced in this thesis and those advanced in other similar analyses have given much insight into reflections of society in archaeological remains. The call for more elementary data collection has been the result of a realization that the phenomenon under consideration, social complexity, is itself a complex idea. It is the culmination of the systemic interrelationships between numerous complex variables.

For these reasons, the results of the analyses presented in this study must stand as preliminary and as a source of hypotheses for future studies utilizing data from all applicable components of the Mississippian Period in northwest Georgia.

APPENDIX I

ARTIFACT ASSOCIATIONS

Sex-artifact association

Numerous artifacts met a priori assumptions concerning sex association; however some did not. Those artifacts which are sex linked are as follows: male: projectile points, stoneworker's kits, blades, bone tools, red ochre, pipes, bacculus, mussel shells, celts, iron artifacts, conch shells, shell masks, animal bone, Dallas ceramics, disks, and beads in order of significane; Female: rattlesnake gorgets and Lamar ceramics.

Male associated artifacts which did not conform to a priori assumptions are mussel shells, ceramics, and beads. These associations may be best explained by sample error since no x^2 in this group was significant. No female artifact associations were significant. For this reason and the generally low significance values for all associations, sex linkage was assigned on a numerical basis alone.

Artifact	Male	Female	Association
Stoneworker's kit	8	1	Male
Projectile point	16	1	Male
Blade	8	1	Male
Red ochre	4	0	Male
Celt	4	1	Male
Mussel shell	3	0	Male
Bone tool	9	2	Male
Bacculum	3	0	Male
Pipe	6	1	Male
Bead	8	5	Male
Animal bone	12	7	Male
Rattlesnake gorget	0	3	Female
Dallas ceramics	6	3	Male
Lamar ceramics	1	3	Female
Disk	3	1	Male
Shell mask	2	0	Male
Conch shell	2	0	Male
Iron	2	0	Male

Age-artifact associations

Most artifacts with definite age association are linked with the adult population at the King Site. Mussel shell comprised the only category of items associated with sub-adults.

Artifact	Adult	Sub-adult	Association
Stoneworker's kit	9	0	Adult
Red ochre	4	0	Adult
Projectile point	21	4	Adult
Pipe	8	2	Adult
Celt	6	1	Adult
Blade	9	0	Adult
Conch	2	0	Adult
Animal bone	19	10	Adult
Mussel shell	3	9	Sub-adult

REFERENCES CITED

Adair, J.
1930 Adair's History of the American Indian. Ed. S. C. Williams. Reprint. Promontory Press, N.Y. 1973.

Baerreis, D. A. and R. A. Bryson
1965 Climatic episodes and the dating of the Mississippian cultures. Wisconsin Archaeologist 46(3):203-220.

Bartram, W.
1958 Observations on the Creek and Cherokee Indians, 1789. Transactions of the American Ethnological Society III(I).

Bates, F. L. and C. C. Harvey
1975 The structure of social systems. Gardner Press, N.Y.

Bendann, E.
1930 Death customs: An analytical study of burial rites. Alfred A. Knopf, N.Y. Reprint, Gryphon Books, Ann Arbor 1971.

Binford, L. R.
1972 Archaeology as anthropology. In An archaeological perspective. Seminar Press, N.Y. pp. 20-32 Orig. American Antiquity 28:217-225.

1967 Smudge pits and hide smoking: the use of analogy in archaeological reasoning. American Antiquity 32(1): 1-12.

1971 Mortuary practices: Their study and their potential. In The Social Dimensions of mortuary practices, ED. J. A. Brown. Memoir 25, Society for American Archaeology pp. 6-29.

Binford S. R.
1968 A structural comparison of disposal of the deal in the Mousterian and the Upper Paleolithic. SWJA 24: 139-154.

Blakely, R. L.
1976 Socio-cultural implications of demographic data from Etowah, Georgia. Unpublished paper given at the Southern Anthropological Society, Atlanta.

Bottomly, J.
1971 Some statistical problems arising from the use of the information statistic in numerical classification. Journal of Ecology 59:339-342.

Brain, J. P.
1971 The Natchez 'Paradox'. Ethnology 10:215-222.

Bray, J. R.
1971 Vegetational distribution, tree growth and crop success in relation to recent climatic change. Advances in Ecological Research, J. B. Cragg (Ed.) 7:177-233, Academic Press, N.Y.

Brown, J. A., ed.
1971a Approaches to the social dimensions of mortuary practices. Memoir 25, Society for American Archaeology.

1971b The dimensions of status in the burials at Spiro Approaches to the social dimensions of mortuary practices pp. 92-112. Memoir 25, Society for American Archaeology.

Caldwell, J. R.
1960 Review of "The Wilbanks Site (9Ck5), Georgia" by W. H. Sears. American Antiquity 25(3):432-433.

n.d. An appraisal of the archaeological resources of Allatoona Reservoir. Manuscript on file. Laboratory of Archaeology, University of Georgia.

Chard, C. S.
1975 Man in prehistory. McGraw-Hill, N. Y. 2nd Edition.

Cowgill, G. L.
1975 On causes and consequences of ancient and modern population changes. American Anthropologist 77 (3):505-525.

Douglas, M.
1972 Symbolic orders in the use of domestic space. In P. J. Ucko, R. Tringham, and G. W. Dimbleby (eds.), Man, settlement and urbanism. Schenkman, Cambridge pp. 513-521.

Evans-Pritchard, E. E.
1950 Kinship and the local community among the Nuer. In A. R. Radcliffe-Brown and D. Forde (eds.) African systems of kinship and marriage. Oxford U. Press. pp. 360-391.

Ferguson, L. G.
1971 South Appalachian Mississippian. Ph.D. dissertation. U. of N. C., Chapel Hill.

Field, J. G.
1969 The use of the information statistic in the numerical classification of heterogeneous systems. Journal of Ecology 57:565-569.

Firth, R.
1936 We, the Tikopia. George Allen & Unwin, Otd., London.

Fisher, J. L.
1964 Solutions for the Natchez paradox. Ethnology 3:53-65.

Flannery, K. V.
1972 The cultural evolution of civilizations. Annual Review of Ecology and Systematics 399-426.

Fried, M. H.
1960 On the evolution of social stratification and the state. In Culture and History, (ed) S. Diamond. pp. 713-731. Columbia U. Press.

1965 The evolution of political society. Random House.

Garrown, P. H. and M. T. Smith
1973 The King Site (9F15) excavations, April 1971, through August 1973: Collected papers. Privately printed, Rome, Georgia.

Goody, J.
1962 Death, property and the ancestors, a study of the mortuary customs of the LoDaggaa of West Africa. Stanford U. Press, Stanford.

Graybill, D. A.
1975 Comparative dimensional analysis of Middle Paleolithic assemblages from North Africa, the Levant and S. W. Europe. Paper presented to the 3rd Bi-annual Meeting of Africanist Archaeologists, Boston, April 26-29.

Griffin, J. B.
1967 Eastern North American archaeology: A summary. Science 156:175-191.

Gruber, J. W.
1971 Patterning in death in a late prehistoric village in Pennsylvania. American Antiquity 36(1):64-76.

Haas, M. R.
1939 Natchez and Chitimacha clans and kinship terminology. American Anthropologist 41:597-610.

Hally, D. J.
1970 Archaeological investigation of the Pott's Tract Site (9Mul03), Carters Dam, Murray County, Georgia. University of Georgia, Laboratory of Archaeology Series, Report No. 6.

1975 Introduction to the symposium. The King Site and its investigation. Southeastern Archaeological Conference, Bulletin 18:48-54.

1976 Archaeological investigation of the Little Egypt Site (9Mul02) Murray County, Georgia. 1969 Season. With contributions by B. H. Connor and J. A. Roth. Department of Anthropology, University of Georgia, Athens.

Hally, D. J., P. H. Garrow, W. Trotti
1975 Preliminary analysis of the King Site settlement plan. Southeastern Archaeological Conference, Bulletin 18:55-62.

Hart, C. M. W.
1943 A reconstruction of Natchez social structure. American Anthropologist 45:374-386.

Hatch, J. V.
1974 Dallas mortuary practices. M. A. Thesis. Pennsylvania State University.

Hatch, J. W. and P. S. Willey
1974 Stature and status in Dallas society. Tennessee Archaeologist 30(2):107-131.

Hawkins, B.
1848 A sketch of the Creek country in the years 1798 and 1799. Collections of the Georgia Historical Society, III(1). Savannah.

Hertz, R.
1907 Death and the right hand. Reprint 1960. Trans. by R. and C. Needham. Free Press.

Hill, C. E. and A. R. Kelly
1968 Ethnohistory and archaeology at the Carter's Dam Site. Working papers in sociology and anthropology 2(2):91-98.

Kelly, A. R.
n.d. Explorations in Sixtoe Field, Carters Dam, Murray County, Georgia. Report submitted to the National Park Service.

Kelly, A. R. and L. H. Larson, Jr.
1957 Explorations at Etowah Indian Mounds near Cartersville, Georgia; Seasons 1954, 1955, 1956. Archaeology 10(1)

Kroeber, A. L. and C. Kluckhohm (eds)
1952 Culture: A critical review of concepts and definitions. Alfred A. Knopf, N.Y.

Kuper, J.
1947 An African aristocracy; Rank among the Swazi. Oxford University Press for the International African Institute.

Lambert, J. M. and W. T. Williams
1966 Multivariate methods in plant ecology VI: Comparisons of information analysis and association analysis. Journal of Ecology 54:635-64.

Lance, G. N. and W. T. Williams
1966 Computer programs for monothetic classification ("Association analysis"). The Computer Journal 8:246-249.

1970 A note on a new divisive classificatory program for mixed data. The Computer Journal 13

Larson, L. H. Jr.
1954 Georgia Historical Commission excavations at the Etowah Site, Summer 1954. Early Georgia 1(3):18-22.

Larson, L. H., Jr.
1959 A Mississippian headdress from Etowah, Georgia. American Antiquity 25:109-112.

1971 Archaeological implications of social stratification at the Etowah Site, Ga. Memoir 25, Society for American Archaeology. pp. 58-67.

1972 Functional considerations of warfare in the Southeast during the Mississippi Period. American Antiquity 37(3):383-392.

Lee, C. H.
1976 Settlement pattern during the late Mississippian Period in Piedmont Georgia. paper presented before the 75th annual meeting of the American Anthropological Association, Washington, D.C.

Lewis, T. M. N. and M. Kneberg
1946 Hiwassee Island. U. T. Press, Knowville.

Linton, R.
1936 The study of man. Appleton-Century-Crofs. N.Y.

Lopez, D. R.
1970 The McLemore cemetery complex. Bulletin of the Oklahoma Anthropological Society. 19.

MacLeod, W. C.
1924 Natchez political evolution. American Anthropologist 26:201-229.

McKern, W. C.
1939 The Midwestern taxonomic method as an aid to archaeological culture study. American Antiquity 4:301-313.

McNett, C. W., Jr.
1973 A settlement pattern scale of cultural complexity. In A handbook of method in cultural anthropology. Eds. R. Naroll and R. Cohen. Columbia U. Press. pp. 872-886.

Mitchell, W.
n.d. Projectile point variability in King Site (9F15) domestic structures. MS in possession of the author.

Murphy, C. and C. Hudson
1968 On the problem of intensive agriculture in the aboriginal southeastern United States. Working Papers in sociology and anthropology 2(1):24-34. Department of Sociology and Anthropology, University of Georgia, Athens.

Nie, N. H., C. H. Hull, J. G. Jenkins, K. Steinbrenner, and D. H. Bent
1975 SPSS, Statistical package for the social sciences. McGraw-Hill. 2nd Edition.

Olah, J. A.
1975 An investigation of ethnographic and archaeological political structure in the southeastern United States. Journal of Alabama Archaeology 21(2):145-169.

Pearson, C. E.
1977 Analysis of late prehistoric settlement on Ossabaw Island, Georgia. University of Georgia, Laboratory of Archaeology Series, Report No. 12.

Peebles, C. W.
1971 Moundville and surrounding sites: Some structural considerations of mortuary practices II. Memoir 25, Society for American Archaeology pp. 68-91.

1972 Monothetic-divisive analysis of the Moundville burials: An initial report. Newsletter of Computer Archaeology 8(2):1-13.

1974 Moundville: The organization of a prehistoric community and culture. Ph.D. dissertation. U. of California, Santa Barbara.

Quimby, G. I.
1942 The Natchezan culture type. American Antiquity 7:255-275.

Radcliffe-Brown, A. R.
1952 On social structure. In Structure and function in primitive society. Free press, Glencoe, IL. pp. 188-204.

Rathje, W. L.
1969 Socio-political implications of lowland Maya burials: Methodology and tentative hypotheses. World Archaeology 1:359-374.

Sahlins, M. D.
1958 Social stratification in Polynesia. U. of Washington Press, Seattle.

1968 Tribesmen. Prentice-Hall, Englewood Cliffs, N.J.

Sampson, R. J.
1973 Statistics and data analysis in geology. John Wiley & Sons, N.Y.

Sauer, C. O.
1971 Sixteenth century North America. U. of California Press

Saxe, A. A.
1970 Social dimensions of mortuary practices. Ph.D. dissertation. U. of M., Ann Arbor.

1971 Social dimensions of mortuary practices in a Mesolithic population from Wadi Halfa, Sudan. Memoir 25, Society for American Archaeology. pp. 39-57.

Sears, W. H.
1958 The Wilbanks Site (9Ck5), Georgia. Bureau of American Ethnology, Bulletin 169:129-194.

1962 The state in certain areas and periods of the prehistoric southeastern United States. Ethnohistory 9(2):109-125.

1968 The state and settlement patterns in the New World. In K. C. Chang, ed. Settlement archaeology. National Press Books, Palo Alto.

Seckinger, E. W., Jr.
1975 Preliminary report on the social dimensions of the King Site mortuary practices. Southeastern Archaeological Conference, Bulletin 18:67-73.

Service, E.
1971 Primitive social organization: An evolutionary perspective. Random House. 2nd Edition.

Shannon, C. E. and W. Weaver
1964 The mathematical theory of communicaton. U. of Illinois Press, Urbana.

Siegel, S.
1956 Nonparametric statistics for the behavioral sciences McGraw-Hill, N.Y.

Smith, B. trans.
1968 Narratives of DeSoto in the conquest of Florida as told by a Gentlemen of Elvas and in a Relation by Luys Hernandez de Biedma. Intro. by A. Lytle. Palmetto Books, Gainesville, Florida.

Smith, M. T.
1975 European materials from the King Site. Southeastern Archaeological Conference, Bulletin 18:63-66.

1976 Structure 4. 9Mul02. Unpublished M.A. Thesis, University of Kentucky.

Sokal, R. R. and F. J. Rohlf
1969 Biometry: The principles and practice of statistics in biological research. W. H. Freeman, San Francisco.

Sperber, J.
1976 Mississippian socio-political organization: An alternative approach. Paper presented at Annual Southeastern Archaeological Conference, November, Tuscaloosa.

Sprague,
1967 Aboriginal burial practices in the Plateau Region of North America. Ph.D. dissertation, University of Arizona, Tucson.

Struever, S.
1968 Woodland subsistence-settlement systems in the Lower Illinois Valley. In New Perspectives in archaeology. Eds. L. R. and S. Binford. Aldine, Chicago. pp. 285-312.

Swanton, J. R.
1911 Indian tribes of the Lower Mississippi Valley and adjacent coast of the Gulf of Mexico. Bulletin, Bureau of American Ethnology 43.

1928 Social organization and social usages of the Indians of the Creek Confederacy. 42nd Annual Report of the Bureau of American Ethnology, 1924-25. pp. 23-472.

1946 The Indians of the Southeastern United States. Bulletin, Bureau of American Ethnology 137. Reprint, Greenwood Press, N.Y. 1969.

Tainter, J.
1973 The social correlates of mortuary patterning at Kaloko, North Kona, Hawaii. Archaeology and Physical Anthropology in Oceania 8(1):1-11.

1975 Social inference and mortuary practices: An experiment in numerical classification. World Archaeology 7(1):1-15.

Tally, L.
1975 Preliminary demographic analysis of the King Site burial population. Southeastern Archaeological Conference Bulletin 18:74-75.

Waring, A. J. and P. Holder
1945 A prehistoric ceremonial complex in the southeastern United States. American Anthropologist 47(1):1-34.

Wauchope, R.
1966 Archaeological survey of northern Georgia. Memoir 21, Society for American Archaeology.

Whallon, R. E., Jr.
1971 A computer program for monothetic subdivisive classification in archaeology. Technical Reports 1. Museum of Anthropology, U. of M., Ann Arbor.

White, D. R., G. P. Murdock, and R. Scaglion
1971 Natchez class and rank reconsidered. Ethnology 10(4):369-388.

White, L. A.
1959 The evolution of culture. McGraw-Hill, N.Y.

Willey, G. R. and P. Phillips
1958 Method and theory in American Archaeology. U. of Chicago Press. Chicago.

Williams, W. T.
1971 Principles of clustering. Annual review of Ecology and Systematics. 2. Palo Alto.

Williams, W. T. and M. B. Dale
1965 Fundamental problems in numerical taxonomy. In Advances in botanical research. R. D. Preston, ed. Academic Press, N.Y. pp. 33-68.

Wishart, D.
1969 Clustan 1A user manual. Computing Laboratory, U. of St. Andrews, St. Andrews, Fife, Scotland.

Wright, H. T. and G. A. Johnson
1975 Population, exchange, and early state formation in southwestern Iran. American Anthropologist 77(2): 267-289.