1999

Ethnoarchaeological Consideration of Social Relationship and Settlement Patterning Among Africans in the Caribbean Diaspora

E. Kofi Agorsah

Portland State University, agorsahe@pdx.edu

Citation Details

Part of the African Studies Commons
Dedicated to the resourcefulness of the African-descendant people of the Caribbean: past, present, and future.

AFRICAN SITES
ARCHAEOLOGY
IN THE
CARIBBEAN

JAY B. HAVISER
EDITOR

Markus Wiener Publishers
Princeton
Ian Randle Publishers
Kingston

1999
ETHNOARCHAEOLOGICAL CONSIDERATION OF SOCIAL RELATIONSHIP AND SETTLEMENT PATTERNING AMONG AFRICANS IN THE CARIBBEAN DIASPORA

E. Kofi Agorsah

Introduction

One of the most comprehensive data sources for perceiving social behavior among societies is the locational records of archaeological surveys combined with analysis of processes of pattern formation within settlements. Ethnoarchaeological approaches (Agorsah 1990; Kramer 1979; Kent 1984; Ascher 1961; Donnan and Clealow 1978; Gould 1968, 1969, 1974, 1980; Watson 1982) indicate that the use of these sources of evidence to formulate models that could be archaeologically tested have proven to be very helpful. The most quoted definition and by far the longest so far is that of Stanislawski (1974) who defines ethnoarchaeology as "participant observation study of form, manufacturing, disturbance, meaning and use of artifacts and their function or institutional setting and social group correlation among non-industrial peoples for the purpose of constructing better explanatory models and also to aid archaeological analogy and inference." In his definition, Gould (1968, 1980) distinguishes between "ethnoarchaeology" and "living archaeology," emphasizing the active element in the study generally, while Stiles (1977) calls it "archaeological ethnography" which he explains as the framework for comparing ethnographic and archaeological data. Ethnoarchaeology deals with much more than comparative analysis. Although these definitions delineate the aims and the broad range of areas covered by the sub-discipline, only a few studies adequately provide results that go further than mere data analysis. It is beyond such boundaries, and with emphasis on explanation rather than description, that the ethnoarchaeological enterprise can be considered as systematic. The wide variety of definitions of ethnoarchaeology (Kramer 1979; Stanislawski 1974; Oswalt 1974; Schiffer 1976, 1978; Stiles 1977) attest to the confusion that surrounds its practice and many such studies bear only a resemblance to ethnoarchaeology. Methodological developments in the last two decades clearly call for redefinition of the discipline but, whatever it is, ethnoarchaeology most of necessity consist of a means of explaining the behavior of past societies on the basis of analytical models derived from observed behavioral or cultural phenomena of living societies, traditional or not. The crucial consideration should be an orientation towards an explicitly well-defined interface between models drawn from modern traditional behavior and those of the past. This is the main principle which forms the basis of the discussion of this paper. This approach was the obvious choice mainly because of the availability of the type of evidence in Africa and the African diaspora that would permit observed continuities with the past. However, ethnoarchaeology should not be considered as an end in itself, but as one of the many tools which can be used to refine our explanation for understanding of past human behavior. More than any other branch of archaeological science, with the exception of the study of the origins of man, ethnoarchaeology continues to attract a large following although many of its practitioners often adopt the complacent strategy of evading crucial methodological issues.

Ethnoarchaeology and Settlement Behavior

The discussion of this essay endorses some basic facts: that the ethnoarchaeologist must realize and be able to cope with a wider range of variables in his data than does the natural scientist, and that the relationships among these variables are not static over time and space as those in the natural sciences can be considered to be (Hodder 1953); in essence the use of analogy is unavoidable in ethnoarchaeology and that, as Wylie (1985) has rightly argued, alternatives to analogy which scholars propose are themselves unavoidably analogical in form and foundation, thus most archaeological inferences remain analogical. Ethnoarchaeology has also in recent times emphasized settlement analysis at various levels (Gould 1980; Yellen 1977; Sinclair and Lundmark 1984; Clark 1981; Sinclair 1987; Agorsah 1983, 1987, 1988). Settlement location and distribution, settlement size and settlement composition are of special interest to ethnoarchaeologists. But of greater importance is relating settlements to social groupings or to the human groupings defined as ethnic groups (Agorsah 1986a, 1986b) or bands (Yellen 1977; Chang 1968; Sinclair 1987; Agorsah 1988a, 1988b). How do we identify the distribution of different categories of people within a defined settlement, and how does their way of social organization change with the growth and development of the settlement space? It is the usual belief among archaeologists that definition of groupings such as tribes is subjective, and it is often difficult to provide any supporting criteria for delimiting
them. What can we regard as the equivalent in the Caribbean of the word "ethnic" used for describing African societies? A number of models for identification of relationships between societies and settlements have been suggested, based on the use of local terms of identification of segments of certain African communities (Mills 1985; Sinclair 1987; Agorsah 1985, 1986a, 1986b). Some of these are used in this discussion of the settlement patterning among Africans of the Caribbean diaspora. The "local rules" model of spatial behavior (Agorsah 1985, 1986a), referred to later, places emphasis on social relationships as a crucial factor in the spatial development of traditional settlements.

Interpretation of intra-site frame of reference within settlements provides the opportunity for analyzing the settlement system through time depth that is not normally possible in non-archaeological studies (Parsons 1972; Chang 1968; Plog 1971; Zimmermann 1976). All these lead to a clearer understanding of social space because it depicts a realization of the cultural images of space that serve to order many kinds of environmental phenomena which facilitate differentiated constraints and possibilities for each society and each organizational level, providing the context for an extended network of exchange and co-existence (Klausner 1971; Zimmermann 1978; Yellen 1976).

Ancestral variations of the relationships between cultural phenomena are so numerous that archaeologists have, over the centuries, looked for regularities or patterning among distribution of these material manifestations. The basic assumption in dealing with patterning consists of convictions related to recurring modes of human activities or behavior. Artifact pattern analysis (South 1977; Armstrong 1982, 1985, 1990), spatial pattern analysis (Clark 1977; Downs and Stea 1973; Hodder 1978; Hodder and Hassal 1971; Hodder and Orton 1976; Fletcher 1977, 1978; Hillier, et al. 1978; Muehrcke 1980; Hagget 1965; Agorsah 1988a, 1988b; Stea and Soja 1971; Kuper 1972; Soja 1971), ceramic typology (Soper 1971; Boomtert 1980; Crossland 1973), and similar types of classification in archaeology assume regularity in human behavior. The conviction here is that spatial pattern is viewed as adapting to the dynamic nature of the social system. The principle of seriation in archaeology (Deetz 1977) uses the frequency or regularity of occurrence of artifacts for chronological schemes. Basically, patterning involves specification of the spatial relations of discrete phenomena in such a way as to summarize their manner of distribution in space. Patterning, therefore, has become and remains a basis for discussing or explaining systems of classification and abstract concepts of human behavior (Kent and Ury 1975; Doby 1967; Bailey 1982). Although social relationships have been regarded as crucial in the formation and transformation of societies in the African diaspora, their relationship to settlement behavior is lacking. How much of such studies has Caribbean archaeology of the African diaspora seen so far? The observation that to date, only a few of the many black settlements in the Caribbean, representing only a few hundred of the several million persons of African descent who lived in and helped create the rich and diverse cultural landscape found today in the Americas, have been explored continues to haunt archaeologists of the African diaspora and is a concern echoed by many researchers in the field, as well as other social scientists in other fields of Caribbean studies. (Armstrong 1982, 1990; Agorsah 1993, 1994; Handler 1995; Singleton 1985; Singleton and Bogaard 1995). However, there are a few case studies that can be used to demonstrate that the situation can be reversed. This essay discusses ethnoarchaeological evidence for reconstructing settlement patterning and social relationships in the African diaspora, using models derived from studies among communities. It is demonstrated that certain regularities within settlement formation in both West Africa and the African diaspora indicate the overriding significance of social relationships.

A Model of Spatial Behavior

Several models of spatial behavior have been proposed during the last two decades that can help determine the process of development of patterns among African societies (Agorsah 1985, 1990; Cartwright and Harary 1977; Mills 1985; Leach 1978; Binford 1968, 1983; Chang 1998; Lorraine and White 1977). Many of these approaches resort to theories in the social sciences that are flexible enough to permit the use of models for reconstructing behavior patterns (Salmon 1967; Sallade and Braun 1978; Bailey 1982; Schiffer 1977; 1978, 1987). When Binford discussed his economic zonation of settlements (Binford 1983), he emphasized the "home base" as an important factor built on social patterns of relationships. Although not directly indicated, his example of mobility patterning, the result of which is his so-called economic zones, consists of a direct consequence of social relationships between groups in Nunamit Eskimo society. Binford's study of within- and between-site variability - as well as variability in site utilization - also supports the view of the dynamic nature of social systems in shaping the use of space. The significance of social factors for spatial interpretation in archaeology has been demonstrated by many writers (Agorsah 1994b; Bailey 1982; Brown 1965; Campbell 1956; Doby 1967; Mills 1985; Leach 1978). It has been clearly emphasized that the form of spatial relationship within settlements or...
archaeological sites must be described in terms of patterns of social behavior to which individuals and groups conform their dealings with one another (Agorssah 1986). But the difficulty of observing the social behavior of past societies requires reliance on models drawn on modern social behavior patterns or behavior formulated in rules which in modern societies are recognized as rules of etiquette or moral rules. These rules, especially where they are related to human's use of space, can be utilized to formulate models that can be applied to the past situations at African diaspora sites, combining both spatial and social factors in one package (Eidt 1984; Downs and Stea 1973; Agorsah 1985, 1986a, 1986b; Merton 1957). Settlements reflect the natural environment, the level of technology on which builders operated, and social interactions and control which a society maintained. As has been explained elsewhere (Agorssah 1985, 1986a, 1986b), the Local Role (LR) model of spatial behavior places emphasis on social resources which are defined as the opportunities offered to individuals or groups and not the relationship per se. Lorraine and White (1977) describe such a situation as a system of binary relations in which social groups are viewed in a network of mutual role relations and set of reciprocal expectations (also see Netting 1967; Newman 1978; Haviser 1997; Oswald 1977). Because such rules impose constraints on the behavior of individuals or groups, there is the tendency for rules of spatial behavior to be generated as a result. These considerations should be clearly expected among societies (pre-historic ones included) which as part of the natural environment, are intimately linked with the land. In such societies, to belong to a territory or place is a social concept which requires first and foremost belonging to a social unit (Agorssah 1985, 1986; Goody 1973). Studies among the Tiv (Andah 1982, Bohman 1966), the Mossi of Burkina Faso (Skinner 1960, 1964), the Laren of Ghana (Brokensha 1966), the Yalunka of Sierra Leone (DeCorse 1988) and Elmina (DeCorse 1988a, 1988b, 1991a, 1991b), the Akan (Fortes 1970), the Kunkumba of northern Ghana (Tait 1961; Fletcher 1977, 1978; Holl 1987; Netting 1967) and among several other African societies (Yellen 1976, 1977; Newman 1978), clearly give support to the view that close inter-relationships between the social organization of these societies not only for purposeful and shared opportunity but also in the placement of structural features within the environments which they occupy at any time. Clan affiliations among such societies play a major role in the generation of patterns.

Clan/Family Affiliations

In a study of traditional societies in the northern Volta basin of Ghana, it was established that certain social rules obtain among groups of people that control their choice of locations, providing the context for the test of the LR model of spatial behavior which was conducted in relation to the archaeological evidence of the origins and the development of traditional settlements in the Volta Basin of Ghana based on data on the Nchumuru ethnic group (Figure 4). Each Nchumuru settlement in the Volta Basin belongs to one of its major grouping or phratries: Bandu, Ghaai, Chjembe, Kpemp, or Sunwae. These groupings, as mentioned earlier, are traditionally referred to as nuuru (Kasuru, sing.), each with a male head, its own ancestral shrine, secrets, properties, and relationships with other villages and adjoining areas. Inheritance is by a homogenous transmission, either male or female, to the next oldest in the nuuru.

There are five nuuru (Brei, Dapoeta, Kpemp, Nikro, and Tariako) in the head village of the Bandu phratery called Wure discussed below, and which is the paramount village of the wholly Nchumuru ethnic group. Recognition as an Nchumuru is determined by a kabuno, membership of

![Figure 4: Ethnic Groups in the Northern Volta Basin, Ghana](image-url)
which also consists not only of the living, but also and primarily the ancestors. Consequently, the ancestral shrine of the kabuno is the controlling factor within it and traditionally should be located in the head's house or compound. In addition, in Nchumuru society, as it is with other West African societies, such as the Krachi (Agorsah 1986), the Brong (Posnansky 1971-1976), the Yalunka of Sierra Leone (DeCorse 1988), and the Tiv (Bohannan 1963, 1968), the builder of the environment is the user and at the same time he is the one who maintains it. Social connections, therefore, play a vital role in spatial behavior (Prussin 1969; Agorsah 1986; Heider 1977; Orme 1973, 1974, 1981). One very basic fact about many traditional societies (including prehistoric ones) is that spatial behavior is not merely a technological problem, but principally one of social relationships, the main goal being the practical adherence to cultural values. This assertion is supported by studies carried out by Mhlanga (1976), Prussin (1969), Heider (1977), Mills (1985), Handler (1966), Haver (1967), Sinclair (1987), and Beattie (1960).

As has been remarked elsewhere (Agorsah 1985, 1988), the development of settlements in the northern Volta Basin has been seen as clearly influenced by the social systems of the societies. The case of Wiae settlement seemingly demonstrates this assertion. Archaeological and ethnographic evidence has
been used to identify the clan (kabuno) areas at Old Wise (Agorsah 1983) (Figure 5). The importance of keeping the clan system intact at Old Wise is also indicated by the presence of kabuno shrines at central locations in the compounds of the kabuno head as keeper of the clan spirit, as has also been noted elsewhere (Kuper 1972). Also, we recognize that courtyards of compounds open into each other to maintain kabuno connections. These patterns of spatial distribution are carried forward into New Wise which in 1972 (Figure 6) showed signs of the tendency which ten years later, in 1981, became clearly manifested in the settlements. Ethnographic evidence from Wise suggests that a change in social relationships among kabuno groups would certainly effect changes in future distribution of kabuno compounds. However, for over the four-hundred years of its existence, the Nchumuru villagers of Wise seems to have maintained the spatial features of their settlements in the same conservative fashion that they have maintained their social relationships. Nchumuru occupation of their present area (the Banda-Wise area) has been reconstructed into four phases (Agorsah 1983, 1985b, 1988a, 1988b). Each phase is characterized by social and spatial adjustments identified through a study of the location of settlements and changes in house location within settlement. The Nchumuru example at Wise also indicates that the effect of the social system on the clan levels depends on the strength of the relationship involved, although the nature of the relationship appears to be more crucial. The socio-spatial dynamics among the Nchumuru are also demonstrated when we analyze the development and placement of individual structural features within the settlement. Shared opportunities between groups depend on the social level in question. Among the Fulani of Be village (David 1971) and Konkomba (Tait 1961; Fletcher 1978), for example, the rule is more positive at the village and clan levels than at the regional level. The quarters (Kromo, Dwinafuo, Brong, etc.) at the ancient trading settlement of Begho (Posansky 1973, 1976) were located separately because, although there were some social and economic relationships among them, the opportunities offered by these relationships were not such that they could locate in a single cluster.

The African Diaspora in the Caribbean

Interpreting settlement patterns and spatial behavior of Africans in the Caribbean diaspora is not an easy undertaking. In situations outside the constraints imposed by the slavery system and where the greatest freedom to express cultural values and continuities exist, it may be much easier to speculate about settlement and spatial behavior. The first problem, therefore, is defining the degree to which a community was able to choose freely from options available for making settlement and spatial decisions. Higman's study of Old and New Montpelier (1991) indicates that factors such as family size and structure, location, pre-existing political and economic controls, population and its composition were also important in the nature of patterns that existed among Africans in the diaspora. But most important of all, from Higman's analysis, family and other social relations played a major role in the definition of the settlement and spatial parameters observed at Montpelier. This observation is significant because social relationships have been observed as a very crucial factor among African societies in the determination of settlement patterns. The cause of purposive social location is a function of a complex set of individual and collective decisions. The decision process may be strongly influenced by desires, attitudes, values, and perceptions concerning the environment and the relationship of the individual or the group to it. Realistically, the causes of such a locational decision may involve both perceptual and objective factors, and individuals may attempt to minimize or maximize some function. However, where social relationships play a major role among any group of people, as has been shown to have existed among Africans of the diaspora, a certain form of patterning is expected to occur. There are limitations to the extent to which one can infer such patterning across a large number of communities (Smith 1955; Schiller 1977; South 1977; Salmon 1967, 1977; Stanislawski 1974).

The Maroon Town of Accompong, Jamaica

Ethnographic study of a Maroon town in Jamaica demonstrates how social relationships have determined behavior patterns similar to that observed in the Volta basin model, thus carrying it forward into the Caribbean. The Maroons consisted of groups of people who escaped from the plantations and formed their own settlements in the most inaccessible regions of the New World, forging new communities and cultures (Agorsah 1994). These groups vigorously fought colonial forces, in many cases to a military stalemate, forcing peace treaties in the end, which gave them their freedom. Such communities can be identified in Mexico, Jamaica, Suriname, Brazil, and many other areas of the New World. A 1757 map marks out 1,000 acres of land for Accompong Maroons of Jamaica (Figure 7). Located in the same strategic area as in the eighteenth century, with restricted access routes, although it has been shifting south and westward away from the original...
location, Old Accompong Town, locally referred to as Old Town, has several historical structural features, including the old church and cemetery, and the monument dedicated to Colonel Kojey who signed the peace treaty with the English in 1739 (Agorsah 1994). The town consists of the several quarters (Figure 8) that appear to represent divisions related to family units. These units are considered to have been unconsciously created or developed as the Maroons settled in the area. Oral traditions claim that these quarters do not represent any predetermined family relationships, but examples from other areas indicate that is the case. These town quarters appear to represent the congregation of related families clustering as units of the town. The quarters include Hill Top, Parade, Middle Ground, Over Yonder, Gipsy, Guinea Grass, Pondside, Cedar Valley, River Hole, River Pond, Out Yonder, Force Hill, Outer Road, to mention some of them (Agorsah 1994). Within each quarter can be identified specific groups of families that could be referred to as "clans." Their development appears to have followed a pattern based on the needs of social relationships as described above. In a West African context they would be similar to clustering of houses belonging to families with closer relationships. Like the houses or compounds in Old Wari in the Volta basin of Ghana, the most important thing in the development of the family houses or compounds at the Maroon settlement of Accompong in Jamaica has been the recurring pattern of aggregation of family members. Once people became familiar with this pattern of behavior, they tend to respond in terms of the shared opportunities that it offers. The more the shared opportunities gain root, the more positive the role of cluster. The continuity of the pattern gives strong support to the overriding significance of affiliations in the location of family groups and their associated activities and cultural values. At Accompong the connection between spatial configuration and social structure may in some cases be obvious, and in others it may be extremely difficult to discover. But, the comparison demonstrates that spatial configurations reflect not only the true unconscious organization, but a model existing consciously in their traditional mind although its nature may be illusory and even contradictory in reality. Herein lies the relationship between social and spatial dynamics. Levi-Strauss (1967) refers to this as the "manifestation of social phenomena that can be reduced to a set of abstract rules and expressed in different models existing unconsciously in the mind of traditional societies."

In 1973 Barry Higman, then of the University of the West Indies at Mona, Jamaica, conducted an archaeological investigation of the Old and New Montpelier and Rosehampton (Figure 7) plantations located in the parish of St. James, Jamaica, with the purpose of identifying patterns of household location and relationships among families of those households. Using available documentary or historical records, maps and artistic renderings of the plantations, Higman generated several questions or propositions that he attempted to answer by use of both historical and archaeological data. Consequently it was possible to make some generalizations about patterning within settlements, as well as spatial and social relationships among them. Higman's study of Montpelier (1974) indicates that factors such as family size and structure, location, pre-existing political and economic controls, population and its composition were also important in the nature of patterns that existed among enslaved Africans on those plantations. But most important of all, from Higman's analysis, family and other social relations were considered to have played a major role in the definition of the settlement and spatial parameters observed at Montpelier. This observation is significant because social relationships have been observed as a very crucial factor among African societies in the determination of settlement patterns. The significance of the formation of "yards" or what could be termed compounds in the African sense, the connectivity provided by the pathways between the "yards," the location of related family members and households close to each other and the impact of all these on the layout of the Afro-Jamaican settlement, were some of the important issues raised by Higman's study. It is interesting that similar issues were featured in the study by Armstrong and in my study of the Volta Region of Ghana.

The search for the formation and transformation of cultural systems of the
African diaspora in Jamaica has been Armstrong's pre-occupation for over ten years, beginning with the survey and excavation at Drax Hall (Figure 7) in the 1980s and ending with an extensive and intensive study of the Seville site on the northwest coast, of Jamaica (Armstrong 1982, 1985, 1990). With the main objective of identifying the emergence of an Afro-Jamaican community, their internal social organization and evidence that would reflect retention, Armstrong intensively combined maps, estate plans and accounts and other written documentation about the management of plantations in Jamaica, treatment of slaves, and structural features resulting from the interaction of the slaves and the enslaved, to attempt a reconstruction that appears to indicate the new dimensions that our understanding of the African diaspora in the Caribbean would bring to New World archaeology.

The Seville study is particularly fascinating firstly because of the diachronic interpretation and explanation of culture change or transformation afforded by the data. Examination of the human physical remains clearly demonstrates how the slaves experienced oppressive political conditions in addition to cultural disruption, subjugation, segregation, and isolation from their African heritage. The spatial organization of the plantation explains the power relationships and security motive of the planters. Armstrong's prediction of the spatial patterning at Seville is also supported by the 1721 maps and plans of Seville Estate's 2,500 acre area which indicate that, while the central location of the Seville works area was meant to maximize production, the overseers' residences were established as a buffer zone between the slaves' quarters and those of the planter-owners. This separation Armstrong (1992) views as the factor that gave the enslaved Africans on the plantation the opportunity to set the parameters for the emergence of the spatial patterning of the slave community which occupied only 16% of the entire plantation complex components which included the fields, works, planter and managers residences, and a "slave village" usually referred to as "negro houses" on plantation maps. The location of the village at Seville conforms to a general model by being positioned close to the works and fields but close to and under the constant vigilance of the managers or supervisor. As rightly interpreted there is no question that the planter was fully aware of the active role the spatial arrangement of houses had in expressing the slave's subservient role in the plantation system. In addition to providing both economic benefit and maintaining control over the enslaved, this spatial pattern avoided compromising valuable soils with habitation structures. These priorities of the planter had a considerable degree of control on the settlement behavior, as there was no full freedom to choose locations initially, although later that choice was available (Heumann 1992). It is therefore, not surprising...
that Armstrong's observation of the settlement development during later years indicated trends meant to satisfy the social needs of the enslaved communities.

But the evidence at Seville indicates that certain circularly casual relationships between the dynamic physical development of the house form, vis-à-vis the social context, can also be gleaned through an examination of those relationships. In the example of Wiaw in the Volta basin of Ghana (Agorsah 1985, 1988), the main activity areas of the house were the room, courtyard, kitchen, and backyard. Even though the house was divided into these four typical areas, the activities related to them could hardly be placed in clear-cut compartments. The type of connectivity observed in Wiaw was a basic characteristic and a mechanism for maintaining liberal social connection between family groups and between the houses and clan areas of a settlement and its adjoining activity areas. The connections between family areas were emphasized by the network of foot-paths which accommodated the cross-cut movements between relatives in different compounds and gave access to the main paths leading out of the settlements to the streams, farms, shrines, and the lake-side. The changes noticed by Armstrong in the orientation of houses at Seville (Armstrong 1992) appear to be clearly in the direction of making accessibility between families and family living areas easier. The Africans on the plantation were now in control of the locational decision making process. Such behavior patterns confirm that:

"Every human society has some sort of territorial structure. We can find clearly defined local communities, the smallest of which are linked together in a larger society, of which they are segments. This territorial structure provides the framework, not only for political organization, whatever it may be, but for other forms of social organization also..." (Radcliffe-Brown in Fortes and Evans-Pritchard 1940: xiv; also see Fortes 1970; Fortes and Gifford 1945; Klausner 1971).

Bohannan refers to such a behavioral situation as "definition of space in terms of social relations, kinsmen, time and effort" (Bohannan 1963, 1958), a concept that enables us to analyze the African diaspora on the basis of the same parameters used in ethnoarchaeological analysis of West African communities.

### Physical Space and Social Space

The patterns that often result from such interaction have been explained by Hillier and others (1978) by their space syntax theory, in terms that demonstrate that there is a means of producing an overall differentiation in the man-made landscape without a clear idea of the limits of the settlement that a society occupies. It may be noted, however, that such a model cannot objectively deal with a society in which the builder is not the one who takes the locational decision and the one who, on the basis of his social relationships, maintains not only his social position but the continuity of occupation and ancestry in his society. Applying this to African societies must, therefore, clearly define the decision-taking parameters. Also the form of spatial relationships within a settlement, must be described in terms of the pattern of social behavior to which individuals and groups conform in their dealings with one another. The conformity of individuals to local social patterns of behavior usually is formulated in rules which even in modern societies are recognized as rules of etiquette or moral rules. Such rules exist only by virtue of their recognition by the members of the society, when they are either explicitly stated as rules or implied in behavior. With traditional groups it is the latter consideration that is important in view of the fact that these rules are not directly observable. Basically, the LK model (Agorsah 1985, 1986a, 1986b) explains that people locate themselves close to those to whom they have more intimate relationships or recognize as able to share the same geographical space without causing deviation from expected or desired goals.

Nearest neighbor analysis and quadrant sampling are among the most common measures of point patterns (Earle 1976; Muehrcke 1980; Coffey 1981). Nearest neighbor analysis involves the calculation of the straight line distances separating each point and its nearest neighbor, and comparison of these distances with those which might be expected if the points were distributed in a random way within a settlement space. On the basis of this, certain point patterns are classified as regular, random, or clustered. The clustered shows a closer association. The quadrant method concerns the probability of finding 0, 1, 2 ... n points in an area of a given size. It is possible to calculate a mean density of points in an area. Both methods are usually constructed on the basis of some mathematical process, but when it comes to determination of social relationships, this becomes a problem. However, certain basic assumptions should make it possible to determine the parameters of interpretation of any form of distribution observed in a settlement, such as basing it on households in the settlement of the Nchumuru at Wiaw.

The process of such clustering is that which the LR model attempts to address. At any point in time such clusters are formed because of the positive local rule which tends to encourage people to locate near one another and also because they share the same social resources or opportunities. In many traditional settlements and especially among the Nchumuru of Ghana...
Among other groups, for example, there may be aesthetic considerations, but the main goals are the practical and the adherence to cultural values (Mhlanya 1976; Prussin 1969). These were living situations which those carried away to the diaspora valued and they continued to live in the same manner. The development at Accompong in Jamaica appears, therefore, to constitute a revival of the practice and it would not be surprising to find a similar development within other settlements of the African diaspora where some degree of freedom to choose may have existed. Armstrong's example at Seville, Jamaica, of the change in orientation of houses, their openness toward each other and the discarding of the wall barriers explains that this local rule was in operation, albeit unconsciously, as there was more freedom among Africans on the plantation to choose. Data on this behavior pattern indicate that the observed similarity is not accidental (Leinhardt 1977; Leone 1972; Losch 1984). It only goes to emphasize the need to use models constructed through ethnographic observations of African societies for analyzing the African diaspora.

In situations outside the constraints imposed by the slavery system and where the greatest freedom to express cultural values and continuities exist, it may be much easier for speculating about settlement and spatial behavior. The first problem, therefore, is defining the degree to which spatial behavior is not merely a technological problem, but is principally dictated by the character of social relationships (Okpoko 1979). Among other groups, for example, there may be aesthetic considerations, but the main goals are the practical and the adherence to cultural values (Mhlanya 1976; Prussin 1969). These were living situations which those carried away to the diaspora valued and they continued to live in the same manner. The development at Accompong in Jamaica appears, therefore, to constitute a revival of the practice and it would not be surprising to find a similar development within other settlements of the African diaspora where some degree of freedom to choose may have existed. Armstrong's example at Seville, Jamaica, of the change in orientation of houses, their openness toward each other and the discarding of the wall barriers explains that this local rule was in operation, albeit unconsciously, as there was more freedom among Africans on the plantation to choose. Data on this behavior pattern indicate that the observed similarity is not accidental (Leinhardt 1977; Leone 1972; Losch 1984). It only goes to emphasize the need to use models constructed through ethnographic observations of African societies for analyzing the African diaspora.

In situations outside the constraints imposed by the slavery system and where the greatest freedom to express cultural values and continuities exist, it may be much easier for speculating about settlement and spatial behavior. The first problem, therefore, is defining the degree to which a community was able to choose freely from options available for making settlement and spatial decisions and the extent to which material manifestations may be related to certain known or predictable sets of behavior, attitudes or values. In a society in which the builder of the house is the user and at the same time the one who also maintains it, it is clear why social connections should play quite an important role in their spatial behavior or patterning. At Seville, the enslaved Africans were approaching a situation, as Armstrong's discussion explains, in which they were the builders and at the same time the users. Apparently restrictions were not as tough as before. Generally in building a house and deciding on its internal organization, the spatial behavior in such a situation does not pose merely a technological problem but is dictated principally by the character of the villagers' social relationships. Although the spatial behavior involves aesthetic and geometric considerations, the main goal is the cultural and practical function. Herein lie some of the comparisons, social and spatial contexts, that one has to, at times, make in the reconstruction of the behavior of Africans in the diaspora. Fundamentally the physical development of the houses seems to entail more than satisfying the purely functional requirements of the societies (Sinclair and Lundmark 1984; Sinclair 1987). In general terms, the development of the individual houses provides a history that links this basic unit of the settlement (the house) to the social context. The house forms are normally consciously conceived (designed) and realized (built) in response to an existing set of conditions or values or values accepted by the people of Wase as a group. The grouping of the huts and the openness into one another reflect the social order. This is clearly how the pattern of the building process, values, constraints, and also the pattern of daily life are fused in the physical form. This creates a situation of dual coherence in that it is coherently related to its social context as well as its physical form. A superficial examination of the house forms shows that the houses are versions of the same simple form and convey a powerful sense of physical coherency.

Explaining the manner in which the material manifestations of human behavior are bonded together is a fascinating aspect of archaeological study (Kluckhohn 1939; Kent 1984; Klauser 1971). Even more interesting is identifying and explaining the complexity of the interconnections and associations between entities involved. From all these explanations one lesson that emerges is the importance of patterns of social behavior to which individuals or groups conform in their dealings with one another in space and time.

There has been a certain difficulty in explaining the behavior of the people in the African diaspora, for example, Wase in Ghana. Even if the discussion of this essay is not convincing enough, there are a few points that are clear and acceptable. Explaining the consequences of human behavior in terrestrial space in the African diaspora poses a challenge not only to archaeologists but other social scientists as well (Agorsah 1986a, 1990; also see Sjoberg and Nett 1968; Sinclair 1982; Schiffer 1977, 1978; Salmin 1967), especially when it comes to identifying the different strategies for coping with varying environmental phenomena. Also, because human settlements are often placed in the natural landscape, they reflect, in varying degrees, the interrelationships established among human factors such as history, social structure, and physical space. It is not being assumed that societies have a concept equivalent to that of the researcher but a manipulation of the latter's ideas in the form of models such as the local rule (LR) model discussed in this essay could yield lasting results. It should be remembered, however, that the mere desire among archaeologists to obtain objectivity in their analyses and interpretations does not necessarily ensure its attainment.
particular when they disagree on the directions of study and or fail to measure or recognize the inadequacies and uneven geographical coverage, subject matter, and interpretations as well. Apart from the need to liberate itself from the loose pattern of the use of cryptic archaeological jargons that describe cultural traditions and phases of the archaeology of the Caribbean region and the bias in favor of "Amerindian" studies or the prehistoric period, Caribbean archaeology must also think of expanding its field to include material deriving from the other side of the Atlantic. In a West African context it would be similar to clustering of houses belonging to families with closer relationships. Like the houses or compounds in Old Wia in the Volta basin of Ghana, the most important thing in the development of the family houses or compounds at the Maroon settlement of Accompong in Jamaica has been the recurring pattern of aggregation of family members. Once people became familiar with this pattern of behavior, they tend to respond in terms of the shared opportunities offered. The more the shared opportunities gain root, the more positive the rule of cluster. The continuity of the pattern gives a strong support to the overriding significance of affiliations in the location of family groups and their associated activities and cultural values.

Response to social demands, quite similar to those on Higman's Montpelier plantation accounts for similarities in orientation of houses or "yards" or compounds to maintain an openness between them. Multiple house units noted at Montpelier may be referring to the compound houses noted at Wia in the West African example in which houses were positioned such that they opened into each other, confirming connectivity between individual households and allowing family members or kinsfolk easily to conduct their activities and sharing houses, without going too far out of their family zone. Quoting a remark in the 1818 issue of Jamaica Journal, Higman (1974) noted about the slaves that, "They had separate houses but one gate. In the center of the family village, the house of the principal among them is generally placed, and is in general very superior to the others." At Accompong the connection between spatial configuration and social structure may in some cases be obvious, and in others it may be extremely difficult to discover. But the comparison demonstrates that spatial configurations reflect not only the true unconscious organization, but a model existing consciously in their traditional mind although its nature may be illogical and even contradictory in reality. Herein lies the relationship between social and spatial dynamics.

Forming Quarters

The process of such clustering of close kin with a section of a settlement is that which the LR model attempts to address. At any point in time, such clusters are formed because of the positive local rule which tends to encourage people to locate near one another and also because they share the same social resources or opportunities. In many traditional settlements, and especially among the Nchumuru of Ghana (Agarsah 1985), spatial behavior is not merely a technological problem, but principally dictated by the character of social relationships. Among other groups, for example, there may be aesthetic considerations, but the main goals are the practical family connections and the adherence to cultural values (Mhlanga 1976; Prussin 1999). These were the conditions which Africans who were brought to the diaspora may have lived by and valued if they had the choice of decision-making. The development at Accompong in Jamaica appears, therefore, to constitute a revival of the social tradition and it would not be surprising to find a similar development within other settlements of the African diaspora, particularly, where some degree of freedom to choose may have existed. Armstrong's example at Seville, Jamaica, of the change in orientation of houses, their openness toward each other, and the discarding of the wall barriers explain that its local rule was in operation, albeit unconsciously, as there was more freedom among Africans on the plantation to choose at a later period. Higman, in comparing Montpelier and Roehampton, made it clear that patterns that may result in any settlement will depend on the extent of participation in the decision-making process. The question posed was, "If the slaves were given a certain amount of freedom in the location of their houses, as at Old Montpelier, what sort of pattern would they create?" (Higman 1974:45). The factor of "freedom" in the decision-making process was not an issue in the case of the West African settlement. In a society in which the builder of the house is the user and at the same time the one who also maintains it, it is clear why social connections should play quite an important role in their spatial behavior or patterning. At Seville, the enslaved Africans were approaching a situation, as Armstrong's discussion explains, in which they were the builders and at the same time the users. Apparently restrictions were not as tough as before. Generally in building a house and deciding on its internal organization, the spatial behavior in such a situation does not pose merely a technological problem but is dictated principally by the character of the villagers' social relationships. Although the spatial behavior involves aesthetic and geometric considerations, the main goal is the cultural and practical function, hence be some of the comparisons, social and sp-
tial contexts, that one has to, at times, make in the reconstruction of the behavior of Africans in the diaspora. Fundamentally, the physical development of the houses seems to entail more than satisfying the purely functional requirements of the societies. For example, at the Roehampton plantation, the slaves were reported to have created outbuildings and other spaces to accommodate their social needs and even burying their dead in the compound is a very typical tradition observed among the Nchumuru (Agorsah 1985). It appears, therefore, as observed in the Wia study (Agorsah 1985, 1986a, 1988b) that the “yard” or “compound” system may have been very significant to the maintenance of the social network within all the settlements discussed in this essay, both in West Africa and the African diaspora in Jamaica. The local rule (LRO) model of spatial behavior thus appears to constitute one of the approaches that can be used to reconstruct settlement development and behavior among Africans of the diaspora. In general terms, the development of the individual houses provides a history that links this basic unit of the settlement (the house) to the social context. Data on this behavior pattern indicate that the observed similarity is not accidental. It only goes to emphasize the need to use models constructed through observations of African societies for analyzing the African diaspora. It is interesting to note that names such as “Pawpaw,” “Agama,” “Coffee,” and “Quashi” identified in the Daza Hall slave list of 1755 (Armstrong 1991) are clearly Ghanaian, and together with the evidence from Seville and Wia demonstrate that circularly casual relationships between the dynamic physical development of the house form vis-a-vis the social context can also be gleaned through an examination of those relationships.

Maintaining continuous linkages

In the example of Wia in the northern Volta basin of Ghana (Agorsah 1985, 1988), the main activity areas of the house are the room, courtyard, kitchen, and backyard. Even though the house is divided into these four typical areas, the activities related to them can hardly be placed in clear-cut compartments. The type of connectivity observed in Wia is a basic characteristic and a mechanism for maintaining liberal social connection between family groups and among the houses and clan areas of a settlement and its adjoining activity areas. The connections among family areas are emphasized by the network of foot-paths which accommodate the cross-over movements between relatives in different compounds and give access to the main paths leading out of the settlements to the streams, farms, shrines and the lake-side. The changes noticed by Armstrong in the orientation of houses at Seville (Armstrong 1992) appears to be clearly in the direction of making accessibility between families and family living areas easier. The Africans on the plantation were now in control of the locational decision-making process. The house forms at Wia were normally consciously conceived (designed) and realized (built) in response to an existing set of conditions or values or values accepted by the people of Wia as a group. The grouping of the huts and the openness into one another reflect the social order. This is clearly how the pattern of the building process, values, constraints and also the patterns of daily life were fused in the physical form. This created a situation of dual coherence in that it was inherently related to its social context as well as its physical form. A superficial examination of the house forms in the settlements, as in Wia, may show that the pattern at both Old and New Wia were versions of the same simple distribution and convey a powerful sense of continuity in physical coherence. Writing about Seville, according to Armstrong, “the early map depicts the village as two linear rows of tightly spaced houses along a road or path with three structures located behind each row of houses.” However, the 1792 map indicates a clustered arrangement (Locus 2), with each house oriented independently, probably confirming to topography and prevailing winds, and with considerably more yard space between houses” (Armstrong 1992:53).

Obviously, the process of transformation of these spaces became better suited to their needs. Furthermore, as Armstrong explains, in addition to reorganizing internal spaces, the surrounding yard is incorporated into a combined African Jamaican house-yard with increased use of the yard for household activities. The yard activities included exterior kitchen and food preparation areas, animal pens, and gardens. With the exception of specific activity areas, such as hearths and planted garden beds, the yard areas were relatively artifact free, with increased artifact frequencies at the edge of the house and at the perimeter of the cleared yard (Armstrong 1992:55).

Also the form of spatial relationships within a settlement, therefore, must be described in terms of the patterns of social behavior to which individuals and groups conform in their dealings with one another. Also, as noted earlier, the conformity of individuals to local social patterns of behavior usually is formulated in rules which even in modern societies are recognized as rules of etiquette or moral rules. Such rules exist only by virtue of their recognition by the members of the society, when they are either explicitly stated or rules or implied in behavior. With past traditional groups it is the latter consideration that is important in view of the fact that these rules are not direct-
ly observable. Basically, the LR model explains that people locate themselves close to those to whom they have more intimate relationships or recognize as able to share the same geographical space without causing deviation from expected or desired goals. The pathways uncovered by the excavation at Montpelier and observed to connect houses in the hilly and low ground sections at New Montpelier may just have been part of the possible criss-cross pattern of pathways and trails linking the various family areas of the settlement as indicated by the complicated network of foot paths and trails that linked the various Maroon settlements around the Nanny Town area of the Blue Mountains of Jamaica. Many of the several excavated houses at Seville, dating to between 1670 and 1760 on the bases of archeological evidence, exhibit remarkable similarity in layout, size, and row alignment and appear to have been wattle and daub walls possibly thatched, owing to the absence of nails in several partitions. Contrary to expectation the entrances to the houses faced east, opening onto the road which ran between the rows of houses with no paths between them. It appears to me that the restrictions of the plantation life prevented the construction of open courtyards that would link the houses which might have been more relaxed at the time, reflecting, also, more open social relationships in the slave settlement.

Some General Observations

The patterns that often result from such social interaction and relationships have been explained by Coffey (1981), referring to general spatial systems approach, and Hillier and others (1976) by their space syntax theory, in terms that demonstrate that there is a means of producing an overall differentiation in the man-made landscape without a clear idea of the limits of the settlement that a society occupies. It may be noted, however, that such a model cannot objectively deal with a society in which the builder is not the one who makes the locational decision and the one who, on the basis of his social relationships, maintains not only his social position but the continuity of occupation and ancestry in his society. Applying the model to the African diaspora would require, first of all, defining the decision-making status or parameters. How free was a society in question in making the decision about the use of space on the settlement? This was an important question posed by Higman in relation to his study of Montpelier and Roehampton. If the archaeology of the African diaspora has so much to offer in this direction.

We might ask why the African presence has been neglected. Until quite recently, it was partly a matter of racism. The Africans were regarded as unimportant. They were considered as adjuncts of the European presence. To some extent, the neglect was because their material poverty meant they left little behind to attract the archaeologist, who was, in the early days, sponsored by artifact-seeking museums. But mostly, it was because of the lack of expertise among the archaeologists trained in a European or American tradition. They knew little about how to come to grips with the African presence (Posnansky 1984:197).

Clearly, over a decade after Posnansky’s remark the number of African archaeologists has more than doubled, if not tripled just as the number of non-African archaeologists more sympathetic to the African past has also risen. But, unfortunately, as a parallel development, there has been the limitation placed on research activities as a result of the drastic reduction in funding sources and power of supporting institutions. Nevertheless, the opportunities continue to come up that require re-orienting of the direction of search and area coverage. The picture that archaeologists need to paint is that of the double faced each looking at both sides of the Atlantic, and also, as Posnansky (1984) has remarked again, "The archaeology of the Black Diaspora clearly demands both multi-disciplinary and intercultural approaches". In order to give support to this conviction there is the need for a synthesis of the available evidence within the framework that will not only explain but place the contributions of Africans to the cultural developments as well as transformations in the area from the earliest times. Such a discussion should take the individual cultural elements or traditions into account on equal terms.

The proposition that cultural innovations and migrations of societies originated in one area and diffused to other areas is a common plague in anthropological studies and interpretations, raising regional concerns with method, theory, and cultural history. Archaeological evidence, backed by recent scientific experiments in material characterization and identification as well as dating techniques, have provided the fuel of many revisions in recent years. As data from excavations and analyses continue to accumulate, Caribbean archaeologists have gradually come to embark upon re-examination of the
main issues and have begun to look for new answers and interpretations. In addition, new topical areas of research and increased geographical coverage point to the need for greater objectivity and more cross-culturally applicable generalizations.

Some of the more recent attempts to re-affirm Africa's vital enduring cultural contributions to the New World and the global community have included reconstruction of pre-Columbian Africa-New World contacts, identification of African continuities in the Diaspora through (Armstrong 1982, 1985, 1990, 1992; Hayes 1992; Havisier 1997; Howson 1992; Howson and Handler 1993) demographic evidence and racial types or ethnicity and bioarchaeological studies (Watters 1987; Blakney 1995). African technological transfer (Goucher 1990a, 1990b, 1993), spatial and settlement pattern studies (Higman 1986, 1987, 1988; Handler 1983, 1985, Havisier 1997), migrations (Kozlowski 1974, 1980; Rose 1978) and archaeology of Maroon heritage (Agunah 1993, 1994). With the exception of these and a few other studies, few scholars have focused attention on related archaeological evidence. The publication of bibliographic guides to archaeological literature of the African-American experience in the Americas, including the Caribbean (Keegan, Stokes and Newson 1990; Singleton 1985; Singleton and Bograd 1995) which provide overview as well as highlights of selected major developments in the social history of African diaspora during the colonial period and plantation studies, constitute a clear indication of the need for increased archaeological consideration of the African experience in the diaspora. All these developments also indicate the need to tap those sources and as well as the need for collaboration between researchers on both sides of the Atlantic. Much of the lack of consensus and diversity of approaches in archaeological analysis and interpretations that crystallized in the 1970s, in the Americas can be identified in Africa, and it is not difficult to identify the intellectual ancestry of those new trends because they reflect the wider social and intellectual movements. For the African diaspora, the neglect has been more grievous not only due to the biases involved but also because of the failure of African archaeologists to assume the responsibility of assessing and interpreting the past that includes the prehistoric and historical linkages between groups.

As one of the oldest and most important of human activities, traveling has provided the opportunity for a variety of human quests, ranging from the search for new grounds to conquering space in modern times. Impelled by or rather under the cloak of commercial, religious, or political motives, travelers have crossed the face of the earth in search of territory. But not all people in history traveled on their own accord. Some traveled not only against their will but were forcibly torn away from their cultural roots and planted in unfamiliar environments and cultural conditions. This was what happened to various people shipped out from Africa and other places to the New World. The journey was a long one and involved people from the African side of the Atlantic of different derivation of roots. As might have been observed in this paper, the archaeological and historical pattern of cultural transformation in the Caribbean appears to have been music in character and the identification of its component features elusive. With this additional dimension, it becomes even more clear why the need for objectivity is so essential in the analysis of Caribbean cultures. It is difficult to comprehend adequately the true nature of the African cultural heritage in the Caribbean without first appreciating its dynamism and its life-sustaining elements which have particularly helped it to survive far beyond the geographical boundaries of the African continent. There are many historical circumstances in which one would have expected the African cultural heritage to have seen its doom. However, owing to its life-sustaining characteristics, the African cultural heritage has found its way beyond the continent's frontiers. Consequently, as we review the cultural frontiers of the African diaspora in the Caribbean we cannot ignore features that we observe to constitute its roots. The discussion of this paper indicates that identification of the roots, formation and transformation is more complex than had hitherto been thought.

The major source of ambiguity within ethnarchaeological study, as a sub-discipline, and the major points of contention do not lie with its own definition but with the definition of its perceived and practical role within archaeological explanation. The concept of 'analogy' occupies a central position in the framework of what can be referred to as 'applied ethnarchaeological principles', but this has been misused or totally ignored in several studies. From an historical perspective, there have been a series of attempts to discover order in, or perhaps more correctly to impose order upon, the role of the sub-discipline (Dunnan and Clewlow 1974; Gould and Watson 1982; Wylie 1985; Kramer 1979; Gould 1980); yet there is still a lack of clear understanding of its use as an explanatory tool in archaeology. The social sciences need to initiate approaches that are based on clearly articulated theoretical and methodological frameworks (Brown 1963). This applies equally to ethnarchaeology. It is also becoming quite clear that more accumulation of ethnographic data and provision of half-baked generalizations with the usual cautionary note 'more needs to be done on this subject' are in effect obstructing the development of the type of research in ethnarchaeology that would contribute viable theoretical formulations.

Every society has a feeling for history, especially if it is related to the distant past, because the behavior of every society is determined by traditions.
that have developed out of circumstances of the past. There is no part of the world today where this assertion can be appreciated more than in the world of African histories of diaspora and its manifestations beyond it. The increasing awareness of the importance of the past of the African diaspora has become more apparent in the greater emphasis that is being placed upon the ability of African communities in or outside Africa to maintain their heritage. This is the reason why ethnoarchaeological approaches provide an effective way of study of the African diaspora and will remain one of the most influential in Caribbean studies of the African diaspora as we meet the challenges of the future.

EMBEDDED IDENTITIES: PIECING TOGETHER RELATIONSHIPS THROUGH COMPOSITIONAL ANALYSIS OF LOW-FIRED EARTHENWARES

Mark Hauser and Douglas V. Armstrong

This paper evaluates current perspectives on ceramic analysis in the archaeology of the African diaspora and proposes theoretical and methodological shifts in low-fired earthenware analysis. By adopting a network-based perspective and employing compositional analysis, one can define the provenance of low-fired earthenwares and interpret the networks which brought them to the site of consumption.

Introduction

Archaeological analysis of low-fired earthenware from St. John can provide a powerful analytical tool with which to explore social relations on local (intra-island: community and island wide) and regional levels (inter-island). This study, while focused on the United States Virgin Islands, illustrates the necessity for a shift in both the goals of analysis and the analytical tools utilized in interpreting low-fired earthenwares from throughout the region. These low-fired earthenwares provide a window into the understanding of social and economic relations of peoples uprooted and displaced from Africa.

When Richard Gartley wrote his initial report on Afro-Criollo wares, there was a need to demonstrate direct culturally based links between the archaeological contexts of sites in the United States Virgin Islands that were associated with enslaved Africans (Gartley 1979). Studies such as Gartley's highlighted the presence of persons of African descent and emphasized an African past and African heritage. Gartley and others successfully called attention to the possibilities of African Caribbean pottery production and use. It is now widely acknowledged that African Americans were the primary producers and users of a wide range of low-fired earthenwares recovered from archaeological contexts at historic sites throughout the Caribbean (Armstrong 1985, 1990, 1992, 1996; Crane 1992; Gartley 1979; Handler 1962a, 1962b, 1965; Handler and Large 1976; Heath 1988; Mathewson 1972, 1975; Peterson and Watters 1988; Watters 1997).
Harris Lines

Metabolic insults during growth, due to illness or starvation, can be demonstrated as scars of temporary retarded growth, so-called Harris lines. These lines develop both in distal and proximal ends of all long bones during growth. Growth arrest lines were studied in the intact tibias of adult skeletons, where they were found as transverse lines of increased density on a radiograph. Only lines extending at least half way the width of the shaft were regarded as Harris lines. According to Maat (1984), these lines were arbitrarily subdivided in three categories, type I, II, and III. The type III lines are strong lines. They extend either across the whole width of the shaft, or are lines in the diaphyses near the primary ossification center of the tibia. Lines extending only halfway the width of the shaft are type I lines, while lines extending further, but not across the whole shaft of the tibia, are type II lines. The number of lines in the distal tibia correlates best with the number of health insults (Maat 1981). As the lines may disappear during life by continuous bone remodeling, special attention will be paid to type III lines. The over-all incidence in our collection was 4.25 lines, and 1.5 for strong lines (type III) per individual. In the bones of populations with well-known life conditions, for instance of men of medieval York (Dykes and Magilton 1980) and Dutch whalers of Spitsbergen (Maat 1984), the incidence of lines was respectively 1.05 and 2.4, and in case of type III lines, 0.2 and 0.64. Both populations had a moderate to low degree of socio-economic and health conditions. Hence, our collection appears to reflect a considerably worse fluctuating health situation. Our pre-Columbian Amerindian skeletal collection from the same region of Suriname had more or less the same incidence, viz. 4.4 and 1.5 for type III lines. The latter results are very interesting as the compared population had a very different culture, diet, and health status in the same country and climate.

It is hoped that the above data will be useful to other anthropologists in the region working with African skeletal remains.

BIBLIOGRAPHY

Aarons, G. K. Outen, and G. Turner

1990 Historical Archaeological Research at an 18th-Century Plantation: South Ocean Beach, Divi Bahamas Ltd. Manuscript or file. Department of Archives. Nassau, Bahamas.

Abbad y La Sierra, Fray

1979 Historia Geográfica y Natural De La Isla de San Juan Bautista de Puert Rico: Estudio Preliminar Por Isabel Gutierrez Del Arruyo Editorial Universitaria, UPRED.

Abrahams, R. and J. F. Sawed

1983 After Africa: Extracts from British Travel Accounts and Journals of the Seventeenth, Eighteenth and Nineteenth Centuries Concerning the Slaves, Their Manners and Customs in the British West Indies. Yale University Press, New Haven.

Acker, J. K. Barry, and J. Essvevd


Ackshah, C.


Acts of Assembly

1740 Passed in the Island of Nevis from 1664-1719. Inclusive London.

Adams, W. H.

1987 Historical Archaeology of Plantations at Kings Bay, Camden County, Georgia. Reports of Investigations No. 5, University of Florida, Gainesville.

Agonsh, E. K.


314  AFRICAN SITES ARCHAEOLOGY IN THE CARIBBEAN


Alexander, J. E.

Allaire, L.


Allen, R. M.


Andah, B. W.

Anonymous

Anthony, C.

Anthony, R.

Anti-Slavery Reporter
1827  Poor Black Kate: Cruelties Perpetrated by Henry and Helen Moss, on their Slave Kate, in the Bahamas. *Anti-Slavery Reporter* No. 47. Bagster and Thoms, London.

Antoin, B.
1997  *Alguin Kastumber di Antis: Bonaire*. 

Archivo General de Puerto Rico (ACPR)
1953, 1848

Armstrong, D. V.


1990  *The Old Village and the Great House: An Archaeological and Historical Examination of Drax Hall Plantation, St. Ann's Bay, Jamaica*, University of Illinois Press, Urbana.


Arron, J. and M. Garcia-Arevalo

Ascher, R.

Attema, Y.
Ayubi, E. O.


Bachman, H. G.

Bahamas Gazette (BG)
1796 Death. Bahamas Gazette 13(1000), 6-9 December 1796.
1815 Explanations of Mr. Thomas Whewell. Supplement to the Bahamas Gazette 5(472), 20 April 1815.

Bailey, K.D.

Baker, S.G.

Bangou, H.

Barbotin, M.

Barclay, A.
1826 A Practical View of the Present State of Slavery in the West Indies. London.

Barka, N.F.
