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The Evolution of Avunculocal Chiefdoms: A Reconstruction of Taino Kinship and Politics

Studies of prehistoric settlement patterns emphasize resource distributions, production, exchange, and political relations as the determining factors of settlement locations. Settlement patterns are also influenced by social organization. The present study examines the interrelationship of social organization, specifically matrilocal/avunculocal residence and matrilineal descent, and the Lucayan Taino settlement of the Bahama archipelago (ca. A.D. 800–1500). The study involves an archeo-ethnological collaboration in which archeological questions of Taino kinship and politics and ethnological questions concerning the evolution of avunculocal chiefdoms are addressed. The results include a remarkably complete reconstruction of Taino social organization and a diachronic test of the evolutionary sequence proposed for the development of avunculocal institutions.

WHEN COLUMBUS AND HIS FOLLOWERS REACHED THE NEW WORLD the peoples they first encountered were distinct but related Arawakan-speaking groups: the Lucayan Taino of the Bahamas, the Ciboney of central Cuba, and the Classic Taino of Hispaniola and eastern Cuba. The sudden ferocity of the Spanish invasion so overwhelmed the inhabitants that traditional patterns of social and political organization—in fact, the populations themselves—disappeared within about a generation (Cook and Borah 1971; Wilson 1986). Disease and enslavement combined to wipe out Lucayan societies in a matter of years, so documentary evidence is largely restricted to accounts of Columbus's *Diario* (Dunn and Kelley 1988). The more populous and complex societies of the Classic Taino persisted longer, and there is a good deal of information about Classic Taino social and political organization (Fewkes 1970; Las Casas 1951; Loven 1935; Rouse 1948; Wilson 1986). Archeological research has added considerable data on the chronology and pattern of Lucayan settlement, their use of the islands' resources, and their trade with the Taino in the Greater Antilles (Keegan 1985).

This article combines ethnohistorical and archeological sources with ethnographic studies of other societies to reconstruct Taino social organization. This reconstruction is worthwhile for three reasons. First, the available evidence is sufficient to postulate a remarkably complete picture of Taino social organization. Second, these issues offer lines of inquiry for further archeological and archival research. Third, and most fundamentally, the Taino peoples represent a major, theoretically significant instance of matrilineal social organization.

The emergence of matrilineal societies and their responses to changing social conditions have been the subject of an extensive literature based upon comparative study of

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synchronic ethnographic accounts (e.g., Ember and Ember 1971; Schneider and Gough 1961). By suggesting, in effect, that the societies under study represent stages in evolutionary processes, the processes themselves are postulated and tested against the evidence. Viewed one way, these studies provide an ethnographic analogy for interpreting ethnohistorical and archeological data on the Taino. Conversely, ethnohistorical information coupled with an archeological record of centuries of change in Taino settlement behavior provides a diachronic case against which ethnographically postulated processes of change can be tested for their goodness of fit. Therein lies the theoretical significance of our reconstruction. Matrilineal peoples constitute a substantial minority of ethnographically recorded societies, but there are good reasons to believe that many others disappeared without a trace. Taino societies disappeared, but not without a trace, and we may know more about how they developed than we know about others that persisted long enough for ethnographic study.

We are also mindful of the issue that a given pattern does not necessarily reflect a single underlying process (Hodder 1985; Wobst 1978). However, the relevance of the process/pattern distinction depends on the way it is drawn. The process/pattern issue is most often cited in cases in which the pattern is identified in the archeological record and the process is postulated entirely through ethnographic analogy. Since there is considerable ethnographic and ethnohistorical evidence bearing directly on the processes postulated for the evolution of Taino societies, the question is simply one of whether or not there are strong grounds of inference favoring the postulated processes over plausible alternatives.

Lucayan Taino Settlement Patterns

By A.D. 800, Taino colonists from Hispaniola began to settle the Bahama archipelago (Figure 1). During the next 700 years, the Lucayan population of the Bahamas grew at an exponential rate and expanded to colonize all of the larger islands and cays (Keegan 1985; Sears and Sullivan 1978). The terminal (post-A.D. 1400) pattern of settlement reflects a steady-state distribution of population in relation to island area. The examination of terminal population distributions has indicated that this pattern was generated primarily by efforts to maximize access to productive resources during the initial phase of expansion (Keegan 1985).¹

A decision-making model has been proposed to account for the processes by which the steady-state population distribution was achieved. The model assumes (1) that the timing of a new settlement is a function of population growth, such that a new settlement is established through the fissioning of a local settlement unit when this unit has doubled in size; and (2) that the location of the new settlement is a function of maximizing access to productive resources, such that the new settlement is established either on the same island or on the next island in the chain, whichever provides access to the larger productive area.

Maximizing access to productive resources does not, however, provide a complete explanation for the observed settlement distributions. Were access to resources the only criterion, we would expect the largest islands to have been settled first. Three of the largest islands in the archipelago are located in the northern Bahamas (Grand Bahama, Great Abaco, and Andros). Yet there is an overall weighting of the steady-state distribution from south to north, which corresponds to the direction of population expansion. Since colonists were capable seafarers who could have explored those larger islands (Keegan and Diamond 1987), some other constraint must have acted to limit the distance separating each settlement from its progenitor. We propose that the decision to establish a new settlement involved a compromise between the desire to maximize access to resources and the desire to maintain social relations with the parent community.

Following initial colonization, new settlements were established in the unoccupied locations between existing settlements. Since coastal resource distributions are relatively homogeneous in the Bahamas, the following hypothesis is proposed: If the sole criterion



Figure 1
Map of the West Indies.

for deciding settlement locations was maximizing access to productive resources, then settlements should be distributed at regular intervals. Lucayan settlements do exhibit an overall, regular pattern of spacing. However, this regular spacing involves an additional factor: Lucayan sites occur in pairs, with the regular spacing occurring between these “settlement pairs” (Keegan 1985:233–235).

Settlement pairs are defined as contemporaneous sites that are situated within each others catchment area (i.e., two sites separated by less than 1.5 km; see Sullivan 1981; Wing and Scudder 1983). Of 173 open-air sites on 10 islands there are 71 settlement pairs. When sites at the ends of linear distributions are eliminated to avoid boundary effects ($n = 20$), and the number of sites associated as settlement pairs is summed ($n = 138$), then 90% of all sites are located less than 1.5 km from another site.

The pairing of settlements can be attributed to the influences of social and economic factors. A site typology was created to examine these influences (Table 1). The typology is based on the measurement of site size, the best available indicator of relative population numbers and the permanence of occupation. When unmeasured sites are eliminated ($n = 35$), then 61% ($n = 22$) of the pairs relate permanent habitations (Table 2; Keegan 1985; Keegan and Mitchell 1986). If consideration is restricted to pairs that include at least one habitation site, then over 60% of the settlement pairs are paired primarily through the influences of social relations.

The final type of Lucayan settlement occurs in two community forms. On Acklins Island there is a cluster of 15 sites along 6 km of the coast (Figure 2). That clustering appears to reflect increasing sociopolitical integration, and this settlement complex has been identified as the village of a “King, of whom these men give the following details: he is the lord of all these nearby islands and he goes about dressed and wearing much gold on

Table 1
Lucayan Taino site typology.

Site type	Site length (m)
Primate village	>200
Village	90 to 199
Hamlet	20 to 89
Farmshelter	10 to 19
Allochthonous	<9

Source: Keegan 1985:213.

Table 2
Lucayan Taino settlement pairs.

Site types	Number of pairs
Primate village-village	2
Primate village-hamlet	2
Primate village-farmshelter	1
Primate village-allochthonous	1
Primate village-unmeasured	2
Village-village	2
Village-hamlet	12
Village-farmshelter	1
Village-unmeasured	7
Hamlet-hamlet	4
Hamlet-farmshelter	1
Hamlet-allochthonous	6
Hamlet-unmeasured	5
Farmshelter-farmshelter	4
Farmshelter-unmeasured	3
Unmeasured-unmeasured	18
<i>Total number of pairs</i>	71

Source: Keegan 1985:234.

his person" (Dunn and Kelley 1988:101). Since this complex is the most extensive Lucayan settlement, it seems appropriate to interpret the complex as the seat of a paramount chief to whom village headmen and perhaps district chiefs owed allegiance (Keegan 1984; Rouse 1948; Wilson 1986).

The second community form is houses located around a central plaza. Taino communities in the Greater Antilles during the early contact period typically conformed to this configuration (Castellanos 1981; Rouse 1948), and two Lucayan settlements on Middle Caicos exhibit this plaza arrangement (Figure 3). These Middle Caicos sites (MC-6, MC-12) are of special interest because they appear to reflect the unification of settlement pairs. At both sites the houses are arranged around not one but two plazas with what may be a chief's house defining their juncture at site MC-6 (Sullivan 1981). Furthermore, the distribution of exotic materials at site MC-6 provides spatial evidence for differential access to imported, exotic materials. These imports occur in a higher frequency around Plaza I, with the most elaborate imports clustered on the south side of the Plaza. These distributions are interpreted as cross-cutting divisions of the community (Sullivan 1981).

Having postulated the evolution of Lucayan settlement patterns as progressing from random, to paired, to clustered or joined-pairs, attention is next directed to the Spanish accounts of Taino social organization.

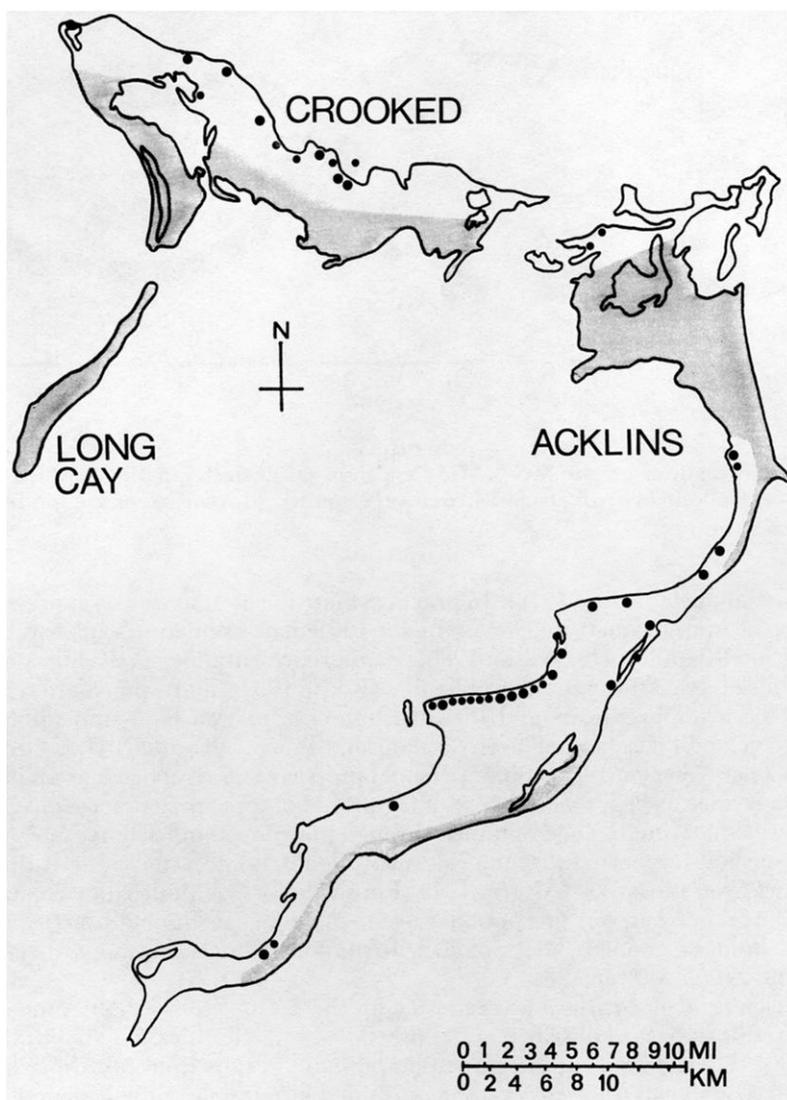


Figure 2

Lucayan Taino sites on Crooked and Acklins Islands (after Keegan 1985). Stippled areas were not surveyed.

Lucayan Taino Social Organization

The Spaniards who recorded Antillean cultures made the majority of their observations among the Classic Taino of Hispaniola. These reports have been generalized to other Taino groups based on the Spanish assertion that all Taino had similar cultural practices (Fewkes 1970; Sauer 1966). The major exceptions were the more warlike posture attributed to some groups and the more elaborate political structure of the Classic Taino. For present purposes it is assumed that a simpler political organization was the primary difference between the Lucayan and the Classic Taino.²

The Taino are reported to have traced descent through the female line. This report is supported by the Taino myth of an immortal being who had a mother with five names

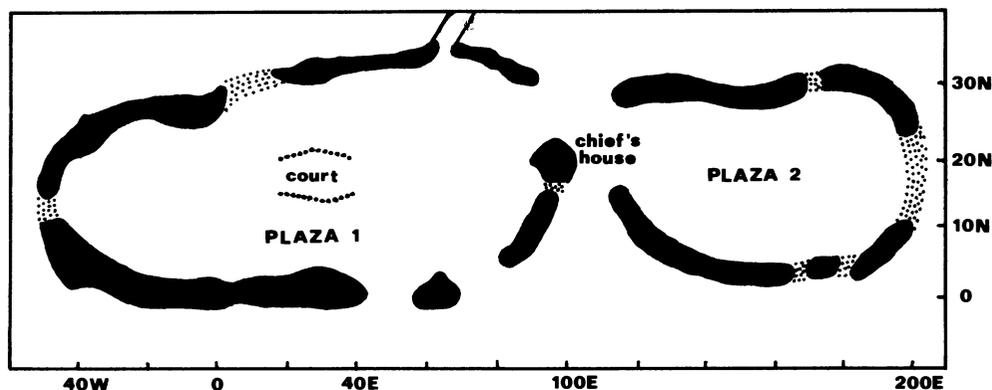


Figure 3

Artifact concentrations on site MC-6, Middle Caicos (after Sullivan 1981). Black areas are dense concentrations of artifacts and structural remains, stippled areas are moderate concentrations.

and a maternal uncle (Rouse 1948). In practice, matrilineal descent was expressed in the inheritance of rank through the female line, with females sometimes inheriting chiefly positions (Sued-Badillo 1979; Wilson 1986). *Zemis*, representations of the lineage's ancestors, were also passed through the female line (Rouse 1982), and women are reported to have been both the producers and the distributors of certain high-status goods (e.g., wooden stools and household objects, "a thousand things of cotton") (Las Casas 1951; Wilson 1986; cf. Petersen 1982). Since personal property is not reported as an important item of inheritance, except among those of high rank, it appears that access to corporate resources was the primary good obtained through matrilineal inheritance.

The Spanish also reported that the eldest son would, on occasion, inherit the rank of lineage chief from his father (Alegria 1979; Rouse 1948). Such inheritance could result from patrilineal descent, but this option appears to be an exceptional practice that may have been brought about by the Spanish disruption of the indigenous social system (Sued-Badillo 1985; Wilson 1986).

A patrilocal residence pattern was reported for the Taino (Rouse 1948). However, this pattern of residence is not consistent with the residence possibilities of matrilineal systems (Aberle 1961; Fox 1967). That interpretation probably results from confusing where the *wife* resided, with where the *husband and wife* resided in relation to the husband's lineage (see Goodenough 1955). Although the wife moved to her husband's village, the husband resided avunculocally (with his mother's brother) in the village of his lineage, a viri-avunculocal residence pattern also recorded among the Trobriand Islanders of Melanesia; the Haida, Tlingit, and Gitksan of British Columbia; and the Longuda of Nigeria (Adams 1973; Malinowski 1929; Murdock 1949).

Having introduced the probable patterns of descent and residence for the Classic Taino, we turn to how these social arrangements may have arisen. Patterns of residence and descent are significant from a materialist perspective because they reflect a society's adaptations to its social and material environments. Our reconstruction of the social life of Taino societies centers on relations between economics, kinship, and politics. It is therefore useful to review literature bearing on the connections between these aspects of culture.

The Political Economy of Matrilineal Society

Three factors are commonly cited as influencing the emergence of unilocal residence in which consanguineously related persons of one sex are systematically aggregated in

extended families: (1) the sexual division of subsistence labor, (2) the prevalence and form of warfare in pre-state-level societies, and (3) aspects of gender relations, especially marital relations, arising from work, warfare, and migration.

The division of labor was the first to receive serious attention in a hypothesis suggesting that consanguineously related members of the harder-working sex would be localized in the interest of efficiency and economic solidarity (Driver and Massey 1957; Linton 1936; Murdock 1949). Subsequent cross-cultural studies revealed only weak and inconsistent associations between residence and the division of labor (Divale 1974; Ember and Ember 1971; Petersen 1982). While it is true, for example, that the division of labor is often matridominant in horticultural societies and that matrilocal societies are usually horticultural (Aberle 1961; Keesing 1975), the fact is that horticultural societies are far more often patrilocal.

The Embers (1971) found that in pre-state-level societies where warfare is prevalent, the form of warfare exerts a strong influence on residence arising from the fact that men are the warring sex. If warfare features internal conflict among members of the same society, residence is usually patrilocal irrespective of the division of labor. When residence is not patrilocal under conditions of internal warfare, it is usually avunculocal. We shall turn to the avunculocal cases presently. The Embers suggest that the more common patrilocal variant arises from the importance of alliances among fathers, sons, and brothers in the face of internal feuding and raiding. If neighbors are hostile, the men of a descent group will not be dispersed at marriage.

By contrast, matrilocal residence occurs regularly only when warfare is purely external (i.e., fought with other societies) *and* when the division of labor is matridominant. As the Embers point out, the division of labor may not be responsive solely to techno-environmental factors internal to productive activities, but may be responsive to other costs and benefits as well. If external warfare requires men to be absent from home for long periods of time, a society may be compelled to adopt a division of labor in which women do most of the subsistence work and find that matrilocality provides a preferable alternative to households composed of unrelated women.

Divale (1974) suggests that matrilocality confers a political advantage on societies engaged in external warfare by dividing fraternal coalitions that might otherwise become factions in internal conflict. While agreeing that this advantage may be conferred, Harris (1979) argues, and we concur, that breaking up bands of brothers could hardly be the motive behind the residential choices of men who would be members of them. Harris interprets the adoption of matrilocality as an emergency measure that becomes institutionalized as the emergency persists.

For instance, begin with a village-based society in which married couples routinely live and work together, and residence is either patrilocal or a mixed pattern of choices reflecting the differing opportunities of individuals. This pattern is disturbed by a period of intense external warfare, or as Divale might suggest, a protracted period of migration, such as the colonization of the West Indies, requiring long pathfinding trips by men. Family life becomes increasingly matrifocal as women must rely more on themselves and one another. Marital bonds are weakened by men's absence, and men return home to find wives replaced by sisters who, like their wives, have returned to the more secure surroundings offered by their natal households. Men come to rely more on their sisters and less on their wives to take care of their interests at home. Eventually, the situation is resolved in an arrangement whereby women never leave home in the first place, and men divide their time between their natal and conjugal households.

This scenario provides the background from which M. Ember (1974) sees avunculocality evolving. Avunculocality is a curious phenomenon in that it usually requires both sexes to change domicile. Men move in with a real or classificatory maternal uncle and are joined by their wives unless they marry the uncle's daughter. Explaining why a people would so complicate their domestic lives becomes all the more interesting in view of the custom's wide dispersal across societies of Africa, Oceania, and the New World. Thus,

the practice cannot be attributed to the peculiarities of a particular historical tradition, but arose independently on a number of occasions.

M. Ember (1974) portrays avunculocal residence as yet another emergency measure that becomes institutionalized, emerging this time in response to a recurrence of internal warfare in a society that had previously adapted to external warfare through matrilocal residence. He notes that all avunculocal societies have internal warfare. They also have matrilineal descent groups, although there are others with patrilineal descent groups (double descent) as well. Further, whereas polygyny is relatively uncommon among matrilocals for a number of practical and political reasons (Murdock 1949), polygyny is widespread among avunculocal peoples. Indeed, among societies with double descent, polygyny is far more prevalent among the avunculocals than among the patrilocals.

M. Ember (1974) explains the co-occurrence of these phenomena as follows. Warfare seems to provide an impetus for the emergence of unilocal residence and strong unilineal descent groups, whether patrilineal or matrilineal. If internal warfare resumes in a society with well-developed matrilineal descent groups, the incentives to form strong localized alliances of consanguineously related males returns. The emergency arises from the fact that established social practices provide little or no opportunity to base local groups on common paternity or to knit together larger alliances on the basis of common patrilineal descent. Matrilineal descent provides the one well-established nexus around which such coalitions can form, and avunculocal residence effectively recomposes localized groups of matrilineally related men who would have been dispersed under matrilocal residence (Fox 1967).

Widespread polygyny under avunculocal residence is significant in several ways. First, polygyny is more common, other things being equal, where high warfare mortality among males creates an imbalanced sex ratio in spouse pools (M. Ember 1974). Thus, Ember believes, the association of polygyny with avunculocality may indicate high warfare mortality among males and a high rate of widow remarriage. If so, this means that a woman's sons are less likely to share a common father, leaving common maternity as the sure basis of fraternal solidarity and strengthening the persistence of matrilineal descent groups. Second, polygyny provides the avunculocally residing man with all of the benefits enjoyed by patrilocally residing men but denied by matrilocality (Murdock 1949).

Through avunculocality a man can bring together multiple wives in a single domicile without their being sisters as in matrilocal residence, and can thereby create marital alliances with a number of groups in the same way that patrilocally residing men can. Moreover, like his patrilocal counterpart, a powerful man can spend his entire adult life in a single domicile amassing and controlling wealth. Finally, it appears to us that avunculocal residence can offer powerful men opportunities they would not enjoy through patrilocality. Under patrilocal residence marital alliance amounts to keeping sons and exchanging daughters. Under avunculocal residence a man can potentially influence the marital destiny and residence of nieces and nephews as well as sons and daughters. A polygynous chief who succeeds a maternal uncle sends sons he has reared to the kin of their mothers where they may succeed to positions of influence. In return he stands to receive the sons of sisters and half-sisters as co-residing nephews under his own influence, whom he controls through the manipulation of succession and access to resources. Likewise, he can influence the marital destinies of his daughters, because they reside with him, as well as those of his sister's daughters due to his prominence in their matrilineal group. Obviously, no one would accomplish this degree of influence without holding a good deal of political and economic power in the first place, but it is this extraordinary potential of avunculocality for the concentration of power within a system of kinship and marriage that leads us to believe that it may have become institutionalized among Classic Taino elites. Broadly speaking, ethnohistorical accounts support this interpretation.

In addition to its association with matrilineality and internal warfare, avunculocality is associated with the division of a society into warring chiefdoms. While the initial transition to avunculocality may well be a defensive measure in the face of internal conflicts

in a matrilineal society, its institutionalization may result from efforts by chiefs and their subordinates to turn internal conflict to their own advantage by manipulating marriage, residence, and succession to concentrate power in chiefdoms that become parties to internal conflict.

We are not suggesting that avunculocal chiefdoms achieve a higher level of political integration than their matrilineal counterparts. To the contrary, matrilineal chiefdoms are fairly common and the fact that they are able to maintain internal peace to engage in purely external warfare is testimony to the size and integration of the polities they may achieve (Schneider and Gough 1961). Indeed, the emergence of the avunculocal chiefdom in response to internal warfare may represent a tightening of political boundaries and what amounts to their social fortification through the manipulation of kinship and marriage by chiefs. In short, a key difference between the two kinds of matrilineal chiefdoms may turn on the personal power of chiefs and the way in which they maintain it.

Some evidence bearing on this postulated difference may be found in Textor's *Cross-Cultural Summary* (1967). One finds that of 18 avunculocal societies 13 have inherited headmanships, all of which are inherited matrilineally (Textor 1967:Table 206). By contrast, of 31 matrilineal societies 17 also have matrilineally inherited headmanships, but 14 have other forms of succession or no headmen at all (Textor 1967:Table 208). Interpreting these limited data cautiously, it seems that while matrilineality does not inhibit matrilineal succession to political office and that the emergence of matrilineal descent groups may encourage it, the political processes that occur in these societies often allow individuals to pursue power through other avenues. Avunculocal residence, by contrast, seems to actively foster the mobilization of matrilineal ties for political purposes.

From a purely military perspective the greater reliance of avunculocal chiefdoms on matrilineal succession may seem contradictory. Outbreaks of warfare with nearby neighbors are often intermittent with periods of alliance and trade, which makes them difficult to anticipate. Constant readiness is required because political leaders must always be mindful of potential threats as well as offensive opportunities. If chiefs must be successful military entrepreneurs to maintain the confidence of followers, it would seem that success should be achieved through demonstrated ability rather than ascribed by kinship.

However, the great advantage conferred by matrilineal succession in the avunculocal chiefdom is that it provides for orderly transfers of power while allowing considerable latitude in the choice of a successor. Under patrilineal succession, a chief is normally succeeded by one of his sons, whereas matrilineal succession may allow a chief to choose any of his sisters' sons, indeed virtually any man of his matrilineage.³ Avunculocal residence assembles potential candidates in or near the chief's household and under his supervision. The succession may be contested, especially if a chief dies intestate, but the power of a chief to choose his successor from a variety of candidates he can call to live with him ensures the allegiance of candidates and motivates them to achieve the chief's objectives to secure his favor.

In fact, we believe that military and political entrepreneurship may be the key element in the emergence of the avunculocal chiefdom. We use the term "avunculocal chiefdom" rather than "avunculocal society" because the fact that a polity is organized through avunculocal residence does not necessarily require the entire society to be. Recall that avunculocal residence seems to emerge in previously matrilineal, matrilineal societies that have experienced a recurrence of internal warfare. Because marriage distances are usually short in matrilineal societies, the men of a matrilineage can routinely assemble for political and ritual activities. As internal conflict resumes, the incentive to assemble the men of a matrilineal group more often and for longer periods increases. However, it may not be feasible to localize all of the men all of the time, certainly not in a single household or village. Rather, the objective of clan chiefs or men who are simply successful war leaders is to assemble a retinue of capable and loyal followers from among their matrikin. Other individuals may continue to live matrilineally, and as avunculocality accustoms the population to the movement of women at marriage, still other couples may choose to live

patrilocally. Thus, ethnographers have found a mixture of residential choices among such groups as the Gitksan (Adams 1973), the Trobriand (Weiner 1976), and the Trukese (Goodenough 1955). These choices reflect the options available to married couples, with avunculocal residence predominant in chiefly families. Since these ethnographic observations describe periods after the cessation of warfare, avunculocal residence may have been more common in earlier times. However, it is not essential for avunculocal residence to be systematic for the avunculocal chiefdom to emerge.

For an avunculocal chiefdom to emerge a single matrilineal group must achieve paramount status. It is no accident of history that avunculocal chiefdoms persisted in highly circumscribed environments, islands, or areas of highly concentrated resources. Circumscribed environments may foster internal conflict that ceases only when one group achieves hegemony through greater numerical strength, better leadership, or command of a strong defensive position centered on a prime site of habitation or astride trade routes. If there is a series of such circumscribed environments in a region, a series of such polities may emerge. These polities may continue to war and trade with one another because no one of them can sustain the extension of its power beyond its circumscribed boundaries by conquering and incorporating others.

Thus far we have dealt with the social dynamics conducive to a shift from matrilocal to avunculocal residence, a process we believe to have occurred among the Classic Taino. The remaining question is: Why do some societies remain matrilocal?

Matrilocal residence seems to require a combination of absent husbands compelling a matridominant division of home-based subsistence labor and internal peace. Whether external warfare must be one reason for men's absence we are not prepared to say, because the Embers' analysis deals only with warlike societies. A matridominant division of local labor could just as well be compelled by long-distance hunting, fishing, and trading, which would tend to externalize warfare, but the extent to which external military threat is necessary to induce internal peace is not clear (Ember and Ember 1971; Petersen 1982). One point is clear: matrilocal residence is neither a necessary nor sufficient condition for internal peace. As the Embers show, there are patrilocal societies with patridominant divisions of labor practicing purely external warfare. Thus, the conditions of internal peace are not to be found in the kinship system itself, but in the material conditions to which the kinship system is responsive. The existence of patrilocal societies with patridominant divisions of labor and purely external warfare suggests that male absence, rather than external threat, is the key condition of matrilocality.

Matrilocal society entails a potential prisoner's dilemma for men (Gumerman 1986). Internal conflict threatens to divide men's loyalties between natal and conjugal groups, and if M. Ember is correct about avunculocality, men side with blood relations when this occurs. If a man is to be away from home for long periods he wants to be assured that his interests at home are protected. He can rely on his sisters, but he needs to be assured that other men within the society will not prey on his resources in his absence. This condition is met when other men's interests are better served by activities conducted away from home than by internal predation. This can happen in several ways. Severe external military threat assures that everyone will be a loser if internal war occurs. Alternatively, it could be that local resources simply are not worth fighting over in view of the higher returns to long-distance trading, raiding, hunting, and fishing. In any or all of these circumstances, interpersonal aggression may occur, but leaders will not allow it to escalate because internal warfare is in no one's interest.

Social Organization and the Evolution of Lucayan Taino Settlement Patterns

The evolution of Lucayan settlement patterns can be viewed as expressing adjustments in residence through time. These adjustments can be separated into (1) an initial phase in which settlements are randomly distributed, (2) a second phase during which settlements converge to form regularly spaced settlement pairs, and (3) a final phase characterized by the clustering of settlement units and the development of plaza communities.

Initial Colonization of the Bahamas

Colonizing populations share a variety of adaptive strategies derived from the exigencies of migration into unoccupied territories. These strategies include a generalized use of the environment, a rapidly growing population, and spatial mobility, all of which conspire to promote the maintenance of a flexible social organization (Cherry 1981, 1985; Keegan 1985; Keegan and Diamond 1987; Kirch 1984; Terrell 1986). During the initial phase of colonization, land and other resources tend to be so abundant as to obviate the need to control them through strong descent groups. As Sahlins (1961:342) has suggested,

Expansion in an open environment may well be accompanied by segmentation, the normal process of tribal growth and spread. But in the absence of competition small segments tend to become discrete and autonomous linked together primarily through mechanical solidarity.

Tracing descent through the female line provides a means for loosely integrating relatively large segments of a population. In horticultural economies where land tends to be abundant in relation to seasonal labor demands, matrilineal descent provides a method for establishing rights of access to land through lineage membership and also serves to foster cooperation among the members of a group. Further, the risks incurred during island colonization would further strengthen the bonds between colonists and the parent community on adjacent islands (see Rouse 1982), and if males are frequently absent on overwater voyages there exists a stimulus for matrilineal residence (Divale 1974).

That the initial colonists of the West Indies were matrilineal and matrilineal can be inferred from several sources. First, mainland Arawakan peoples who in recent times lived closest to the river mouths from which the ancestors of the Taino departed for the islands were typically matrilineal and matrilineal (Steward and Faron 1959:300–301). Second, matrilineal descent is usually accompanied by a preference for matrilineal residence (Aberle 1961:666), and this residence preference is the necessary precursor to avunculocal residence (Fox 1967; Murdock 1949). Finally, as we have seen, ethnohistoric reports identify matrilineal descent reckoning and avunculocal residence as the predominant patterns among the Classic Taino at contact.

In the earlier discussion of the transmission of matrilineal institutions to the Bahamas, the presence of these institutions in Hispaniola at contact was cited as circumstantial evidence. In fact, the distinctions between the Classic and the Lucayan Taino are to some extent arbitrary. There may have been linguistic and other cultural differences within and between Taino groups, and the Classic Taino certainly had much larger communities, but the Bahamas may be viewed as a hinterland of a larger political region centered on the Greater Antilles. In sum, there is a sound basis for concluding that the initial colonists of the Bahamas were predominantly matrilineal. There is also good reason to infer that the initial pattern of residence was predominantly matrilineal, so the following discussion will focus on changes in residence patterns that reflect adjustments to changes in sociopolitical arrangements that are expressed in changes in settlement patterns.

The Lucayan colonization practice of moving to the nearest available island rather than the biggest may be viewed as a satisficing strategy, a simple matter of convenience. Yet, as the ethnohistoric accounts make clear, these people were accomplished seafarers with large vessels who traveled long distances to trade. It is therefore unlikely that they would settle nearby islands simply to save time if farther islands offered better resources. The nearby islands were certainly good enough until the population approached an uncomfortable carrying capacity, but it is more likely that nearby islands were preferred because the system of kinship and marriage worked better if they were settled first. Seemingly, measures were always taken to settle a new island with people who could marry one another, but settlers may have also preferred to stay in easy communication with the parent community, where additional spouses were available. In this way, entire domestic groups could routinely engage in interisland visitation without incurring unnecessary hazards. In short, we are suggesting that the islands would not have been settled as they

were unless people organized in unilineal descent groups were doing the settling. The only unilineal descent groups we know about in the region from historical accounts were matrilineal.

Population expansion would have occurred through the creation of sublineages in response to population growth. New communities would then be established by the "drift" method of segmentation. In its simplest form, the drift method involves a moiety division of the lineage, with two sibs remaining in the parent community and matrilineal relatives of both moving to the new community (Fox 1967; Murdock 1949:215). Under conditions of resource abundance, the impetus to move would have been the pull of greater economic potential in previously unoccupied territories versus the push of intracommunity competition (Keegan 1985; Keegan and Butler 1987). This economic stimulus would have permitted the continuation of amicable relations between the parent and daughter communities. In addition, the differential pattern of growth exhibited by unilineal descent systems, with some lineages growing and others going extinct (Fox 1967), combined with the risks of colonization would have also favored the continuation of intercommunity communication and cooperation.

On the one hand, the risks of colonization, unilineal corporate-group longevity, and matrilineal kinship relations that cross-cut communities favor communication and cooperation (centripetal forces), while on the other, the attraction of economic advantage favors segmentation (centrifugal forces). The spatial displacement of males from communities in which they maintain a vested interest would act to constrain the spatial separation of parent and daughter communities. However, these interests were probably quite small at this time (i.e., no corporate property to "control"), and the distance between communities could be fairly large. In sum, the initial period of population expansion would have been characterized by the localization of female kin groups and the spatial displacement of some males.

Although matrilineal residence is suggested as the prevalent pattern, social and economic factors would favor flexibility of individual choice in residence decisions during the initial phase of colonization. We would therefore expect individuals to reside in the community that best satisfied their productive and reproductive needs. If new communities were created through the drift method of segmentation in which a moiety division of husband givers and husband takers was duplicated in every community, then individuals could maintain the same general pattern of residence regardless of the community in which they resided. The only difference between communities would be the specific individuals who comprised the two sibs in each community.

The Emergence of Settlement Pairs

Even when descent is traced through the female line, it is usually males who assume the positions of authority within the lineage, especially in terms of external relations (Schneider and Gough 1961:5). Although matrilineal descent reckoning may at first be favored by the localization of related females, matrilineality creates instability resulting from a male's desire to participate in his own lineage while resident with his wife's.

One way to balance these competing demands is to establish villages in close proximity, thus reducing the distances that males must travel to participate in their lineage affairs and resulting in the short marriage distances typical of matrilineal societies. So long as male participation in the lineage is flexible, and male distance from their lineage group is outweighed by the advantage of localizing related females, the society should not become critically unstable. However, the advantage of maintaining a corporate group of related females may eventually be outweighed by other sociopolitical factors that require heightened participation by males. Under such conditions the localization of matrilineally related men and their spouses may develop (Ember 1974; Fox 1967).

The shift from widely spread communities to settlement pairs can be explained as resulting from population growth to a level at which lineage membership was important for defining access to productive resources. Under such conditions, males should attempt

to minimize their distance from their matrilineage's corporate resources. One possible solution is the continuation of a matrilocal residence pattern accompanied by the spatial convergence of sublineage segments. Each community contains a minimum of two sibs, with both contributing matrilineal relatives to the new community; if the rule of exogamy is retained, the original sibs are converted automatically into matrimoieties (Murdock 1949:215). A slight spatial separation between the communities provides the basis for controlling a larger territory, while allowing men in both communities to observe the rule of exogamy and reside matrilocally without leaving their natal territory. Settlement pairs thus reflect a compromise between economic strategy and social integration. A similar settlement system known as village clusters characterizes the Trobriand Islanders, a matrilineal and viri-avunculocal society (Powell 1960; Weiner 1976).

Because communities of a pair so often differ in size it seems impossible that islands were endogamous while communities were exogamous. Yet the occurrence of community pairs in this phase suggests some clear reason for maintaining the division between them. Given what we have seen thus far of the ethnohistory of the Taino, the most probable explanation would be that the moiety division of communities reflected a moiety division of society as a whole premised on bilateral cross-cousin marriage. Such moiety divisions are commonplace among Amazonian peoples. If such communities represent single, localized matrilineages or two or more lineages of the same moiety, then they may have been exogamous, exchanging spouses with the paired community as well as with opposite moiety communities on adjacent islands.

Settlement pairs emerged in conjunction with a growing population and the end of opportunities to expand onto nearby islands. It is also apparent that the communities involved are not simply equal pairs. Only six of the settlement pairs involve communities of nearly equal size. The emergence of settlement pairs thus appears to reflect the emergence of a dominant lineage or lineages. This settlement system may therefore be interpreted as evidence for an increasing sociopolitical integration that was based on either matrilocal residence or an initial expression of avunculocal residence among the emerging upper ranks.

Settlement Clusters and Plaza Communities

The final settlement pattern reflects the increasing political integration of the growing Lucayan population. Individual Tainos can be distinguished as commoners (those lacking positions of authority in their lineage) and elites (who held high ranks). Both elites and commoners were likely to change their place of residence several times during their lifetime. Children began by living with their parents. During adolescence, boys would move to their maternal uncle's house in the village of their lineage (avunculocal residence). At marriage, commoners are reported to have provided bride service as compensation to the lineage that provided their wives (Fewkes 1970:48; Rouse 1948:531), at which time the couple resided matrilocally with the wife's family. Elites could apparently avoid such bride service by paying movable property to the wife-giving lineage (Las Casas, quoted in Sued-Badillo 1979:52; Rouse 1948:531). Finally, at the completion of bride service the couple would move back to the husband's matrilineage, where they would reside viri-avunculocally.

These marital practices are especially interesting because bride service, in effect temporary matrilocal residence, amounts to a transitional compromise between matrilocality and avunculocality. Elites who bought out their bride service had for all practical purposes instituted bride price, which was construed as a substitute for bride service simply because commoner men served it.

The attribution of bride service instead of outright matrilocality to the Classic Taino suggests that the impetus to recompose matrilineally related groups of men was felt by a growing proportion of the population. The Spanish accounts are not clear regarding qualifications for *cacique* (chiefly) rank or the number and kinds of distinctions among those of high rank. On one point they were clear: there were many *caciques*. In one case a par-

amount chief is cited as having assembled 300 *caciques* (Wilson 1986). If this assembly actually occurred, the size of the total population of the chiefdom suggests that a man who headed a small village or large family could be regarded as a *cacique*. The picture that emerges from the Spanish accounts, clouded though they were by a previous ignorance of matrilineal institutions, is one of a society with considerable variability in residential practices. Sooner or later, the institution of bride service allowed all men to rejoin their matrikin, with the length of service depending upon the status of the individual and that of the descent group to which he was affiliated.

At the top of the society, avunculocality would have occurred as soon as selected nephews reached adulthood and high-ranking polygynous men brought wives to live with them immediately after marriage. At the bottom of society a connubial cycle prevailed. Sons reared in one family might join a second upon marriage and move to a third upon completion of their suitor service. Meanwhile the original family would be collecting temporarily residing sons-in-law and older, permanently settled nephews, with the question of who went where and when being determined by some mixture of political advantage, practical expedience, and personal preference. The mixture of residential arrangements at the bottom of the society could easily confuse a modern ethnographer (Goodenough 1955), let alone a 16th-century Spaniard.

The cluster of sites on Acklins Island appears very similar to the pattern in the Trobriands, where socially discrete hamlets of extended families composed of matrilineally related men, their spouses, young children, and adolescent nephews occupy large dwellings that together form a village (cf. Rouse 1948; Weiner 1976). One lineage at each village was probably dominant in the sense that that lineage or clan head was the chief of the village and in some cases the chief of a district or a region. With the emergence of chiefs, male status was enhanced and the localization of males in their lineage's village would have promoted the shift to viri-avunculocal residence (Fox 1967; Murdock 1949).

At site MC-6 on Middle Caicos, one plaza is clearly dominant, and its central court has stones aligned to chart astronomical events (Sullivan 1981). The distribution of exotic materials imported from the Greater Antilles provides evidence for a division of this dominant plaza group that conforms to the identification of matrimoieties as the minimum structural unit of matrilineal and matrilocal/avunculocal societies. Site MC-6 is, however, unusual in comparison to other Lucayan sites. It may have been a Classic Taino outpost established to maintain access to marine resources and a seasonal source of salt (Sullivan 1981); MC-6 is certainly more characteristic of Classic Taino than Lucayan Taino spatial organization (Alegría 1983). Since the two-plaza community on Middle Caicos may not be representative, consideration of the emergence of Lucayan settlement clusters is restricted to developments on Acklins Island.

The transition from settlement pairs to settlement clusters appears to reflect some combination of long-distance trading and interisland raiding in conjunction with continued population growth. Columbus reported that exchange was regularly conducted between the central Bahamas and Cuba, and he observed dugout canoes that could carry 40–45 men. Given the sizes of most archeological sites in the central Bahamas, canoes of this size must have carried men who resided in several communities. In sum, long-distance exchange involved a supracommunity organization of males (Keegan 1985). Since matrilineal descent was the dominant principle for the organization of males in cooperative ventures, long-distance exchange provided a stimulus for the localization of matrilineally related males. As we have argued, the localization of matrilineally related males finds its most complete expression in avunculocal residence.

That scale of long-distance exchange would require the participation of a chief. On the one hand, the coordination of efforts by males who usually reside in different communities required an individual whose power and influence extended beyond the community in which he resided. On the other, the construction of large ocean-going canoes or the procurement of such canoes through exchange required an individual who could marshal resources that exceeded those available to the typical household. In sum, the presence of

chiefs is inferred from activities that exceed the scale of single households and autonomous communities.

Recent excavations on Acklins Island provide evidence for long-distance exchange that exceeded by several magnitudes the scale of exchange in the remainder of the Bahamas (Keegan 1988). In one site, 27.3% (by weight) of the pottery was imported from the Greater Antilles. In comparison, Sears and Sullivan (1978) reported that imported pottery comprises less than 1% of the pottery in Lucayan sites in the Bahamas, and up to 10% of the pottery at sites in the Caicos Islands. Such heightened participation in long-distance exchange is consistent with Columbus's report that a "King" who held hegemony over the central Bahamas resided on Acklins Island (Keegan 1984).

The possible role of interisland raiding in the evolution of Lucayan societies has not yet been explored. Interpretive difficulties arise from the fact that raiding is presently archeologically invisible, and the only reports of raiding are colored by Columbus's views. Columbus observed men on *Guanahani* who had scars that were received when raiders from the northwest came to "capture" them. However, given the size of Lucayan settlements it is unlikely that conquest warfare or the taking of captives actually occurred. Here is a case where Columbus is attributing European motives (conquest, slavery) to the native population. It is quite clear, however, that the Lucayans were prepared to defend themselves. Columbus was not met by a cross-section of the population; he was met by young adults carrying spears.

Rather than speculate on the reasons for long-distance exchange and interisland raiding, we limit our interpretations to their sociological impacts. Both activities would have promoted the localization of matrilineally related men. And, as the scale of both increased, a consolidation of power in dominant lineages would have emerged through the coordination and political integration of the men who belonged to the dominant lineages. One expression of such consolidation was the growth of villages through the incorporation of additional settlement units. The fullest expression of such village growth is the settlement cluster on Acklins Island.

Conclusions

The impetus for this study sprang from Keegan's efforts to explain features of Lucayan settlement patterns, notably the selection of islands for colonization and the pairing of communities, in terms of local food-procurement strategies. This problem led him to consider social organization as a factor in settlement decisions, to an investigation of the literature concerning matrilineal societies, and to collaboration with Maclachlan, the ethnologist. Maclachlan saw the project as an opportunity to test Ember's hypotheses concerning conditions favoring the emergence of avunculocal residence with longitudinal data covering a substantial culture area over a considerable period, and to retrieve a group of matrilineal societies, a type that may well have been more common in the past than the ethnographic record of modern societies would indicate.

The available data suggest rather clearly that the evolution of matrilineal societies in the northern West Indies involved the processes postulated in the Embers' cross-cultural studies. Starting with such detailed sociological constructs it is possible to generate very explicit hypotheses that can be subjected to empirical testing. The final result will be a detailed diachronic reconstruction of the interplay of social and economic processes.

Notes

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¹Keegan (1985) provides a comprehensive review of Lucayan settlement patterns, including statistical analyses.

²Instead of building our case from Spanish descriptions, which require detailed critical review beyond the scope of this article, we have chosen to propose a model of Taino social organization

that is consistent with contact period documents but that draws its primary elements from previous interpretations of these documents.

³Melvin Ember (personal communication, 1989) has pointed out that such latitude in the choice of a successor may actually be necessary, especially when there is high male mortality due to warfare. As discussed elsewhere, cases in which sons, wives, and sisters became Taino chiefs may thus reflect the high male mortality that followed the establishment of Spanish settlements.

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