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in Prehistoric Puerto Rico

Author(s): Peter E. Siegel

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CONTESTED PLACES AND PLACES OF CONTEST: THE EVOLUTION OF SOCIAL POWER AND CEREMONIAL SPACE IN PREHISTORIC PUERTO RICO

Peter E. Siegel

The evolution of social power during the ceramic age of Puerto Rico is investigated. Archaeological site plans, ethnohistoric and ethnographic accounts, and size/spatial distributions of ball courts and ceremonial plazas are investigated as they relate to political organization and leadership roles in prehistoric Puerto Rico. One of the strands linking 14 centuries of ceramic-age culture in Puerto Rico is the emphasis on ceremonial space as an overtly integrative arena for the group. As the definition of the "group" evolved from a village-bound entity to a multivillage polity, the importance and elaboration of ceremonial space increased accordingly. The central argument in this paper is that politically motivated individuals accrued power by controlling the rituals and ceremonies that were of fundamental importance for maintaining and reproducing society. Rituals and ceremonies were performed in specially designated areas of communities. As access to power narrowed to specific lineages, families, or individuals, the designated community spaces became more formal in construction and location. These ceremonial spaces, referred to as ball courts and ceremonial plazas in the ethnohistoric accounts, ultimately became contested places as well as places of contest.

Se investiga la evolución del poder social durante la era cerámica de Puerto Rico. Se analizan los planos arqueológicos del sitio, los relatos etnohistóricos y etnográficos, las distribuciones del tamaño/espacio de los bateyes y las plazas ceremoniales con respecto a la organización política y posición de mando en el Puerto Rico prehistórico. Una de las conexiones que une 14 siglos de cultura de la era cerámica en Puerto Rico es el énfasis puesto en el espacio ceremonial como un punto de reunión del grupo. A medida que la definición de "grupo" evolucionaba, desde una entidad de aldea hasta una comunidad integrada por varias aldeas, la elaboración del espacio ceremonial y su importancia iban aumentando. El tema central de este informe es que las personas con motivación política acumulaban poder controlando los ritos y las ceremonias que resultaban fundamentales para el mantenimiento y la reproducción de la sociedad. Los ritos y las ceremonias eran realizados en áreas especiales de la comunidad. Cuando el acceso al poder se limitó a linajes, familias, o personas particulares, los espacios designados de la comunidad se convirtieron en lugares más formales en términos de construcción y de localización. Estos espacios ceremoniales, denominados bateyes y plazas ceremoniales en los relatos etnohistóricos, eventualmente se convirtieron en lugares contestables y lugares de contienda.

When Christopher Columbus and his colleagues arrived in the New World, they documented Native American cultures organized along several lines of sociocultural integration. Observations made independently by different recorders at various times and in separate locations reveal cultures in Hispaniola and Puerto Rico with hereditary status distinctions, well-developed systems of tributary relations, ceremonial and political centers, and people who were greatly concerned with matters of worldview and ideology

(Colón 1947; Las Casas 1951; Oviedo 1950). These were the Taíno Indians and all evidence indicates that they were organized into complex chiefdoms (Rouse 1992; Siegel 1991a, 1992; Wilson 1990a, 1990b). Archaeological data derived from ceramic styles, iconography, settlement organization, and distinctive artifacts reflect linkages between the Saladoid cultures, who dispersed into the West Indies by approximately 500 B.C., and the Taínos, who were well established in the fifteenth century A.D. (Rouse 1986, 1992; Siegel 1992, 1996; Walker 1993).

Peter E. Siegel ■ John Milner Associates, 535 North Church Street, West Chester, PA 19380 and Department of Anthropology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605

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A major research emphasis in Caribbean prehistoric archaeology has centered around the geographical origins of the Taíno Indians (Rouse 1986, 1992), which is not surprising given the archipelago setting. Where did the forebears of the Taínos come from, when did they arrive, and why did they leave the mainland of South America? In recent years, some archaeologists have initiated research programs addressing the development of Taíno chiefdoms (Curet 1996; Moscoso 1981; Siegel 1992; Wilson 1990a). Models for the development of a complex society in the Caribbean have generally focused on demographic or ecological factors (see Curet 1992). Current evidence, however, is equivocal for population pressure or resource limitations at any time during the ceramic age. Curet's (1992) survey in the Maunabo Valley, located in southeastern Puerto Rico, indicates population levels well below the local carrying capacity. However, population density was increasing through the post-Saladoid occupations. In his survey of the Loiza Valley located in northeastern Puerto Rico, Rodríguez (1990) documented dramatically increased numbers of sites and site types during post-Saladoid times, corresponding to the development of ball courts and Taíno chiefdoms. Subsistence, demography, and the environmental context may have been important factors for culture change in prehistoric Puerto Rico, but research to date has not clarified the linkages between these factors and ideology and social organization for the Caribbean in general.

Contrary to materialist perspectives, I have constructed an argument for the importance of ideology in the development of Taíno complex society. Elsewhere I have focused on the links between settlement structure and ideology as a basis for discussing the development of social complexity in the West Indies (Siegel 1989, 1992, 1996). Those studies emphasize specific aspects of the archaeological record that reveal the consolidation of power. In the present paper, I explore the social and political roles and the behavioral strategies of the actors who were involved in the institutionalization of social inequality. By doing so, I investigate the motives of individuals in the specific social and cultural context of West Indian ceramic-age prehistory, and the archaeological correlates of such behavior.

The chronological framework for this study is represented by the Saladoid (ca. 200 B.C.–A.D. 600) and Ostionoid series (A.D. 600–1500). These series

are subdivided into complexes or periods: Hacienda Grande (ca. 200 B.C.–A.D. 400; Period IIa), Cuevas (A.D. 400–600; Period IIb), Monserrate (A.D. 600–900; Period IIIa), Santa Elena (A.D. 900–1200; Period IIIb), and Esperanza (A.D. 1200–1500; Period IV) (Rouse 1952a:330–333, 1992:Figs. 14 and 15).

Institutionalized Social Inequality

Social inequality is defined generally as unequal or asymmetrical relations of power between members or groups of a society. In its broadest application, social inequality applies to any human social system; power differentials are present and frequently codified in gender and age relations and interpersonal characteristics (Cashdan 1980; Flanagan 1989). However, it is the institutionalization (heritability) of inequality that is of interest in the context of complex society (Price and Feinman 1995). Institutionalized inequality may be investigated at various levels of social organization, including families and households, communities, villages, and multivillage polities (Blanton 1995; Earle 1997; Johnson and Earle 1987). The sources of power and how power is harnessed in social contexts is of fundamental importance in describing and explaining specific trajectories of social change and complexity (Earle 1997). Earle and others have addressed the military, economic, political, and ideological sources of power in various contexts (Earle 1991; also Mann 1986). Blanton et al. (1996:2–3) suggest that sources of power may be divided into "objective" versus "symbolic" realms. Objective sources of power include desirable, valuable, and necessary components of material culture. In contrast, symbolic sources are characterized by ideological, informational, and religious spheres of society (Blanton et al. 1996:Table 1). There is considerable overlap between, and interaction among, the sources of power.

Earle (1997:13, 208–211), following Steward's (1955) concept of multilineal evolution, and Feinman (1995:263–268) recently have concluded that there are "multiple routes" or "alternative pathways" in the development of complex society. In so doing, emphasis has shifted from a focus on such prime-mover explanations as agricultural imperatives or population pressure, to an investigation of the social, political, military, economic, and ideological factors underlying observed organizational changes.

Institutionalized social inequality developed in some contexts despite leveling mechanisms that min-

imized the potential for the monopolization of power and critical resources (Feinman 1995:262). The challenge is to understand the specific underlying conditions that resulted in the rupture of leveling mechanisms. As Feinman (1995:262) notes, we “must recognize the historical nature of these social transitions.”

In recent years, there has been an explosion of research devoted to the factors involved in the development of complex society (e.g., Drennan and Uribe 1987; Earle 1991; McGuire 1983; Patterson and Gailey 1987; Price and Feinman 1995; Upham 1990). Some of the same issues characterizing early twentieth-century discussions are still debated: e.g., unilineal versus multilineal evolution and gradual versus transformational change (Earle 1997; Feinman 1995; Friedman and Rowlands 1977; Sanders and Webster 1978; Spencer 1987, 1993).

Debates in the development of social complexity are frequently characterized by conflict versus contract theories (Cohen 1981:5–10; Haas 1982:80; Service 1985:173–199; Wrong 1988:89–92). Conflict theorists argue that complex society developed “as a coercive mechanism to resolve internal conflict that arises between economically stratified classes within a society” (Haas 1982:80). Differential access to critical resources is of fundamental importance from the conflict perspective. Critical resources are not only technoeconomic but also ideological and social. Individuals, or sectors of society, who control the disbursement of these critical resources are in positions of great power. The strength of their power is determined by the degree to which they truly control the circulation of resources. Thus, if a small segment of the total population is capable of withholding or sequestering any, or all, critical resources from other members of society, then their power-base is ensured (Carneiro 1981:58–63; Earle 1977:225–227; Haas 1982:95; Harris 1979:92–93). Abner Cohen differentiates the conflict and contract theories:

According to . . . conflict theory, the power mystique is a subtle, particularistic ideology developed by a privileged elite to validate and perpetuate their domination and thereby to support their own material interests. . . . The elitist, or consensus [contract], theory of stratification, by contrast, maintains that all social order is necessarily hierarchical, and that leadership is a specialization necessitated by the division of labor in all societies . . . men entered into a contract

agreeing to surrender their freedom to a sovereign, who represents their general will and who maintains social order in their own interest, if necessary against their individual wills [Cohen 1981:5–6].

Cohen proceeds to make an important point: “These two schools of thought, though opposed in many respects and still the source of hot debates . . . are in fact focusing on the two extremes of one continuum . . . the elitists would concede that, while serving the general interests of society, elites develop organizational mechanisms to advance their sectional interests. The conflict theorists, on the other hand, would concede that, while serving their own sectional interests, dominant groups develop ideologies purporting to articulate the general interests of society” (Cohen 1981:7–8).

Archaeologists recently have discussed the lack of polarization between the functionalist (contract) and political (conflict) perspectives in connection with institutionalized inequality (e.g., Feinman 1995:262–263; Spencer 1993:48). The specific “route” or “pathway” in the development of institutionalized inequality depends on the historical circumstances of the setting. It is important to address the specific historical and cultural context when attempting to explain the nature of change. It may not be possible to predict specific evolutionary trajectories, but it is reasonable to classify groups of similar, observed trajectories (Trigger 1978: 143–144).

Attention to context in the institutionalization of inequality has resulted in close examination of leaders and their methods of accumulating power and followers (Clark and Blake 1994; Hayden 1995; Lightfoot and Feinman 1982; Spencer 1993). Most recently, Blanton, Feinman, and others have introduced “two general political-economic strategies or modes [that] represent dual pathways toward inequality” (Feinman 1995:264; also Blanton et al. 1996).

In brief, the network mode of political economy is based on the acquisition of wealth through intergroup exchanges that are controlled by aspiring leaders (Feinman 1995:265). Individuals in control of the trade networks use accumulated wealth to attract followers. The network mode may be compared to other models of sociopolitical organization, including Renshaw’s (1974) individualizing chiefdom, Johnson’s (1982) simultaneous hierarchy, and Gilman’s (1987)

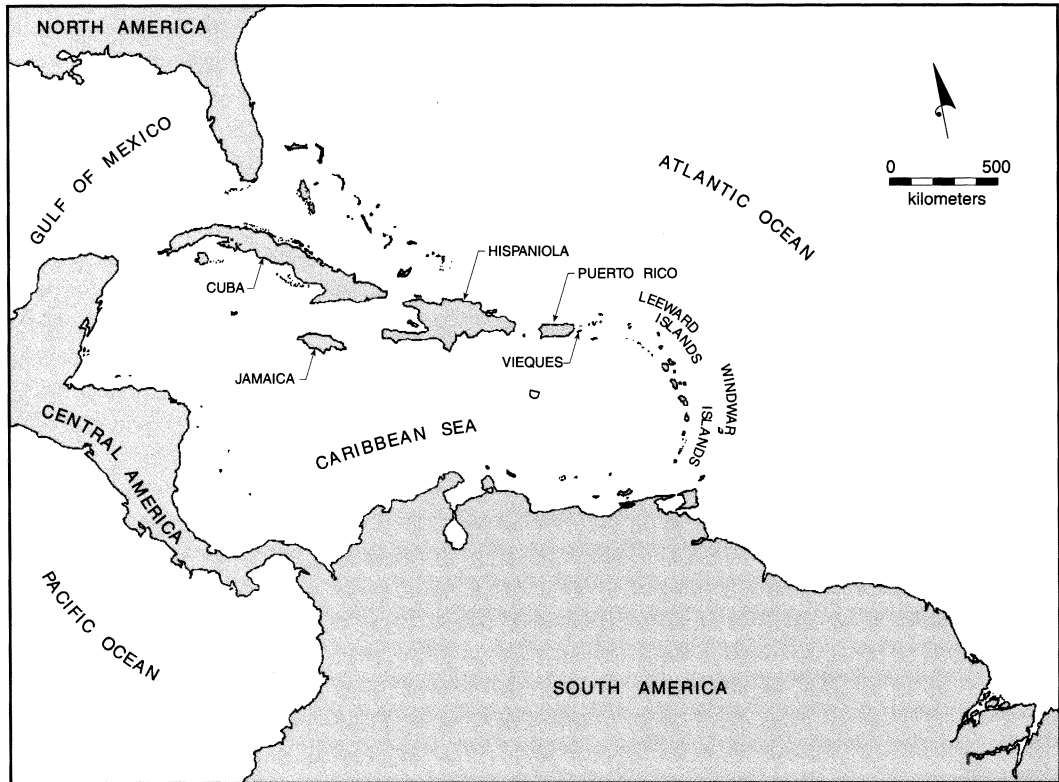


Figure 1. Map of the Caribbean basin.

wealth distribution (Blanton et al. 1996; Feinman 1995). Valuable resources and thus power are narrowed to and monopolized by a distinct subset of the group or specific individuals. In contrast, the corporate mode of political economy is based on group solidarity, through integrative ceremonies and rituals "that crosscut . . . descent-based social segments" (Feinman 1995:266). Comparisons to the other social models include Renfrew's (1974) group-oriented polities, Johnson's (1982) sequential-ritual hierarchy, and Gilman's (1987) staple finance (Blanton et al. 1996; Feinman 1995). The corporate mode promotes public construction and communal rituals.

Feinman (1995), Blanton et al. (1996), and several commentators emphasize that the network and corporate modes represent organizational strategies that are part of a continuum, and, in fact, are frequently mixed within a single region, culture, or cultural trajectory (Cowgill 1996:53; Demarest 1996:56; Kolb 1996:59): "In any one instance or case there may be a dominance of either the exclusionary [network] or the corporate political economy . . . , but all societies contain elements of both, and a

particular society may cycle between the two" (Blanton et al. 1996:66).

In this paper, a theoretical model for the evolution of political centralization in prehistoric Puerto Rico is developed. The corporate and network modes of political economy are viewed within the context of institutionalized inequality; the formalization of leadership roles; and the accrual and centralization of ideological, political, and economic power. In this context, power becomes centralized as politically motivated individuals recognize and take advantage of the manipulative aspects of religion and cosmological beliefs. The development of institutionalized inequality in the Greater Antilles centered around cosmological concepts, which became raw materials for ideological beliefs (Curet and Oliver 1998; Siegel 1996, 1997).

In this West Indian example, shamans were specialists in control of beliefs that revolved around ancestor veneration and of communication channels between the community and the numinous. These individuals directed the actions of people at community events and in ceremonial contexts. There is

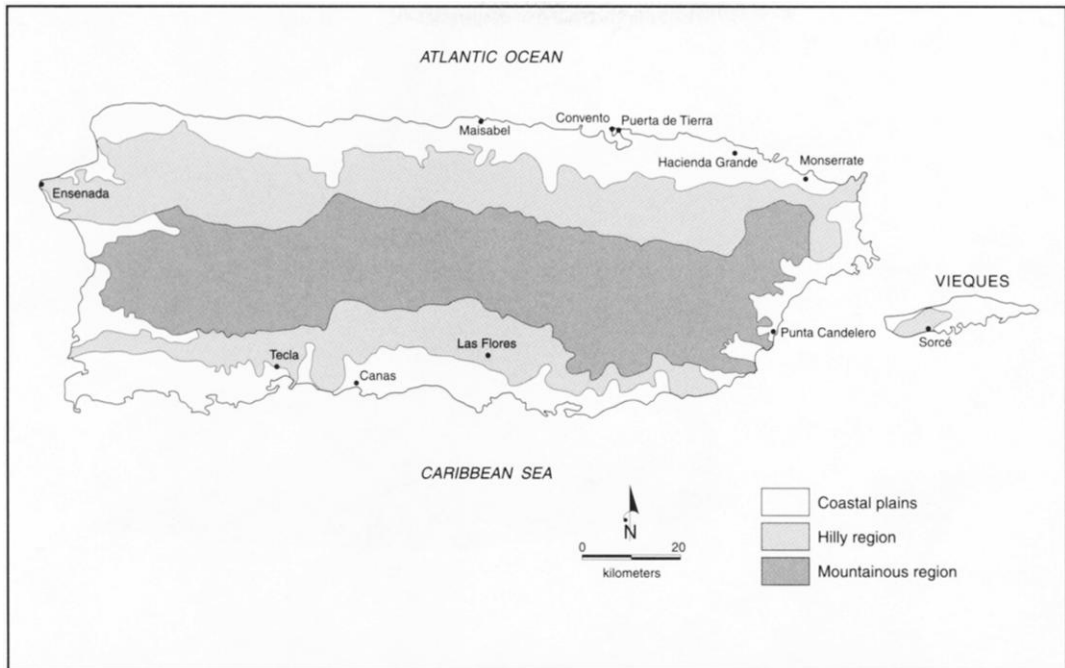


Figure 2. Map of Puerto Rico showing the locations of the known early Saladoid sites.

an expected correspondence between the expanding political power of shamans and increasingly more formal materializations of their power base. We should observe, therefore, ceremonial spaces becoming more elaborate and regionally centralized as politically motivated shamans recognized and forged links between ideology, cosmology, and political power.

Background

The Saladoid peoples who dispersed into the West Indies from northeastern South America approximately 2,500 years ago (Figure 1) were horticulturalists, who relied extensively on fishing and the collecting of marine and terrestrial faunal resources (DeFrance 1988, 1989; DeFrance et al. 1996; Keegan 1985; Newsom 1993; Siegel 1991b; Watters and Rouse 1989; Wing 1989). They produced thin-walled elaborately painted, incised, and modeled ceramic vessels and figurines; fine groundstone celts, adzes, beads, and amulets; carved and ground shell, bone, and coral objects; in addition to many everyday items fabricated from stone, bone, shell, clay, coral, wood, cloth, and feathers. Similarities in material culture across sites and through time provide the basis for assigning the groups to a single series of Saladoid cultures, named after the Saladero type site excavated

by Irving Rouse and José Cruxent (1963). It is generally agreed that the Saladoid peoples displaced pre-existing Archaic groups who were already occupying the Caribbean archipelago. However, the extent and nature of interactions between the ceramic and lithic-age groups in the Caribbean are poorly understood (Siegel 1989).

Evidence from site distributions and typologies, burials, and internal settlement structure indicates that Saladoid groups were relatively egalitarian in social organization (Rodríguez 1990; Siegel 1989, 1992; Versteeg 1989). Grave goods associated with excavated burials are not elaborate (Chanlatte Baik 1979, 1983; Rodríguez 1991; Siegel 1992). Human bone chemistries do not reveal differential access to better-quality foods by some individuals (van Klinken 1991). Sizes and locations of Saladoid settlements do not reflect asymmetrical relations of power (Figure 2; Siegel 1996:Figure 3).

There are material cultural elements associated with Taíno-period rituals that appear also in Saladoid contexts. These are most clearly represented by three-pointed objects variously carved from stone, bone, shell, and coral, and which are a subset of the larger class of religious items called *zemis* (Fewkes 1891, 1907; McGinnis 1997; Rouse 1992; Walker 1993). Saladoid-period three-pointers were small and ele-



Figure 3. Two three-pointers from Puerto Rico: (a) Saladoid shell three-pointer collected from Mounded Midden 1 in the Maisabel site (Catalog No. 1.149.84, collection of the Centro de Investigaciones Indígenas de Puerto Rico). The artifact is shown in profile (upper) and in plan view (lower). (b) Taíno stone three-pointer shown in profile. Photograph of the Taíno three-pointer is by Bruce Schwarz and courtesy of El Museo del Barrio, New York. Artifact is from the collections of the Museo de Historia, Antropología, y Arte de la Universidad de Puerto Rico, Río Piedras (Accession No. 15,339).

gant in their simplicity. In contrast, three-pointers manufactured by the Taínos ranged from large and ponderously baroque in symbolism and imagery to small and undecorated (Figure 3). Three-pointers produced by groups chronologically intermediate between Saladoid and the Taínos were stylistically diverse, but the general trend from small to large and simple to complex is apparent (Walker 1993:43–45). Other materializations of Taíno rituals that appear in earlier time periods include snuff-spouts, probably for inhaling *cohoba* (*Piptadenia peregrina*); elbow stones; and stone collars (Alegría 1986; Rouse 1986, 1992; Rouse and Alegría 1990; Walker 1993), although the three-pointer is the only artifact class to unequivocally link ceremonialism of the earliest Saladoid cultural complex (Hacienda Grande) with rituals documented by the conquistadores (Walker 1993). Finally, specific ceremonial components of Saladoid, Ostionoid, and Taíno villages were functionally the same, even as they changed in form (Siegel 1996). Artifactual and architectural elements suggest that ritual and cosmology, subsumed by the religious sphere of society, were part of an enduring

tradition throughout the ceramic age of Puerto Rico (Rouse 1992; Siegel 1989; Walker 1993). Specific aspects of this tradition were manipulated by strategically placed individuals, and reflect changes in sociopolitical organization. The remainder of this paper addresses the links between religious and cosmological beliefs, ideology, the formalization of leadership roles, and political centralization in pre-historic Puerto Rico.

Taíno Religion

Father Ramón Pané, a Catalán priest, is considered to have made the most accurate and detailed account of Taíno religion during the Contact period. Pané accompanied Columbus on his second voyage to the New World in 1493. He was assigned by Columbus to live with a group of Taíno Indians in northern Hispaniola, learn the language, and record their customs and lifeways (Pané 1974). Pané's work may be considered to be the first anthropological research conducted in the New World (Bourne 1906).

Pané's observations suggest that shamanism was an integral component of Taíno culture (Arrom 1975;

Colón 1947; Deive 1978; Fernández Méndez 1972; Rouse 1948; Stevens-Arroyo 1988). Shamans served as intermediaries between the group at large and the spirit world. Cross-culturally, shamanism is widespread among societies of varying organizational complexity, ranging from simple bands to states (Eliade 1964; Helms 1988; Langdon and Baer 1992; Thomas and Humphrey 1994; Velásquez 1987; Winkelman 1992). Shamans and other religious officials, such as priests, may coexist (Eliade 1964:4). Shamanism and its techniques of ecstasy are frequently if not always intricately connected to the political realm of society (Helms 1988).

Ancestor worship typically is associated with shamanism, and the veneration of deified ancestors was a strong integrative component of Taíno chiefdoms. It was the basis for their cosmological system called *zemíism*. *Zemís*, as a group, refer “to gods, symbols of deities, idols, bones or skulls of the dead,” or anything presumed to have magical power (Fewkes 1907:54). The cosmological order of the Taínos clearly was hierarchical depending on the magnitude of authority or specificity a deity had. At the apex of the structure resided the two creator *zemís*: the earth goddess and the sky god. The union of these two deities resulted in the minor gods, humanity, and animals (Arrom 1975; Fewkes 1907).

Secondary *zemís* functioned as protector deities and represented clan or lineage ancestors (Colón 1947; Fernández Méndez 1972; Fewkes 1907; Rouse 1948). These protector deities were the focal point for most of the rites actually enacted: “Ponen un nombre a dicha estatua [*zemí*]; yo creo que será el del padre, del abuelo o de los dos, porque tienen más de una, y otros más de diez, en memoria, como ya he dicho, de alguno de sus antecesores” (Colón 1947:184). The Taínos had numerous physical representations, or icons, of their *zemís* fabricated out of different materials including stone, wood, bone, shell, clay, coral, and cotton (Chez Checo 1979; García Arévalo 1977; Saunders and Gray 1996; Vega 1971–1972). The ethnohistoric literature indicates that *zemís* were employed in ecstatic trances, seances, and curing ceremonies performed by a select few. There appears to have been a partitioning of these activities by at least two subsets of individuals, referred to as shamans (*behiques*, *buhuitus*, *boiti*) and principal men (*hombres principales*) or chiefs (*caciques*) (Arrom 1974, 1975; Colón 1947; Las Casas 1951; Martire 1885; Oviedo 1950). Further,

there are references to counselors or advisors to the *caciques*, who assisted the chief in negotiations and rituals (e.g., Dunn and Kelley 1989:243). In terms of religious or ceremonial activities these counselors may be considered as priests, distinct from shamans, although this degree of occupational specificity is not explicit in the ethnohistoric accounts. It is difficult to unravel the positions (shaman, priest, *cacique*) from the actors in the ethnohistoric accounts. Chiefs frequently are referenced by name. Shamans and priests are not.

Rouse observed that “chiefs and priests derived political power and social status from their *zemís*” and that the “deities were also worshipped in temples” (Rouse 1986:115). This connotes a public role for these individuals, in contrast to shamans who dealt more in the realm of private, household-based curing ceremonies (Colón 1947:193–195; Rouse 1948:537–538). A continuum of authority may have existed between shamans and priests, such that there were no distinct spheres of jurisdiction. Glazier (1980) argued for such a scenario among the so-called island-Caribs of the Lesser Antilles.

It is clear from the accounts that all individuals of power in Taíno society employed shamanistic techniques of ecstasy to enter the spirit world. It is less clear that within this segment of society there was a division of individuals by occupation and status. Certain individuals may have occupied two or more positions (shaman, priest, chief). Taíno chiefdoms were complexly organized, with greater and lesser *caciques*, in addition to nobles (*nitáinos*), commoners (*naborías*), and possibly slaves (Moscoso 1981; Rouse 1948; Wilson 1990a). Given the complexity of the political organization, it is reasonable to assume that the roles of shaman, priest, and *cacique* were occupied by distinct individuals with generally separate spheres of authority, which nevertheless appear to have had a certain amount of overlap. Indeed, Walker (1993:42) observes that “behiques are often mentioned in the same breath as caciques, suggesting that they closely interacted with the socio-political leaders.” It may or may not be the case that an individual who achieved a great amount of overlap in the three roles accrued more power than those individuals who did not.

Taíno chiefs were deified upon death. Special structures, or temples, were maintained by the *caciques*, in which their *zemís* were kept. These *zemís* were assigned names of ancestors of the *cacique*

(Colón 1947:184; Las Casas 1951:II:279; Oviedo 1950:130–131). After death, a chief's body was opened and preserved through drying over a fire (Colón 1947:185; Las Casas 1951:II:279).¹ Further, hollow wooden images of dead chiefs were made, in which his fetishes were stored (Rouse 1948:535).

Aspects of ethnographically and ethnohistorically documented Amazonian groups may be investigated for insights into West Indian prehistoric cultures. Archaeologists and ethnographers have focused specifically on cosmologies and belief systems, village organization, shamanism, and subsistence practices in making comparisons to and drawing inferences from lowland South America (Alegría 1986; Heckenberger and Petersen 1999; López-Baralt 1985; Oliver 1992; Siegel 1996; Stevens-Arroyo 1988; Versteeg and Schinkel 1992; Wilbert 1981, 1987). Studies of shamanism in lowland South America in particular are instructive. Native American groups in various portions of Amazonia display forms of magico-religious organization that have been referred to as horizontal versus vertical shamanism. Hugh-Jones (1994) indicates that vertical shamans are ranked by degree of training, methods and locations of curing ceremonies, and social status within the community. Esoteric knowledge is maintained within a small exclusive group of individuals, who transmit their knowledge patrilineally (Hugh-Jones 1994:33, Table 1). He notes, too, that horizontal shamanism occurs in egalitarian societies, where the ecstatic experience is "open to all adult males" (Hugh-Jones 1994:33). Hugh-Jones equates highly ranked vertical shamans with priests, who earn their "credentials through specialized training" (Hugh-Jones 1994:35). This characterization of ranking among shamans may be consistent with ethnohistoric descriptions of *caciques* as shamans, versus other religious specialists who dealt with everyday illnesses and problems of all community members (Colón 1947; Las Casas 1951; Oviedo 1950).

Taíno *caciques* employed shamanistic techniques to interpret myths, communicate with ancestor deities, and provide direction to members of the community on how to proceed in numerous activities. Pané (1974:42) documented rituals, whereby *caciques* embarked on hallucinogenic journeys to commune with the spirit world when matters of community importance required addressing.

The ethnohistoric documents indicate that cosmology, shamanism, and the concept of *axis mundi*

provided an organizational framework for how individuals interacted with each other and the universe (Alegría 1986; Arrom 1974, 1975; López-Baralt 1985; Siegel 1996; Walker 1993). Iconographic and architectural evidence indicates that this framework was rooted in the Saladoid vision of the world. However, Saladoid social and cosmological order was based on an egalitarian ethic. Under certain circumstances, cosmological organization may be manipulated to the advantage of a select few. The shaman is positioned to employ his cosmological connections to further a political agenda. Esoteric and strange behavior may be used judiciously and skillfully by politically motivated individuals to accrue power.

Saladoid and Ostionoid Burial Patterns: Continuity or Change?

Elsewhere I have discussed the structure and organization of documented Saladoid sites in the West Indies (Siegel 1996). Drawing on ethnographic data from lowland South America and ethnohistoric observations from the West Indies, I have interpreted Saladoid site plans to be physical models of the Native American cosmos (Siegel 1992, 1996). The village occupants view their community literally as a cosmogram. As such, the village layout represents an organizing principle for the community members. In brief, I argue that the circular aspect of the cosmos is reproduced on the ground by a circular distribution of midden deposits arranged in the central portion of the village. These middens ring a communal village space or plaza, often containing a burial ground, which is situated precisely in the settlement center. I have argued that the plaza/cemetery represents an *axis mundi*, connecting together the various layers of the cosmos (Siegel 1989, 1996, 1997). Based on comparisons to ethnographically documented shamanist cultures, we may assume that a shaman presided over rituals and ceremonies associated with the burial ground and mounded middens (Deive 1978; Eliade 1964; Langdon and Baer 1992; Winkelman 1992). The centralized communal area of Saladoid villages functioned as a plaza, serving as a focal point for community life in general (Siegel 1989, 1991c; Siegel and Bernstein 1991). These observations seem to have been accepted by a majority of researchers in Saladoid archaeology (Curet and Oliver 1998; Oliver 1992; Petersen 1996; Rouse 1992; Watters 1994).

The ceremonial spaces in Saladoid villages func-

tioned as portals to the various layers of the cosmos. These portals were used only by the shamans in making cosmic journeys. The public rituals that took place in the centrally positioned village plazas would have been orchestrated and presided over by the shamans. As an extension of this model, I have argued that the Saladoid village plaza/cemetery, and the cosmological organization that it represented, also was a focal point around which ceremonial space was formalized and political change transpired, ultimately resulting in the development of ball courts and ceremonial plazas in the post-Saladoid periods of Puerto Rico (Siegel 1991a, 1992, 1996). To this discussion Curet and Oliver (1998) recently have added a consideration of shifting mortuary practices with regard to kinship and the emergence of institutionalized inequality.

Consistent with other researchers, Curet and Oliver (1998) observe that political, economic, and social power narrowed to specific families or lineages by the late Ostionoid and Contact periods (Alegría 1983; Rouse 1992; Siegel 1992; Wilson 1990a). In searching for any post-Saladoid mortuary data, however, Curet and Oliver (1998) conflate sites from various levels of a settlement hierarchy into a single homogeneous burial program. In doing so, these authors obscure the political, social, and economic implications of the post-Saladoid settlement hierarchy (Rodríguez 1990; Siegel 1991a, 1992). That is, by A.D. 600 (Period IIIa) settlements were becoming more functionally specialized than in previous periods. With this specialization, there is evidence of integrated settlement hierarchies that include hamlets, larger villages, and political and ceremonial centers (Goodwin and Walker 1975; Rodríguez 1990; Rouse 1952a, 1952b; Siegel 1991a). Within the integrated settlement system, or emergent polity, not every hamlet or small village necessarily contained members of the institutional elite. Burial practices within these hamlets might be expected, therefore, to continue in the same manner as in the egalitarian communities of the previous Saladoid periods. Maisabel is one such hamlet, occupied throughout the Saladoid and during at least two of the post-Saladoid periods (Monserate and Santa Elena complexes). In attempting to fit Maisabel into their model of shifting mortuary practices and changes in sociopolitical organization, Curet and Oliver (1998) misinterpret important aspects of the burial data from this site.

Curet and Oliver (1998) indicate that there was a

shift in the locations of burials from communal plazas in the early (Saladoid) periods to domestic contexts in later (Ostionoid) periods of occupation in Puerto Rico. It may be more appropriate to specify non-plaza rather than domestic contexts for post-Saladoid burial locations with regard to ball court/ceremonial plaza complexes. Ethnohistoric and archaeological data reveal considerable variability in post-Saladoid burial locations, including caves, mounds, and house floors (Aitken 1918; Alegría 1983; Colón 1947; Fewkes 1907; Joyce 1916; Las Casas 1951; Martire 1885; Oviedo 1950; Veloz Maggiolo et al. 1976).

The mortuary evidence from Maisabel reveals continuity in use of the central communal burial ground throughout the prehistoric occupations of the site. As such, smaller hamlets within the post-Saladoid settlement systems continued the burial program of the previous periods. Indeed, this burial program, and the cosmological concepts associated with it, was the nexus around which political change transpired. Other settlements within the post-Saladoid site hierarchies displayed different burial practices. This is most evident in the ball courts and ceremonial plazas where the dead were interred in other locations outside of the plaza grounds.

The 33 burials recovered from Maisabel (23 from the cemetery, 10 from a portion of the site termed the "house area") span the full range of occupations in the site. Using ^{14}C dates, associated artifacts, and contextual associations, I tallied 10 Saladoid, 4 Saladoid/Ostionoid transitional, and 9 Ostionoid-period graves from the cemetery. This distribution reflects the recognition of the cemetery as a burial ground throughout the prehistoric occupations of the site.

The Maisabel skeletons were ^{14}C dated by the Accelerator Mass Spectrometry (AMS) group at the University of Arizona. AMS-dating researchers have proposed various reliability measures for determining the degree of collagen degradation and thus the accuracy of the resulting ^{14}C age estimate (Long et al. 1989; Taylor 1987a, 1987b, 1992). The Arizona group found that glycine, one of the constituent amino acids in collagen, is a good index for collagen preservation. The glycine depletion ratio (GDR) is a value that represents the amount of glycine present in an archaeological bone specimen relative to a modern bone (Long et al. 1989:234–235).

Radiocarbon dates derived from human bone that are associated with GDRs of approximately 10 or less are considered to be reliable. Radiocarbon dates

Table 1. Dating of Burials Recovered from the Maisabel Cemetery.

Burial No.	Lab Sample No.	Uncorrected ¹⁴ C Age (B.P.)	Calibrated ¹⁴ C Age (2 sigmas)	Glycine Depletion Ratio	Artifact Association	Cultural Affiliation
9	AA-5030	1145 ± 75	A.D. 680-1020	86.5	Prehistoric pottery; chert flakes; unmodified raw local stone; shell; complete ceramic bottle with two keels, two D-shaped handles, and flat base	Hacienda Grande
9	AA-7029	1280 ± 50	A.D. 650-871	.0		Hacienda Grande
14	AA-6809	1600 ± 55	A.D. 262-580	17.0	Prehistoric pottery, calcite pendent, unmodified raw local stone, shell, vertebrate bone, crab carapace	Hacienda Grande
28					Ceramic vessel	Hacienda Grande
1	AA-6805	1525 ± 55	A.D. 410-640	16.0	Cuevas-style pottery, chert flakes, coral	Cuevas
6	AA-4098	1505 ± 65	A.D. 410-650	90.9	Prehistoric pottery	Cuevas
10	AA-4100	1515 ± 50	A.D. 420-640	2.3	Prehistoric pottery, chert flakes, groundstone and chert hammerstones, granite bead preform, unmodified raw local stone, shell, coral	Cuevas
15	AA-4102	1420 ± 100	A.D. 420-799	208.9	Carefully shaped and polished black fine-grained siliceous sedimentary rock pebble (ceramic vessel pebble polisher?)	Cuevas
19A	AA-4105			430.0		Cuevas
19B						Cuevas
19C	AA-5031	995 ± 80	A.D. 890-1220	199.0	Cuevas-style open concave bowl	Cuevas
19C	AA-7030	580 ± 50	A.D. 1280-1430	9677.0, 1761.0		Cuevas
2	Beta-15886	1325 ± 100	A.D. 540-942		Prehistoric pottery, chert flakes, unmodified raw local stone	Saladoid/Ostonoid transition
5	AA-4097	1330 ± 45	A.D. 613-797	1.8	Prehistoric pottery, chert flakes, unmodified raw local stone, coral, shell	Saladoid/Ostonoid transition
16	AA-4103	1335 ± 45	A.D. 609-796	1.2	Prehistoric pottery, chert flakes, two disc-shaped shell bead preforms, two calcite fragments, unmodified raw local stone, shell, coral, vertebrate bone	Saladoid/Ostonoid transition
21	AA-4107	1360 ± 50	A.D. 583-770	2.5	Prehistoric pottery, chert flakes, unmodified raw local stone, perforated shell disc, coral, shell	Saladoid/Ostonoid transition
17	AA-6810	1295 ± 60	A.D. 640-1072	18.0	Prehistoric pottery, chert flakes, unmodified raw local stone, shell, chert hammerstone, calcite, ochre, coral abrader	Monserrate
3	AA-4096	1140 ± 45	A.D. 770-1000	3.9	Prehistoric pottery, unmodified raw local stone, shell, chert flakes, coral	Monserrate
4	AA-6806	1145 ± 55	A.D. 693-1000	22.1	Prehistoric pottery (some with red slip), unmodified raw local stone, coral, polished stone cell/adze, ochre, shell bead, shell, chert flakes	Monserrate
7	AA-6807	1188 ± 55	A.D. 680-980	11.21	Ovoid Monserrate-style ceramic vessel, polished stone cell/adze, chert flakes, unmodified raw local stone, coral, shell, biconvex celt, carved shell plaque	Monserrate
22	AA-6811	1180 ± 85	A.D. 660-1018	22.0	Prehistoric pottery, unmodified raw local stone, coral, shell, perforated shell disc, chert flakes	Monserrate
11	AA-6808	750 ± 60	A.D. 1161-1386	.0	Prehistoric pottery, chert flake, unmodified raw local stone, shell	Santa Elena
12					Prehistoric pottery, chert flakes, unmodified raw local stone, shell	Santa Elena
20	AA-4106	1045 ± 45	A.D. 891-1148	3.2	Prehistoric pottery, chert flakes, unmodified raw local stone	Santa Elena
13	AA-4101			668.0	Large Ostionoid ceramic bowl with restricted opening	Undifferentiated Ostionoid

Table 2. Dating of Burials Recovered from the Maisabel House Area.

Burial No.	Lab Sample No.	Uncorrected ¹⁴ C Age (B.P.)	Calibrated ¹⁴ C Age (2 sigmas)	Glycine Depletion Ratio	Artifact Association	Cultural Affiliation
27	AA-4110	1405 ± 50	A.D. 540-680	3.3	Undecorated pottery, chert flakes, fire-cracked rock, unmodified raw local stone, shell, vertebrae bone, coral	Cuevas
25	AA-4109	1335 ± 45	A.D. 609-796	8.7	Undecorated pottery, one incised lip flange of ceramic vessel, chert flakes, unmodified raw local stone, vertebrae bone, shell	Cuevas/Monserrate
18	AA-4104	1195 ± 45	A.D. 685-978	3.5	Undecorated pottery, chert flakes, hammerstone fragment, polished stone celt or adze, unmodified raw local stone, shell, vertebrae bone, coral	Monserrate
29	AA-4111	1110 ± 50	A.D. 777-1019	4.9	Undecorated pottery, ceramic disc fragment, chert flakes, unmodified raw local stone, coral, shell, vertebrae bone	Monserrate
26	AA-6812	1080 ± 55	A.D. 780-1030	13.0	Undecorated pottery, chert flakes, unmodified raw local stone, coral, shell, vertebrae bone	Monserrate/Santa Elena
31	AA-4113	1065 ± 50	A.D. 783-1146	6.2	Undecorated pottery, unmodified raw local stone, coral, vertebrae bone	Monserrate/Santa Elena
8	AA-4099	1045 ± 45	A.D. 891-1148	5.6	Undecorated pottery, chert flakes, unmodified raw local stone	Santa Elena
23	AA-4108	1025 ± 55	A.D. 890-1155	3.2	Undecorated pottery, chert flakes, unmodified raw local stone, coral, shell	Santa Elena
30	AA-4112	1040 ± 45	A.D. 892-1149	5.0	Undecorated pottery, D-shaped handle, chert flakes, polished-bone item, unmodified raw local stone, vertebrae bone, coral, shell	Santa Elena
24					Complete undecorated open bowl, unmodified raw local stone	Ostionoid series

associated with extremely high GDRs (greater than 100) must be viewed with caution; datings of these burials should place more emphasis on artifact associations and general context.

Table 1 lists the Maisabel cemetery burials in order by cultural affiliation. Uncorrected ¹⁴C ages, calibrated ¹⁴C dates (2 sigmas), GDRs, and artifact associations are presented for each burial, as available. For the 10 burials attributed to the Saladoid series (Hacienda Grande and Cuevas complexes), three are associated with unacceptably high GDRs (Burials 15, 19A, 19C). These burials were assigned to the Saladoid series based on associated artifacts or context or both. Curet and Oliver (1998) discount the post-Saladoid dating of cemetery burials owing to unspecified problems with the dating analysis. Burials 5, 16, and 21 produced low glycine depletion ratios providing confidence that the Saladoid/Ostionoid transitional dates are accurate. Bone from Burial 2, conventionally dated by Beta Analytic, does not have a GDR value. Nine burials were assigned to the Ostionoid series (Monserrate and Santa Elena). Unacceptable GDRs are associated with Burials 11 and 13; assignment to the Ostionoid series is based on good artifact associations and context. The remaining six Ostionoid burials dated by AMS produced GDRs ranging from 3.2 to 22.1, thus providing confidence in the associated dates.

Based on cemetery size and burial recovery rate, the Maisabel cemetery may contain as many as 2,500 interments (Siegel 1995:64). If the chronological distribution of burials outlined above is at all representative of the cemetery population then there are approximately 1,086 Saladoid, 434 Saladoid/Ostionoid transitional, and 978 Ostionoid burials.²

Most of the burials recovered from the house area date to the Ostionoid periods (Table 2), thus supporting Curet and Oliver's (1998) contention that post-Saladoid burials may be located in domestic areas. However, the large number of Ostionoid burials situated in the cemetery indicates that the communal/private-domestic spheres are not mutually exclusive or temporally partitioned burial zones.

In sum, there is continuity and change in post-Saladoid burial patterns. Denizens of small-scale settlements in the post-Saladoid social landscape continued to use central portions of their villages as cemeteries. In addition, however, some of the Ostionoid dead were deposited into the floors of houses that were located outside of the village center.

Context of the Saladoid-Ostionoid Transition

Saladoid cosmological concepts were expressed vividly in the structure and organization of their villages. The communal plaza and central burial ground was the *axis mundi* or sacred pillar that held the cosmos together. The shaman who presided over this sacred space wielded considerable power in his role as intermediary between the numinous and the community at large.

In Puerto Rico, the transition from the Saladoid to the Ostionoid periods occurred by approximately A.D. 600. This transition is marked by distinct changes in ceramic styles, shifts in settlement and subsistence patterns, and the development of obvious ball courts and ceremonial plazas (Alegría 1983; Curet 1996; DeFrance 1988, 1989; DeFrance et al. 1996; Rainey 1940; Rodríguez 1990; Rouse 1952a, 1952b). Elsewhere in the Lesser Antilles, Saladoid material culture, and presumably lifeways, continued for much longer, in some areas to as late as A.D. 1200 (Hofman 1993, 1995; Hofman and Hoogland 1991). Post-Saladoid cultures in the Lesser Antilles never displayed the degree of social complexity as that of the Taíno chiefdoms in Puerto Rico and Hispaniola. Based on the size and spatial distributions of ball courts and ceremonial plazas employed during the fifteenth century A.D., Puerto Rico was divided into a number of polities, each of which was headed by a chief and a handful of sub-chiefs. Ethnohistoric documents depict a considerable degree of competition between paramount chiefs (Colón 1947; Joyce 1916; Redmond and Spencer 1994; Wilson 1990a). There are references to greater and lesser *caciques*, suggesting that a political hierarchy was in place within polities (Colón 1947:181; Joyce 1916:161; Rouse 1948:528–529). Ethnohistoric descriptions of Hispaniola suggest the existence of paramount chiefdoms on that island, with at least four to six “principal men” (Colón 1947:181; Las Casas 1951:I:275; Vega 1980).

In recent years, some debate (unpublished, to my knowledge) has developed regarding the appropriateness of comparisons of Taíno sociopolitical organization between Hispaniola and Puerto Rico. As Wilson demonstrates, the average size of known ball courts on Hispaniola is considerably larger than those in Puerto Rico, although many more ball courts are known for the latter island (Wilson 1990a:24–26). Individuals, including myself, have argued that the

Caribbean ball courts and ceremonial plazas are intimately connected to the political realm of society (Alegría 1983; Morse 1990, 1991; Siegel 1996; Wilson 1990a). It is very likely that the political, social, and symbolic significance of the ball courts and ceremonial plazas was the same for the two islands. The polities on Hispaniola and Puerto Rico may have varied in size, but they were present on both islands. In my opinion, placing too much of a distinction between Hispaniola and Puerto Rico in Taíno sociopolitics inappropriately imposes modern geopolitics onto the prehistoric context.³

Taíno chiefdoms had developed into strongly territorial, and in fact spatially expansive, political entities (Las Casas 1967:II:317; Martyr D’Anghera 1970 [1912]; Moscoso 1981:310; Redmond and Spencer 1994:205). Within polities, an “ideology of domination” was maintained by ensuring that territorial competition was fierce and that lesser chiefs and commoners recognized these boundaries (Vesceius 1977).

On Hispaniola, where the most detailed accounts of the Taíno chiefdoms were made, it appears that major drainage divides formed political and territorial boundaries between polities (Las Casas 1967:II:308; Martyr D’Anghera 1970:118 [1912]; Redmond and Spencer 1994; Wilson 1990a). Several reconstructions of Taíno political organization on Hispaniola, including size and number of chiefdoms, have proposed five to six polities in slightly different locations (Redmond and Spencer 1994; Rouse 1948; Sauer 1966; Vega 1980; Wilson 1990a). Wilson notes that

The characterization of the Taíno chiefdoms that emerges from the ethnohistorical sources . . . is not one of political entities that can be neatly bounded on a map. The conquistadores saw the Taíno. . . in terms of European feudal kingdoms whose boundaries (at any point in time) were known. For the Taíno, if there were such rigid categories, they were not recovered in the historical documents . . . The kinds of geographical boundaries of the Taíno chiefdoms that can be drawn on a map are inappropriate to the transient nature of the political structures” (Wilson 1990a:109).

The competitive jostling associated with the relatively unstable political structures of Taíno chiefdoms resulted in shifting polity boundaries. The chiefly ideology was fueled by veneration of deified chiefly ancestors, who were the focal point of rituals that took place in increasingly complex ceremonial structures.

The development and complexity of ceremonial space in prehistoric Puerto Rico is a process that began in the Saladoid period. This process, spanning some 14 centuries, reflects a continuum in the use and change in the form of sacred space, beginning with the Saladoid village plaza and ending with the Taíno ball court. These architectural changes are physical manifestations or materializations of power consolidation into increasingly narrower social segments. In tracking this power consolidation from the Saladoid plaza to the Taíno ball court, we now shift the scale of analysis to the spatial and chronological distribution of ball courts and ceremonial plazas.

Ball Courts and Ceremonial Plazas in Prehistoric Puerto Rico

Ball courts and ceremonial plazas are architectural features documented for many culture areas throughout the Americas (Alegría 1983; Moore 1996; Scarborough and Wilcox 1991; Stern 1949). They are associated generally with ritual competitions of groups within and across polities and with communal gatherings ranging from sacred to everyday events. On Puerto Rico and Hispaniola the development and use of ball courts appear to be associated with increasingly more complex societies, ones in which status hierarchies were emplaced and control over labor and tribute were well established (Alegría 1983; García Arévalo 1991; Wilson 1990a).

There is no consensus as to whether the institution of the ball game was independently invented in different regions of the New World or whether it diffused from one or more centers. In Puerto Rico, ball courts appear in the archaeological record by ca. A.D. 700, coinciding approximately with the transition from the Saladoid to Ostionoid periods. Elsewhere, I have argued that large centrally located cemeteries in Saladoid villages served as plazas, like those documented in lowland communities of South America (Siegel 1989, 1992, 1996). There is evidence that the earliest ball courts in Puerto Rico also functioned as cemeteries (González Colón 1984; Robinson et al. 1985). Ethnohistoric accounts indicate that the ball courts and ceremonial plazas served as forums or public stages where rituals were enacted and myths recited, and which were presided over by the *cacique* and his retinue (Arrom 1975:162; Fewkes 1907:84; Joyce 1916:206; Las Casas 1951:I:441, III:328; Oviedo 1950:132–134). Ball courts were important elements in the political con-

solidation that occurred at this time (Alegría 1983:5–6; Wilson 1990a). With the Classic Taínos, who resided on eastern Cuba, Hispaniola, Puerto Rico, Vieques, and St. Croix, ceremonial space was specialized and spatially fragmented, reflecting differentiation of authority (Morse 1990:57–58, 1991; Siegel 1989). I argue that the emergent chiefs are using the ancestor cult as a symbolizing mechanism to legitimize their power consolidation. We find chiefs taking on, or preempting, some of the shaman's authority by partaking in drug-induced trances during rituals (Deive 1978:191–192).

Earthen plazas and cemeteries (of Saladoid sites) were replaced, in some places, by formally constructed ball courts and ceremonial plazas. Control over the rituals associated with these places became more visible and impressive than ceremonies conducted in "natural" plazas. That is, the energy invested in constructing ceremonial plazas reflected the power of the individual (and his or her family) who presided over them. Relative sizes of the courts or plazas should reflect, too, relative decision-making authority (e.g., Santley et al. 1991:21; Spencer 1987:372–373).

Vescelius (1977) noted a correlation between ball court concentrations and surmised political territories. He suggested that major drainages divided chiefdoms (Vescelius 1977:2). Vescelius bolstered this observation by asserting that the locations of ethnohistorically documented chiefdoms correlated well with ball court concentrations. Vescelius's hypothesis is intuitively appealing. He makes an explicit connection between ball court clusters and polities: "The distribution of ball courts in ancient Puerto Rico would appear to have been closely related to the way in which the island was divided politically" (Vescelius 1977:1).

Vescelius's (1977) brief observations foreshadowed current interest in the development and formalization of ceremonial space in Puerto Rico. Power consolidation may be reflected by increasingly more centralized distributions of ball courts and ceremonial plazas (Alegría 1983; Wilson 1990a). As a result, there should be increasing levels of competition between emergent centralized "polities." Interpolity feuding has been documented ethnohistorically (Alegría 1983:155; Colón 1947:181–184; Las Casas 1951:I:259–264, 441; Wilson 1990a:24). Following Vescelius, competition will be reflected by larger and more numerous ceremonial places within circumscribed areas.

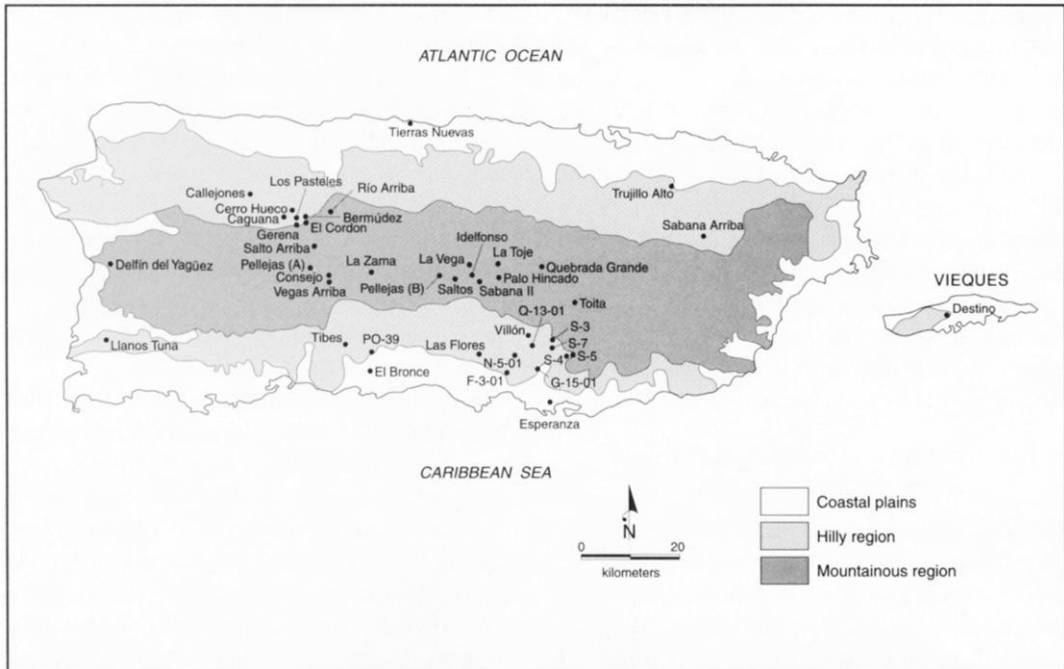


Figure 4. Locations of all known sites containing ball courts or ceremonial plazas that could be plotted on the map of Puerto Rico.

Ball court/plaza sites are examined for each of the major ceramic-age periods of Puerto Rico. I assume that the development and elaboration of ball courts and plazas reflect a concomitant political evolutionary process, thus allowing us to address social and political change on a regional level (Vescelius 1977).

The Sample

Sites containing ball courts and plazas constitute an aspect of Puerto Rican archaeology that has been reported on extensively (Aitken 1918; Alegría 1983; González Colón 1984; Haeblerlin 1917; Lothrop 1934; Mason 1941; Rainey 1940; Rouse 1952a, 1952b). Most of the ball courts and ceremonial plazas known in Puerto Rico were reviewed by Irving Rouse (1952a, 1952b) in his two-volume survey of the island. He systematically visited each municipality searching for sites. Alegría's (1983) review of ball courts and ceremonial plazas in the West Indies added several more sites to the list. Finally, there has been a handful of additional findings, through avocational archaeology and cultural resource management surveys (e.g., Dávila 1979; McNutt and Garrow 1990; Ortiz Aguilú 1991; Rivera Fontán and Silva Pagán 1997; Robinson et al. 1985; Rodríguez López 1985, 1995; Rodríguez and Rivera 1983a, 1983b).

Although systematic sampling and full-coverage surveys are limited in Puerto Rico, the entire island has been covered at least by reconnaissance surveys. The resulting database is likely to be fairly accurate with regard to larger and more obvious surface finds (Ammerman 1981; Fish and Kowalewski 1990; Mueller 1974; Nance 1983; Plog et al. 1978). Sites with such surface architectural remains as ball courts and ceremonial plazas will be reported more frequently than other less obvious sites (proportional to the total number of each category of site). No Teotihuacans will be missed. Sites with ceremonial features that have little or no surface manifestations will be underrepresented through reconnaissance in the tropics. This may or may not be important depending on what questions are asked. For this study it would be useful, but not necessary, to have the full range of sites that contain ceremonial features. The current findings should be treated as predictions or hypotheses to be tested with systematic field surveys.

Efforts have been made to obtain and analyze all extant reports dealing with ball court/plaza sites. Three categories of information were recorded: 1) site location, 2) time period, and 3) dimensional data on ball courts/plazas. However, none of these categories is entirely free of problems.

With regard to location, not all sites were precisely mapped, although in some cases site locations were described reasonably well. In the latter instances, it is usually possible to estimate the site's position based on such information as river or valley names, *municipio* or barrio names, elevations, road numbers, or other information. Those sites whose locations could be determined exactly, or with reasonable accuracy, are plotted on Figure 4.

Recent agricultural practices in Puerto Rico, specifically the large-scale cultivation of sugarcane during the nineteenth and early twentieth centuries, may have destroyed obvious signs of courts and plazas in areas located near the coast. This situation may result in an apparent bias toward upland locations of sites with ball courts. However, there is some evidence that sugarcane cultivation may not have been as destructive to sites as commonly believed. Rouse (1952b:474) observed that Caguana, a large ball court complex located in the highlands near Utuado, was a sugarcane field in the late 1930s. (Alegría [1983:78] indicates that the use of heavy equipment at this site has caused "some destruction of the structures.") Robinson et al. (1985:i) report that the El Bronce site, which contained a small stone-lined plaza, was "located in a repetitively-plowed cane field on a low terrace just to the east of the Bucaná river, near Ponce on the south coast of Puerto Rico." Modern agriculture has not unequivocally destroyed major portions of the ball court/plaza database on the island, so the spatial patterning of these sites is not necessarily biased as a result.

A serious problem, relevant for distribution analysis in general, is the contemporaneity of the sites under investigation. If no information is available concerning the period of occupation of a site, then it cannot be included in this diachronic study of ball courts. Several sites were deleted from the distributional analysis owing to the lack of chronological control (Table 3). Many of the sites yielded artifacts from more than one phase or occupation. In these cases, it was necessary to read carefully the site reports of the original excavators to determine which of the occupations were more likely associated with the courts or plazas. It is likely that a certain amount of error has been interjected into the discussion owing to imprecision in the chronological control for some sites. Any such error will have resulted in a slight over-estimate of earlier ball court/plaza sites. The overall pattern suggests a marked increase in the use

Table 3. Documented Ball Courts Lacking Chronological Information.

Site name	Ball Court/Plaza Area (m ²)
Santa Isabel ^{a, b}	512.5
Sumidero ^a	297.5
Torres Cortés ^a	87.8
Cortés-Cayuco ^a	80.3
Casa Vieja ^a	450.0
Veguitas ^a	399.0
Jauca ^a	109.9

^a Data from Alegría (1983).

^b Data from Mason (1941).

of these ceremonial places through time, thus if we were to subtract any erroneously placed early ball court sites from the analysis this resulting pattern would be even more pronounced.

In multi-occupational ball court sites, it is difficult to monitor constructional and use changes through time (Alegría 1983:117). This is not a problem unique to Puerto Rican archaeology, but has continuously plagued the investigations of architectural development elsewhere, for example in Mesoamerica (e.g., Berger et al. 1967; Coe and Diehl 1980:294–295; Drennan 1976). In such cases, the assessments of the excavators were used to guide chronological assignments of the Puerto Rican ball courts.

Dimensional data are critical to this study, and the most reliable reports contain site maps with scales. Some reports present written descriptions from which court or plaza sizes could be obtained. If a site report contains temporal information but no dimensional data on the ceremonial space, then it is included in the spatial analysis but has to be excluded from the study of court/plaza relative sizes.

Analysis

For the analysis of ball court/plaza sizes and locations, I have prepared three maps of Puerto Rico, by the major periods defined by Rouse (1952a:330–333, 1982:46–48): (a) Period IIIa, A.D. 600–900 (Figure 5), (b) Period IIIb, A.D. 900–1200 (Figure 6), and (c) Period IV, A.D. 1200–1500 (Figure 7). Nearest-neighbor and *k*-means cluster analysis were performed in an earlier study of site locations. Potential polities were defined and investigated in terms of rank-size distributions (Siegel 1992:402–475). In the present study, I focus more closely on the data and less on statistical analysis. This may be appropriate given the lack of full-coverage surveys for the region.

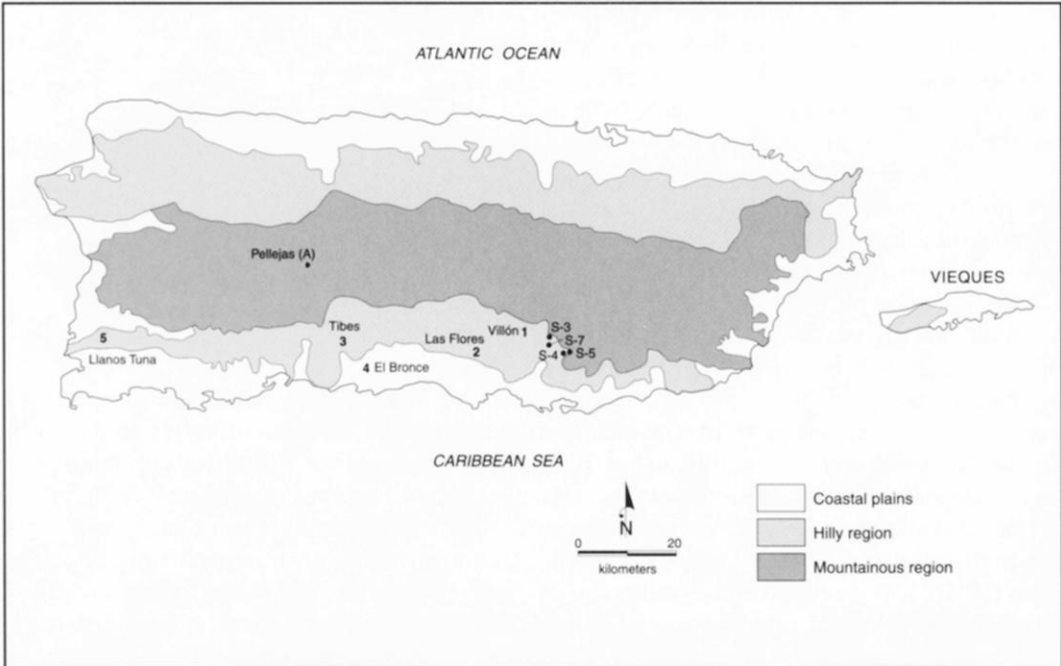


Figure 5. Distribution of Period IIIa ball courts/plazas. Dots are plotted for sites with courts/plazas but where no size information is available. Numbers (1-5) indicate the relative sizes (high to low) of the courts or plazas.

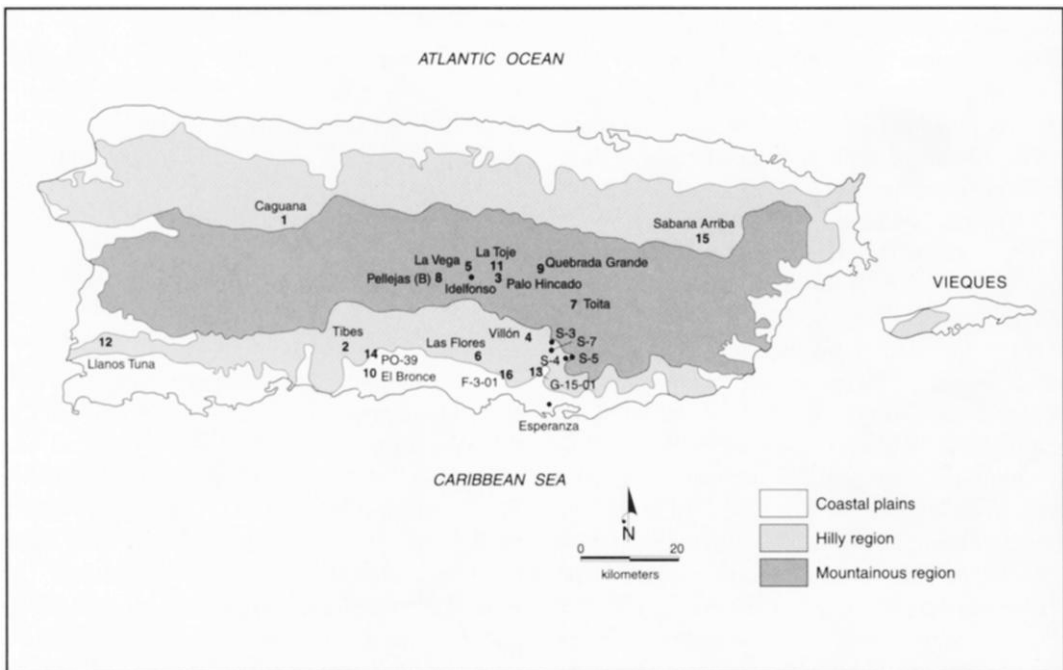


Figure 6. Distribution of Period IIIb ball courts/plazas. As in Figure 5, the numbers (now 1-16) denote relative sizes of courts/plazas at this time. Notice that the three sites with the greatest amount of court space are equidistant from each other. This may reflect the development of distinct polities.

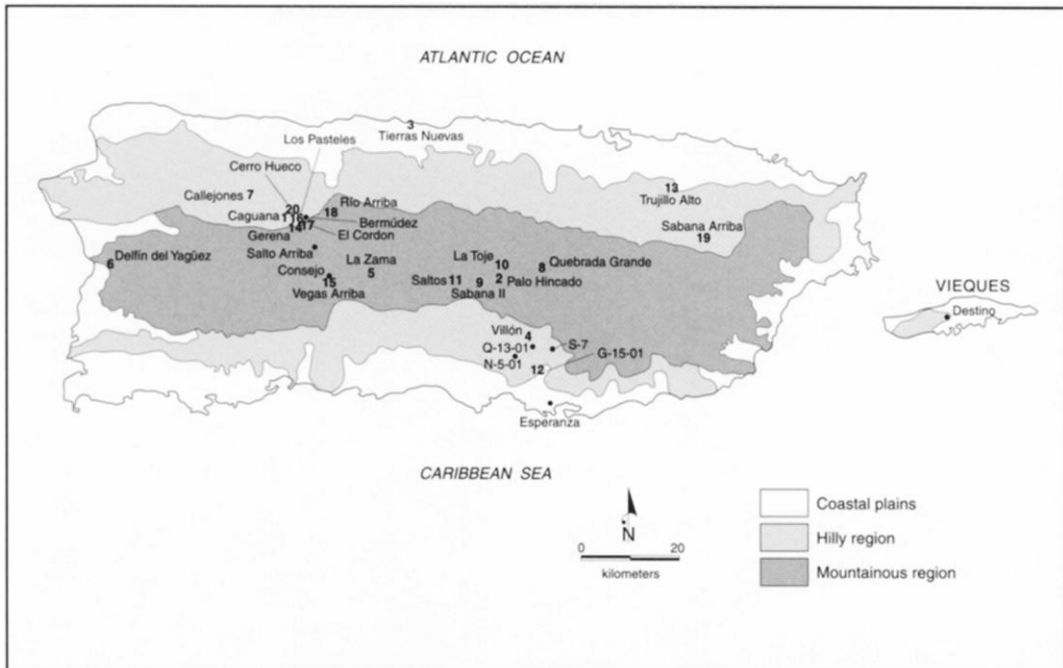


Figure 7. Distribution of Period IV ball court/plaza sites.

It is safe to assume that ball courts and plazas were constructed primarily for ceremonial activities (Alegría 1983; Arrom 1975:162; Fewkes 1902:504–510, 1907:70, 79–85; Gómez Acevedo and Ballesteros Baibrois 1978:162–166; Joyce 1916:203–208; Las Casas 1951:I:441–442, II:236, III:328; Oviedo 1950:132–134), which also had political significance (Wilson 1990a:24). The amount of space devoted to ceremonial activities is likely to reflect the relative rank of the site in a political hierarchy.

García Arévalo (1991) has suggested that the Taíno ball courts and plazas also functioned as economic centers for interregional exchange. He frames his discussion in terms of a market economy, which I believe is misleading. Ethnohistoric documents indicate that the Taínos were based on a pre-market economy, where tribute, barter, and reciprocity were the major forms of exchange. There is no sense of organized sellers and buyers following market principles of competition and price fixing (Sahlins 1972). García Arévalo's point, however, is well taken that the people convening for ball games and other ritual activities were likely to have traded with each other. I do not think that it is appropriate to consider one set of activities (like economic ones) to be more important than others (like ceremonial ones) in this context. A more realistic perspective is one that views

categories of activities as embedded within others.

Figure 4 shows the locations of all known sites in Puerto Rico with ball courts or ceremonial plazas that could be placed on the map. Table 4 presents summary information for the sites concerning plaza/court dimensions, time periods, and locations. From these data, three subsets of sites were created, one for each of the major time periods (Periods IIIa, IIIb, and IV).

Figure 5 displays the distribution of known Period IIIa ball court/plaza sites. Given the small sample of sites available during Period IIIa, it is difficult to discern patterns. These sites are distributed, however, across a sizable portion of southern Puerto Rico. Out of the 10 Period IIIa sites, five have dimensional data available on courts or plazas. Villón has the greatest amount of ceremonial space, followed by Las Flores (Figure 8).⁴ The ball court/plaza sizes and the site locations during Period IIIa suggest the existence of two or three widely spaced polities. This distribution may reflect the continuation of the Saladoid settlement pattern of large relatively self-contained villages widely dispersed around the island (Siegel 1992).

By Period IIIb, the number of sites with ball courts or plazas increased considerably (Figure 6). Nine out of the 10 sites present in Period IIIa were still used in Period IIIb, while an additional 13 ball court/plaza

Table 4. Chronology and Areas of Documented Ball Courts and Ceremonial Plazas in Puerto Rico.

Period IIIa Site	Period IIIa Ball Court/ Plaza Area (m ²)	Period IIIb Site	Period IIIb Ball Court/ Plaza Area (m ²)	Period IV Site	Period IV Ball Court/ Plaza Area (m ²)
Villón ^{a, b}	1,620.0	Caguana ^{a, b, f}	5,199.69	Caguana	5,199.69
Las Flores ^{a, c}	1,000.0	Tibes	4,434.54	Palo Hincado	4,239.00
Tibes ^d	431.5	Palo Hincado ^{a, b, g}	4,239.00	Tierras Nuevas ^j	2,472.00
El Bronce ^e	400.0	Villón	1,620.00	Villón	1,620.00
Llanos Tuna ^{a, b}	345.0	La Vega	1,200.00	La Zama ^{a, b, k}	1,340.00
		Las Flores	1,000.00	Delfín del Yagüez ^f	1,292.00
		Toita ^{a, b}	837.00	Callejones ^{a, b, l}	1014.00
		Pellejas ^{a, b}	596.00	Quebrada Grande	595.00
		Quebrada Grande ^{a, b}	595.00	Sabana II ^{a, b, f, g, m}	376.00
		El Bronce	400.00	La Toje	357.00
		La Toje ^{a, b}	357.00	Salto ^{a, b}	345.00
		Llanos Tuna	345.00	G-15-01	343.75
		G-15-01 ^h	343.75	Trujillo Alto ⁿ	261.68
		PO-39 ⁱ	183.21	Gerena ^a	261.30
		Sabana Grande	65.00	Vegas Arriba	226.00
		F-3-01 ^h	37.32	Los Pastales ^{a, f}	203.52
				El Cordon ^{a, f}	158.97
				Río Arriba ^{a, o}	128.80
				Sabana Arriba ^p	65.00
				Cerro Hueco ^{a, q}	26.00

^a Data from Alegría (1983).

^b Data from Rouse (1952a, 1952b).

^c Data from Ortiz Aguilú (1991).

^d Data from González Colón (1984).

^e Data from Robinson et al. (1985).

^f Data from Mason (1941).

^g Data from Rainey (1940).

^h Data from Rodríguez López (1995).

ⁱ Data from McNutt and Garrow (1990).

^j Data from Dávila (1979).

^k Data from Lothrop (1934).

^l The dimensions presented by Alegría (1983:95) in the written description of this court (20 m on a side) do not correspond to the map. I have chosen to use the dimensions taken from the map.

^m Rouse (1952b:491) presented dimensions of 90 m x 45 m in his written description of the site, but I believe that he must have meant 90 ft. x 45 ft. Ninety feet converts to 27.43 m and 45 ft. is 13.72 m. These figures are consistent with Rainey's (1940) description of the Sabana II court. Based on Rouse's map of the site (Rouse 1952b:Fig. 7) it is clear that the size of the ball court is roughly 28 m long by 14 m wide. This resolves the discrepancy noted by Alegría (1983:115) between the two sets of figures.

ⁿ Data from Rodríguez López (1995).

^o Data from Haeberlin (1917).

^p Data from Rodríguez López and Rivera (1983a).

^q Data from Aitken (1918).

^r Data from Rivera Fontán and Silva Pagán (1997)

sites were occupied, 9 of them in the interior mountains. There are now 16 sites available with dimensional information on court/plaza areas. An interesting spatial, and potential political process seems to have occurred. The 3 largest ball court centers (Caguana, Tibes, and Palo Hincado) are considerably bigger than the remaining 13 courts or plazas (Figure 9). Caguana, Tibes, and Palo Hincado are equidistant from each other, forming a triangle in the central portion of the island (Figure 6). Given the mountainous and deeply dissected topography of

this region, the effective distances (in terms of travel time) between the 3 largest sites would have been considerable. Difficult transportation routes and complex topography frequently result in isolated adjacent settlement systems (Johnson 1977:498).

The Period IIIb pattern reflects some degree of political jostling. During Period IIIa, Villón was the largest center in the distribution. By Period IIIb, the amount of ceremonial space at Tibes had increased considerably, catapulting this site into the number 2 position (Figure 9).⁵ Based on the size distribution

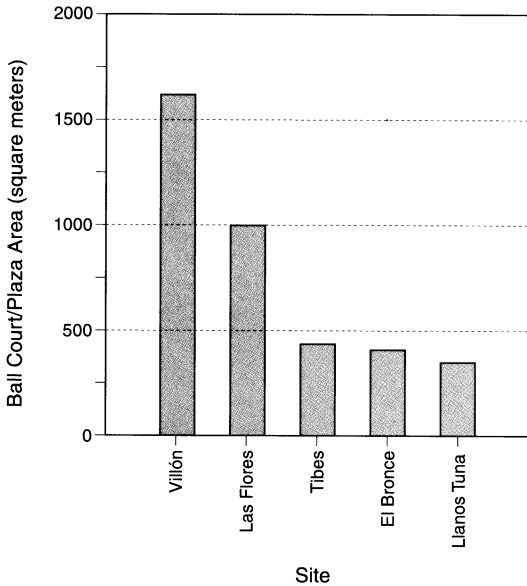


Figure 8. Bar chart showing the relative sizes of the Period IIIa ball courts/plazas.

during Period IIIb, Caguana, Tibes, and Palo Hincado clearly constitute a first-order tier of ceremonial/political centers.⁶ At this point, the pattern suggests that three separate polities had formed by

Period IIIb, each with its own major and secondary centers. During Period IIIa, ball court sites were broadly distributed in the south coastal region of Puerto Rico. During Period IIIb, a process of expansion and territorial/political consolidation occurred, whereby at least three enclaves of settlements were established.

By Period IV, the distribution of ceremonial places seems to have shifted predominantly to an interior montane focus (Figure 7). Seven out of the nine ball court/plaza sites that had been used during Periods IIIa and IIIb dropped out of the distribution, and a large number were introduced in the vicinity of Caguana (Site #1). The four sites with the greatest amount of ceremonial space (Figure 10) are located at considerable distances from each other and are positioned in the central portion of the island. However, other sections of the island also have sites with courts/plazas. At this time, the island of Vieques also received a ball court (Destino site).

La Zama (Site #5) deserves some discussion. This site is nearly equidistant between the two largest ball court centers, Caguana and Palo Hincado. It is unique in its placement and content. Rouse, who excavated at La Zama, provides the following description: "Unlike the ball courts previously described La

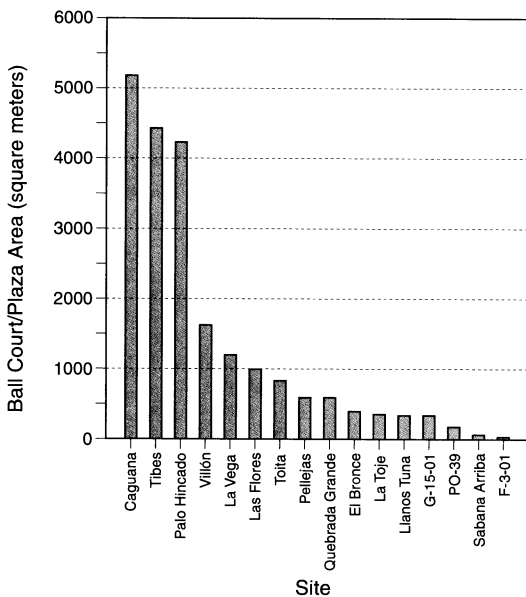


Figure 9. Bar chart showing the relative sizes of the Period IIIb ball courts/plazas.

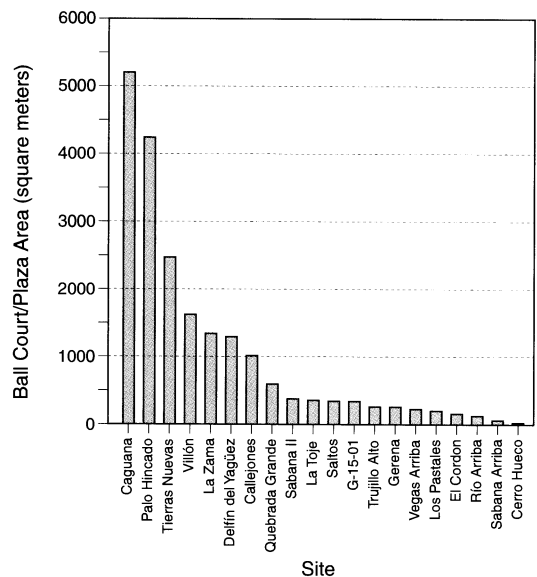


Figure 10. Bar chart showing the relative sizes of the Period IV ball courts/plazas.

Zama is situated on a hogback between two hills. The top of the hogback is long, narrow, and flat, and on either side the land slopes sharply into mountain valleys. The Río Zama, in the valley to the west, is 25 meters below the level of the site. Alongside this river is a large boulder marked with a petroglyph of a human face, which may have some connection with the site" (Rouse 1952b:484).

Given the very low artifact frequency resulting from his excavations at La Zama, Rouse (1952b:484) suggested that this site may have served primarily as a "place of worship," in contrast to other sites with ball courts and plazas, which also served as habitations (Rouse 1952a:360). Based upon Rouse's (1952b:483–484) description of La Zama and its nearly equidistant positioning between Caguana and Palo Hincado, I suggest that it might have served as a ritual interaction center between two distinct polities. This suggestion needs to be tested with additional surveys and excavations in the intervening valleys between the present-day towns of Utuado (Caguana) and Barranquitas (Palo Hincado). In this regard, it also is important to note Rouse's observations concerning the ethnohistoric basis of the two polities: "Correlations with the historic sources are possible at Capá [referred to as Caguana in the present study] and Palo Hincado. The former is likely to have been the residence of chief Guarionex and the latter of Orocobix" (Rouse 1952b:510).

If the distribution and hierarchy of ceremonial places in Puerto Rico are a reflection of political processes, then by Period IV the island has been partitioned into at least four to six polities. The quality of the regional database is uneven, so the precise number of polities is only impressionistic. However, the impression emerging from this analysis suggests that through time concern for territorial boundaries becomes increasingly important. With more field surveys, especially of the full-coverage type (Fish and Kowalewski 1990), this image should become more evident, allowing us, too, to establish polity sizes.

Discussion

Cosmology and ritual are seen as an enduring tradition from the early Saladoid period through to Contact in Puerto Rico (Siegel 1992, 1996). The central sacred area of the Saladoid/Ostionoid Maisabel site was used as a cemetery throughout the prehistoric occupations, spanning roughly 12 centuries (Siegel

1992, 1995, 1996). Based on ethnographic analogy to Amazonian communities, this central area was interpreted also to have functioned as a plaza (e.g., Crocker 1985; Dumont 1972; Gregor 1977; Maybury-Lewis 1979, 1989; Nimuendajú 1946; Seeger 1981; Wilbert 1972, 1981).

During post-Saladoid times, ball courts and ceremonial plazas developed as architectural elements in some sites. In some of these sites, we find that the courts/plazas also served initially as cemeteries. At El Bronce, a stone-lined plaza yielded up to 13 burials. The excavators observed that "if the construction of the plaza dates to the earliest occupation as indicated by the depositional data, then *the plaza may also have functioned as a local graveyard*" (Robinson et al. 1985:40; emphasis added).

Curet and Oliver (1998:225) discount the burial ground notion of the El Bronce plaza on the basis "of the small sample size and the lack of chronological data." However, they neglect to consider the small size of the plaza. Robinson et al. (1985:40) indicate that the plaza is approximately 400 m² in area. (Compare this to the 6,300 m²-size cemetery/plaza located in the Maisabel site.) They observe that 8 to 11 "deliberate burials were located at or within the edges of the 20 x 20 m confines of the formally-defined plaza" (Robinson et al. 1985:40). I am willing to accept the excavators' interpretation that these burials are chronologically associated with the plaza. Radiocarbon dates and ceramic styles indicate that the site was occupied during Periods IIIa and IIIb (Robinson et al. 1985:29–37). There is no evidence for an earlier (Saladoid) occupation and the two late (Period IV) dates are discounted on the basis of poor context and depositional considerations (Robinson et al. 1985:34). It is unlikely that the burials date to the Saladoid period (Periods IIa and IIb), given the lack of Saladoid dates and artifacts from the site. It is safe to conclude therefore that the plaza and associated burials date to at least Period IIIa and perhaps Period IIIb.

None of the El Bronce graves suggested preferential treatment; they were devoid of gravegoods, both sexes are represented as are adults and subadults (Robinson et al. 1985:40). Robinson et al. (1985:41) further note that "it is most likely that the plaza was a multifunctional center, serving a variety of prehistoric social needs— not the least important of which was commerce, in the sense of exchange of both information and goods . . . Whatever function(s) the

plaza at El Bronce may have accommodated, it assuredly served as the focal point for the structure of the settlement at the site.”

In support of these interpretations, Robinson et al. (1985) refer to ethnohistoric observations linking Taíno plazas to social and ceremonial activities (de Hostos 1941; Fewkes 1907; Oviedo 1950; Rouse 1956). In addition, they hypothesize, following Fewkes (1907:83), that the burials in the plaza may be linked to the *areitos*, or mortuary dances, associated with Taíno-period plazas. The archaeological correlate of a dance step may be difficult to discern; however, through the judicious use of ethnographic analogy, ethnohistoric data, and observed site structure, I believe broad categories of use can be inferred in such areas of a site. Mortuary rituals, associated with the burials, are likely to have been enacted in the El Bronce plaza.

In apparent agreement with this trend in shifting village organization, Oliver has observed that “by this time (ca. A.D. 650) a few but not all of the villages began to change the way in which the central plaza’s boundaries were physically outlined . . . The central plazas in those few village sites were now sharply and unambiguously demarcated by stone alignments and/or earth works. . . the plaza enclosure (now also a “court”) still remained the only available public space within the village . . . Rectangular plazas or courts with stone aligned boundary markers still “housed” a cemetery” (Oliver 1992:7–8).

In an earlier study, I focused on aspects of settlement organization that informed on cosmology and ritual (Siegel 1996). By examining the construction, use, and distribution of ceremonial space through time, it has been necessary to address social and political maneuverings. Tracking the historical trajectory of culture during the ceramic age in Puerto Rico, we find that the use, development, and elaboration of ceremonial space was a focal point in the consolidation of power and authority.

Figure 11 depicts a model for the evolution of ceremonial space in prehistoric Puerto Rico. During the Saladoid period, the central portion of the village is reserved for the cemetery. Based on ethnographic analogy to Amazonian groups, it is inferred that this centrally located cemetery also functioned as a plaza. Surrounding the cemetery are mounded middens that contain the most elaborate artifacts fabricated during the early ceramic age. Within some early post-Saladoid villages, the cemetery was incorporated

into a simple, yet formally constructed, ball court or plaza. By the late Ostionoid period, ball courts and plazas were relatively elaborate and assumed a variety of shapes in addition to rectangles. At this time, ball courts were no longer used as cemeteries; the dead were deposited elsewhere, including mounds and caves.

Cosmology, as a basis for ideology in this context is manipulated by *caciques*-cum-power brokers in an effort to solidify their power base. An issue of fundamental importance concerns the actions of people and the options available to them. In this regard, it is useful to refer to elements of cosmology that are ripe for manipulation. Ethnographic data from lowland South America supply us with some insights.

In his analysis of cosmology and ritual among the Barasana Indians of Colombia, Hugh-Jones (1979:36–37) documented a set of relations between powerful shamans, large houses, frequency of ritual dances, and inter- and intra-community leadership roles. Myth, ritual, and cosmology are of paramount importance in the organizational stability of the Barasana. The role of shaman in this context is critical; he “officiates,” and thus ensures that the complexity of their cosmology is interpreted and acted on properly. In terms of shamanic power, “shamans are . . . ranked according to their knowledge and abilities” (Hugh-Jones 1979:33).

Ranking among shamans creates competition. Good shamans are in demand by other communities besides their own. A good shaman who effectively officiates at rituals, especially when communicating with the spirit world, consolidates, monopolizes, and wields considerable power. He directs the career of the community.

Regarding South American shamanist cultures in general, Langdon observes that “in his broadest exercise of power we find the shaman as the political-religious leader. . . he is called upon to mediate disputes, contribute to decisions regarding warfare, mobilize the group in communal activities, and direct the economic activities in the procurement of food. His ambiguity also serves as a mechanism of social control over the group in the absence of formal control systems. The extent of the shaman’s role depends most often on the historical and cultural circumstances in which the role expands and contracts according to factors impinging upon the social organization of the group” (Langdon 1992:15).

We see, too, that powerful shamans exert influ-

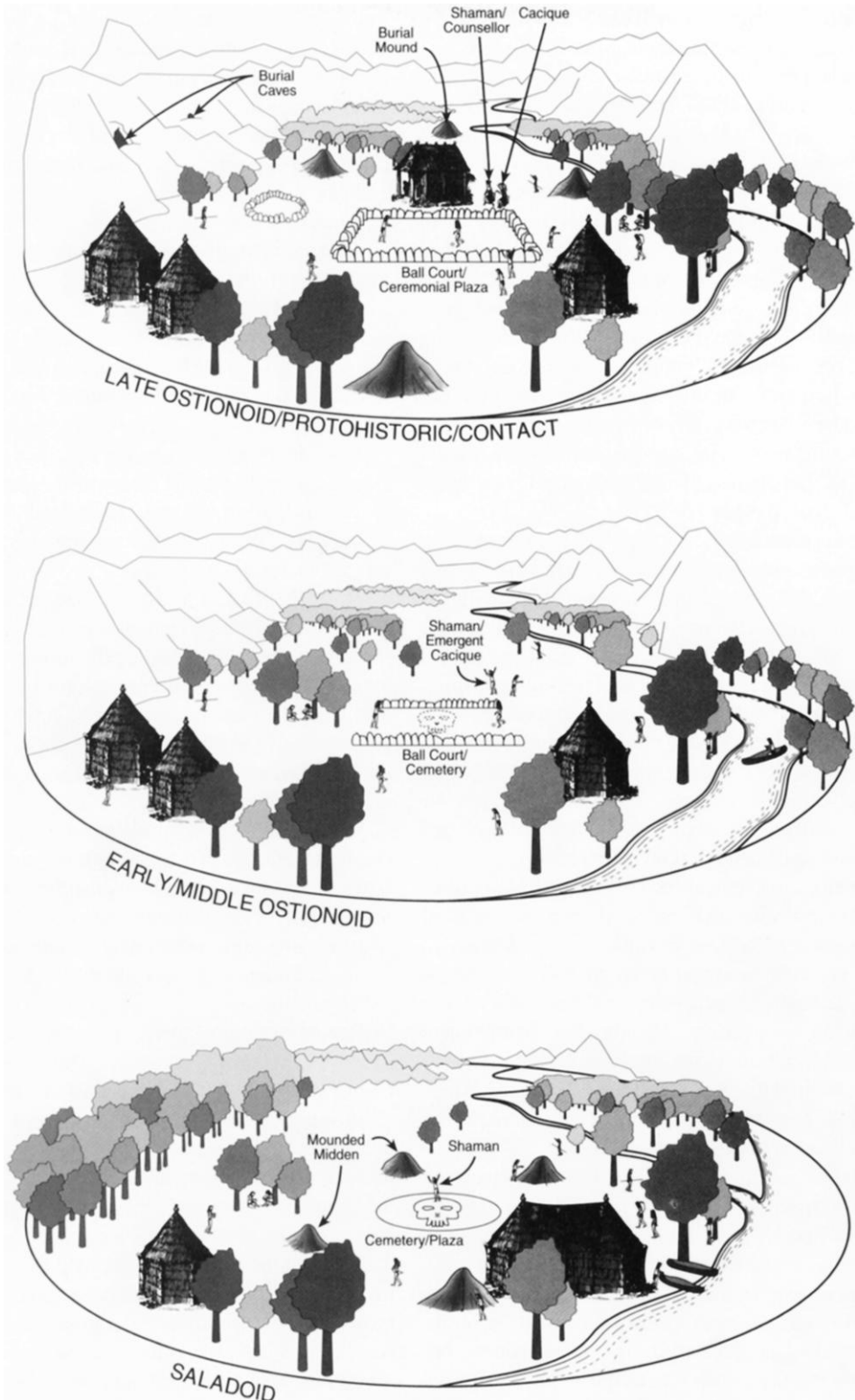


Figure 11. Model charting the evolution of ceremonial space during the ceramic age of Puerto Rico.

ence on surrounding communities, vis-à-vis rituals and ceremonies. It is not a great leap of speculation to suggest that the shaman's power over the ceremonial landscape may be a "front" for his power over the political landscape (see also Stahl 1984:253–254). In this context, power may become an inheritable aspect of the shaman's family or lineage. Hugh-Jones (1979:33–38) observed that powerful shamans, large houses (or communities), large dance plazas (or ceremonial spaces), and great spheres of influence (within and across communities) were related. The interaction of these social dimensions is ripe for the formation of ranked society and a settlement hierarchy.

If the rituals and ceremonial sphere of society are the basis of political power, then the relative importance of communities will be reflected by the relative amount of space devoted to rituals. Thus, by measuring the sizes of ceremonial spaces across the landscape we can reconstruct the hierarchical organization (if it exists) within and across polities.

It is important to be cognizant of the social contexts of shamanism under discussion. The ethnographically observed societies in lowland South America are egalitarian tribal-based communities. Under these conditions, the role of shaman, as cosmological broker, does not impinge on political matters, at least overtly. Organizationally, these cultures are inferred to be analogous to the West Indian Saladoid groups.

The Taíno *buhuitihu* (shamans), on the other hand, were in collusion with the *caciques* to control and manipulate people, using shamanistic methods and cosmology as their power base (Colón 1947; Las Casas 1951; Martyr D'Anghera 1970 [1912]; Oviedo 1950). From Saladoid to Ostionoid to the Classic Taíno Indians, we see a continuity in the ideological basis of society. Bender contrasts cultural perception from ideology. The former is an "understanding of how the world is constituted and how things should be done, because that is how they are and always have been done. . . . Ideology is that which is spoken, that which offers an internal logic, which purports to know why. Ideology is the domain in which justification and legitimation are offered, the domain of rhetoric" (Bender 1990:259).

The Saladoid tradition is characterized by an egalitarian tribal-based social organization. In death, everybody is relatively equal, except for some individuals who might have achieved high status in life

through great skill or charisma. Thus, in Saladoid cemeteries, we do not find great amounts of sumptuary funerary items deposited with any single individual. Contrary to chiefdoms, where often the most elaborate artifacts are found in the graves of high-status individuals, in Saladoid sites the most elaborate items are found in the mounds *surrounding* the cemetery, or central portion of the settlement (Chanlatte Baik and Narganes Storde 1983; Rainey 1940; Siegel 1989, 1992).

By ca. A.D. 700, structural ball courts and plazas were constructed in Puerto Rico. Mortuary rites and ancestor veneration had now become a formal component of society at the polity level, in contrast to the previous village-oriented Saladoid pattern. This development corresponds to the beginning stages of regional power consolidation. By approximately A.D. 1200, ball courts and plazas were highly developed, with elaborate ceremonies and rituals revolving around them.

Through the 16 centuries of prehistory prior to Spanish intrusion, the Saladoid and Ostionoid groups occupying Puerto Rico and Hispaniola displayed elements of both corporate and network modes of political and economic organization. The early Saladoid groups, organized into large village communities, emphasized integrative ceremonies and rituals that promoted a corporate mode of political economy and group solidarity. As population expanded geographically during the post-Saladoid periods, local settlement hierarchies developed and were integrated most visibly through systems of ball courts and ceremonial plazas. Aspiring leaders took advantage of the integrative aspects of group rituals to accrue power. Ultimately, late in prehistory, power within and among Taíno chiefdoms was consolidated and controlled through carefully calculated marriages and exchanges across chiefly lineages (Wilson 1990b). Ball courts and plazas served as the arenas for formal rituals legitimizing these transactions for all members of society. A unique melding of corporate and network strategies of political organization was represented in these complex chiefdoms. That is, the ethic of group solidarity was strong and reinforced through large public displays and rites of ancestor veneration (corporate mode). At the same time, status distinctions were emphasized through such exclusionary tactics as elite intergroup exchanges and private *cohoba* rituals, which were limited in attendance to the *cacique* and his retinue.

Conclusions

The underlying conditions during the ceramic age of the Greater Antilles represented a particular mix of social, economic, and ideological factors that resulted in the narrowing of power to specific subsets of society. In this context, cosmological concepts were necessarily transformed in response to shifting ideological principles. Shamans, as interpreters of cosmological concepts, were strategically situated to control actions of community members.

In paraphrasing *Webster's Dictionary*, Flannery and Marcus (1993) indicate that cosmology and ideology are not synonymous. Cosmology is a worldview employed by members of society to describe and explain their universe. Ideology, on the other hand, is a systematic set of concepts, principles, theories, and values "by which human societies are governed" (Flannery and Marcus 1993:261). Based on archaeological site plans, ethnographic analogy, and ethnohistoric documents, the Saladoid and Taíno cosmos consisted of a multilayered series of concentric disks, one of which was the here-and-now earthly plane. Connecting the various layers together was the *axis mundi*, which was traveled by the shaman on his/her journeys through the cosmos. Ancestor spirits occupied one or more of the non-earthly planes, although occasionally they came for a visit. By default, the revered ancestors in Taíno society were ranked, mirroring the political organization of their living relatives residing on the earthly plane.

I do not think that it is a "bungee jump into the Land of [Interpretive] Fantasy" (Flannery and Marcus 1993:261) to suggest that the ancestor spirits occupying the Saladoid cosmos were an egalitarian lot. With the shift from "natural" plazas/cemeteries in the Saladoid-period hamlets to the development of formal ball courts/ceremonial plazas in some Ostionoid-period settlements, there was a concomitant shift in the burial program and ultimately in the political organization of the spirit world. Shamans as psychic community directors were strategically positioned at the Saladoid/Ostionoid transition to accrue power, resulting eventually in Taíno chiefs employing shamanistic techniques of ecstasy to enter the spirit world.

The most visible forum for the shaman's display of power would have been the centrally located plaza/burial ground in Saladoid times. This ritually charged large public space was a link to the other

layers of the cosmos. Rituals conducted in the earliest ball courts and ceremonial plazas during early post-Saladoid times also would have been orchestrated by the shaman. As ball courts became increasingly associated with politics, in addition to rituals, shamans were situated to expand their realm of power from the numinous exclusively to matters of governance and inter-community affairs.

Ball court/plaza site distributions became increasingly centralized at the local level through the late ceramic age of Puerto Rico. We see shifting centers of power, initially broadly dispersed in the south and gradually concentrated in the Cordillera Central. The ball courts and ceremonial plazas became large public symbols of the power and authority wielded by chiefs and their kind. At the macroregional scale (entire island) political organization was never centralized. By Period IV, three to four centers of power, of approximately equal size, were dispersed across the island. With interpolity competition evident at Contact, these centers of power were truly contested places and places of contest.

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Notes

- In Columbus' passage, it is not clear whether the variety of burial treatments he described was directed to chiefs or to other members of society as well: "De los de otros solamente toman la cabeza. A otros los sepultan en una gruta y ponen encima de la cabeza pan y una calabaza llena de agua. A otros los queman en la casa donde mueren; y cuando los ven en el último extremo, antes de que mueren, los estrangulan; esto se hace con los caciques. A otros los echan fuera de casa, y a otros los ponen en una hamaca, que es un lecho de red, les ponen agua y pan al lado de la cabeza, los dejan solos y no vuelven a verlos más" (Colón 1947:185).
- I distributed excavation units across the cemetery systematically to obtain broad coverage of this portion of the site. This is not a random sample of the cemetery space or of the burial population. However, every unit that was excavated in the cemetery produced at least one burial and usually more than one. Further, upon completion of our fieldwork at the site, a local avocational

archaeologist excavated a trench within the cemetery, retrieving an additional 10 burials. Lacking a random sample of the cemetery population, the estimate for the chronological distribution of the burials is only general. It is safe to assume however that there are hundreds of Saladoid and Ostionoid burials located in the cemetery.

3. Ball courts and plazas had political significance. Sites that received these features were important areas of dispute adjudication, alliance building, negotiation, and competition. Shifts in political power, temporally and geographically, may therefore be tracked by documenting the size, spatial, and density distributions of ball courts and ceremonial plazas across the landscape.

4. On the basis of his excavations at Villón, Rouse (1952b:503-507) indicates that the site was inhabited during Periods IIIa, IIIb, and IV, constituting a combined ceremonial and habitation center during these periods of occupation.

5. Based on ¹⁴C dates and ceramic styles, González Colón, the original excavator of the site, indicates a sequence in the developmental history of the Tibes ball court complex: "Los juegos de bola (B-1), (B-5) y (B-9) localizados en la periferia del yacimiento se pueden asociar cronológicamente con los comienzos de la segunda fase de ocupación (Rouse: período III-A). Las plazas (B-6), (B-7) y los juegos de Bola (B-2) y (B-8) de acuerdo a la evidencia parecen ser mas tardíos pero asociados con las postrimerías de la segunda fase" (González Colón 1984:114).

6. Based on ceramic analysis, Rouse suggested that Caguana was occupied during Periods IIIb and IV (Rouse 1952b:477). A fragment of a wood post recovered from one of the plazas yielded a ¹⁴C date of A.D. 1270±80 (A.D. 1190-1420 cal, 2 sigmas), straddling Periods IIIb and IV (Rouse and Allaire 1978:Table 13.6; Rouse and Alegría 1979). Walker (1993:174-175), too, suggests that Tibes and Caguana were "contemporaneous during the later part of Period III." Based on iconography of some of the stones lining the plazas, Oliver (1992) suggests that Caguana dates to Period IV.

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