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PERSPECTIVE: CLASSIC PERIOD CARACOL,  
BELIZE AND TIKAL, GUATEMALA**

*Arlen F. Chase, Diane Z. Chase and William A. Haviland*  
University of Central Florida and University of Vermont

IN

**La organización social entre los mayas  
prehispánicos, coloniales y modernos**

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*Vera Tiesler Blos, Rafael Cobos y Merle Greene Robertson*  
Coordinadores

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## MAYA SOCIAL ORGANIZATION FROM A "BIG SITE" PERSPECTIVE: CLASSIC PERIOD CARACOL, BELIZE AND TIKAL, GUATEMALA

*Arlen F. Chase, Diane Z. Chase and William A. Haviland*  
University of Central Florida and University of Vermont

**I**n spite of a long history of research, there is currently no absolute agreement about the nature of Classic Period (A.D. 250-900) Maya social organization. Inheritance and descent among the ancient Maya have been viewed alternatively as patrilineal, matrilineal, and cognatic. Rules for residential patterning are similarly problematic. Arguments exist over the degree to which the Maya were stratified, with disagreement over whether they maintained two or more status levels and whether or not there was mobility between or among status levels. Apart from semantic differences, there is also difficulty in identifying basic social units. Perhaps the most widely discussed social groups in the archaeological literature are those of "lineage" and "household"—regardless, or in spite, of the size of the site in question. In areas of high population numbers, other means of social control surely organized and even superseded these kin-based units; however, our knowledge of these groups is, at best, incomplete. The degree to which lineages formed primary focal units for the Classic Maya is also not clear. Even the number of people living in a household or at a given site may be debated, notwithstanding the employment of consistent formulae for the determination of population size and history.

Models for the socio-political organization of the Maya are equally varied. Scholars alternately see the Maya as composed of uncentralized segmentary states or chiefdoms, of centralized states, and/or of a very limited number of super-states (Chase and Chase, 1998a). Views of higher-level socio-political organization obviously have ramifications for interpretations of lower-order social organization and the role that kinship, as opposed to more centralized political control, had in the functioning of the social order. Models for Classic Maya socio-political organization have diverse origins and are not always conjunctively derived. Views of the Classic social order are just as likely to be garnered from general models created from cross-cultural and/or non-Maya ethnographic comparison as they are to be derived from specific models based on Maya archaeological, ethnohistoric, ethnographic, or epigraphic information. And, in the search for overarching models of ancient social organization, the Maya have been homogenized (A. Chase and D. Chase, 1996a: 810; Haviland, 1997b). Thus, the variation that must have existed among sites and regions has tended to be glossed in treatments of social organization. Especially difficult to define, because of the lack of modern parallels, is the complexity that must have once existed—at least

among the largest sites and political units that can be defined archaeologically.

Carefully collected archaeological data from densely populated sites like Caracol, Belize or Tikal, Guatemala can be used to begin to examine both large-scale and small-scale social organization. The long-term archaeological work conducted at these two sites (each with over 15 years of research) has resulted in the collection of large bodies of contextually controlled data on numerous aspects of ancient life. These data range from the site layout of residential and monumental architecture to the spatial distributions of artifacts and features to the placement of human burials to the distribution of ancient dietary patterns. By combining various classes of archaeological data with existing epigraphic, ethnohistoric, and ethnographic information, it is possible to begin to define better the larger integrative social units that must have existed in the "big sites" of the Classic Period. We have previously suggested (Chase, *et al.*, 1990) that viewing smaller sites without reference to large ones warps our view of the ancient Maya. Within this paper we will briefly summarize our current understanding of ancient Maya social organization and suggest why the "big site" perspective is necessary. The end result is not a complete re-interpretation of ancient Maya social organization, but it does provide some interesting new twists of interpretation.

### **Social Organization: Maya Descent and Residence**

One of the primary concerns of Maya social organization has been a concern with defining patterns of descent and residence.

In spite of a long history of research on this topic, there is little agreement. However, ethnohistoric, ethnographic, epigraphic and archaeological data can all be brought to bear on these considerations.

William Haviland has written a series of articles (1968, 1970a, 1970b, 1972a, 1973) that synthesized the ethnohistoric and ethnographic information on Maya descent. A recent summary has also been presented by Rick Wilk (1988). Both Haviland and Wilk indicate the difficulty in using relatively late Maya materials to make interpretations about the much earlier Classic Period Maya, particularly given the problems of temporal relevance and of the comparability of units. Haviland (1968) notes the likelihood of significant cultural change in the Maya area between the Classic Period and the 15<sup>th</sup> through 20<sup>th</sup> centuries. He has argued that useful ethnohistoric information derives from statements about the Maya of Yucatan and argued for continuity between Late Postclassic Maya sites in Yucatan—such as Mayapan—and Classic Maya social traditions (Haviland and Moholy-Nagy, 1963). But the linkage between the ethnohistory and the archaeology is exceedingly elusive and difficult to make (e.g. D. Chase, 1986). Nowhere can this be better seen than in our inability to find ethnohistorically recorded terms of office and status (*ah kuch cab, bol pop, balach uinic*) in Classic Period Maya hieroglyphic inscriptions (D. Chase, 1992).

While there has generally been a direct application of Historic models to the prehistoric situation, most researchers acknowledge the multitude of problems with this "direct historic approach" to Maya social organization (Haviland, 1968, 1972b; McAnany, 1995; Wilk, 1988). The problems in directly using ethnographic

analogies in Maya archaeological interpretation have been amply demonstrated (D. Chase and A. Chase, 1992; Marcus, 1995). However, because of a lack of representative or relevant archaeological data, the use of ethnographic and ethnohistoric data continues as a mainstay for most synthetic archaeologically-based statements of ancient Maya social organization (e.g., McNany, 1995: 21). Yet another approach is to apply general principles derived from cross-cultural research. For example, the presence of warfare, centralized political control, men as the main providers of subsistence, and polygyny are well known predictors of patrilocal residence (Haviland, 1985, 1997a).

Discussions over the nature of Maya social organization invariably include a consideration of descent and jural rights. While the majority of scholars view the Classic Period Maya as having been patrilineal (Haviland, 1972b, 1997a; Hopkins, 1988, 1991), ethnohistoric and ethnographic arguments for matrilineal descent have been developed from statements about the role that both maternal and paternal ancestry played for the Maya nobility (Roys, 1940: 37-38, 1962: 53, 60, 63) as well as from descriptions of residence among the Chontal Maya (Haviland, 1970a). For example, one name—the *naal*—appears to have been inherited from the mother. Ethnohistoric data (Roys, 1940: 37-38), however, strongly indicate that the name inherited from one's mother was her patronymic, so even this seems to emphasize the importance of patrilineal, rather than matrilineal, principles. The word *almeben*, Maya for "noble," has been interpreted to mean that individual status was derived from both the mother (*al*, or female offspring) and the father (*mehen*,

or male offspring) (Roys, 1943: 33). Hopkins (1991: 190), however, suggests that *almeben* simply refers to "ancestors" and means "descendent" or "children," indicating that there is noble status of both the mother's and father's patriline. Two other Yucatec terms—*chibal* and *tzacab*—have also been used to see evidence of male and female descent; Hopkins (1991: 190), however, argues that they refer to the father's patriline and the mother's patriline, thus negating any interpretation of matrilineal descent.

Haviland (1972b, 1972c, 1977) suggests that the Classic Period Maya of Tikal were likely patrilineal. His review of the evidence indicates that matrilineal descent was not important in 16<sup>th</sup> century Yucatan, but that ambilineal descent may have been. He maintains that the *chibal*—a patrilineal descent group—was de-facto an ambilineal descent group (Haviland 1973: 143) and that post-contact residence also appears to have been ambilocal. Haviland suggests that the *chibal* was more likely a sib than a lineage. Following Murdock's (1960: 1) definition, Haviland (1973: 137) defines the sib (the preferred term today would be "clan") as "a unilineal construct with few, if any, corporate characteristics, with geographically dispersed membership, and with an unknown or merely postulated common ancestor." Haviland (1970a) also presented a strong argument that the Chontal Maya were not matrilineal, but were rather a cognatic society that practiced ambilocal residence. He (1968; 1973) concluded that Maya descent and residence was not uniform, but rather changed over time and throughout the geographic area of the Southern lowlands. Haviland (1968) once viewed descent and residence at Tikal as progress-

ing from matrilineal and matrilocal during the Preclassic Period to patrilineal and patrilocal during the Classic Period. He further argued that the evidences of ambilineal descent in the Yucatan were a relatively late development—a potential response to the crisis of early Spanish intervention in the New World—that allowed for greater flexibility in the survival of the nobility (Haviland, 1973). More recently Haviland (1997a) has argued that a cognatic or ambilineal system existed during the Preclassic Period at Tikal, that this system gave way to patrilineal principles as dynastic rule developed, and that there was a reversion to cognatic principles in the Maya lowlands with the political collapse. He (1971: 105; 1968: 114) simultaneously suggested that cognatic organization persisted in the Usumacinta-Pasion region, thus explicitly recognizing that a diversity

of social patterns must have existed in the Classic Period Maya lowlands.

Subsequent to Haviland's groundbreaking work, developments in the transcription of Maya hieroglyphs have allowed these data to be analyzed from a different perspective. New hieroglyphic readings have provided a wealth of insight on the ancient Mayan (but see Marcus, 1992). Particularly significant are hieroglyphic statements concerning parentage (Jones, 1977; Stuart, 1997; Figure 1). Most epigraphers argue that the hieroglyphic data indicate patrilineal reckoning of descent (Mathews, 1988; Hopkins, 1991)—at least for rulers. However, hieroglyphic and iconographic information also demonstrate that Classic Period women, at least in some instances, played an important—even critical—role in ancient Maya social organization. Women occasionally are named as office holders

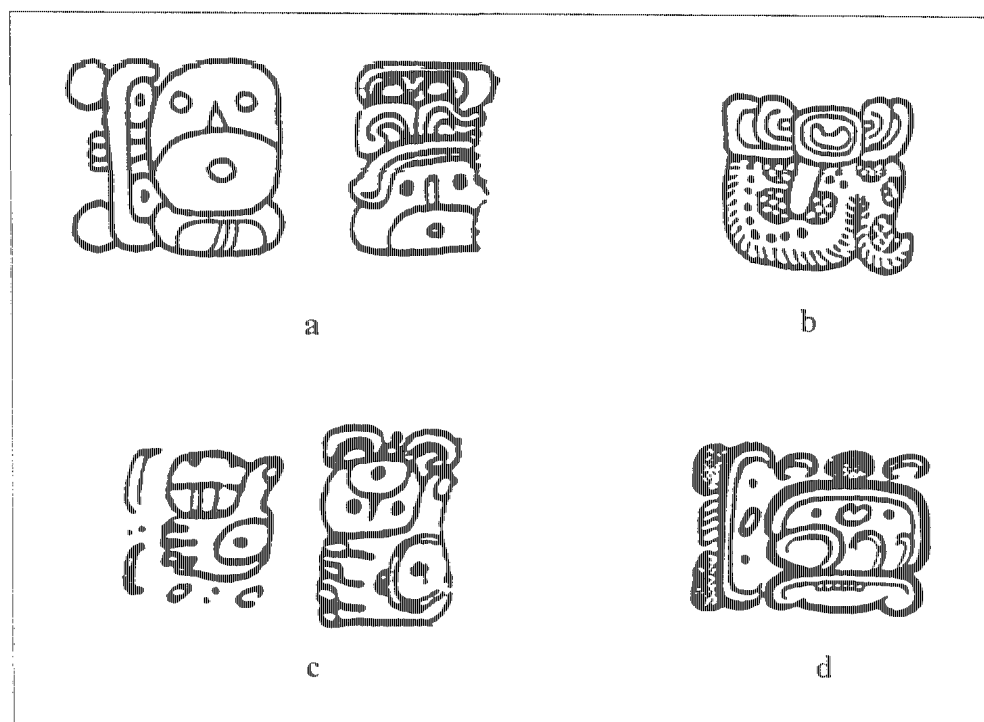


Figure 1. Epigraphic statements of parental relationships, useful in deducing descent  
 a) child of father;  
 b) *yu ne*, man's child;  
 c) *y-al*, woman's child; *é u hun tan*, cherished one (woman's child)

at Palenque, Yaxchilan, Naranjo, and some other sites. They also constitute primary figures on some carved monuments (see for example, Lady Xoc at Yaxchilan, Lady Zac-Kuk at Palenque, and Lady 6 Sky at Naranjo). However, a prominent role for women need not be inconsistent with patrilineal principles. For instance, in England patrilineal succession is the rule for reigning monarchs. Yet, the English have had the occasional reigning queen (Elizabeth I and II, Victoria) because a male heir was not available; in other words, those queens became such due to their fathers' positions. Thus, any emphasis on women in Maya epigraphy and iconography can be interpreted as being consistent with patrilineal principles.

Alternative suggestions have, however, been made. Using hieroglyphic texts from Piedras Negras, Fox and Justeson (1986) suggested the existence of a demonstrable matriline for the Classic Maya in which husbands were the rulers and the invested offices were passed on to nephews. Fox and Justeson do not attempt to suggest that a matrilineal system was universal to the Maya, but maintain that Classic Period father-to-son succession only is assumed in the Southern lowlands based upon ethnohistorically recorded Postclassic Yucatecan practices. However provocative their arguments, these interpretations are contingent upon contested glyphic translations. They read the glyph "T606" as "nephew or niece" (possibly related to *ih tzin*, meaning "younger sibling") as opposed to alternative readings of *une(n)*, "child" (Hopkins, 1991), or *u bun tan*, "cherished one" (Stuart, 1997). Continued hieroglyphic work will be of obvious utility in discussions of descent and marriage. But, unfortunately, even the ultimate tran-

scription of all existing Classic Period texts will not irrefutably reveal the descent of the majority of the Classic Maya people—as the texts do not refer to all segments of the population, but rather only to the ruling elite, who were probably iconoclasts in terms of following general rules of descent.

Archaeological information adds much data to the discussion of ancient Maya descent, but still does not definitively resolve questions concerning ancient Maya social organization. Initially, excavation data appeared to show a substantial preponderance of high status male burials as opposed to female burials in the archaeological record, especially at the Guatemalan site of Tikal (Haviland, 1972, 1977, 1997a). Most elaborate "tombs" appeared to have male occupants. Haviland (1968, 1997a) thus interpreted the archaeological data as supporting a patrilineal view of Maya society, at least for Tikal. The carved sculptural record was seen as providing complementary data in support of this observed relationship (Haviland, 1997a). Other excavations—first at Altar de Sacrificios (Adams, 1970) and subsequently in other areas (Santa Rita Corozal [D. Chase and A. Chase, 1986], Rio Azul [Adams, 1986], Caracol [A. Chase and D. Chase, 1987], Copan [Fash, 1991])—somewhat confuse any uniform picture. High status female interments and greater numbers of females in key contexts have been recovered at several sites and date to both the Early and Late Classic Periods. Additional excavations at Tikal have also revealed the presence of females in Early Classic "tombs" at that site (Laporte, 1987). In initial discussions of the Altar de Sacrificios archaeological data, Haviland (1971: 104; but see also Adams, 1972) concluded

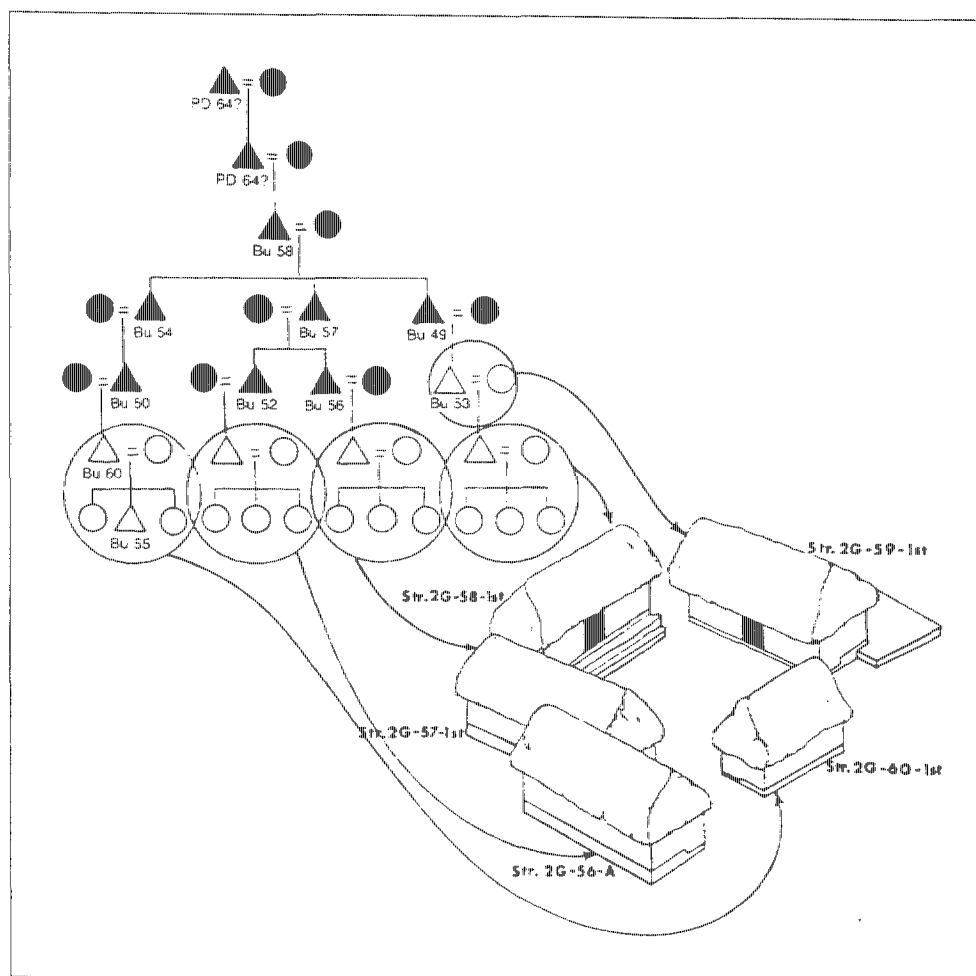
that, "a woman in a high political post, however rare, would be more likely to be found in a cognatic [than matrilineal] society" and, thus, that the social organization of the Usumacinta-Pasion region was likely cognatic. Given the more recent recovery of a greater number of high status female interments, the possibility that much of the Classic Maya world may have had ambilineal cognatic social organization (while certainly not proven) can not be overlooked (e.g. Joyce, 1981, Hendon, 1991: 912).

### **Social Organization: The Domestic Unit**

The nuclear and extended family form the most basic domestic unit of the Late Classic Southern lowland Maya. Written descriptions of Maya families in both the ethnohistoric and ethnographic data exhibit much variability. Ethnohistoric sources indicate a wide range in the number of members of a single household, less than 5 people (Haviland, 1972c) to upwards of 40 people per household (Hellmuth, 1977). Most researchers agree that the Maya had extended families. Thus, several generations might live within the same household, but the implications of this fact in terms of archaeological population estimates is hotly debated. Did each house in a mapped residential plaza group represent a nuclear or extended family unit (Culbert and Rice, 1990; McAnany, 1993) or does each mapped residential plaza group represent a single extended family using multiple buildings (Becquelin and Michelet, 1994)? The presence of more than one wife—as suggested for royalty in the hieroglyphic texts of Yaxchilan (Mathews, 1988) and other sites—could also signifi-

cantly increase the possible number of individuals within any extended residential unit, especially if polygyny were practiced by the wider society. However, cross-cultural ethnographic research in the Americas has demonstrated that most marriages were non-polygynous and that what is called "general polygyny" (prevalent in many African societies) is not common. In the Americas, if polygyny occurred, it tended to be "limited polygyny," which was associated with people of a particular status in society (like chiefs, kings, and shamans).

Archaeological research substantially augments the available information on the nature and function of ancient Maya domestic units. It is assumed that residential plazuela groupings represent extended families. These exhibit construction growth; the increased numbers of structures in a single residential group that were built over time could easily accommodate at least some of the growth of an extended family and can be explained by recovered archaeological remains in a variety of cases (Haviland, 1981, 1988; Figure 2). That the individuals living within a plazuela unit formed a single domestic unit is suggested by evidence of shared diet at Caracol, although there are isolated exceptions. Several individuals who had been interpreted to be sacrificial victims based upon contextual clues prior to stable isotopic analysis have been found to have poorer diet than other interments in a group (D. Chase *et al.*, 1998). There are also isolated examples of single individuals at Caracol whose diet is unlike that of the rest of the group, but that matches the palace diet: these are presumed to have been attendants to the ruling elite who would have eaten in the palace where they were working, but were nevertheless buried



within their own family compound (A. Chase and D. Chase, 2000). For Group 7F-1 at Tikal Haviland (1981: 103) has shown that differential health status co-varied with burial treatment, suggesting that lower class servants were part of an upper class household.

Archaeological data do not give us an undisputed number of individuals for a single extended family unit. There are a number of variables that must be considered prior to estimating family size. First, there is varied function of buildings in plazuela groups. Not all buildings appear

to have been used for sleeping; some likely had specialized cooking, storage, and/or ritual functions. Constructions also vary tremendously in size. Some contain only one small room, while others are multi-room "palaces." Differences in the number and kind of structures between high and lower status families might further suggest slight differences in family structure—such as the number of wives—and possibly even different ratios of living space per individual. Thus, it is likely that domestic units at any specific site were of varying sizes and that population estimates

Figure 2. Diagram of temporal social organization, as seen archaeologically, in Tikal Residential Group 2G-1 (after Haviland, 1988)



based upon a set number of individuals per structure—without any other corrections—are not likely to accurately mirror the actual social situation. Although they may be useful in providing relative population comparisons among sites. What is clear in looking at the Classic Maya settlement data is that most definable residential groups focus on households *per se*, and not on larger lineage units.

At both Caracol and Tikal there is a focus on the veneration of dead within plazuela groups—or single family units (Becker, 1982; A. Chase and D. Chase, 1994a, 1996c; D. Chase and A. Chase, 1996; Haviland, *et al.*, 1985). It is also clear that not all dead are buried in eastern structures or even within any given plazuela group: only specifically selected individuals—sometimes males, sometimes female, and often of mixed sexes and ages—are associated with specific residential groups (D. Chase, 1997). At Caracol, the majority of a given residential group's inhabitants must have been interred outside of the residential group, perhaps in outlying cemeteries or other locales. At Tikal, most of a group's inhabitants must have been interred outside of houses, but not necessarily outside of the group. In the case of Tikal royalty, males were clearly placed in a special cemetery—the Great Plaza and North Acropolis.

Households at both Caracol and Tikal are the locales of abundant production activity (A. Chase and D. Chase, 1994b; Moholy-Nagy, 1997). Thus, the archaeological household was both a production and consumption unit (see also Wilk, 1988: 137 for the significance of the household among contemporary and Historic Maya). Some specialized items—such as shell objects—may have been produced in only a

very limited number of workshop areas; at Caracol four known shell workshops occur in specific residential groups, all over a kilometer distant from the epicenter (but all well within the city). However, many Caracol households contained evidence of some sort of production activity (Pope, 1994). At Tikal, workshops are similarly distributed outside the epicenter (Becker, 1973; Haviland, 1974; Moholy-Nagy, 1997). Obsidian workers may have originally occupied Tikal Group 7F-1, and obsidian workshops are noted for Group 4F-2 (Haviland *et al.*, 1985: 178) as well as for a small group 5 kilometers south of the Tikal epicenter (Puleston, 1983). While clearly worked within city limits, obsidian-knapping was a low-status occupation (Haviland, 1981: 104).

Even though there is a general belief that the production of certain goods—polychrome ceramics (Ball, 1993); spondylus and jadeite (Moholy-Nagy, 1997); obsidian (Folan *et al.*, 1995)—is correlated with status and elite control (e.g. A. Chase and D. Chase, 1992), the archaeological data relevant to Caracol's domestic units suggests that *production* could be undertaken by individuals of any status, but that the *distribution* of finished products was regulated or controlled by the elite (A. Chase, 1998). Preconceived ideas about status items die hard (A. Chase and D. Chase, 1992). For instance, *spondylus* is interpreted as a symbol of high status (Coe, 1988; Moholy-Nagy, 1985). Yet, at Caracol, *spondylus* and *strombus* were worked by the general population (Cobos, 1994), but *olivia* was worked by the site's latest elite. Shell artifacts and obsidian blades are widely distributed among the residential groups at Caracol. At Tikal objects of jadeite, *spondylus* shell, and obsidian (excepting blades)

are rare in non-elite groups, with the exception of those that served as workshops. Although obsidian working was not common, obsidian—an item obtained through long-distance trade—was worked by a limited number of Tikal households on the lower and middle ends of the social spectrum (Becker, 1973; Puleston, 1983). Thus, specialists in the production of bone, shell, flint, and wood products at Caracol and in flint, obsidian, bone, and ceramic items at Tikal are located in households that are scattered throughout the residential settlement of both sites—although within city limits. The archaeological data indicate that, if production was controlled, it was only very loosely controlled. Nor were specialists "attached" to elite households at either Caracol or Tikal. Rather, it would appear that the elite maintained control of the locales in which finished products were distributed to the broader population (A. Chase, 1998). The presence of market areas next door to palaces at both Tikal and Caracol suggest that, while the elite may not have commissioned all the finished items, they at least regulated commerce and probably maintained an overview (and possibly rights of first refusal) of all of the goods and products that were available for consumption.

### **Social Organization: Evidence for Status Differences**

Discussion of status differences among the Maya usually begins with ethnohistoric descriptions which indicate the existence of two groups: the nobles and the commoners (Roys, 1940; Tozzer, 1941; Sharer, 1993: 93). Hieroglyphic texts also contribute evidence for titles that are in-

dicative of status differences (Stuart, 1993: 329-332). In particular, the term *sabal*, interpreted directly from hieroglyphic data, has been taken to indicate the existence of a secondary nobility in Classic Maya society. However, the hieroglyphic texts do not appear to help with discussions of the status levels present in the society at large, although there are hints of a wide range of titles for a secondary elite and for specialists (especially in the Usumacinta area texts). Archaeological data indicate the importance of considering temporal change in Maya social organization. A growing group of archaeologists has suggested that regardless of the "ideal" two-group situation suggested in the ethnohistoric literature, by the Late Classic Period and continuing into the Postclassic Period, material well-being seems to be separable into minimally three social groups (A. Chase, 1992; D. Chase, 1992; Haviland and Moholy-Nagy, 1992). These potential divisions are evident based upon a variety of archaeological factors, ranging from structure size, to energy-expenditure in the creation of an interment, to the presence of "exotic" goods (see A. Chase and D. Chase, 1992). The discrepancy between ethnohistoric and archaeological indicators of class may involve emic as opposed to etic distinctions.

The real question, however, is the degree to which Maya society was stratified. Archaeological investigations have been able to focus upon differential health and diet. Information from Tikal suggests distinctions in stature that can be separated into minimally three distinct groups, presumably related to nutrition (Haviland, 1967; Haviland and Moholy-Nagy, 1992). Differences in social status at Tikal have also been correlated with specific residen-

tial groups and clusters (Becker, 1973; Haviland, 1985, 1988, 1997a). While a greater abundance of animal bone in palace trash has been interpreted as being indirect evidence for dietary differences at Tikal (Haviland and Moholy-Nagy, 1992), differential preservation (where palace deposits are more deeply buried and better covered than those associated with perishable constructions) may also account, at least partially, for this correlation.

Recent stable isotope analysis, in combination with contextual analysis of other archaeological remains from Caracol provides even more detailed answers to questions of family relations and status. At least three different, but coeval, dietary patterns are in evidence for this Late Classic city. Individuals occupying Caracol's palaces had the best diets in the city with more maize and protein than any other segment of Caracol's population (A. Chase and D. Chase, 2000). Immediately outside of the epicenter are individuals with perhaps the worst diet in the city, while residential groups amid the site's plentiful agricultural terraces (A. Chase and D. Chase, 1998b) exhibit a far better dietary mix (D. Chase *et al.*, 1998). Thus, diet at Caracol appears to be directly correlated with social status and to confirm the very real existence of stratification at the site through clear evidence of unequal access to basic food resources (conforming to Fried's [1967] original anthropological definition of social stratification).

Apart from food, other status differences may be interpreted from the archaeological data relating to a series of variables: 1) the scale, size, and quality of residential groups; 2) specific ritual practices (as seen in the use of specialized structures, specific kinds of ceramics, and

formal "tombs"); and, potentially, (3) the practice of particular kinds of household (specialist) activities.

### Social Organization: Settlement Patterns

Diego de Landa's account of the organization of the Maya town is one of his most frequently repeated passages:

"Their dwelling place was as follows: —in the middle of the town were their temples with beautiful plaza, and all around the temples stood the houses of the lords and the priests, and then (those of) the most important people. Thus came the houses of the richest and of those who were held in the highest estimation nearest to these, and at the outskirts of the town were the houses of the lower class.

(Tozzer, 1941: 62)

Evon Vogt's (1961, 1964) description of highland Maya towns in combination with other passages in Landa's *Relación de las Cosas de Yucatán* (Tozzer, 1941) led to the idea that ancient Maya sites may have had a vacant or unoccupied ceremonial center with a dispersed populace living in the surrounding countryside. Subsequent archaeological research has provided far more detailed information on Maya settlement. We now know that the centers of Maya sites were lived in and were the locations of far more than just ritual activity (e.g. Harrison, 1969, 1986). The "vacant ceremonial center" model of a Maya town does not aptly describe any of the major sites and likely does not adequately describe any of the minor sites either. We

also now have far more archaeological data with which to evaluate Landa's account. Some have argued for the fit of Landa's concentric description of a Maya town with archaeological data, especially given that there are major concentrations of architecture at the center of most Maya sites (Marcus, 1983). Others have postulated that a strict version of his model does not fit Maya sites, as elite households are often found at some distance from site epicenters (Arnold and Ford, 1980; D. Chase, 1986, 1992; D. Chase and A. Chase, 1988; Haviland, 1982). Large Classic Period Maya sites that have undergone long-term investigation, such as Tikal and Caracol, permit a more critical assessment of Landa's statements as well as of the nature of ancient site organization.

At Tikal, most formal palaces are located within 1 kilometer of the epicenter (Harrison, 1986; Puleston, 1983). However, nodes of consistently larger architecture are embedded within the outlying city settlement at a distance of approximately 4.5 kilometers from the site epicenter (Figure 3). At the northern limit of Tikal, where such nodes do not appear, an east-west "wall," consisting of a deep dry moat and breastworks, occurs at the distance of 4.5 kilometers from the site epicenter (Puleston, 1974; Puleston and Callendar, 1977). A similar feature, again consisting of a moat and breastworks, has been located approximately 6.5 kilometers south of Tikal's epicenter (Puleston, 1983); the projected length of the southern earthworks is 2 or 3 times that of the northern ones. Although not directly connected to the epicenter by causeways in a dendritic manner (as happens at Caracol), the general plan of Tikal's outlying nodes—all located inside the site's earthworks—are

fairly consistent. Bobal and Chikin Tikal both have small internal "linking" causeways, larger plaza areas, and acropolis groups. While there may be temporal depth to this pattern at Bobal and Chikin Tikal, the larger plazas—which presumably served administrative purposes—are also found at the outlying architectural nodes of Mixta Xuc and Tintal. It is important to note that not all of Tikal's "peripheral" palaces were administrative units (e.g. Haviland, 1981 on Group 7F-1); without excavation it is difficult to assign definitive function. However, the seemingly regularized distribution of architectural nodes at Tikal is presumably reflective of the same pattern that is more directly expressed through Caracol's internal causeway system (Figure 4). The settlement at Caracol clearly reflects the internal integration of the site through the use of outlying "administrative plazas," which appear to have served as market places in an administered economy (A. Chase, 1998).

The combined contextual analysis of use-related on-floor debris, construction efforts, interments, and dietary information provides significant information about who lived where at Caracol. The elite not only lived in the site epicenter, but also in termini palaces at the causeway ends; they were sometimes even intermixed within the core settlement. The lowest status housing is located immediately adjacent to the Caracol epicenter. Middle and upper middle status individuals lived further from the epicenter amidst the agricultural fields; however, the status of neighboring residential groups in the settlement area was not equivalent (as indicated by diet). Given the scarcity of land and the regularity seen in the placement of Caracol's residential groups, settlement

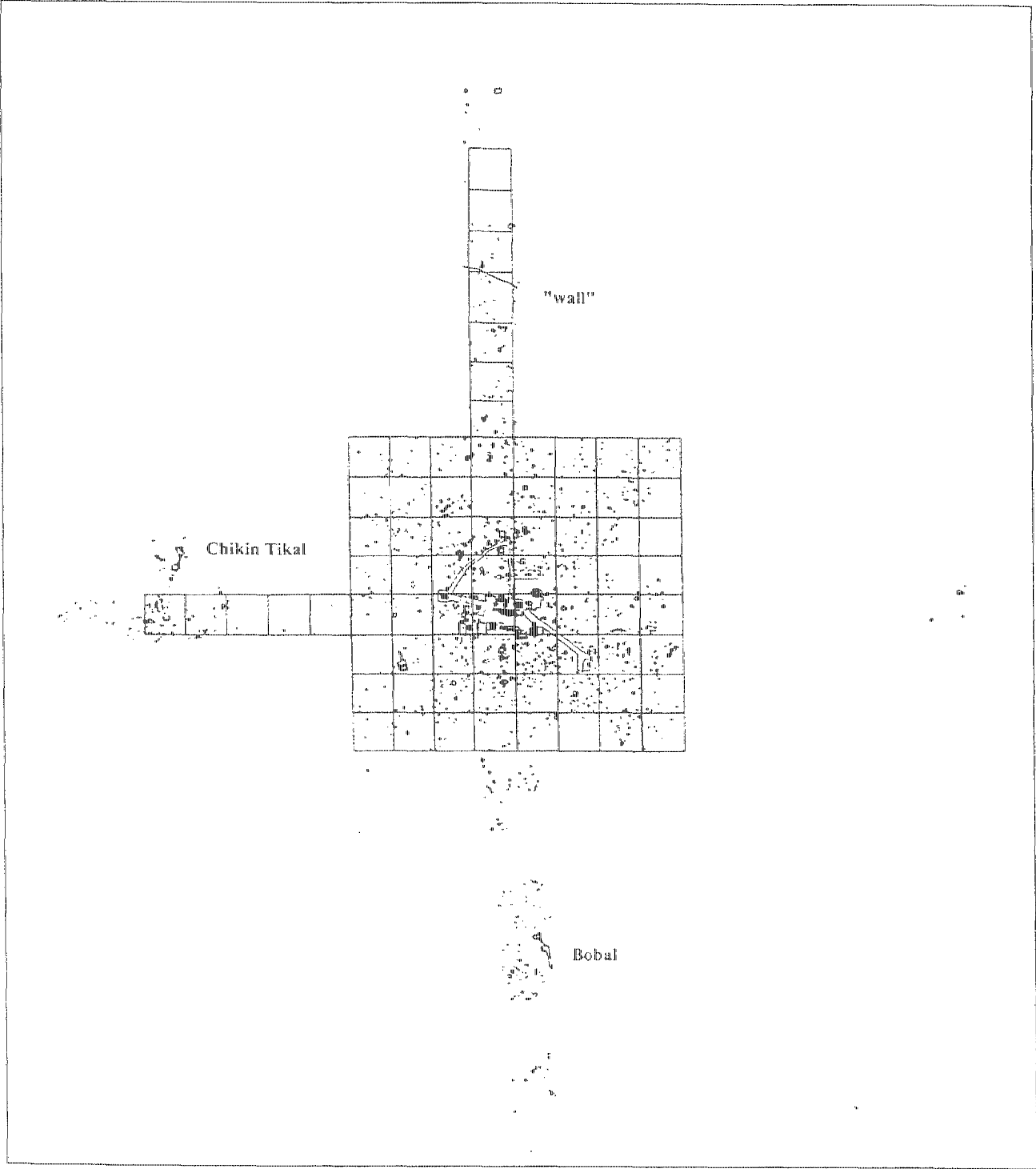
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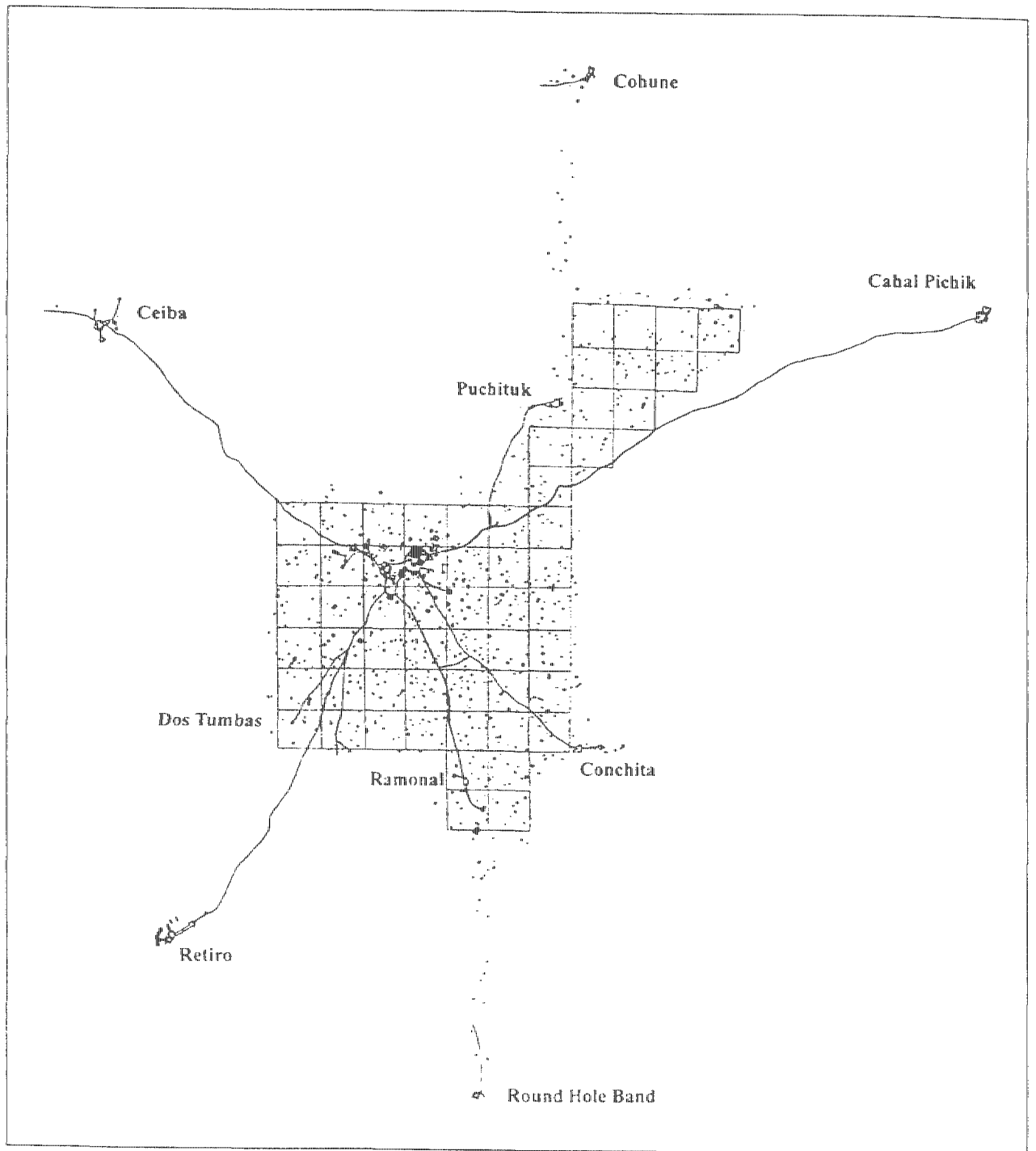
*Figure 3. Plan of the mapped area of Tikal, conjoining the mapped central 16 square kilometers with the mapped settlement transects.*

*Each square measures 500 m by 500 m; north is to the top of the page*

Page 265:

*Figure 4. Plan of the mapped area of Caracol, conjoining the block-mapped central area with the mapped settlement transects, causeways, and termini. Each square measures 500 m by 500 m; north is to the top of the page*





appears to have become regulated by the Late Classic Period, perhaps even being centrally planned. Causeways facilitated transport and communication throughout the metropolis. There is no evidence for attached specialists, as is argued for Copan (Webster and Freter, 1990). Craft specialists generally did not live within elite households; rather, specialty workshops (such as for *strombus* and wood-working) appear to be spatially distributed throughout the site, representing household control over production. A similar situation is seen at Tikal (Becker, 1973; Moholy-Nagy, 1997).

While Caracol and Tikal may not be typical of all Maya sites, they are certainly representative of the larger ones and presumably exemplify a good proportion of Classic Period social organization. However, in terms of all of the above variables and data classes, we would argue that a study of ancient Maya social status cannot be effectively viewed or understood without a perspective from "big sites" like Tikal and Caracol—sites that are at the acme of their political systems and which have been well situated archaeologically within their encompassing settlement landscapes. While research oriented to the elite will obviously reveal a partial picture, large sites surely housed a broad spectrum of Maya society.

Excavations at even well-sampled smaller sites will presumably yield divergent archaeological data from that found at "big sites;" smaller sites should not directly reflect their larger counterparts (e.g. A. Chase, 1998: 35 and Haviland 1992). Smaller sites will vary from "big sites" and should only be interpreted through their placement in broader regional contexts. They may exhibit differ-

ent proportions of the same societal segments found at larger sites: they may be completely missing segments of society that are found in the larger centers; they may represent only a single segment of the many different levels of society that are found in larger centers. Thus, attempts to make interpretations about the Maya based solely on data from elite contexts or only on data from smaller sites are likely to be incorrect. An example of this "small site"- "big site" dichotomy may be seen in reference to Colha, Belize, a site that needs to be interpreted in terms of its broader regional links (e.g. Malloy, 1986; and Shafer and Hester, 1986). While full of specialized lithic producers (Shafer and Hester, 1983), Colha does not present the same range of social variability that is found at the larger site of Altun Ha (Pendergast, 1979, 1982, 1990)—to which Colha was probably subordinate in the Late Classic era. Likewise, the lithic offerings of Altun Ha are better understood with a knowledge of Colha production.

### **Social Organization: Lineages and Clans**

Much recent discussion has been focused on the hypothesized lineage organization of the ancient Maya (Hendon, 1991; McAnany, 1995). However, given the archaeological settlement data and the density of Classic Period populations (Rice and Culbert, 1990), a strict lineage structure may not have existed in many of the sites of the Classic Period (Haviland, 1968, 1992). By "lineage," we mean a corporate descent group whose members trace their genealogical links to a common ancestor (Haviland, 1999: 300). Part of the archaeo-

logical problem in dealing with Maya social organization is that many Mayanists seem to think of lineages and clans (sometimes called sibs) as if they were static, fixed entities, rather than as dynamic and changing social constructs. Lineages and clans would have developed to serve particular purposes, but as those purposes changed over time, so too would social structure; they cannot be divorced from the functions they serve.

Importantly, settlement data (Haviland, 1968, 1972c; Chase *et al.*, 1990: 501) demonstrate that a strict lineage system did *not* characterize Tikal, at least in the Late Classic Period. And, the archaeological data from Caracol, especially that relevant to dietary intake in neighboring residential groups (D. Chase *et al.*, 1998), also demonstrate a lack of anything that can be interpreted as lineage clustering in the Late Classic settlement. Haviland (1968) suggested that strict corporate lineage structures, involving land-holding rights, likely broke down by the Late Classic era and further demonstrated that 16<sup>th</sup> century Yucatec Maya were more likely organized by clans (or sibs) rather than by lineages (especially given the dispersed residential locations of named populations). This does not imply a lack of concern for ancestry, but rather a lack of localized residences and corporate ownership of land.

Epigraphic evidence for the existence of Classic Period lineages consists of genealogical information related to Maya rulers. Unfortunately, the glyphs apply to the nobility and cannot be *assumed* to apply to the rest of society. Furthermore, many Classic Period elite texts appear to have modified ancestral claims to formulate justifications for rulership. This is clearly seen in Bird Jaguar IV of Yaxchi-

lan's extensive modification and re-statement of his predecessor's activities and relationships (Mathews, 1988; Schele and Freidel, 1990; Tza, 1992). Nevertheless, hieroglyphic texts make it evident that ancestry was important to the Maya. That some rulers "lied" about their genealogy emphasizes this. The Classic Period elite appear to have placed greater emphasis on patrilineal as opposed to matrilineal descent—although this point has been contested (see above). Whatever the case, the epigraphic texts do not necessarily preclude ambilineal descent by at least some Classic Period Maya elite.

Lineage organization among the Classic Maya nobility makes sense, considering the stakes involved relating to power and privilege. Where no such stakes existed (as among "commoners") the situation is quite different, especially if a centralized bureaucracy usurped some of the traditional functions of lineages, which appears to have been the case. In traditional horticultural societies, lineages commonly function as land-holding corporations, an activity that appears to have been usurped at both Tikal and Caracol. Any demise of commoners' lineages would also serve to reduce their opportunity to challenge elite power. Thus, it would have served the elite well to stress their own lineages while physically dismantling, or minimally de-emphasizing, all others.

Because the core members of a lineage commonly reside together at a particular locality (Haviland, 1999: 300), their existence may be reflected archaeologically. Archaeological data have been taken, in fact, to indicate the presence of groups larger than a single domestic residential group various sites. At Santa Rita Cerrozal, D. Chase (1982, 1986) attempt-



ed to show the existence of site sectors based upon the distinctions in ceramics and ritual offerings during the Postclassic era; each of these sectors contained at least one multiple room dwelling, which was interpreted as an upper-level administrative residence for that part of the Postclassic city. For Tikal, Haviland (1968) attempted to define the location of a dozen lineages in the mapped settlement. Each of these multi-residential units was defined based on settlement data, particularly upon the existence of spatially clustered residential groups in which only one of these contiguous groups exhibited an unusually large temple or palace, interpreted as an ancestral house (e.g. Haviland *et al.*, 1985: 185). Such clustering is not uniform at Tikal, but rather only existed in certain cases—such as when lineages functioned as craft guilds—where there was a continued reason for their existence.

While some such clustering may be evident at Tikal, the preponderance of east-focused groups at Caracol (over 60% of the mapped settlement [A. Chase and D. Chase, 1994a, 1996a, 1996b]) indicates the importance of the household as the focal settlement unit. The hundreds of east-focused groups at Caracol cannot all represent the houses of lineage heads. Further, there are uniform burial ritual, censerware deposition, and caching practices throughout the site. Buried in these east structures are individuals of both sexes (D. Chase, 1994, 1998). East buildings are also the locus for other ritual activity such as caching. These cached offerings are consistent throughout Late Classic Caracol and consist both of small lip-to-lip bowls that are either empty or enclose the remains of human fingers and of lidded

vessels with modeled representations of human faces (D. Chase and A. Chase, 1998). The uniformity in caches likewise does not suggest patron deities associated with individual lineages or clans (sibs). At least at Caracol, the ritual focus appears to be on smaller family groupings and their direct household ancestors rather than on larger lineages or clans. Thus, Haviland's suggested Late Classic lineage breakdown is even more manifest in the Caracol data than in the Tikal data upon which it originally was postulated.

## Conclusions

The view from the "big sites" is clear. Regardless of how one undertakes population estimates, the numbers are far greater than expectations for a chiefdom level society; such numbers are within the realm noted for other ancient states. Evidences of social stratification are present not only in material goods, but also in differential access to life's most basic resources, as can be seen in variations in ancient Maya diet. Differentiation within the population indicates the existence of multiple (etic) societal levels regardless, or in spite, of the ideal (emic) conceptions.

While archaeological data do not end the debate about the nature of Maya descent, recovered interments may be associated with carved monumental iconography (at both Yaxchilan and Tikal) to suggest the significance of the role played by at least some women in ancient Maya society. In certain specific cases (such as at Naranjo) women were clearly the "power behind the throne." From these and other data it can be inferred that women were capable of holding a variety of titles

and of transferring descent rights. These data, however, do not negate suggestions of patrilineal or cognatic descent.

Archaeological data also provide us with information about who lived where. At Late Classic Tikal, in some instances settlement maintained a lineage focus with clustered housing of related individuals. For the bulk of Tikal's population, however, the extended family was the largest residential group. In Late Classic Caracol, any lineage system had broken down even further than at Tikal and population densities were higher; thus, once an extended family became large enough to split and a new residential group was established, it necessarily was located nowhere near the original residential group because of constraints that the high population had to have placed on the use-rights of land. Land scarcity, in and of itself, could have caused the breakdown of any lineage organization. Whatever the case, households, rather than lineages, were the focal unit for both production and ancestor veneration at Caracol. Furthermore, at least at Caracol, censerable—perhaps the best potential material expression of patron deities that would be expected to be affiliated with lineages or clans—maintained an iconographic uniformity across the site that seems inconsistent with the existence of individual lineages.

At the "big sites" of Caracol and at Tikal, settlement was complex. At Tikal, the elite were concentrated in the epicenter, though others lived scattered in outlying areas. At Caracol, the elite not only lived in the epicenter, but also at causeway termini and sometimes in the surrounding core residential areas. Caracol's "service sector" lived outside, but adjacent to, the monumental architecture of

the site epicenter. At Tikal, service personnel sometimes lived in elite households, such as in Group 7F-1. At both sites craft specialists lived within city limits, but usually widely scattered in the outlying settlement. At Tikal, planning is most evident in the layout of the site epicenter and in the earthworks that delimit the city; the construction of the earthworks represented a major undertaking, implying strong central control to carry out as well as to maintain once constructed. At Caracol, planning is evident in the placement not only of epicentral monumental architecture, but also in the siting of residential groups, causeways and causeway termini, and agricultural fields; the maintenance needs of this densely packed landscape also imply strong central control.

Ancient Maya social organization was embedded within its political system. Current debate over Classic era socio-political organization is largely polarized over descriptions of the Maya as a segmentary versus a centralized society (Fox *et al.*, 1996; A. Chase and D. Chase, 1996a). But, evidence from "big sites," like Tikal and Caracol, suggests a far more urban and centralized situation (at least in the Classic Period) than that predicted by simpler social models for Maya society, such as those encompassed within the segmentary state or regal-ritual models. In our estimation, supporting data for simpler social models for the Classic Period Maya derive largely from smaller sites that have been taken out of a regional or hierarchical context. To some degree, varied points of view may be possible based on the size of the site or polity in question. Simply on the basis of population numbers, small sites and/or small polities may not have all of the heterogeneity and divisions present in

larger ones; they may appear to be more kinship-based and less hierarchical. In contrast, settlement at larger sites certainly appears to be less kinship-based, as well as more centralized and hierarchical. Thus, the sites at the top of the Classic Period social system—the “big sites”—must be fully understood archaeologically in regional context in order to better define broader patterns of social organization that must have pervaded most, if not all, Classic era Maya political systems.

Archaeological data add richness and perspective to discussions of ancient social organization. “Big sites” must be included in conjunctive discussions of ancient Maya socio-political organization. Without them the picture is incomplete and truncated. It is the conjunction of big-site regional archaeology with ethnohistory, ethnography, and epigraphy that adds the greatest sense of depth, complexity, variation, and change to our current views of the ancient Maya world.

## Bibliografía

- Adams, Richard E.W. "Suggested Classic Period Occupational Specialization in the Southern Maya Lowlands," en William R. Bullard (ed.), *Monographs and Papers in Maya Archaeology*. Papers of the Peabody Museum of Archaeology and Ethnology, Cambridge, Harvard University, 1970, pp. 487-502.
- , "Reply to Haviland", *American Antiquity*, núm. 37, 1972, pp. 140-141.
- , "Lost City of the Maya: Rio Azul", *National Geographic*, núm. 169(4), 1986, pp. 420-451.
- Arnold, J.E. y Anabel Ford, "A Statistical Examination of Settlement Patterns at Tikal, Guatemala", *American Antiquity*, núm. 45, 1980, pp. 713-726.
- Ball, Joseph. "Pottery, Potters, Palaces, and Politics: Some Socioeconomic and Political Implications of Late Classic Maya Ceramic Industries", en Jeremy A. Sabloff y John S. Henderson (eds.), *Lowland Maya Civilization in the Eighth Century A.D.*, Dumbarton Oaks, Washington, D.C., 1993, pp. 243-272.
- Becker, Marshall. "Archaeological Evidence for Occupational Specialization among the Classic Period Maya at Tikal, Guatemala", *American Antiquity*, núm. 38, 1973, pp. 396-406.
- , "Ancient Maya Houses and their Identification: An Evaluation of Architectural Groups at Tikal and Inferences Regarding their Functions", *Revista Española de Antropología Americana*, núm. 12, 1982, pp. 111-129.
- Becquelin, Pierre y Dominique Michelet. "Demografía en la zona Puuc: el recurso del método". *Latin American Antiquity*, núm. 5(4), 1994, pp. 289-311.
- Chase, Arlen F., "Elites and the Changing Organization of Classic Maya Society", en D. Z. Chase y A.F. Chase (eds.), *Mesoamerican Elites: An Archaeological Assessment*, Norman, University of Oklahoma Press, 1992, pp. 30-49.
- , "Planeación cívica e integración de sitio en Caracol, Belice. Definiendo una economía administrada del Periodo Clásico maya". *Los investigadores de la cultura maya*, núm. 6(1), Universidad Autónoma de Campeche, 1998, pp. 26-44.
- y Diane Z. Chase, *Investigations at the Classic Maya City of Caracol, Belize: 1985-1987*, San Francisco, Monograph 3, Pre-Columbian Art Research Institute, 1987.
- , "Mesoamerican Elites: Assumptions, Definitions, and Models", en D. Z. Chase y A. F. Chase (eds.), *Mesoamerican Elites: An Archaeological Assessment*, Norman, University of Oklahoma Press, 1992, pp. 3-17.
- , "Maya Veneration of the Dead at Caracol, Belize". en M. Robertson y V. Field (eds.), *Serenidad Palenque Round Table, 1989*, San Francisco, Pre-Columbian Art Research Institute, 1994a, pp. 55-62.
- , "Details in the Archaeology of Caracol, Belize: An Introduction", en D. Z. Chase y A. F. Chase (eds.), *Studies in the Archaeology of Caracol, Belize*, San Francisco, Monograph 7, Pre-Columbian Art Research Institute, 1994b, pp. 1-11.
- , "More than Kin and King: Centralized Political Organization among the Ancient Maya", *Current Anthropology*, núm. 37(5), 1996a, pp. 803-810.

- , "A Mighty Maya Nation: How Caracol Built an Empire by Cultivating Its 'Middle Class'", *Archaeology*, núm. 49(5), 1996b, pp. 66-72.
- , "The Organization and Composition of Classic Lowland Maya Society: The View from Caracol, Belize", en M. Robertson, M. Macri y J. McHargue (eds.), *Eighth Palenque Round Table, 1993*, San Francisco, Pre-Columbian Art Research Institute, 1996c, pp. 213-222.
- , "Late Classic Maya Political Structure, Polity Size and Warfare Arenas", en Andrés Ciudad Ruiz *et al.* (eds.), *Anatomía de una civilización: Aproximaciones interdisciplinarias a la cultura maya*, Madrid, Sociedad Española de Estudios Mayas, 1998, pp. 11-29.
- , "Scale and Intensity in Classic Period Maya Agriculture: Terracing and Settlement at the 'Garden City' of Caracol, Belize", *Culture and Agriculture*, núm. 20(2), 1998b.
- , "The Royal Court of Caracol, Belize: Its Palaces and People", en T. Inomata y S.D. Houston (eds.), *Royal Courts of the Ancient Maya*, Boulder, Westview Press, 2000.
- Chase, Diane Z., "Spatial and Temporal Variability in Postclassic Northern Belize", tesis doctoral, Filadelfia, Department of Anthropology, University of Pennsylvania, 1982.
- , "Social and Political Organization in the Land of Cacao and Honey: Correlating the Archaeology and Ethnohistory of the Postclassic Lowland Maya", en J. A. Sabloff y E. W. Andrews V. (eds.), *Late Lowland Maya Civilization*, Albuquerque, University of New Mexico Press, 1986, pp. 347-377.
- , "Postclassic Maya Elites: Ethnohistory and Archaeology", en D. Z. Chase y A. F. Chase (eds.), *Mesoamerican Elites: An Archaeological Assessment*, Norman, University of Oklahoma Press, 1992, pp. 30-49.
- , "Human Osteology, Pathology, and Demography as Represented in the Burials of Caracol, Belize", en Diane Z. Chase y Arlen F. Chase (eds.), *Studies in the Archaeology of Caracol, Belize*, San Francisco, Pre-Columbian Art Research Institute, 1994, pp. 123-138.
- , "Southern Lowland Maya Archaeology and Human Skeletal Remains: Interpretations from Caracol (Belize), Santa Rita Corozal (Belize), and Tayasal (Guatemala)", en Stephen L. Whittington y David M. Reed, *Bones of the Maya: Studies of Ancient Skeletons*, Washington, Smithsonian Institution Press, 1997, pp. 15-27.
- , "Albergando a Los Muertos en Caracol, Belice", *Los Investigadores de la Cultura Maya*, núm. 6(1), Universidad Autónoma de Campeche, 1998, pp. 26-44.
- y Arlen F. Chase, *Offerings to the Gods: Maya Archaeology at Santa Rita Corozal*, Orlando, University of Central Florida, 1986.
- , *A Postclassic Perspective: Excavations at the Maya Site of Santa Rita Corozal, Belize*, San Francisco, Monograph 4, Pre-Columbian Art Research Institute, 1988.
- , "An Archaeological Assessment of Mesoamerican Elites", en D. Z. Chase y A. F. Chase (eds.), *Mesoamerican Elites: An Archaeological Assessment*, Norman, University of Oklahoma Press, 1992, pp. 303-317.
- , "Maya Multiples: Individuals, Entries, and Tombs in Structure A34 of Caracol, Belize", *Latin American Antiquity*, núm. 7(1), 1996, pp. 61-79.
- , "The Architectural Context of Caches, Burials, and Other Ritual Activities for the Classic Period Maya (as Reflected at Caracol, Belize)", en Stephen D. Houston (ed.), *Functions and Meaning in Classic Maya Architecture*, Dumbarton Oaks, Washington, D.C., 1998, pp. 299-332.
- , Arlen F. Chase y William A. Haviland, "The Classic Maya City: Reconsidering 'The Mesoamerican Urban Tradition'", *American Anthropologist*, núm. 92, 1990, pp. 499-506.
- , Arlen F. Chase, Christine White y Wendy Giddens, "Human Skeletal Remains in Archaeological Context: Status, Diet, and Household at Caracol, Belize", ponencia presentada en el 14<sup>th</sup> International Congress of Anthropological and Ethnological Sciences, Williamsburg, Virginia, 1988.

- Cobos, Rafael, "Preliminary Report on the Archaeological Mollusca and Shell Ornaments of Caracol, Belize", en Diane Z. Chase y Arlen F. Chase (eds.), *Studies in the Archaeology of Caracol, Belize*, San Francisco, Pre-Columbian Art Research Institute, 1994, pp. 139-147.
- Coe, Michael D., "The Ideology of the Maya Tomb", en Elizabeth Benson y Gillett Griffin (eds.), *Maya Iconography*. Princeton, Princeton University Press, 1998, pp. 222-235.
- Culbert, T. Patrick y Don S. Rice (eds.), *Precolumbian Population History in the Maya Lowlands*, Albuquerque. University of New Mexico Press, 1990.
- Fash, William, *Scribes, Warriors, and Kings: The City of Copan and the Ancient Maya*, Londres, Thames and Hudson Ltd., 1991.
- Folan, William J., Joyce Marcus, Sophia Pincemin, María del Rosario Domínguez Carrasco, Laraine Fletcher y Abel Morales López, "Calakmul: New Data from an Ancient Maya Capital in Campeche, México", *Latin American Antiquity*, núm. 6(4), 1995, pp. 310-334.
- Fox, John W., Garrett W. Cook, Arlen F. Chase y Diane Z. Chase, "Questions of Political and Economic Integration: Segmentary versus Centralized States among the Ancient Maya", *Current Anthropology*, núm. 37(5), 1996, pp. 795-801.
- Fox, James A. y John S. Justeson, "Classic Maya Dynastic Alliance and Succession", en Virginia Bricker y Ronald Spores (eds.), *Supplement to Handbook of Middle American Indians*, vol. 4, Austin, University of Texas Press, 1986, pp. 7-34.
- Fried, Morton, *The Evolution of Political Society*, Nueva York, Random House, 1967.
- Harrison, Peter D., "Form and Function in a Maya Palace Group", *Verhandlungen des XXXVIII Internationalen Amerikanistenkongresses*, vol. 1, Stuttgart-Munich, 1969, pp. 165-172.
- , "Tikal: Selected Topics", en Elizabeth Benson (ed.), *City-States of the Maya*, Rocky Mountain Institute for Pre-Columbian Studies, 1986, pp. 45-71.
- Haviland, William A., "Stature at Tikal, Guatemala: Implications for Ancient Maya Demography and Social Organization", *American Antiquity*, núm. 32(3), 1967, pp. 316-325.
- , *Ancient Lowland Maya Social Organization*, Nueva Orleans, Middle American Research Institute Publication, núm. 26(5), Tulane University, 1968.
- , "A Note on the Social Organization of the Chontal Maya", *Ethnology*, núm. 9, 1970a, pp. 96-98.
- , "Marriage and Family among the Maya of Cozumel Island, 1570", *Estudios de Cultura Maya*, núm. 8, 1970b, pp. 217-226.
- , "Entombment, Authority, and Descent at Altar de Sacrificios, Guatemala", *American Antiquity*, núm. 36(1), 1971, pp. 102-105.
- , "Principles of Descent in Sixteenth Century Yucatan", *Katunob*, núm. 8, 1972a, pp. 63-73.
- , "A New Look at Classic Maya Social Organization at Tikal", *Cerámica de Cultura Maya*, núm. 8, 1972b, pp. 1-16.
- , "Family Size, Prehistoric Population Estimates and the Ancient Maya", *American Antiquity*, núm. 37, pp. 135-137.
- , "Rules of Descent in Sixteenth Century Yucatan", *Estudios de Cultura Maya*, núm. 9, 1973, pp. 135-150.
- , "Occupational Specialization at Tikal, Guatemala: Stone Working - Monument Carving", *American Antiquity*, núm. 39, 1974, pp. 494-496.
- , "Dynastic Genealogies from Tikal, Guatemala", *American Antiquity*, núm. 42, 1977, pp. 61-67.
- , "Dower Houses and Minor Centers at Tikal, Guatemala: An Investigation into the Identification of Valid Units in Settlement Hierarchies", en Wendy Ashmore (ed.), *Lowland Maya Settlement Patterns*. Albuquerque. University of New Mexico Press, 1981, pp. 89-120.
- , "Where the Rich Folks Lived: Deranging Factors in the Statistical Analysis of Tikal Settlement", *American Antiquity*, núm. 47, 1982, pp. 61-67.

- , "Population and Social Dynamics: The Dynasties and Social Structure of Tikal", *Expedition*, núm. 27(3), 1985, pp. 34-41.
- , "Musical Hammocks at Tikal: Problems with Reconstructing Household Composition", en Richard R. Wilk y Wendy Ashmore (eds.), *Household and Community in the Mesoamerican Past*, Albuquerque, University of New Mexico Press, 1988, pp. 121-134.
- , "Status and Power in Classic Maya Society: The View from Tikal", *American Anthropologist*, núm. 94(4), 1992, pp. 937-940.
- , "The Rise and Fall of Sexual Inequality: Death and Gender at Tikal, Guatemala", *Ancient Mesoamerica*, núm. 8(1), 1997a, pp. 1-12.
- , "On the Maya State", *Current Anthropology*, núm. 38(3), 1997b, pp. 443-445.
- , *Cultural Anthropology*, 9<sup>th</sup> Edition, Fort Worth, Harcourt-Brace, 1999.
- Haviland, William A., Marshall J. Becker, Ann Chowning, Kieth A. Dixon y Karl Heider, *Excavations in Small Residential Groups of Tikal: Groups 4F-1 and 4F-2*, Filadelfia, University Museum Monograph, núm. 58, University of Pennsylvania, 1985.
- y Hattula Moholy-Nagy, "Review of Mayapan, Yucatan, Mexico, by H.E.D. Pollock, R.L. Roys, T. Proskouriakoff, and A.L. Smith", *American Journal of Archaeology*, núm. 67, 1963, pp. 327-330.
- , "Distinguishing the High and Mighty from the Hoi Polloi at Tikal, Guatemala", en Diane Z. Chase y Arlen F. Chase (eds.), *Mesoamerican Elites: An Archaeological Assessment*, Norman, University of Oklahoma Press, 1992, pp. 51-60.
- Hellmuth, Nicholas, "Cholti-Lacandon (Chiapas) and Peten-Ytza Agriculture, Settlement Pattern, and Population", en Norman Hammond (ed.), *Social Process in Maya Prehistory*, Londres, Academic Press, 1977, pp. 421-448.
- Hendon, Julia, "Status and Power in Maya Society: An Archaeological Study", *American Anthropologist*, núm. 93, 1991, pp. 894-918.
- Hopkins, Nicholas A., "Classic Maya Kinship Systems: Epigraphic and Ethnohistoric Evidence for Patrilineality", *Estudios de Cultura Maya*, núm. 17, 1988, pp. 87-121.
- , "Classic and Modern Relationship Terms and the 'Child of Mother' Glyph (T1:606.23)", en Merle Greene Robertson y Virginia M. Fields (eds.), *Sixth Palenque Round Table, 1986*, Norman, University of Oklahoma Press, 1991, pp. 255-265.
- Jones, Christopher, "Inauguration Dates of Three Late Classic Rulers of Tikal, Guatemala", *American Antiquity*, núm. 42(1), 1977, pp. 28-60.
- Joyce, Rosemary, "Classic Maya Kinship and Descent: An Alternative Suggestion", *Journal of the Steward Anthropological Society*, núm. 13(1), 1981, pp. 45-57.
- Laporte, Juan Pedro, "La cerámica del Clásico Temprano desde un mundo perdido. Tikal: una reevaluación", en Prudence M. Rice y Robert J. Sharer (eds.), *Maya Ceramics*, Oxford, British Archaeological Reports International Series, núm. 35, 1987, pp. 121-181.
- McAnany, Patricia, "The Economics of Social Power and Wealth among Eighth-Century Maya Households", en Jeremy A. Sabloff y John S. Henderson (eds.), *Lowland Maya Civilization in the Eighth Century A.D.*, Washington, D.C., Dumbarton Oaks, 1993, pp. 65-89.
- , *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*, Austin, University of Texas Press, 1995.
- Mallory, John K., "'Workshops' and 'Specialized Production' in the Production of Maya Chert Tools: A Response to Shafer and Hester", *American Antiquity*, núm. 51, 1986, pp. 152-157.
- Marcus, Joyce, "On the Nature of the Mesoamerican City", en Evon Vogt y Richard Leventhal (eds.), *Prehistoric Settlement Patterns*, Albuquerque, University of New Mexico Press, 1983, pp. 195-242.
- , *Mesoamerican Writing Systems: Propaganda, Myth, and History in Four Ancient Civilizations*, Princeton, Princeton University Press, 1992.

- , "Where is Lowland Maya Archaeology Headed?", *Journal of Archaeological Research*, núm. 3, 1995, pp. 3-53.
- Mathews, Peter L. "The Sculpture of Yaxchilan", conferencia doctoral, Yale University, University Microfilms 9011374, 1988.
- Moholy-Nagy, Hattula, "The Social and Ceremonial Uses of Marine Molluscs at Tikal". en Mary Pohl (ed.), *Prehistoric Lowland Maya Environment and Subsistence Economy*, Cambridge, Peabody Museum of Archaeology and Ethnology, Harvard University, 1985, pp. 147-158.
- , "Middens, Construction Fill, and Offerings: Evidence for the Organization of Classic Period Craft Production at Tikal, Guatemala", *Journal of Field Archaeology*, núm. 24(3), 1997, pp. 293-313.
- Murdock, George Peter, "Cognatic Forms of Social Organization", en George P. Murdock (ed.), *Social Structure in Southeast Asia*, Chicago, University of Chicago Press, 1960, pp. 1-14.
- Pendergast, David, *Excavations at Altun Ha, Belize; 1964-1970*, vol. 1, Toronto, Royal Ontario Museum, 1979.
- , *Excavations at Altun Ha, Belize; 1964-1970*, vol. 2, Toronto, Royal Ontario Museum, 1982.
- , *Excavations at Altun Ha, Belize; 1964-1970*, vol. 3, Toronto, Royal Ontario Museum, 1990.
- Pope, Cynthia, "Preliminary Analysis of Small Chert Tools and Related Debitage at Caracol, Belize", en Diane Z. Chase y Arlen F. Chase (eds.), *Studies in the Archaeology of Caracol, Belize*, San Francisco, Pre-Columbian Art Research Institute, 1994, pp. 148-156.
- Puleston, Dennis E., "Intersite Areas in the Vicinity of Tikal and Uaxactun", en N. Hammond (ed.), *Mesoamerican Archaeology: New Approaches*, Austin, University of Texas Press, 1974, pp. 303-311.
- , "The Settlement Survey of Tikal", *Tikal Report*, núm. 13, Filadelfia, University Museum Monograph 48, University of Pennsylvania, 1983.
- y Donald Callender, "Defensive Earthworks at Tikal", *Expedition*, núm. 9(3), 1967, pp. 40-48.
- Rice, Don S. y T. Patrick Culbert, "Historical Contexts for Population Reconstruction in the Maya Lowlands", en T. Patrick Culbert y Don S. Rice (eds.), *Pre-Columbian Population History in the Maya Lowlands*, Albuquerque, University of New Mexico Press, 1990, pp. 1-36.
- Roys, Ralph L., "Personal Names of the Maya of Yucatan", *Contributions to American Anthropology and History*, núm. 31, Washington, D. C., Carnegie Institution of Washington, 1940.
- , *The Indian Background of Colonial Yucatan*, Washington, D.C., Carnegie Institution of Washington, 1943.
- , "Literary Sources for the History of Mayapan", en H. E. D. Pollock, R. L. Roys, T. Proskouriakoff y A. L. Smith (eds.), *Mayapan, Yucatan, Mexico*, Washington, D.C., Carnegie Institution of Washington, 1962, pp. 24-86.
- Schele, Linda y David A. Freidel, *A Forest of Kings: The Untold Story of the Ancient Maya*, Nueva York, William Morrow, 1990.
- Shafer, Harry y Tom Hester, "Ancient Maya Chert Workshops in Northern Belize, Central America", *American Antiquity*, núm. 48(3), 1983, pp. 519-543.
- , "Maya Stone-Tool Craft Specialization and Production at Colha, Belize: Reply to Mallory", *American Antiquity*, núm. 51(1), 1986, pp. 158-166.
- Sharer, Robert J., "The Social Organization of the Late Classic Maya: Problems of Definition and Approaches", en Jeremy A. Sabloff y John S. Henderson (eds.), *Lowland Maya Civilization in the Eighth Century A.D.*, Washington, D.C., Dumbarton Oaks, 1993, pp. 91-109.
- Stuart, David, "Historical Inscriptions and the Maya Collapse", en Jeremy A. Sabloff y John S. Henderson (eds.), *Lowland Maya Civilization in the Eighth Century A.D.*, Washington, D.C., Dumbarton Oaks, 1993, pp. 321-354.



- , "Kinship Terms in Maya Inscriptions", en Martha J. Macri y Anabel Ford (eds.), *The Languages of Maya Hieroglyphs*, San Francisco, The Pre-Columbian Art Research Institute, 1997, pp. 1-11.
- Tate, Carolyn E. *Yaxchilan: The Design of a Maya Ceremonial City*, Austin, University of Texas Press, 1992.
- Tozzer, Alfred Marston, "Landa's *Relación de las cosas de Yucatán*". *Papers of the Peabody Museum of Archaeology and Ethnology*, núm. 18, Cambridge, Harvard University, 1941.
- Vogt, Evon Z., "Some Aspects of Zinacantan Settlement Patterns and Ceremonial Organization", *Estudios de Cultura Maya*, núm. 1, 1961, pp. 131-145.
- , "Some Implications of Zinacantan Social Structure for the Study of the Ancient Maya", *XXXV Congreso Internacional de Americanistas*, vol. 1, México, 1964, pp. 307-319.
- Webster, David L. y Ann Corinne Freter, "The Demography of Late Classic Copan", en T. Patrick Culbert y Don S. Rice (eds.), *Precolumbian Population History in the Maya Lowlands*, Albuquerque, University of New Mexico Press, 1990, pp. 37-61.
- Wilk, Richard, "Maya Household Organization: Evidence and Analogies", en Richard R. Wilk y Wendy Ashmore (eds.), *Household and Community in the Mesoamerican Past*, Albuquerque, University of New Mexico Press, 1988, pp. 135-151.