The City-States of the Maya

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The Maya are a unique case for a city-state culture in a tropical lowland environment. Maya states flourished in an area corresponding to the territory of present day southern Mexico (Chiapas, Tabasco, Campeche, Yucatan and Quintana Roo), Belize, northern Guatemala (Peten) and a small area of eastern Honduras. In contrast to most of the city-states discussed and compared in this symposium, many facets of Maya states are still unknown and controversial. The systematic study of Maya states has begun only recently as a result of the decipherment of Maya hieroglyphic writing and in-depth settlement studies in the rural areas around and between the urban centers. The present paper attempts to summarize what we know about Maya states and what we still do not know, and especially how archaeologists and specialists of Maya writing use their data to develop more sophisticated models of the political geography of the Maya lowlands. The basic outlines of the picture I am going to draw most probably will not change, but much of the detail will be revised.

Classic Maya culture, characterized by a multitude of cities with monumental architecture, hieroglyphic writing and a complex hierarchy of settlement, flourished between 250 A.D. and 900 A.D. For a long time, the Classic period has been seen as an isolated phenomenon without a long preceding development. Recent excavations and discoveries have brought to light evidence for the existence of enormous cities with monumental architecture, and hence for complex administrative structures, as early as the 6th century B.C. Unfortunately, our knowledge about the growth and organization of late Preclassic cities such as Nakbe, El Mirador, Cerros and Uaxactun is severely handicapped due to the scarcity, if not complete absence, of written texts from this period. Even though Maya hieroglyphic writing, our principal source for the investigation of the Maya states, probably was developed already centuries before the start of the Classic period, it is not before the third century A.D. that dated hieroglyphic inscriptions are widely used for recording the history and personal biographies of Maya kings.

The institution of statehood was in no way limited to the Classic period. Even though the majority of the city-states disappeared after what is known as the Classic Maya collapse in the 9th century, a few states on the periphery of the lowland Maya area survived, and other states and cities were newly founded and flourished in the Postclassic period on the Yucatan peninsula, the highlands of Guatemala and the central lowlands of northern Guatemala until the arrival of the Spaniards in the 16th century. The states of the Itza Maya resisted all attempts at conquest until 1697. The Postclassic states are almost as unknown as their Preclassic precursors because the tradition of monumental hieroglyphic inscriptions was discontinued. The principal media for recording writing in the Postclassic seems to have been barkpaper books, of which only four survived decay and the Spanish destruction. Because of the scarcity of written documents, I will focus on the city-states of the Classic period lowlands and touch on the Middle and Late Postclassic states of ca. 1100-1550 A.D. only briefly.

The Identification of Maya States

Approaches to the reconstruction of Maya political organization have been drawn from a variety of sources: archaeological data, the hieroglyphic record, ethnohistorical analogies, and external models applied from anthropological theory. In nearly all a recurrent division in thinking can be noted: one favors a large-scale view of multi-center polities that can be characterized as a "regional state" model; the other conversely sees polities of limited size, a population center surrounded by its immediate sustaining area, often termed a "city-state" model.

Early researchers, though hardly explicit in their interpretation of Maya socio-political structure,

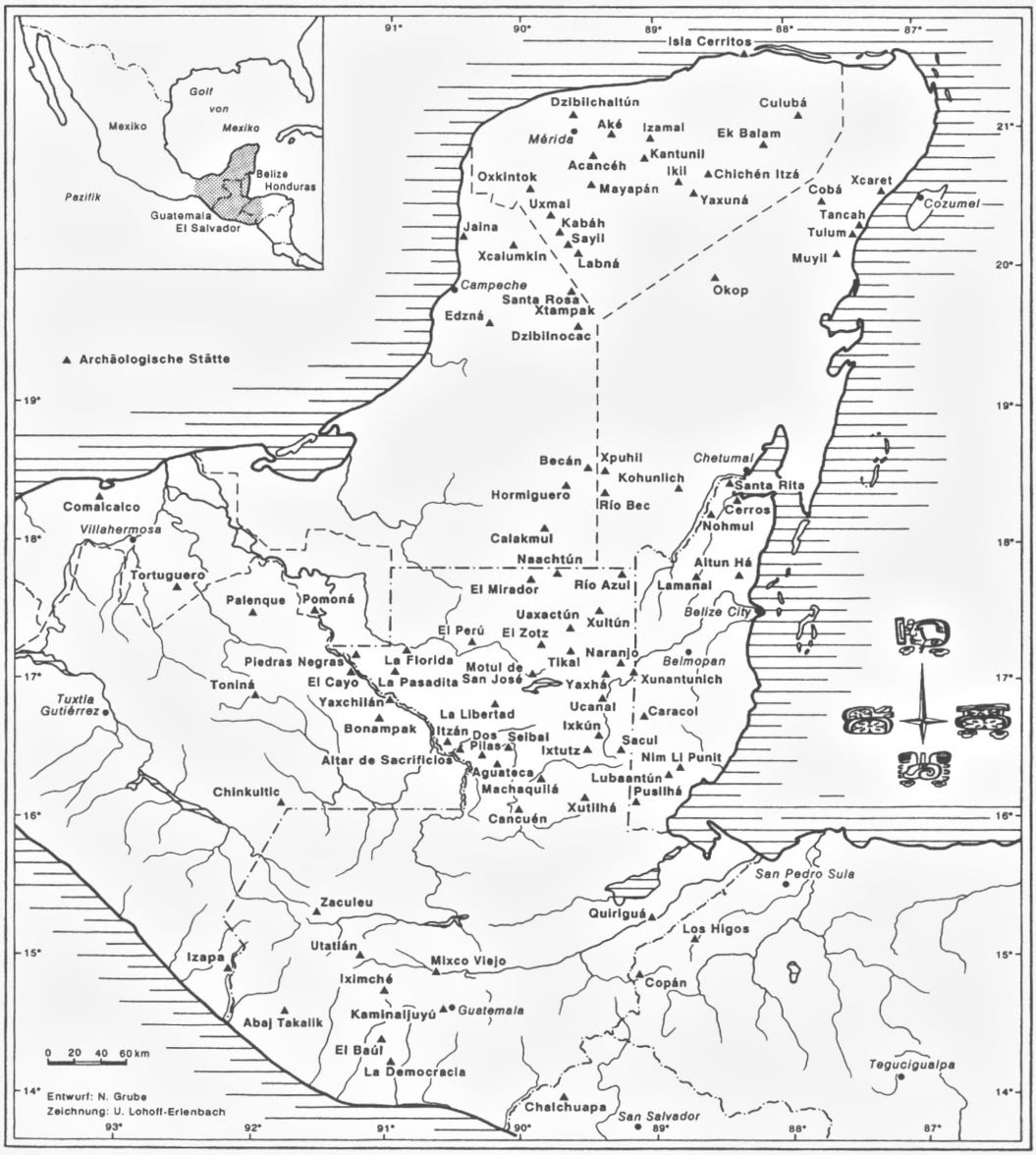

Figure 1: Map of the Maya area (drawing by U. Lohoff-Erlenbach after a draft by the author).

alluded either to the idea of small city-states that were variously compared to Greek *poleis* and the states of Renaissance Italy (Morley [1946] 50; Thompson [1950] 7; [1954] 81) or larger regional groupings often called "Empire" (Morley [1947] 160). The first empirical attempt to derive political implications from material remains can largely be attributed to William R. Bullard Jr. (1960). His localized analysis of settlement distribution in the northeast Peten produced a size-based hierarchy of sites and probable territories under their administration. Formal geographical modeling, derived from central-place theory (Christaller [1933]; Haggert [1965]), was introduced by Kent Flannery to reconstruct the site hierarchy of a single polity, Calakmul (1972); while in Norman Hammond's study of Lubaantun environmental factors were used to assess a polity's resource base and thus to reconstruct its total "realm" (1972, 1975). Hammond later used a similar approach to cover much of the Maya lowlands, introducing Thiessen polygons as a schematic way with which to express potential polity boundaries and territories controlled by major centers (1974). His definition of a "major center", and hence a polity capital, was a general judgement based on building mass and typology and, like Bullard before him, his study did not (while noting the issue) address the great disparity in size between such centers.

This last point was taken up by Richard E. W. Adams, who, together with several collaborators, assessed the construction mass and typological make-up of a great many sites in an attempt to produce an

objective method for their rank-ordering (Adams & Jones [1981]; Turner, Turner & Adams [1981]). His work proposed a hierarchy of four tiers and a map of the Maya area that delimited eight regional states: Tikal, Calakmul, Palenque, Copán, Yaxchilan, Río Bec, Cobá, and "Puuc-Chenes".

The celebrated discovery of historicism in the inscriptions, heralded in the work of Heinrich Berlin (1958) and Tatiana Proskouriakoff (1960), led to the collapse of the old view of Maya civilization as a theocracy guided by a priestly elite without interest in politics. Now it became clear that Maya states were headed by divine rulers (*k'ul ahaw*) who succeded to their office through patrilineal descent. These rulers used written texts to record their deeds and to legitimize their rule through divine sanction. In this new environment of dynastic succession and endemic "raiding", political organization became one of the main concerns of research for the first time.

Heinrich Berlin noted that a particular class of hieroglyphs – linked by a common formula – had versions specific to each of the major sites. He called these compounds "Emblem Glyphs" and speculated that they referred to ruling lineages, patron deities or even named the centers themselves. His article attributed eight Emblems, while almost forty can now be recognized.

The first person to make real use of the Emblem Glyph, and so to approach the topic from an epigraphic viewpoint, was Thomas Barthel (1968a, 1968b). Following one of Berlin's observations, he examined a text on the Copan monument Stela A naming four Emblem Glyphs in succession: those of Copan, Tikal, Palenque and Calakmul; each one is associated with the number "four", a "sky" glyph and a sign for one of the four cardinal directions. Barthel interpreted this as a reference to a conceptual political universe aligned on the four cardinal points. Strong analogies for this kind of arrangement can be found in Maya ethnography and ethnohistory, where this four-way division of space is a fundamental and pervasive idea.

These ideas were taken up by Joyce Marcus (1973, 1976, 1983), who combined them with central-place analysis and an interpretation of wider Emblem Glyph distribution to propose a ranking between a large number of lowland centers. In her model the four "primary centers" cited at Copan headed large regional states whose domains incorporated strata of secondary, tertiary and quaternary sites (adding to Barthel's schema two shifting "confederacies", those of Yaxchilan and the "Petexbatún"). More recently, Marcus has revised the model to include a more dynamic quality and has argued from an ethnohistorical perspective that the cyclical unification and fragmentation of polities in Postclassic northern lowlands provides a close parallel for the Classic period (1993, 1998).

The decipherment of the key *ahaw* "lord, ruler" element of Emblem Glyphs (Lounsbury [1973]) allowed Peter Mathews to identify such compounds as the personal titles of Maya kings (Mathews & Justeson [1984] 216; Mathews [1985] 32). His analysis demonstrated that Emblems refer to the sovereignty of a ruler over a particular center or territory, and that the title does not in itself make any differentiation in rank between the various office-holders. Based on this interpretation and the spatial distribution of Emblem Glyphs, he produced his own reconstruction of the layout of Classic Maya polities in which, by the Late Classic (A.D. 600-900), the southern lowlands were politically divided into some thirty or more independent states (Mathews [1985], [1988], [1991]). With each ruler claiming the same title of "divine king", it became clear that Maya polities were structurally autonomous, with no sign that their basic composition altered in any fundamental way from their inception to dissolution (Mathews [1991] 29).

This more dispersed scenario was very much in line with theoretical approaches gaining ground among archaeologists (e.g. Sanders [1981]) and accorded closely with the descriptive models of "peer-polity interaction" developed by Renfrew ([1982]; Renfrew & Cherry [1986]) after Price (1977) and Wesson's "state system" (1978) (Freidel [1986]; Sabloff [1986]; Hammond [1991]). Both describe culturally homogeneous landscapes made up of densely clustered, autonomous polities, in which none achieves a measure of dominance.

More recently these have been joined by a number of related and highly influential analytical models: the "segmentary state" of Southall (1956) and Fox (1977), "theater state" of Geertz (1980), and "galactic polity" of Tambiah (1976, 1977) (Carmack [1981]; Hammond [1991]; Demarest [1992]). These "weak state" constructs (Houston [1992a]) have provided comparative frameworks for the decentralized, small polity view that has emerged as a wide consensus both of archaeologists (Fox [1987]; Sanders & Webster [1988]; de Montmollin [1989]; Ball & Taschek [1991]; Ball [1993]) and epigraphers (Houston [1992a], [1992b], [1993]; Stuart [1993]). Broadly speaking, these authors characterize Maya states as fragile structures with weak control over people and

territory, centered on the rule of charismatic kings who use personal ties, rather than a formal bureaucracy, to exercise their authority.

Yet, all reconstructions of the political system of the Maya have always failed to explain why some cities are vastly larger than others. Were such disparate units really equals? The idea that central authority within larger kingdoms was ineffectual is undermined by the scale of their public works – massive pyramids, defensive earthworks miles in length, and great networks of internal roadways – which would have required centralized planning and the control of substantial manpower (Folan *et al* [1983]; Folan [1985]; Culbert [1988], [1991]; Chase, Chase & Haviland [1990]; Chase & Chase [1992]).

The most compelling explanation for the difference in size comes from the recent discovery of a higher order of political organization beyond the level of the individual state (Martin & Grube [1994], [1995]; Martin [1996]; Grube [1996]; Grube & Martin [1998]). Epigraphic information for political subordination and the existence of political confederations in the Maya lowlands has been studied only recently. Hieroglyphs have been found which define a dominant-subordinate relationship between kings of different states, where the highest rank of *ahaw* ("lord, ruler") comes into play. By adding the possessive prefix *y-*, *ahaw* becomes *y-ahaw*, "the lord of", or in effect "his vassal". Further evidence for the hierarchy between states is found in passages recording the accession of kings. Some of these statements contain a secondary phrase giving the name and emblem of a foreign ruler. This phrase is introduced by a verb clause that epigraphers now translate as *u kabhiy*, "it was done by him".

If we combine the appearance of the *y-ahaw* and *u-kabhiy* phrases with Classic period texts documenting other forms of interaction between states, such as royal visits, gift-giving, joint ritual activity, and marriage, we find the hierarchical contacts are part of relationships spanning several generations. Some kingdoms are consistently more dominant than others and seem to be manipulating the affairs of weaker ones. This analysis is supported by inscriptions describing conflicts. Wars are only rarely recorded between states that usually share political ties, and politically allied kingdoms tend to share the same adversaries. Together, such patterns suggest that there were groupings of states during the Late Classic period headed by the most powerful states such as Calakmul and Tikal, characterized by their size and the richness of their architecture.

The new picture that emerges is that of a few powerful kingdoms that held lesser ones in their sway. Conquests made by the dominant states were not consolidated by military occupation or centrally administered. Local lords were usually restored to their offices and allowed to rule their states without further hindrance. Thus, the state, or the city-state remained the principal unit of lowland Maya politics. Large states came to dominate the weak, but at no time in Maya history was a real empire with unified territories consolidated. City-states usually preserved a large degree of autonomy even when they became vassals or allies of other centers. This scenario should not bother us since it is very similar to classical Greece, where small, fiercely individualistic states engaged in a long and inconclusive struggle for dominance of their cultural realm (Hansen, *supra* 141-87). Most importantly for us, this was no peer polity landscape, but one dominated by the hegemonic states – Athens, Sparta and Thebes – which headed wider groupings not of allies, but of subject-allies, subordinated polities which had become their political dependents.

The Territory of Maya City-States

The city-state model as initially developed by Mathews (1985, 1988, 1991) is based on the hypothesis that all centers with their own Emblem Glyph and the presence of a divine king represent capitals of city-states. This produces a map of approximately 30 units in the lowlands during the Late Classic period. Applying geographical models of ideal boundaries such as Thiessen polygons to these capitals, a hypothetical map of lowland Maya city-states has been reconstructed (Mathews [1991]). This reconstruction has many drawbacks, however, as has been pointed out by Joyce Marcus (1993), as it is only appropriate for egalitarian societies where all polities are of equal size and power. In the Maya case, however, size differences are obvious and are accompanied by widely varying numbers of inscribed public monuments, and even more important, with notable differences of political power. Politically less important states are not mentioned as often in the written record of other polities as influential states. Marcus noted that, ignoring the inscriptional evidence and applying Thiessen polygons only, Tikal which certainly ranks as one of the largest Maya cities receives an absurdly tiny area (Marcus [1989] 38).

The investigation of the size of ancient Maya polities is handicapped by the absence of identifiable boundaries, be they natural features or man-made

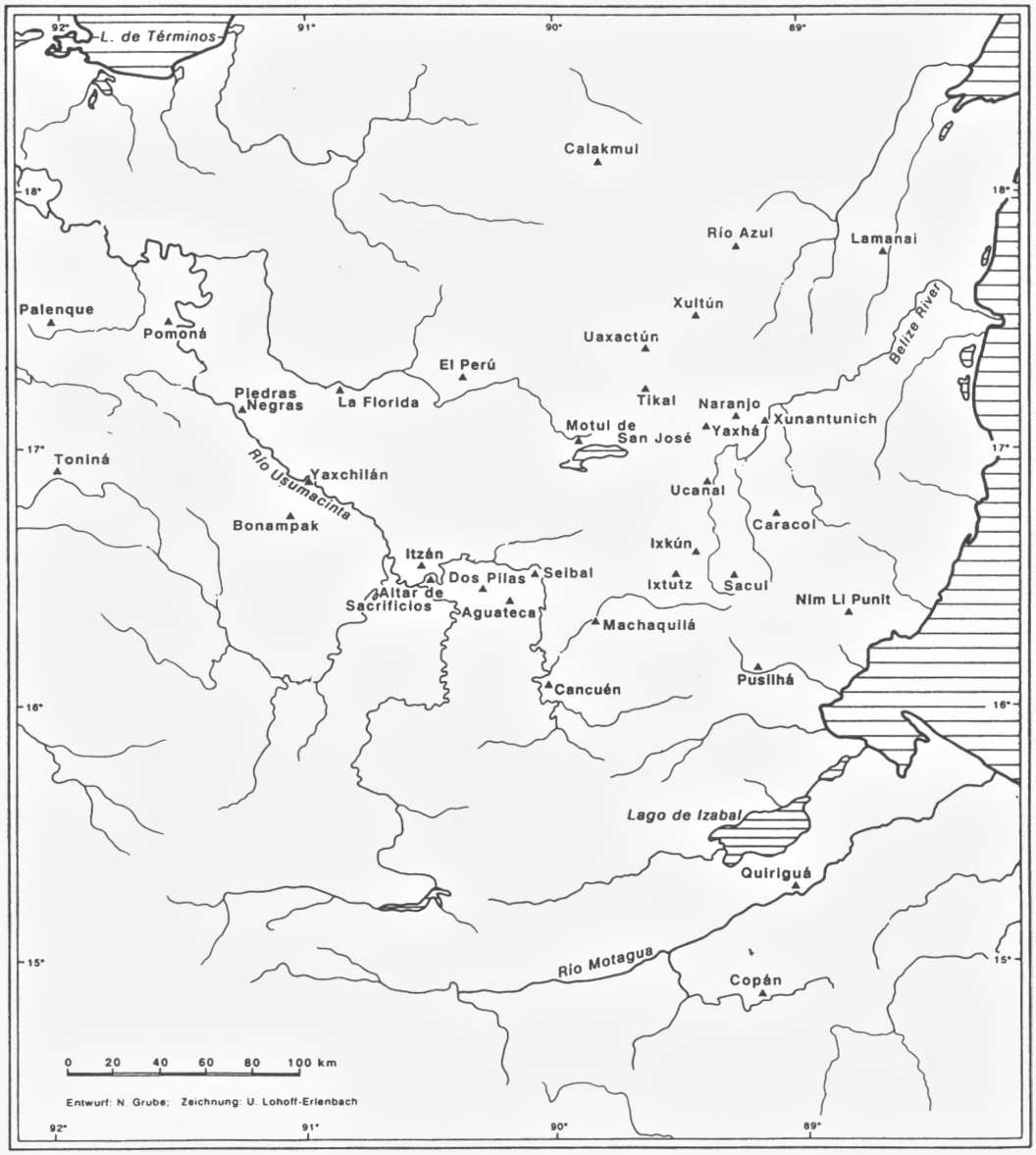

Figure 2. The capitals of Maya city-states in the southern lowlands in approximately A.D. 750 (drawing by U. Lohoff-Erlenbach after a draft by the author).

demarcations. Even where archaeologists have found evidence of limits of settlement areas around centers, it is not at all obvious whether these correlate with political boundaries. The relationship between the change of settlement patterns and density, on the one hand, and political boundaries on the other has not yet been a major research issue, probably because it would involve survey programs that go beyond the logistic capacities even of more ambitious archaeological projects. Even where extensive mapping has taken place and has gone far into the hinterland (Tikal, Copan, Caracol, Seibal, La Milpa, Komchen, Sayil), the actual limits of states have not been identified with any degree of certainty (Tourtellot [1993]).

Tikal is a good example of a carefully mapped and surveyed center where certain settlement limits have been defined but the question of political boundaries has not been settled. Tikal is one of the few lowland Maya sites for which we can speak of settlement limits determined by archaeological evidence (Puleston & Callender [1983]). Structure density drops off sharply a few kms from the site center. On the east and west the decline correlates with the start of large *bajos* (seasonally flooded swamps) but the fall in density to north and south occurs in areas where high ground was still available for habitation. Here, defensive earthworks seem to mark a border (Puleston & Callender [1983]). The area thus defined by most archaeologists as the "site of Tikal" consists of 120 km^2. One of the principal questions that still remain and have

not yet been discussed satisfactorily is whether this is the area of the Tikal state, or whether the true limits of the state are much wider. Indeed, small centers, of which a few display inscriptions recording members of the Tikal royal dynasty, are located outside these confines, such as Jimbal, El Encanto, Corozal, Uolantun, El Zapote, Ixlu and Sakpeten (Puleston & Callender [1983]; Jones & Orrego [1987]; Martin [1998]; Rice, Rice & Pugh [1998]). These secondary centers all have in common that they mention the *k'ul ahaw* of Tikal as their patron, while at the same time their own lord is not of equal rank. This suggests that these centers, all about 30 km from Tikal, were at some time in history not only within the area controled by the Tikal king but were actually part of a Tikal state.

Mathews' ([1991] 21) calculation of an average area of 2,500 km^2 for the territory of an ancient Maya state is based on the assumption of largely equalsized polities. Differences in size of the sites that were the capitals of these states are obvious, however. Dos Pilas, with its 492 mapped structures over a 3 km^2 central area (Houston [1993] 36), can hardly compete with Tikal (2,151 structures mapped in the central 9 km^2, Puleston & Callender [1983]) and Calakmul (6,250 structures mapped in 30 km^2, Folan [1994]).

Unequal size is (usually, but not necessarily always) mirrored by differences in political influence. A closer inspection of the written record speaks of hierarchies of power and large centers that held sway over lesser clients (Martin & Grube [1994], [1995]; Grube & Martin [1998]). Physical size and political clout are also tied to access to land, resources and manpower. In any case, it is important to keep in mind that even the most powerful states such as Tikal and Calakmul never expanded to become real, consolidated empires. Lesser states that were formerly independent retained a large degree of autonomy even after they had been integrated into the political sphere of a larger state. This Mesoamerican format of hegemonic rule, with a powerful state dominating client rulers of smaller kingdoms, is best documented in the Valley of Mexico (see Smith, *infra* 590-3), but also has other Mesoamerican analogies (Grube & Martin [1998]). Conquests probably had no effect at all on boundaries; the principal aim of military exploits was to establish loyal vassals and access to tribute.

To explain why this system might have developed in the Maya area we should examine a variety of sources revealing the Classic Maya's concern for concepts of "place" and the rights of kings to govern. The reading of the Emblem Glyph title shows the rulers' claim to a form of "divine kingship". These were not competing clains to a singular authority since each drew his power from, and was specific to, a given seat or locality, better seen as a central source rather than a bounded and demarcated territory. The legitimacy of "place-specific" systems such as this declines over distance, restricting their territorial extent to the kind of modest radius we find around polity capitals (Renfrew [1982] 282; Freidel & Schele [1983]; Hammond [1991] 273, 277; Demarest [1992]; Freidel, Schele & Parker [1993] 138-172).

Historically, Maya city-states grew around the seats of divine kings legitimated through a long line of ancestors that ultimately go back to place-specific dynastic "founders" (Mathews [1985]; Grube [1988]; Schele [1992]). These progenitor kings became, in due course, the focus of ancestor worship, their tombs and mortuary complexes dynastic shrines that formed the heart of place-specific legitimation (Sanders [1981] 359; McAnany [1995] 161). While the canon of patrilineal descent could on occasion be subverted by a usurper or schismatic faction, this basic conception of "polity" seems to have held true for the duration of the Classic, and possibly also for the Postclassic period.

In such an environment, political expansion achieved through wars of conquest, requiring the removal of a rival "divine" king and the imposition of direct control by a foreign power, would represent an illegitimate and, in the long-term, unworkable system of governance. Continued influence over a defeated, or otherwise subdued, polity would therefore rely on coopting its traditional elite. Expansionist states would strive not to appropriate foreign territory permanently but to extend a client network. The orthodoxy of divine kingship could thus be preserved, though now overlaid by a more pragmatic level in which rulers acknowledged their varying rank.

In fact, such principles and styles of organization are far from unfamiliar, since they were common to much of Postclassic Mesoamerica and extensively documented by sixteenth-century chroniclers (Spores [1965], [1993] 172; Bray [1972] 162-170; Carmack [1981] 141; Calnek [1982] 54, 56-58; Carrasco [1984], [1996]; Hodge [1984]; Hassig [1985] 93; [1988] 19-20; Smith [1986]; Berdan *et al.* [1996]). Polities throughout the region were consistently of small scale and structurally autonomous, though in practice such independence was rarely maintained and they usually fell within broader organizations and the orbit of more powerful states. The system of multiple city-states, or even micro-states in the Valley of

Mexico, continued to exist even after some degree of Aztec imperial consolidation and modification. In the 15th century, there were 50-60 of them, averaging 5,000-50,000 people and 80-200 km^2 (Bray [1972]; Hodge [1984]; Berdan *et al.* [1996]; Smith [1996]; Gillespie [1998]). Although the average size of states in the Maya lowlands may have been considerably larger, it is very likely that a similar mosaic of unequally sized polities covered the area.

Why the Term "City-States" is Useful in the Maya Case

Contrary to some critiques (Marcus [1989]; Marcus & Feinman [1998] 9), I believe that the concept of "city-state" is highly appropriate and should be applied in analyzing ancient Maya states. Even though there was considerable variation in the size of their territories, their wealth and political power, even the largest Maya states seem small if compared to regional states in other parts of the world. The term "city-state" is especially helpful in order to shift attention from the discussion about whether Maya states were "peer polities" or "regional states" to emphasize the dominant role of their core, the center of these states. Talk of states and kingdoms tends to bring to mind borders and territories, but these were not the emic concepts in which Maya polities defined themselves. Much more important was the dynastic seat at their core, their administrative, ceremonial and commercial focus and the hub from which ties radiated outward, connecting the central court to lesser lordships on its periphery (Hammond [1991]; Martin & Grube [1994]). At the heart of Maya states is the divinely sanctioned royal dynasty. Divine kings were the ultimate authority who patronized client lords and claimed loyalty from all sectors of the society. Bonds to the king were highly personalized and tended to continue "posthumously" even after the death of the actual king, as expressions of subordination to deceased kings from Copan and elsewhere show (Houston & Mathews [1985]).

The role of the city, the seat of the royal court, was so dominant that the city – or, more precisely, the place of the royal court – was equated with the entire state. Consequently, Maya states (like their central Mexican counterparts) were known only by the name of their capital. The main element of Emblem Glyphs, still the best indicator for the existence of a Maya state, is almost always indentical with the toponym of the capital (Stuart & Houston [1994]).

In Maya hieroglyphic inscriptions there is only limited evidence for the existence of hieroglyphs providing names for the territorial unit as opposed to its capital. The capital was the state; it was the seat and origin of divinely legitimized power and therefore provided the name for the entire unit. In those cases where the Emblem Glyph is distinct from the place name of the capital, such as at Dos Pilas, Palenque, Caracol and Calakmul, there are specific historical reasons for this variation. In most cases these capitals originated at other places: Dos Pilas claims power over Tikal and thus takes the same *mutal* name for its state; the capital of the *kanul* state is called *oxte tun*, but it seems that in the early Classic period the capital was at a different place; and finally, the capital of the state of Palenque (or *bak*, as the Maya called) moved to *lakamha'* (the name of the site now known as Palenque) not before the first half of the 6th century (Martin & Grube [n.d.]). In general we can say, therefore, that the name of a city-state is identical with the name of its major urban center.

The conceptual identity of the state with the capital, and more specifically with the seat of a divine king, manifests itself in the use of the word *ahawlel* for both. *Ahawlel* is the word for "kingship", and kings accede to power by "seating themselves in *ahawlel*". At the same time, colonial documents and dictionaries use *ahawlel* as a word for the territorial unit ruled by an *ahaw* (Lacadena & Ruiz [1998] 40).

Were Maya Capitals Real Cities? Another Look at Maya Urbanism

One of the prerequisites of city-states is the existence of urbanism. It does not seem to be necessary to make this statement since it is so obvious. However, early scholars who introduced the concept of "city-states" into Maya research often described Maya cities, the capitals of these states, as "vacant ceremonial centers". Sir Eric Thompson, one of the influential scholars of the first half of the 20th century, states, "What was a Maya city, and how did it function? First, as I have already said, it was not a city at all in our sense of the word, because it was a ceremonial, not an urban, centre, to which the people repaired for religious ceremonies, civic functions, and markets. The stone buildings were quite unsuited for permanent habitation..." (Thompson [1954] 66). The particular layout of Maya "centers" and their open character still continues to fuel discussions about the nature of urbanism in the Maya area.

It is true that there is a stark contrast between the Maya lowlands and the civilizations of highland

Mexico such as Teotihuacan and the Aztec, which developed cities that conform more closely to our European understanding of urban centers with a substantial resident population. Some scholars have asserted that the tropical lowlands would have been unfit for the development of cities, while the temperate Central Mexican highlands with fertile soils, hard stone and bodies of surface water permitted the rise of pre-industrial cities with nucleated population and centralized government (Erasmus [1968]; Sanders & Santley [1983]; Sanders & Webster [1988]). These views have been altered dramatically with the start of systematic settlement studies in the Maya area and with a more sophisticated understanding of the architecture in Maya cities. The mapping of Tikal and of other Maya cities brought into question the old view of the non-urban ceremonial center. About 10,000 to 11,000 people must have lived in the 16 km^2 around the site core. Maya cities were not vacant but had considerable populations, even though they were clearly not as densely packed as most European cities. The open character of Maya cities – the fact that the population density in the cities was not markedly higher than in the countryside – has been taken by researchers such as William Sanders as an argument against the application of the word "city" (Sanders [1981]). Indeed, V. Gordon Childe in his famous article "The Urban Revolution" lists ten criteria for the city and includes a large and dense population as one. Arguments over Childe's or other scholars' criteria have been raised for various reasons, not only because it was difficult if not impossible to recognize certain items in the archaeological record, but also because it soon became clear that "...no single definition will apply to all its manifestations and no single description will cover all its transformations" (Mumford [1961] 3).

In recent years, anthropologists have offered new definitions of cities that emphasize the relatedness of a series of trends or processes which they exhibit, in order to avoid some of the objections that the trait-list approach generated. Regardless of demographic factors, the capitals of Maya states were "functionally urban" in nature (Adams [1977]; Adams & Culbert [1977]). At issue here are the number and variety of activities performed at a given center, not merely the presence of a large, dense population. The different variables of central places (size, social role, prestige, power and economic role) are all met by the capitals of Maya states. But even if one employs a large, dense and socioeconomically diverse resident population as a criterion to distinguish functionally urban centers from true cities, at least some of the capitals of Maya states will have to be elevated to this category. The city of Caracol – the area defined by the causeways radiating from the center – may have had a total population of 180,000 (Chase [1996a]). Its population was engaged in a variety of economic activities as can be shown by specific workshop areas that have been uncovered by archaeologists (Chase [1996b]). The intrasite causeways, such as those found at Caracol, Yaxha and Coba connect more than just ritual areas or elite groups and show that they must have been used to facilitate communication and integration of the urban area.

Even though it is difficult if not impossible to define sharp edges of settlement, Maya cities are distinct from their surrounding countryside. This distinction in many cases was made manifest by boundary-marking features such as the great earthworks around Tikal (Puleston & Callender [1967]), the defensive moat of Becan, the walls around Calakmul, Oxpemul, Ek Balam, Yaxuna and Uxmal (cf. Webster [1977]). Often, these features are difficult to detect because they are located at great distance from the core of the cities. We can expect to find many more of these demarcations in the future when large-scale settlement studies are carried out. Whether all the walls discovered so far served defensive purposes is still a matter of debate; it does not actually matter here because whatever their primary function was, they also served to mark a visible boundary between an urban center and the settlement area around it.

Other population centers within Maya states could have different, but intertwined functions, as is seen in the archaeological record in communities that are commodity-specific, such as the lithic production site of Colha (Shafer & Hester [1983]; Hester & Shafer [1984]), areas such as Pulltrouser Swamp (Harrison & Turner [1978]) likely were functioning as food production centers; still other areas, like the northern coast of the Yucatan peninsula, were specialized loci for salt procurement (Andrews [1983]).

Differences in size and morphology between different Maya capital centers cannot be overemphasized. Clearly, such sites as Tikal, Naranjo, Calakmul and Caracol represent true cities, dramatically different kinds of places than for example Dos Pilas, Sacul and Motul de San José, which we can identify as capitals of Maya states, but which certainly tended to be closer to functionally urban centers and not to dense cities. These differences, among other factors, can account for the development of hierarchies between Maya states described further below.

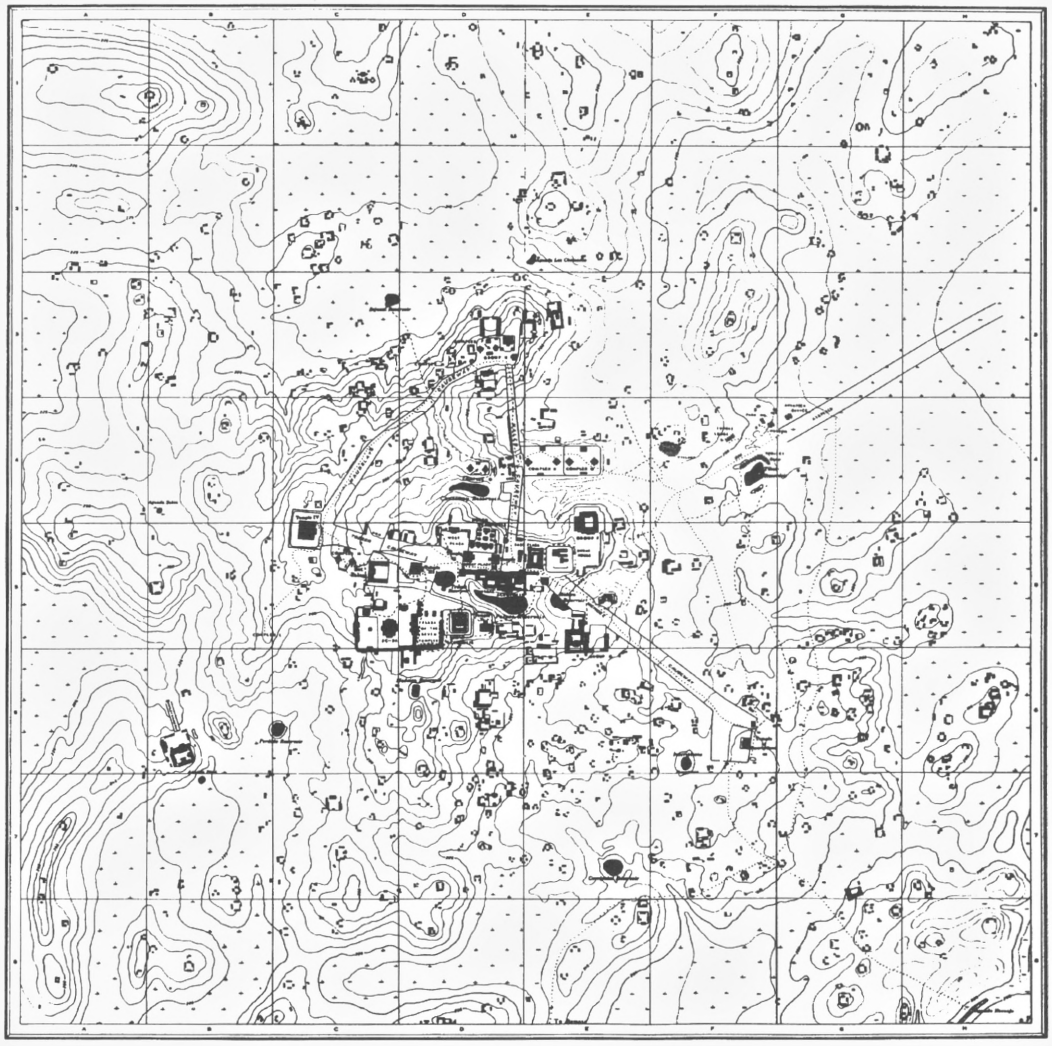

Figure 3. A part of the map of central Tikal, which covers in all 16 km^2 (after Carr & Hazard [1961]).

The question whether it is possible to determine how many people actually lived in a Maya city-state is almost impossible to answer. It is closely linked to determining of the precise scale of Maya states. It is clear from the abundance of sites of all sizes that Maya states were densely populated and that, from a comparative perspective, they would count as too large to be city-states. However, the calculating of approximate population totals presents manifold problems and is often not more than an educated guess. The Maya population is estimated on the basis of remains of masonry residential platforms and superstructures ("house mounds") of varying size and elaboration (Ashmore [1981]) which are mapped and counted. Many problems affect the extrapolation of population figures, such as the existence of hidden structures, structures which were not used for residential purposes, and of course the problem of chronology and contemporaneity (Pyburn [1988], Haviland [1965], [1969], [1989]). Even more severe is our lack of knowledge regarding the number of habitants per household. Numbers are usually extrapolated from contemporary ethnographic analogies, despite great variation in the ethnographic record (Haviland [1969]; Tourtellot [1988]). However, Culbert & Rice (1990) have been able to present approximate density figures for a number of ancient Maya population centers and surrounding regions based on a large number of systematic survey projects. These figures suggest that lowland states had densities of over 600 people/km^2 in the urban and semi-urban nuclei and 200 people/km^2 in the rural areas.

Certainly the most severe obstacle to population estimates for Maya states is our lack of knowledge concerning the territory controlled by them. Only in a few cases can the area pertaining to a city-state be delimited because of the natural setting. This is the case of Copan, whose area is easily surveyed and whose population was confined to naturally bounded

alluvial pockets. The population of the Copan urban core is estimated at 5797 to 9214 and that of the entire Copan valley as 18,417 to 24,828 (Webster & Freter [1990]). This estimate is limited to the area immediately around Copan. We must take into consideration that the actual territory under immediate control of the *k'ul ahaw* of Copan was much larger. It is known that other, smaller and more distant cities such as Los Higos were within the realm of Copan, suggesting that the population figure given in many publications has to be revised upwards.

Tikal is another case of a city whose immediate hinterland is limited naturally through the existence of *bajos*, or seasonally flooded swamps, and defensive earthworks. Behind these earthworks, mound density drops drastically. Tikal, so defined, covers 120 km^2. The total population of the central 9 km^2 is calculated as 8,300 during the Late Classic. The remaining 111 km^2 of more rural areas within the "Tikal area" may have had a population of 50,695, resulting in a total of 62,000 within this area (Haviland [1969]; Puleston & Callender [1983]). However, the Tikal state certainly included other areas beyond the *bajos* and at some time may even have included the smaller neighbouring city of Uaxactun. Taking this size of the Tikal state into account, there would have been 425,000 inhabitants in the Classic period (Culbert *et al.* [1990]). The same numbers are calculated by de Montmollin. His population guesstimate for a polity of 2,000 km^2 is 400,000, with 50,000-80,000 in the 60-100 km^2 "urban core" (de Montmollin [1995] 255, see also Hammond [1991] 258-259). Such figures dwarf those of most other early city-states such as the Hellenic *poleis*, which could have population figures between 1,000 and 50,000 people in territories of only 25 km^2 and rarely exceeding 500 km^2 (Hansen, *supra* 155), or Sumerian Lagash with 80-100,000 people around 2400 BC.

Settlement Patterns Within City-States

As expected with city-states, Maya states are centered on a city which is the central place of the state, the seat of power, prestige and administration. Maya capitals are always the largest urban centres within their territory. Other urban settlements are second-order settlements. They differ from capitals principally in the absence of a ruling dynasty claiming divine origin. Capitals are characterized by monumental architecture and specific public, residential and administrative buildings. Specialized architecture provided the context for religious activities, public celebrations, the ritual ballgame, gatherings of people, places for economic exchange, for the storage of goods, palaces for the royal family, buildings with administrative functions, and residences for the various strata of the elite. Except for royal palaces, these features can also be found in secondary centers, but in smaller format.

Lower-order urban centers also can have hieroglyphic inscriptions; where this is the case, they record subordination of local nobles under the dominance of the center. Certain specific titles are known which document a hierarchy of power within Maya states. The title *sahal* is used exclusively for subordinate figures who were rulers of small dependent sites within the larger polities of the lowlands (Stuart [1993a]; Mathews [1998]). Especially in the western region of the Maya lowlands, individuals carrying the *sahal* title are shown in connection with the principal rulers; in a few cases status differences are visually indicated in the smaller size of the *sahals*. *Sahals* acceded to their office under the auspices of the *k'ul ahaw*; in several instances the texts explicitly state that a certain subordinate is "the *sahal* of" the ruler. These relationships document the highly personal character of affiliations, but they also permit us to define the rôle of small, secondary centers. *Sahals* are often engaged in warfare, suggesting that one of their functions was to recruit people and soldiers for warfare among the peasants associated with their center.

Unfortunately, lower-order dependencies – although more numerous than primary centers – are underrepresented in many excavation reports and settlement pattern studies. Some secondary centers may have been economically specialized; a good case is probably the site of Colha, which produced flint tools for the Altun Ha region (Hester, Shafer & Eaton [1982]). Other secondary centers may have been located at strategically important places, such as El Cayo, which is situated at one of the few places along the Usumacinta River where canoes could anchor, or Quim Chi Hilan, located on an easily defendable peninsula in the Petexbatun lagoon.

To start at the bottom, the basic settlement unit in the Maya lowlands is the single house, usually a wooden structure covered with a thatched roof erected on an earthen platform. Between two and six houses are usually grouped together in a residential group around a central patio (Ashmore [1981] 49). Large residential groupings are typical of the Maya lowlands. In current thinking, these units are seen as the organizational nexus of agricultural production and are assumed to have been occupied by an extended family. Specialized non-residential struc-

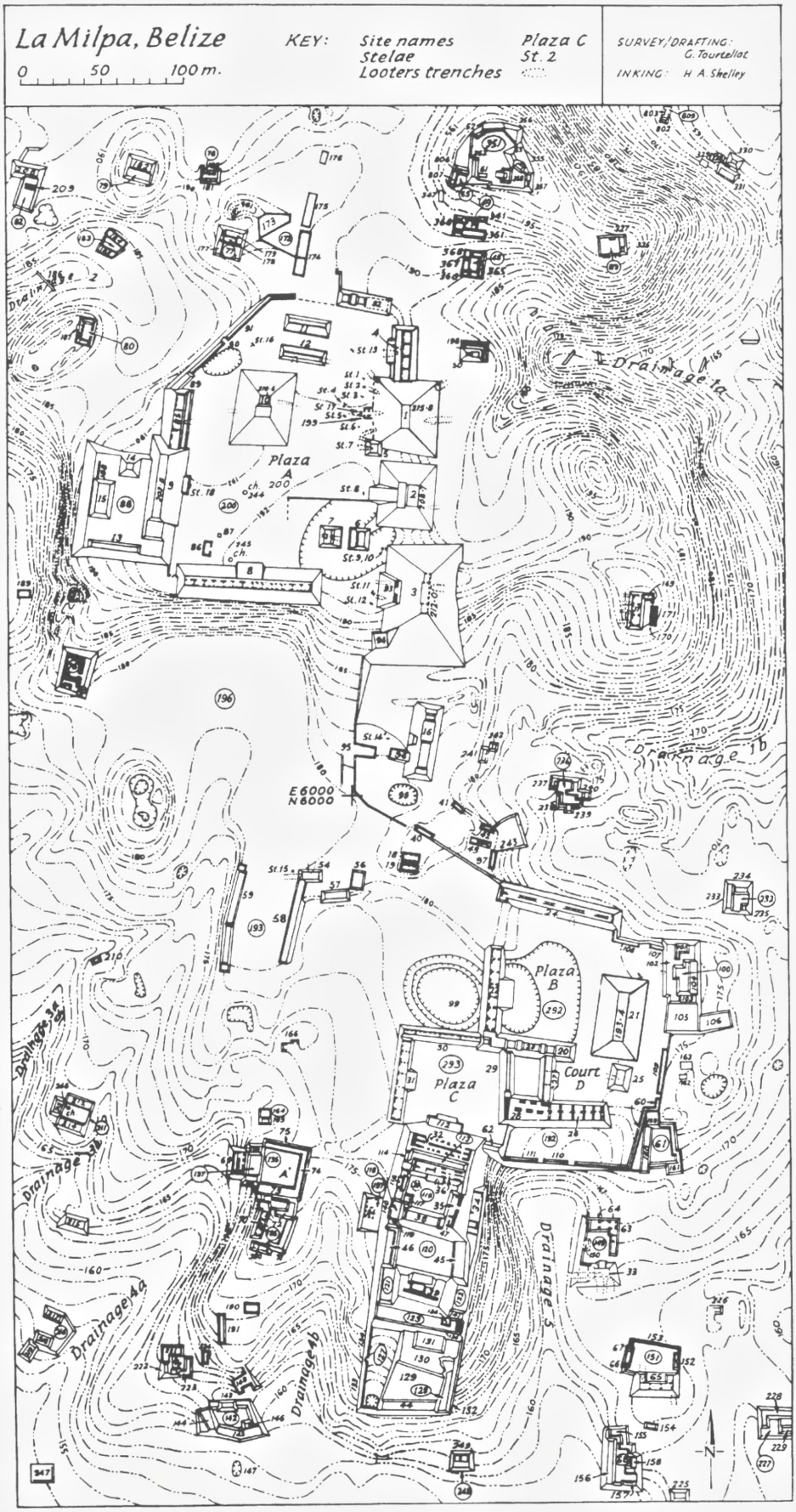

Figure 4. The site core of La Milpa, Orange Walk, Belize, showing topography and drainage. La Milpa was the capital of a Maya city-state in the Late Classic period. Drawing by Gair Tourtellot (after Hammond, Tourtellot, Everson, Thomas & Wolf [1999]).

tures for craft production or storage have also been found within such patio groups. In some cases, a more elaborate structure within a group indicates the existence of a leader or headman of an extended family.

Two or more patio groups may form a cluster (Bullard [1960]). Open space separates these clusters from each other. Here again, one of the groups or one structure is clearly more elaborate and dominant. Often this is a small vaulted stone structure. If these larger residential clusters were occupied by large kin groups or lineages, we assume that the lineage head and his extended family lived within the largest residential group. A couple of these clusters may be arranged around a small urban center with administrative, ritual and residential functions. In a few cases, these centers have hieroglyphic inscriptions identifying their rulers as subsidiary lords. These local lords also employ the *ahaw* title, but in contrast to the supreme king residing in the capital they were never addressed as *k'ul ahaw*, or "divine lord". Between the heads of extended families, the lineage heads, the secondary lords and finally the supreme ruler were networks based on kinship, but also on economic, political and religious connections.

Economy

The economy of Maya city-states was a complex, multi-layered fabric of production and exchange. It combined agrarian production for subsistence with craft production on the intrapolity level, with long-distance trade and tribute collection on the interpolity level. Many segments of Maya economic production and exchange are only poorly known. Unfortunately, written documents provide only rare glimpses into this aspect of Maya society so that our understanding of the Maya economy has to rest solely on archaeological evidence, ethnoarchaeological analogies and comparison with the better-documented economies of the central Mexican highlands.

The core of Maya economy was subsistence production based on maize, beans, squash, root crops, fruit trees combined with hunting, fishing and occasional exploitation of forest products (Harrison and Turner [1978]; Fedick [1996]). Production took place close to the settlements. The organizational nexus of agricultural production was residential groups of two or more households. Increasing evidence for intensive agriculture such as hillside terracing and wetland drained fields with a productivity several times higher than traditional slash-and-burn agriculture implies the existence of planning and administration in the rural areas outside the urban centers (Turner & Harrison [1983]). Where intensive agriculture takes place, the labour investment in land is twice as high as in areas of traditional farming, increasing the value of land and therefore the territory controlled by a state. The complex network of regular hillside terraces around Caracol, which extends several kilometers in all directions, shows a high degree of centralized planning (Jaeger Liepins [1994]).

Subsistence goods were consumed locally and moved vertically through taxation or tribute collection to support the elite stratum of Maya society. Craft production also took place at the household level. Pottery and stone tools for daily use were probably produced and exchanged locally. Whether these products were ever exchanged in markets is still a matter of debate. Even though archaeologists claim to have identified specific market areas at a few sites, final proof is lacking in all cases.

At a higher level, craft production of elite goods such as jade jewelry, polychrome ceramics and stone sculpture was confined to urban centers. Some production activities were so restricted that they took place only in the royal palace (Ball [1993]). Sculptors and scribes were often members of elite lineages and clients of the king. Lacking their own scribes, secondary lords had to rely on the scribes of the royal court if they wanted their own monuments carved. Palace artists and palace schools produced power symbols, many of them exchanged as royal gifts between states and within states in order to confirm the loyalty of clients. The function of preciously painted ceramic as social currency is well attested in hieroglyphic inscriptions (Reents-Budet [1994]).

Systems of long-distance trade in raw materials such as jade may have been linked more directly to the maintenance of social power rather than to the accumulation of economic wealth. Items acquired from exotic places – jade, shell, feathers of the Quetzal bird, obsidian and stingray spine – were low-bulk items of prime, symbolic value that were badges of prestige.

Exchange, particularly at the "external" or interpolity level, was characterized by the unequal relationships between vassal states and their patrons. Throughout Mesoamerica expansionist states had as a primary goal the control of exchange systems, trade routes and especially tribute networks, as was the case among the Postclassic Maya (Carmack [1981] 141; Fox [1994]; Roys [1957]). While such activity has always been difficult to isolate archaeologically in the Maya area, signs are emerging (despite much

earlier pessimism on the subject) that an active tribute system can be detected in Classic Maya writing and iconography (Le Fort & Wald [1995] after a suggestion by Houston; McAnany [1995] 133-136; Schele & Miller [1986] 153, 218). At present, such activity is poorly understood and we cannot yet say whether this was "gift-giving" of a predominantly symbolic value, or the traces of "tribute empires" in which extortion had a major sustaining role. One source of tribute payment seems to be as a consequence of war. At several sites, booming construction activity is associated with glyphic records of military success, suggesting sudden enrichment of some kind, perhaps the supply of tribute labor (Chase & Chase [1989] 16; Martin [1996b]; Sharer [1978] 67).

Macro-Political Structures Amongst Maya States

A city-state is a self-governing community, but not necessarily an independent and autonomous state. External sovereignty is not considered to be a necessary requirement for a city-state (Hansen: *supra* 18). Epigraphical data clearly demonstrate that the southern lowlands were politically divided into numerous, territorially small states, which maintained their structural autonomy throughout the Classic period. A few powerful states held lesser ones in their sway, a system not unlike others seen throughout ancient Mesoamerica (Smith, *infra* 590-3; Lind: *infra* 576). Glyphic structures that define hierarchical ranking can be identified at the macro-political scale, providing strong evidence for an over-arching and structurally complex system of political patronage that was headed especially by two states, Calakmul and Tikal.

By the middle of the sixth century at least, Tikal and Calakmul, both large survivors of late Preclassic culture, were acting over considerable distances to intervene in the affairs of other states. If, as seems most likely, this represents competition between the two, then Calakmul soon had the upper hand and was seen to gain an associate at the expense of Tikal. This event coincides with both a known defeat of the Tikal state and with the onset of its hiatus period. Although Tikal remained a functioning state during at least some of this time, its near encirclement by hostile associates of Calakmul, first noted by Linda Schele & David Freidel ([1990] 175, 211), gives the impression of a resistant and embattled pocket. Extensive fortifications erected at Tikal during the Early Classic (Puleston & Callender [1967]) may have been a response to this weakening in its strategic position. The strong pattern of aggression between Tikal and its immediate neighbors might yet prove to be part of a process in which areas formerly under Tikal influence shared a special enmity toward their former master. Calakmul may have been a particular beneficiary of this, continuing to gain affiliates and clients throughout the transition from early to Late Classic, a period that corresponds almost exactly to the absence of surviving monuments at Tikal. By the beginning of the 7th century its extensive web of personal and military ties had made it the single most influential force in Maya geo-politics.

Other major states, such as Caracol and Naranjo, appear to have been drawn into the on-going power-play and neither seems to have been able to pursue its own rivalry without reference to the central powers. Supporting one or another antagonist in a regional contest, or capitalizing on any instability arising from such conflicts, may have been an important means by which patron states built up their influence. On other occasions it may have been the desire to secede from patron relationships that brought central forces into this region.

Apart from direct military confrontation and supporting the defection of Tikal's affiliates, Calakmul's strategy also appears to have exploited divisions within the Tikal dynasty. The emergence of the Dos Pilas state, an intrusive presence in the Petexbatun, might be viewed as a Calakmul-sponsored attempt to promote a rival claim to the title of Tikal, with the recent interpretation of true fratricidal conflict only enhancing this scenario. Calakmul's direct support might explain how this minor center managed to survive and even triumph over its vastly more populous adversary. If the ultimate goal was to usurp the incumbent Tikal line and replace it by a pro-Calakmul faction, the attempt clearly failed, leading to the permanent establishment of a "state-in-exile" in the Petexbatun.

Calakmul's ascendancy, though successfully maintained for over 130 years, circa A.D. 562 to 695, was not to last. The Late Classic resurgence of Tikal is closely associated with the reversal of its military fortunes and a victory over Calakmul that brought down one of this center's most powerful kings. Despite some defeats at the hands of clients or associates of Calakmul at about this time, Tikal survived the attentions of its many enemies and emerged with its ruling dynasty and independence intact. By contrast, the highpoint of Calakmul power had passed and its

foreign citations, especially hierarchical ties, fell sharply. After what seems to be a further victory against its great rival, Tikal was able to record decisive success against two of Calakmul's closest affiliates, El Peru and Naranjo, creating a prolonged disturbance in their public records after A.D. 744, and perhaps even placing them under Tikal's supervision for a time. It is recognized that the great mass of the Tikal metropolis visible today, virtually all the tall pyramids and final phases of other major architecture, is the product of a relatively short period of less than a century following the accession of Ruler Yik'in Chan K'awil in A.D. 734 (Culbert [1973] 72-73; Jones [1991] 120). Here too, the shifting political fortunes of the great centers may have left their mark, as this impressive remodeling corresponds to the reestablishment of Tikal power in the region (Martin [1996b]).

Not long thereafter, evidence for long-range interaction between states, subordination and joint activities, all but evaporates. These thematic changes seem to mark a genuine diminution of such contacts well before the start of the Terminal Classic. The 9th century, long thought to be a time of increasing instability and conflict leading towards final collapse, is a period in which Maya city-states seem more independent, but also more isolated. A widening of the Emblem Glyph franchise to include non-regnal lords, together with the greater prominence given to secondary figures more generally, speaks of a weakening of the monopolistic power of kings and the need to appease a more assertive generation of subordinates (Chase, Grube & Chase [1991] 7, 13; Fash & Stuart [1991] 171, 175; Schele & Freidel [1990] 385-392; Stuart [1993a] 332). Indeed, the concomitant increase in centers raising monuments for the first time, an apparent "balkanization" that has been commented on by a number of scholars (Marcus [1976] 192-193; Willey [1977]; Culbert [1988] 149; Hammond [1991] 282), seems likely to be a further progression of this process. Although some states briefly profited during this era – Caracol and then Seibal experienced renewed vigor – the character of the Classic period had changed irrevocably and the overall trajectory was toward ever greater dissolution.

Although it may seem particularistic, a single defeat, such as Calakmul's in A.D. 695, could fatally undermine a hegemonic system, which is overly reliant on the perception of strength at its dominant core and vulnerable to a sudden desertion by its affiliates (whether to assert their own independence or to seek more advantageous connections elsewhere). Any Classic Maya attempt to build a stable pan-regional network would most likely founder on their inability to forge more effective and institutionalized authority over their vassals and affiliates.

The degree to which warfare represents cause or effect in the process of collapse has still to be fully determined. George Cowgill (1979) draws a number of interesting comparisons between the Classic Maya and societies engaged in "militaristic" competition for regional dominance. His basic theme is that societies can evolve from a form of peer-polity competition to a new level of warfare, in which the strategic aim has shifted to the "prize" of complete mastery over all other states in the region. Success for one party leads to unification and stability, failure to a protracted and enfeebling conflict with potentially dire social consequences. It is not yet possible to assess whether the wider organization of Late Classic states had a role in intensifying warfare. Indeed, the opposite case can be argued, one which sees the patronage system as a feature of Classic period order, one whose undoing led to more chaotic and destabilizing patterns of conflict. What can be said is that the decline of inter-polity hierarchy probably represents the earliest sign yet of the onset of political breakdown within the Late Classic, the phenomenon known as the collapse of the Classic Maya Civilization and the end of the Classic period.

Summary

The ongoing decipherment of Maya hieroglyphs demonstrates that the southern lowlands were politically divided into numerous, territorially small states, which maintained their structural autonomy throughout the Classic period. These states were autonomous in internal affairs but were embedded in larger and extremely stable political networks headed by a few powerful hegemonic states. None of the states became powerful enough to transform the region permanently into one political unit. Even though large states such as Tikal and Calakmul managed to establish long-term "mini-empires", the city-state structure persisted as the principal political unit. The patron states provided prestige, protection and probably also participation in economic wealth from war booty to their clients. In return, patron states amassed considerable power and profited from tribute collection. Diplomacy, interdynastic and interpolity marriage, a complex web of kinship ties and economic interaction on various social levels connected the multi-layered fabric of Maya states (Martin & Grube [1994]).

Maya states shared a common culture. Although it is not known which languages were actually spoken by the majority of the population in the Maya lowlands, it is clear that the written language of the hieroglyphic inscriptions was a *lingua franca* for the literary elite. Southern Classic Maya was the prestigous written language employed by Maya scribes all over the Maya lowlands, and there is not a single state whose royal dynasty was excluded from Maya literacy (Stuart, Houston & Robertson [1999]). Besides writing, Maya states shared a common ideology and the same religious beliefs. Even though each city-state and its rulers had its own set of patron gods, there was a common religious symbol system and shared opinions about the creation of the universe, the origins of gods, the birth of maize – the principal crop – and many other features of religious ideology (Freidel, Schele & Parker [1993]). The existence of a common lowland Maya culture is supported by recurrent patterns in the architecture of temples and elite residences across all parts of the lowlands. Regional styles often reflect the presence or absence of certain material conditions (such as the use of hard limestone at Palenque and *adobe* bricks at Comalcalco), but the symbol system was not affected by stylistic variation.

Classic Maya civilization is only one of several city-state cultures in Mesoamerica and resembles in many aspects those better-documented city-state cultures of the Postclassic period, such as the Mixtec (Lind, *infra* 567-80) and the Aztec (Smith, *infra* 581-95). With these the Maya states also share the multiple-level hierarchies of states and the hegemonic control of lesser states by more powerful ones, where vassal lords retained their power but were obliged to pay tribute (Grube & Martin [1998]).

The city-states of the Maya lowlands collapsed in the 9th and 10th century A.D. There is not enough space here to describe the numerous theories that have been developed to explain this collapse. No single explanation can account for the variety of processes that led to the accelerating abandonment of the entire lowlands. Ecological pressure and economic failures combined with escalating warfare and competition amongst city-states (probably fueled by the disappearance of Calakmul as a powerful hegemon) all played a leading rôle in the disappearance of lowland Maya city-state culture.

The collapse of the Classic period city-states did not result in the disappearance of Maya city-states forever. In the Late Postclassic period new city-states emerged in other parts of the Maya lowlands, especially in the northern half of the Yucatan peninsula. These city-states were encountered by the Spaniards in the 16th century. Because there was no central, overarching government it took the Spaniards a long time to conquer Yucatan. The eastern part of the peninsula was only formally taken over by the Spaniards but never really integrated into the colonial empire. Further south in the lowlands of the Peten, the same place where Maya civilization flourished in the Classic period, the aggressive polities of the Itza-Maya – perhaps also city-states – became valiant enemies of the Spaniards and managed to resist conquest and Christianity until 1697 (Jones [1998]). In the highlands of Guatemala the expansionist states of the K'iche', the Kaqchikel, the Tz'utujiil and the Mam controlled vast areas; since the territories of these states tended to correspond to linguistic boundaries, and because of their size these states do not qualify as city-states as outlined by Hansen, *supra* 16-19. The small, Late Postclassic states of Yucatan, however, are a good case for city-states that emerged out of a pre-existing macro-state. In the Middle Postclassic period (ca. A.D. 1150-1450), the city of Mayapan controlled the entire north of the Yucatan peninsula and subsumed a whole series of provinces, each with its head town (Relaciones de Yucatan Vol. II:18). It is possible, though hard to prove, that these provinces originally were autonomous city-states. After the collapse of Mayapan (traditionally dated to A.D. 1446), its "macro-state" broke up into sixteen small states, the smallest of them covering a territory of 1,000-2,000 km^2, and the largest (Uaymil) covered an area of about 11,000 km^2 (Roys [1957]). As in the Classic period, the name of the capital was identical with that of the state, and in some cases also with that of the ruling lineage.

The Maya therefore provide an interesting case for a city-state culture which went through processes of collapse, centralization and again decentralization. At least twice in its history, the Maya created a city-state culture. Joyce Marcus has described the different degrees of centralization as a feature of her "dynamic model" of Maya political organization (Marcus [1993], [1998]). She argues that during the periods of major unity the territorial size of Maya states increased until, in the case of Mayapan, only one large regional state survived. A more sophisticated understanding of colonial sources on Postclassic Yucatan as well as of the archaeological record now confirms, however, that the city-states never completely disappeared. Instead, during the predominance of Mayapan, they continued as autonomous entities in a "micro-empire" not unlike the *altepetl* states of Cen-

tral Mexico in the Aztec empire. The more we know about Maya states, the more they become truly "Mesoamerican", having grown out of the same roots as their neighbors.

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