MONUMENTAL ARCHITECTURE AND THE ANCIENT MAYA: THE ROYAL ACROPOLIS AT YALBAC, CENTRAL BELIZE

BY

SEAN M. GRAEBNER, B.A.

A thesis submitted to the Graduate School

in partial fulfillment of the requirements

for the degree

Master of Arts

Major: Anthropology

New Mexico State University

Las Cruces, New Mexico

December 2002

CHAPTER 1

INTRODUCTION

A fundamental hypothesis is that the relationship between humans and their built environments are dynamic and interactive (Webster 1998:17).

Ancient civilizations have left behind countless material remains of their once flourishing cultures. A significant cross-cultural feature is monumental architecture, which all complex societies constructed (Trigger 1990:119). With the transition from simple to complex, societies experienced technological and social advances that thrust peoples into new subsistence and communal lifestyles (e.g., city-states). Stemming from these new aggregated settlements, power was obtained by individuals who attained political and spiritual leadership, and who organized labor to construct monumental architecture (e.g., temples). "Temple building brought together a wide range of interwoven themes, including new technology, the expression of religious symbolism, the social consolidation of the communities through regularity of worship . . ." (Hahn 2001:4). Cross-culturally, the massive results of the "interwoven themes" are comparable and were based on the same motive of expressing power.

This thesis addresses the relationship between monumental architecture and the ancient Maya royal court. I argue that through spatial analysis of monumental architecture, one can demonstrate the existence and function of royal courts. This is particularly important in a situation where site maps are the major dataset. To illustrate this relationship, in Chapter 2, I briefly present two examples of well-known ancient civilizations,

Mesopotamia and Egypt, to establish that monumental architecture existed cross-culturally for parallel reasons. Chapter 3 presents a discussion of architecture and royal courts between A.D. 250 and 950, using data from Southern Lowland Maya centers. Chapter 4 introduces Yalbac, a medium-sized major Maya center in central Belize, and the results from the 2001 and 2002 field seasons. Finally, in Chapter 5 I illustrate my argument for the existence of a royal court at Yalbac based on the analysis of the results from two field seasons, as well as through comparisons to other centers within the Southern Lowland region.

CHAPTER 2

MONUMENTAL ARCHITECTURE CROSS-CULTURALLY

"Monumental architecture is any structure that's scale and elaboration exceed the requirements of any practical functions that a building is intended to perform" (Trigger 1990:119), and includes pyramids, coliseums, temples, shrines, and palaces. These structures reflect the power of political leaders and elites who organized their construction. "Monuments are ideological statements about social and political relations. These statements are usually assumed to express relations of power and especially domination/subordination, but they may also represent elements of social integration" (Pollock 1999:175). This is significant, especially when only evaluating architecture and maps in situations when little or no excavation has been conducted.

I posit that through evaluating architecture, evidence of authority and royalty can be revealed, as I illustrate through a discussion of monumental architecture and royal courts in ancient Mesopotamia and Egypt. Cross-culturally there are commonalities in the function and layout of centers, monumental architecture, and royal courts. The examples in this chapter demonstrate that the presence and type of monumental architecture signify political and social hierarchy within complex societies, an issue I further explore at Yalbac in Chapters 4 and 5.

Mesopotamia

In Mesopotamia (5000-2100 B.C.), monumental architecture was built primarily for administrative and religious purposes, and came in three specific types: temples or ziggurats, walls, and palaces (Pollock 1999:174-175). Urban centers were commonly

enclosed by walls and possessed a temple, which served as a commercial and a religious center (Pollock 1999:47). "Every major city was home to numerous temples. Temples were dedicated to specific deities, with the largest and most prominent consecrated to the patron deity of the city-state" (Pollock 1999:49). Each city-state (e.g., Uruk, Ur, and Babylon) had a patron god that served as protector from famine and danger. These "places of worship" were constructed with adobe bricks and often were built based on geometric plans with the corners oriented in the cardinal directions (Cichy 1966).

One feature that appears to be standard with most ancient monumental architecture is the construction of temples on top of platforms, or ziggurats. The reason for this architectural foundation is two-fold: first, ziggurats were built with the intent of protecting the structure from enemy attacks. Second, they serve as an illusion by enhancing the size of the already grand structure (Cichy 1966). A possible third reason derives from Sumerian mythology; "[Ziggurats] may have been a reminiscence of the mythical belief that the gods originally came down from the sacred mountains . . . and that the true habitation of the gods was on the mountain tops." (Cichy 1966:27).

Gradually, the palaces took over as the more central structure and were built near temples (e.g., Palace A at Kish) (Cichy 1966; Flannery 1998:26-27). Palaces differed from temples in that they served as the royal residence and as a social arena for government:

> Palaces tended to be extensive, well-built edifices with residential areas, storage, workshops, and kitchens as well as rooms probably designated for state ceremonial and administrative functions. (Pollock 1999:51)

Large walls constructed with adobe bricks enclosed the city. Located within the boundaries of the walls would have been a complex layout of river ports, markets, houses,

temples, administrative buildings, and a palace. “By the third millennium, the bulk of the settled population lived in urban communities” (Pollock 1999:76). The construction of these walls created an organized and aggregated microenvironment conducive to trade, religion, and political administration, which was overseen by a ruler, who obtained power through land ownership (Baines and Yoffee 1998:207). Through owning a major riverside resource - agricultural land - rulers and elite exacted tribute from village farmers and rural inhabitants to build palaces, temples, and granaries.

The development of the Mesopotamian city-state incorporated the construction of monumental architecture, which promoted social, political, and religious cohesion. Similar elements of architecture and organization can also be found in ancient Egypt.

Ancient Egypt

Ancient Egyptian architecture epitomizes monumental architecture, and Egyptian architects used progressive construction techniques. For example, the Egyptian architect Imhotep was the first to use stone blocks about 2630 B.C., rather than the traditional mud bricks to build the temple complex of Sakkara, thus creating the first monumental structure of stone. Pyramids and pyramid groups (e.g., Giza) were constructed, gradually urbanizing the Egyptian countryside, and centralizing social and political organizations for efficient administration and economy (Baines and Yoffee: 1998:208). “For Egypt, central places were important on a number of levels; the idea of a walled, nucleated settlement goes back into prehistory . . . the city was a primary motor of development . . .” (Baines and Yoffee 1998:209). There are three major types of Egyptian architecture as well: tombs, temples, and palaces.

Tombs housed the kings and the elite. The Egyptian perspective of life was that ones sentient life was a precursor to the more important life in the afterworld. Much emphasis was placed on the afterlife, implying that their daily lives consisted of preparing for a successful posthumous one. Excavations have revealed that some pyramids, typically located outside of cities, served as necropoli for the Egyptian elite, containing elaborate entombments of both kings and queens within structures. Egyptians believed that the pharaoh was the focal point of their society, serving as both the political and spiritual leader. "During Dynasties 0-III (c. 3100-2600 B.C.) the king acquired a complex titulary that proclaimed he manifested aspects of deities on earth" (Baines and Yoffee 1998:205-206). Even today, Egyptian temples are enduring testaments of monarchical authority and spiritual relevance.

The best-known Egyptian temples are located in the mid-Nile area in the vicinity of the old capital of Thebes, and include the great temples of Luxor, Al Karnak, and Deir al Bahri (1400-1100 B.C.), and Idfu (200 B.C.). The Egyptians believed that the gods occupied a different part of the universe than living human beings did. Therefore, temples were built as houses for the gods, where the gods could appear on earth (Badaway 1966). Temples were ritually significant and to which access by some elites and most non-elites was prohibited, limiting admittance to priests and royalty (Badaway 1966).

The king lived in a palace built near temples, where he performed governmental and religious duties, deciding on issues that affected the city and its occupants. Due to the king's divine manifestation, the palace was highly restricted and contained a private temple or shrine area for the king (Badaway 1966). "The palace was the central institution that mobilized the country's resources, although in most periods there also were significant 'secular' and temple administrations" (Baines and Yoffee 1998:206-207). Parallel to Mesopotamia, Egyptian kings

and royalty attained power and received tribute through an inherited sequence of land ownership. "Within Egypt, royal authority was underpinned by the king's theoretically absolute ownership of the land and rights over his subjects" (Baines and Yoffee 1998:206).

Concluding Remarks

Undoubtedly, monumental architecture was constructed for specific purposes. These structures are tangible representations of power that required significant amounts of organization and labor to construct. They were constructed with the intent of drawing attention to their size and design. More importantly, and unlike the perishable and small houses of most non-elites, monumental architecture is enduring, and synonymous with the powerful individuals who built them, or for whom they commemorated. For all intents and purposes, monumentality legitimized power. "As with the fusion of 'permanence' and 'perfection,' monumental architecture makes power visible and hence becomes power rather than merely a symbol of it: 'It was by and through their association with these monuments that men in the office of king, and their agents, had access to power' " (Trigger 1990:122).

Analogous to the examples above, the monumental architecture of the ancient Maya represented authority and power as well, particularly that of the royal court.

CHAPTER 3

SOUTHERN LOWLAND MAYA MONUMENTAL ARCHITECTURE

The Southern Lowland Maya lived in the western and southwestern region of the larger area known as Mesoamerica (Figure 1), including the countries of Mexico, Belize, Guatemala, El Salvador, and Honduras. They occupied this region for thousands of years, with their most significant cultural achievements occurring during the Classic Period (A.D. 250-950). The Classic Maya thrived for over 700 years, reaching their cultural and population pinnacle in the Late Classic Period (A.D. 550-850) (Coe 1999; Sharer 1994:46-47).

Largely subsisting upon maize agriculture, the Southern Lowland Maya initially lived in farmsteads near perennial water sources, eventually moving into other areas as populations grew and competition over land and other resources increased (Coe 1999; Sharer 1994). Populations began to aggregate at particular locations throughout the Southern Lowlands that served as religious, social, political, and economic centers. These civic-ceremonial centers marked a shift of society from egalitarian to hierarchical. Centers consisted of monumental architecture and public plazas constructed under the auspices of members of royal courts.

The royal court was a faction of elite persons including the ruler and members associated with and contributing to the decisions of that specific ruler. These people advised the ruler, and ultimately affected the lives of the masses, yet only represented a fraction of the population. Inomata and Houston (2001) describe the royal court and its members:

> In our judgment, the pivotal feature of the royal court is that it incorporates an organization centered around the sovereign, be this person a king, ruler, emperor, or monarch. The people who surround the ruler may include his or her family members, advisors, relatives, guards, artisans, craftspeople, and servants. These court members are bound by

> mutual understandings and obligations; their interactions generally take place in culturally ordered spatial settings. (Inomata and Houston 2001:6-7)

Generally speaking, the court was comprised of several individuals that together governed. Their relationship with a ruler, and with one another, were of a close-knit nature, and given the importance of their political and spiritual affairs, their conversations and actions remained discrete. Consequently, similar to the senate and congress of the United States' political system, the royal court required a spatial environment conducive to conducting business. Since no written evidence of the royal court exists archaeologically, we must rely upon the best tangible evidence of these governing bodies, monumental architecture, especially royal palaces.

The center was the nucleus of the Maya community consisting of monumental architecture (e.g., ballcourts, temples, causeways or *sacbeob*, plazas), including elite residences and the royal acropolis. "Centers are aggregated and nucleated arrangements of pyramids, big platforms, palaces, and other buildings that were the foci of Maya political and religious life . . ." (Willey 1987:113). The architecture was laboriously constructed of cut-stone, often having multiple rooms with plastered and painted walls, and spatially arranged to delineate residential areas from public, political, and ritual spaces. Rulers exacted tribute from surrounding farmers in the form of labor and foodstuffs, however food processing and other domestic activities did occur in specialized rooms (e.g., Inomata et al. 2002). A king, who claimed divine authority, would have directed rituals within the royal complex as well as in public venues. "Ceremonial centers, were in essence comparable to the small domestic house complex in their structural components – i.e., they had residential structures of varying size and function, grouped around a plaza along with what we have always referred to in the Maya

area as a temple pyramid" (Sanders 1981:359). Similar to Mesopotamia and Egypt, Maya centers and monumental architecture served as public arenas for economic exchange and social organization, facilitated by open plazas ideal for ritual events and political rallies, as illustrated in the discussion on acropoli and palaces in the Southern Maya Lowlands (e.g., Central Acropolis, Tikal).

Southern Lowland Maya Acropoli

Many Southern Lowland Maya acropoli likely served as multifunctional complexes housing the ruler and his royal court. The term “multifunctional” describes a structure or structure complex (e.g., acropolis) that served more than one purpose, an architectural feature that can be found both in the Southern Lowland Maya region as well as cross-culturally (e.g., the Minoan Palace of Knossos, the Royal Compounds of Chan Chan, Palace A at Kish, the Palace of Nestor at Pylos, and Structure III at Calakmul) (Flannery 1998:22-34). The most common functions associated with this term are residential, political, administrative, and ritual.

A multifunctional acropolis would have had housing quarters for the ruler and his family, with thrones or benches in many of the rooms, which in themselves are indicative of royalty (Harrison 2001). There would be additional rooms and open courts, accessible only by the members of the royal court, where political and religious topics would have been debated and decided. Within the acropolis, there may have been one palace or a series of palaces, depending on the size of the royal court. “The number of such compounds at a site may be a good indicator of the size of its royal population” (Clark and Hansen 2001:17). For example, there are a total of three acropoli at Tikal (North Acropolis, Central Acropolis, and the South

Acropolis) with several palaces, and there are two acropoli at Caracol (Central Acropolis and South Acropolis) and one massive palace, Ca'ana. "For Classic period polities such as Tikal or Caracol, architectural . . . data suggest a rather sizable court existed at times . . ." (Traxler 2001:47), contrasting to other Southern Lowland sites such as Baking Pot, Belize, that contained one palace or acropolis and had a much smaller royal court, if any at all.

Royal acropoli or palaces were often at the core of centers, located near temples, and were highly complex and grandiose, clearly demarcating royalty.

> The royal palace was the most formal architecture of the royal residence, designed to convey wealth, power, order, and heritage. In most Classic centers, the royal palace is recognizable as the most elaborate of the large, multiroom range structures, and its central or prominent location in the architectural design of the polity center reinforced the dominant position of the ruler within the community. The architecture of the royal palace was designed to separate the royalty from the populace both physically and symbolically. The design and manipulation of space reinforced social distinction and control, typically situating the ruler and the court as central, elevated in society, and circumscribed. (Traxler 2001:48-49)

The intentional design of the royal acropolis or palace as the focus of the Maya center placed this architectural complex within proximity to other substantial and important structures within the center core, such as plazas, temples, and ballcourts. Plazas, temples, and ballcourts are all associated with public activity and ritual, indicating a clear relationship between these types of structures and the royal acropolis. "The proximity of royal compounds to primary temples implies that kings and other royal members of the court, including priests, were involved in rituals associated with these edifices" (Clark and Hansen 2001:31). Court members could easily and frequently access temples, ballcourts, and plazas during times of public celebrations and rituals, while other center residents had limited access due to their peripheral residence. Similarly, the proximal relationship of the royal court to temples

emphasizes the religious and political roles of rulers. "The intermediary position of these compounds between secular and sacred space at these early centers is patent and signals the rulers' dual functionality on at least two spatially and conceptually distinct spheres or power: god and mammon" (Clark and Hansen 2001:31).

Architectural evidence of this type of layout is found throughout the Southern Lowlands. For example, the royal acropolis of Nakbe, Guatemala, is located next to the largest temples at the site (Clark and Hansen 2001). As further discussed below, Tikal's royal residence, the Central Acropolis, was located next to two of the largest temples at Tikal, Temples I and II, which are associated with the largest open plaza at Tikal, the Great Plaza (Coe 1999, Sharer 1994). Palenque's Tower Palace is near the largest temple at Palenque, The Temple of Inscriptions, as well as the ballcourt (Sharer 1994). At Caracol, the large palace, Ca'ana, is at the nucleus of the center and close to several plazas (Chase and Chase 2001). The Castillo (palace) at Xunantunich is by far the largest structure within the center; it is surrounded by the largest temples of the site and a ballcourt, and faces the largest plaza. The acropolis at Cahal Pech, Belize, is directly associated with the largest plaza and temples, as well as two ballcourts (Awe, Campbell, and Conlon 1991). "The occupants of the [royal] compound had immediate and ready access to the temple platforms as well as large plazas, a pattern noted at all . . . capital centers . . ." (Clark and Hansen 2001:18). These spatial designs appear to be intentional, in that access to particular structures and areas is only provided to elite and royal individuals (Houston 1998:522).

> [T]he Maya manipulate space in ways that can serve more than aesthetic needs. Classic buildings not only create mass but define and enclose space. Participants in processions move through them in predetermined ways to create what de Certeau calls a 'spatial story' that 'weave(s) time and space together into a kind of narrative'. (Houston 1998:522)

Interpreting this “spatial story” is what Maya archaeologists are attempting to accomplish. Through analyzing spatial layouts of lowland centers, we attempt to identify royal courts, which can best be revealed in whether architecture was restricted versus unrestricted.

Restricted and Unrestricted Architecture

Restricted and unrestricted architecture exist at many major centers. For example, Cahal Pech (Figure 2), located in western Belize, is considered a "medium-seized Maya site" (Awe, Campbell, and Conlon 1991) and consists of 34 core structures and two ballcourts. Cahal Pech also offers important insight to the spatial layout of the royal court. The royal court is represented in what Awe, Campbell, and Conlon define as "semi-restricted and restricted access plazas." Semi-restricted plazas have limited access and ". . . and are bounded, but not enclosed . . .", and restricted plazas “. . . are entirely bounded on all sides by mounds" (1991:27). Within Cahal Pech, the complex architecture that encloses and is associated with the restricted plazas is comprised of a maze of rooms, corridors, and former doorways that divert residents from plaza to plaza.

Awe and others argue plazas that are partially restricted are representative of public and non-elite, or lesser elite, activities, and that the exclusively restricted plazas were not open to public viewing, demonstrating the existence of a royal court. "If we were to reconstruct the socio-political, hierarchical system of the site based on settlement configuration, the size and complexity of structures in Plaza A, and the restrictive nature of that courtyard, would then suggest that the highest ranking elite were based in this plaza" (Awe, Campbell, and Conlon 1991:28). The structural and social complexity of this "medium-sized" site demonstrates that the royal court extended well beyond the major centers of the lowlands, such as Tikal.

The Central Acropolis, Tikal

Tikal, in the Peten region of Guatemala, boasts the most monumental volume and extent of all Maya centers. The site consists of over 3,000 core and surrounding structures (Coe 1967). Within the core, there are at least six major temples, three different acropoli (palace complexes), five causeways, and several plaza areas enclosed by other significant monumental architecture. However, there is one particular complex that displays elements of complexity that articulate both private and open areas, the Central Acropolis (Figure 3). The spatial arrangement of this complex and its courtyards contrasts with the layout of the neighboring Great Plaza to the north. Both contain monumental architecture, but the Great Plaza has a large open, unrestricted area that allowed for public congregation, while the Central Acropolis is enclosed or restricted, indicating it likely served as the royal's palace. "This area surely housed Tikal's ruling dynasty and their retainers . . ." (Sharer 1994:164).

The Central Acropolis is ". . . the largest well-known royal palace compound . . ." (Webster 2001:148), and the structures within the Central Acropolis are diverse in their construction. They range from ". . . one, two, or three stories, often containing many rooms. These buildings are termed 'palaces' to distinguish them and their characteristics from temples" (Coe 1967:55). There are a total of six plazas (courts) containing about 35-40 structures within a 240 (east-west) x 120 (north-south) meter area, creating a complex, constricted spatial layout. Each plaza is enclosed by structures on all sides with narrow passageways connecting them. The setting of the Central Acropolis is physically higher than the neighboring Great Plaza which is demarcated by two of the largest temples of Tikal (Temples I and II), further impeding access. By adding stories to several structures within the Central Acropolis, the Maya architects established an even more restricted environment,

privatizing certain areas within an already private complex. This indicates that the activities that transpired within Central Acropolis were intentionally restricted, limiting access to only royalty. This allowed the royal court privacy for ritual and secular duties (e.g., ceremonies and administration).

Peter Harrison argues that the Central Acropolis was a multifunctional (personal communication 2002) complex and provided the royal court ". . . a physical setting and associated features of architecture that enabled the performance of their duties" (Harrison 2001:75).

Concluding Remarks

Evaluating monumental architecture clearly illustrates that it is possible to demonstrate the existence of a royal court. The presence of restricted plazas and architecture within a center is a clear indicator that a particular structure may be associated with royalty, limiting access to lesser elites and non-elites. In addition, the location of the royal court near temples, ballcourts, and plazas indicates that there is a relationship between royals and public activities (e.g., ceremonies and ballgames). I will now attempt to demonstrate that a royal court is present at Yalbac through the analysis of its site layout.

CHAPTER 4

YALBAC: RESULTS FROM THE 2001 AND 2002 FIELD SEASONS

The research completed at Yalbac by the Valley of Peace Archaeology (VOPA) project, under the directorship of Dr. Lisa J. Lucero, is in its early stages. Consequently, we have only conducted test excavations. No archaeological references about Yalbac can be found other than brief notes from J. Eric Thompson's excavations at San Jose during the 1930s, approximately 18 kilometers to the north. In his notes, Thompson mentions that when traveling to San Jose from "El Cayo," now known as San Ignacio, he passed ". . . through the depopulated village of Yalbac, close to which there are many mounds" (Thompson 1939:2). Furthermore, in the appendix of his 1939 field report, Thompson again mentions Yalbac as: "Pyramids and mounds on edge of village, now abandoned" (Thompson 1939:282). Whether or not Thompson is talking about the same village and "pyramids and mounds" in my thesis is unclear due to the vagueness of his descriptions. There are several historic sites approximately 2 kilometers to the south named San Pedro Siris that is an abandoned logging village often referred to as Yalbac.

During the 2001 and 2002 field season, I served as the mapping and survey director for the VOPA project. In 2001, Charles "Sonny" Hartley and myself collected over 250 points within the site core using a theodolite, and all architectural dimensions were recorded using a 50-meter tape. Using transect survey, over 150 hinterland structures were located and recorded, allowing us to generate a preliminary settlement map. During the 2001 and 2002 field seasons, through the use of global positioning systems (GPS), I have collected additional geographic data on architecture, natural resources, and other related features. All of this data

have been plotted, calculated in Microsoft Excel spreadsheets, entered into a database, and analyzed through the use of two geographic information systems (GIS) softwares, Trimble Terramodel 9.8 and ArcView 3.2. As a result, I have produced two-dimensional and three-dimensional maps for the VOPA project and the Belize Department of Archaeology. All images and maps of Yalbac in this thesis are produced by the author (see Appendix A for GIS images of Yalbac).

Since the terms acropolis and palace are sometimes difficult to distinguish from one another in literature, for purposes here, I use the term acropolis to refer to a complex of raised platform(s) and plazas that are spatially constricted and contain several different types of structures within the complex, and multifunctional. The term palace is used to refer to a multiroom range structure that housed the ruler and his family members, and may either be segregated from the acropolis or incorporated into the acropolis.

Yalbac

From February to May of 2001 and May to July of 2002, the VOPA project (Figures 4 and 5) began field research at the previously unstudied Maya center of Yalbac in central Belize. Preliminary data was collected over the course of forty days, by 30-35 VOPA archaeologists. During the first season, 15 days were spent at Yalbac, with 20-25 crewmembers (staff, field school students, and local workers). During the second field season 25 days were spent at Yalbac, with 14 crew members. Although only a limited number of days was spent at Yalbac, a significant amount of data was collected. We also excavated two peripheral structures and two plaza test pits.

Yalbac is located approximately 45 kilometers east of Naranjo, 35 kilometers east of Cahal Pech, 90 kilometers northeast of Caracol, and 100 kilometers east of Tikal, and is situated south of the Yalbac Hills. The core structures sit at an approximate elevation of 75 meters above sea level, and are slightly north of a perennial stream, Yalbac Creek. The land occupied by the site of Yalbac is a prosperous, privately owned cattle ranch and logging company (Yalbac Cattle and Ranch Company) that neighbors the small agricultural village of Yalbac south of the creek.

Yalbac (Figure 6), based on its size, is considered a medium-sized major center (Adams and Jones 1981). To the south of Yalbac are two large terraces that are approximately 20 to 25 m (meters) in height, which are separated by a gradual inclining path (about 65 m in length) with a slope of about twelve to fifteen degrees. This causeway serves as the only entrance to the site core, where there are three major plazas. Plazas 1 and 3 appear to be more restricted given the smaller entrances to each one respectively, with Plaza 1 being the more restricted of the two, and Plaza 2 being the largest and most accessible of all three plazas.

Plaza 2 is c. 50 x 60 m in and is surrounded by seven monumental structures, two of which comprise a ballcourt (Structures 2B and 2C), and range from 30 x 30 m to 55 x 15 m and 4 to 16 m in height. By exiting Plaza 2, one enters Plaza 3 on the northwest corner on a slightly inclined ramp. Plaza 3 is an estimated 45 x 56 meters . This plaza consists of six structures ranging from 9 x 2.5 m to 45 x 17 m and 1 m to 11 m in height. The southern and eastern portions of this plaza form the boundary of the southern terrace previously mentioned.

Plaza 1, directly west of Plaza 3, is the smallest in size, yet contains the most complex architecture. This plaza is surrounded by five structures (33 x 27 m) including three long and

narrow structures that form its northern, southern, and eastern boundaries, and range from 25 x 7 m to 33 x 7 m and 5 to 7 m in height. A fourth structure, similar in size but smaller in height, forms another segment of the northern boundary to the northwest of the plaza. All of these structures are dwarfed by the largest complex of the Yalbac core, the acropolis (Structure 1A).

The acropolis (Figure 7) is approximately 45 x 55 m and is over 20 meters in height, and consumes the western portion of Plaza 1. There are at least 19 structures forming the acropolis, all surrounding one of the four sunken plazas or courtyards, with staircases likely connecting lower plazas to upper plazas. Abutting plazas connect likely via a corbel archway.

All structures are constructed with faced limestone, a fact quite visible in the several looters trenches that penetrate the acropolis at various locations (28 looters trenches in total; Figure 8 and see Appendix B). The top most revealing looters trenches, LT 1 (Figure 9) and LT 2, both located at the of the acropolis, have exposed two rooms in LT 1, one with an intact corbel arched ceiling and red-plastered walls, and an additional room in LT 2 that contains a bench overlooking Plaza 1.

We excavated 1 x 2 m test pits in the centers of Plazas 2 and 3 to collect chronological information. They both had 13 natural levels, or at least six construction phases consisting of plaster floors and cobble ballasts. Ceramics collected from these test pits and looter's trenches date to c. 300 B.C. to A.D. 900 (Late Preclassic to Late Classic) (Conlon and Ehret 2002; see Appendix C).

Although the research at Yalbac is preliminary and limited excavation has taken place, the monumental architecture itself reveals much about the presence of a royal court.

Finally, we also began to explore the settlement around Yalbac. We were primarily

concerned with finding structures and surface collecting any diagnostic ceramics that would provide us with a regional chronology. The majority of the structures in the hinterland were solitary “residential units” and constructed with cut stone, however it was not uncommon to find a small “patio group” or three to six structures also constructed with cut stone (Ashmore and Willey 1981). The majority of structures were greater than one-meter in height. Surface ceramics from 78 hinterland structures were collected and analyzed. Ceramics were predominantly from the Spanish Lookout phase (A.D. 700-900), but ranged from A.D. 400. to 1150-1500 (Conlon and Ehret 2002). The ceramics collected and the associated dates strongly indicate that Yalbac was occupied for at least 1100 years. Assuming that “things found together relate to each other behaviorally and chronologically” (Webster 1998:15), it appears that the occupational peak of Yalbac is in the Classic period, specifically the Late Classic or A.D. 700-900.

In sum, over 150 structures (Figure 10) were found in the hinterland in a 5 square kilometer area. The greatest numbers and highest density of structures were found on higher ground, north of Yalbac Creek and west and northwest of the 35 core structures on soil that is highly suitable for agriculture (Fedick 1996). This survey, however, was only preliminary. We need more data on hinterland settlement with regard to agricultural soil and water resources. This information will provide insight to the means that the Yalbac royal court possessed in order to exact tribute.

CHAPTER 5

DISCUSSION

The purpose of this thesis has been to explore the site layout of the Maya center of Yalbac to determine whether or not a royal court existed at Yalbac. Results leave little doubt that rulers lived at Yalbac. In this chapter, I investigate the nature of the royal court through a detailed discussion of Yalbac's monumental architecture.

The structures that surround Plaza 2, as well as its size, suggest that the plaza served as a more public venue than did Plazas 1 and 3. Plaza 2 contains the largest temple of the site, 2A (20 x 11 m and 15 m in height), which is physically connected to the only ballcourt, structures 2B and 2C. This temple and ballcourt indicate social and ceremonial events. The two remaining temples (structure 2E and 2F) on this plaza may have been used for public events as well. The final building in Plaza 2, a long, narrow range structure (2D) likely consists of a series of rooms that served for residential and/or administrative functions.

Plaza 3 is similar to the semi-restricted plazas at Cahal Pech. The only entrance into this plaza is from the northwest, suggesting some degree of restricted access. Inside the plaza, there is a significant amount of open space, yet it is considerably smaller than Plaza 2. Structures 3A and 3D, which are directly across from one another, mirror each other in design and are the largest structures on the plaza. These two temples are quite similar to the E Group assemblage in their design and cardinal orientations, but their true function has yet to be determined. The E Group assemblage was first identified at Uaxactun and ".

. . consisted of a pyramidal western facing mound facing an eastern platform . . " that " . . . believed to have functioned as a solar observatory. . ." and are present at ". . .at least 30 sites in a rather concentrated area within the Southern Lowlands" (Chase and Chase 1995:90). The remaining four structures are modest in size, and may have served as elite residences.

Plaza 1 is also semi-restricted. Three range structures (structures 1B, 1C, and 1D) and the royal acropolis (1A) enclose this plaza. The three range structures likely included several rooms that would have housed members of the court. Their location within the plaza and association to the "palace complex" indicates that the persons who lived in them had some degree of power and wealth, yet were not as influential as the members who resided in the acropolis. David Webster uses the term "palace complex" to exemplify ". . . the whole set of court facilities that maintained the royal family and its closest associates, as well as the larger institution of rulership in all its political, ritual, and ideological dimensions, and provided a stage for royal drama" (Webster 2001:141). Though these structures and their inhabitants contributed to the royal court, their functions were not likely to be as significant as those that physically and spatially occupied the acropolis.

The acropolis is constructed on a raised platform with four restricted plazas. These plazas are small in size and are elevated above all other structures of Yalbac. This restricted nature, as well as the steep staircases leading to the acropolis, indicate that it was private and restricted. The individuals that resided in the acropolis were likely the most influential and important figures at Yalbac. The primary royal residence of Yalbac is located on the extreme top of the acropolis, with the front of the structure facing the open area of Plaza 1 to the east, more than twenty meters below. The plaza associated with this

primary residence is smaller than all other acropolis plazas. It is the highest plaza of Yalbac, and can only be entered by climbing up from the three lower plazas. As mentioned earlier, one large looter's trench (LT 1) has exposed two perpendicular rooms. A second looter's trench (LT 2) exposed an additional room in the front of the acropolis revealing door jams and a bench overlooking Plaza 1. The existence of benches can be indicative of royalty (Harrison 2001). Corbel arched ceilings are classified as "improved architecture" requiring labor and masonry skills, and are frequently associated with elite architecture (Abrams 1994:24). The presence of several rooms, both in the front and back, indicates that a multiroom structure is located at the top of the acropolis.

The location of the acropolis near the largest temple (2A), plazas, and ballcourt at Yalbac is congruent to what Clark and Hansen state: "The proximity of royal compounds to primary temples implies that kings and other royal members of the court, including priests, were involved in rituals associated with these edifices" (Clark and Hansen 2001:31).

Implications for Future Research

Given that Yalbac has a royal acropolis, plazas, temples, a ballcourt, and a causeway indicates that the royal court likely organized their construction. What is not known, however is over whom the royal court ruled and the extent of their authority. The centers of San Jose, Barton Ramie, Holmul, Mun Diego, Baking Pot, and Saturday Creek are all within 18-25 kilometers of Yalbac. Their proximity to one another may provide insight of the boundaries and interaction of each sovereignty. Each of these centers were potentially autonomous, but may have been under a larger and more authoritative sovereign, such as Caracol, Tikal, or even

albac. Further excavation may yield material evidence for interaction and trade amongst these centers.

Regarding farmers from whom they exacted tribute, preliminary hinterland survey demonstrates that Yalbac was surrounded by non-elite and elite settlement. The settlement itself correlates with the location of perennial water sources and good agricultural soils.

Yalbac is situated next to a perennial water source, Yalbac Creek, and is surrounded by highly suitable soil (Figure 11) for agricultural cultivation with Class I soils being most suitable for agricultural production and Class V soils being least suitable for agricultural production (Fedick 1996). The location of the majority of the site core of Yalbac and its surrounding settlement are on Class II and III soils intermixed with Class IV soils. This correlation to fertile soils and a perennial source of waters, coupled with possible aguadas and/or reservoirs, places Yalbac in a suitable environment for agriculture and may have provided means for the royal court of Yalbac to control resources and exact tribute from farmers.

Concluding Remarks

Well designed over centuries, Classic Southern Lowland Maya centers, including Yalbac, display evidence of site planning that benefited the royal court by restricting areas of political, administrative, residential, and religious significance, and by placing themselves in proximity to public and sacred arenas. These restricted areas allowed the royal court to successfully manage and maintain authority over their citizens, while their association to sacred and public venues reinforced both religious and political clout.

CHAPTER 6

CONCLUSION

Monumental architecture is tantamount with rulership since it legitimizes power. It serves as a physical symbol of wealth, authority, and royalty. The structural layout and architectural exclusivity of royal compounds implies that their daily activities were not accessible to the common people whom they governed. Ultimately, restricting access to particular areas created and maintained social order through emphasizing to the common masses the roles of specific individuals, from farmer to ruler.

I have attempted to reveal commonalities cross-culturally and amongst Classic Southern Lowland Maya centers. Through my discussion of the ancient civilizations of Mesopotamia and Egypt, I have illustrated that similarities exist in monumental architecture, especially temples and palaces. The same can be said for Southern Lowland Maya centers.

> To reconstruct the social world of a Classic Maya court involves reasoned interpretation, drawing upon excavated remains in all forms, imagery, and deciphered inscriptions. Any reconstruction also involves a measure of speculation drawing on comparison with models of court life from other cultures and times. (Traxler 2001:46-47)

The analysis of site layout is quite useful to asses the presence and type of monumental architecture. In the preliminary stages of study at Yalbac, I have only the map to evaluate. There can be little doubt that Yalbac indeed had a royal court. David Webster has stated: “We [archaeologists] assume that the built environment reflects ancient patterns of behavior,

organization, and meaning in coherent ways, and we try to use it to reconstruct these feature of past societies" (Webster 1998:17). Only future and comprehensive excavations can further support my results.

APPENDIX B

LOOTER'S TRENCH (LT) SUMMARIES

LT Number and Structure	Measurement (L x W x H in meters)	Location	Construction Type
1-1A	4.70x3.50x2.40	Top of mound, west side, south end	Limestone boulder walls, plaster floor, corbel vault
2-1A	4.30x1.50x1.50	Top of mound, east side, north end	Limestone boulder walls, plaster floor, bench
3-1A	2.70x.75x.77	Top of mound, west side, north end	Limestone boulder walls with plaster
4a-1A	1.50x.50x.40	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill
4b-1A	.90x.60x.30	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill
4c-1A	.80x.50x.80	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill
4d-1A	.30x.10x.20	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill
5-1D	2.80x.80x.62	Bottom of mound, south side, west end	Limestone rubble, faced stone wall
6-1D	1.75x.60x.70	Bottom of mound south side, east end	Limestone boulder and rubble fill; plaster floor, faced stone wall
7-3A	11x1x1.70	Bottom of mound, west side, center; tunnel trench	Limestone rubble fill; at least 4 phases, 3 floors
8-3D	12.8x1x1	Center of mound, east to west, center	Limestone boulder; possible steps in lower LT profile
9-3B	11x1.4x1.15	Center of mound, east to west, west side	Limestone boulder and rubble fill; faced stone walls
LT Number and Structure	**Measurement (L x W x H in meters)**	**Location**	**Construction Type**
10-2G	10x1x1.50	Bottom to almost top, south side, east end	Limestone and rubble fill
11-2F	14.5x2x1	Bottom to top, south side, west end	Limestone and rubble fill; faced stone walls
12-1A-2b	3x.70x2	North of SE corner, west end, east to west	Limestone boulder and cobble fill, lower construction phase, above plaster floor
13-1A	1.70x1.20x 1.5	North side, north to south, west end	Limestone plaster floor, boulder, cobble, and marl fill
14-1A	3.2x.90x1.8	North side, north to south, east end	Limestone plaster floor, cobble and pebble fill above, large boulder below

			floor
15-1C	.67x1.9x2.0	South side, top of upper tier	Limestone boulder
16-2E	5.4x1.4x2.1	SW corner, top to bottom, north to south	Limestone boulder fill, faced stone, plaster floor
17a-1A	2.20x1.2x1.3	Bottom center of east side	Small, compact limestone pebble fill
17b-1A	2.4x1.2x1	Bottom center of east side	Compact limestone boulder fill with small cobbles
18-2C	3.15x1.25x1.6	East side near end of structure, east to west	Compact limestone boulder fill with small cobbles
19-2C	1.4-1.8x2x1.9	East side near north end, east to west	Limestone boulder fill with cobbles
20-2C	3.5x1.5x1.4	East side at north end, east to west	Limestone boulder fill
21-2F	12x2.25x1.50	West side, from top to bottom, east to west	Limestone boulder and cobble fill; large faced boulder walls
22-4	2.92x.92x.92	North end of structure, north to south	Limestone boulder and cobble fill
LT Number and Structure	**Measurement (L x W x H in meters)**	**Location**	**Construction Type**
23-4	6.1x1.4x1.95	West side of structure, SW to NE	Limestone boulder fill with plaster, faced cap stone lying in trench
24-3E	7x1x.65	West side of structure, east to west	Limestone boulder fill
25-3A	3.4x2.4x1.2	East side, top center	Boulder fill, possible vault/capstone
26-3D	6.4x1.4x1.5	East side, top; east-west	Boulder and cobble fill
27-1D	6.6x1.2x0.85	East side, bottom middle	Pebble cobble fill; possible wall?
28-1D	7.6x2.7x1.5	NE corner, top	Boulder and cobble fill, walls

APPENDIX C

CERMAMIC ANALYSIS RESULTS FROM 2001 FIELD SEASON

Catalog Number	Area/ Structure*	Location /Level^	Phases#	Probable Phase and Dates#
107	94E 22N	LT 2	SLE, SLA	SLA, AD 700-900
108	94E 22N	SITE C	SLE	SLE, AD 700-800
109	94E 22N	SITE D	SLE, SLA, SLL, NTE, NTL	NTE & NTL, AD 900-1500
110	94E 22N	SITE B	SLE, SLA	SLA, AD 700-900
111	LAGUNITA	SURFACE	TRA, SLE, SLL	SLL, AD 800-900
112	93E 21N	SITE 3	SLA	SLA, AD 700-900
113	3D	LT 8	SLL,	SLL, AD 800-900
114	93E 24N	SITE 5	HA, TRA, SLE, SLL	SLL, AD 800-900
115	93E 21N	SITE 4	TRA, SLA	SLA, AD 700-900
116	3A	LT 7	TRL, MH	TRL, AD 650-750
117	94E 22N	SITE 2	TRA, SLE, SLA	SLA, AD 700-900
118	94E 22N	SITE 3	SLA	SLA, AD 700-900
119	93E 21N	SITE 7	SLA	SLA, AD 700-900
120	1E	LT 12	SLA, SLL	SLL, AD 800-900
121	93E 24N	SITE 2	HA, TRA, SLE, SLA, SLL	SLL, AD 800-900
122	94E 23N	GRP 1	TRA	TRA, AD 600-700
123	93E 21N	SITE 1	HA, TRA	TRA, AD 600-700
124	93E 21N	SITE 3	SLA	SLA, AD 700-900
125	93E 21N	SITE 4	N/A	N/A
126	94E 21N	SITE 1	SLE	SLE, AD 700-800
127	1A	LT 1	MH	MH, 100 BC-AD 250
128	1A	LT 13	SLA	SLA, AD 700-900
129	2E	LT 16 UPPER	SLA	SLA, AD 700-900
130	2E	LT 16 LOWER	SLA	SLA, AD 700-900
131	1A	SURFACE	TRA	TRA, AD 600-700
132	1A	LT 4	SLA	SLA, AD 700-900
133	1A	LT 17	SLE	SLE, AD 700-800
134	3A	YD	TRA	TRA, AD 600-700
Catalog Number	**Area/ Structure***	**Location /Level^**	**Phases#**	**Probable Phase and Dates#**
192	PLAZA 2, TP1	3	HA	HA, AD 400-600
193	PLAZA 2, TP1	2	TRA, SLA	SLA, AD 700-900
194	PLAZA 2, TP1	1	TRA, SLA	SLA, AD 700-900
195	PLAZA 3, ROCK PILE	SURFACE	SLA	SLA, AD 700-900

196	94E 22N	SITE 4	HA, TRA, SLA	SLA, AD 700-900
206	94E 23N	SITE 2	SLL, NTE, NTL	NTE &NTL, AD 900-1500
207	94E 23N	SITE 3	TRA, SLA, SLL	SLL, AD 800-900
208	94E 22N	SITES 5-7	TRA, SLA, SLL	SLL, AD 800-900
209	93E 21N	SITE 11	N/A	N/A
210	93E 21N	SITE 11	N/A	N/A
211	93E 21N	SITE 10	TRA, SLA, SLL	SLL, AD 800-900
212	1A (WEST)	SURFACE	SLL	SLL, AD 800-900
213	PLAZA 2, TP1	7	TRA	TRA, AD 600-700
214	PLAZA 2, TP1	6	HE, SLE	SLE, AD 700-900
215	PLAZA 2, TP1	5	JCL, BC, MH, FP, HE	HE, AD 250-400
216	PLAZA 2, TP1	4	N/A	N/A
251	94E 22N	GRP 8, D & E	TRA, SLA, SLL	SLA, AD 700-900
252	93E 22N	SITES 1-4	SLA	SLA, AD 700-900
253	94E 22N	GRP 9A	TRA, SLA, SLL	SLL, AD 800-900
254	94E 23N	SITE 4	HA	HA, AD 400-600
255	94E 22N	GRP 8A	TRA, SLA	SLA, AD 700-900
256	94E 23N	SITE 5	TRA, SLA	SLA, AD 700-900
260	PLAZA 3, TP1	1	SLE, SLA SLL	SLA, AD 700-900
Catalog Number	**Area/ Structure***	**Location /Level^**	**Phases#**	**Probable Phase and Dates#**
261	PLAZA 2, TP1	9	BC	BC, 300-100 BC
262	PLAZA 2, TP1	8	BC, MH, FP	FP, AD 1-250
293	93E 22N	SITE 8	SLA, SLL	SLA, AD 700-900
294	94E 23N	SITE 7	SLA	SLA, AD 700-900
295	93E 22N	SITES 7 & 9	TRA, SLA	SLA, AD 700-900
296	PLAZA 3, TP1	2	FP, HA, SLE, SLA, SLL	SLA, AD 700-900
297	93E 22N	SITE 5	SLA	SLA, AD 700-900
298	94E 22N	SITE 10B	N/A	N/A
299	94E 23N	SITE 9	TRA, SLA	SLA, AD 700-900
300	94E 23N	SITE 6	SLA	SLA, AD 700-900
301	93E 22N	SITE 8	TRA, SLA	SLA, AD 700-900
302	94E 22N	SITE 10A	SLA	SLA, AD 700-900
303	94E 22N	SITE 12	SLA	SLA, AD 700-900
304	PLAZA 3, TP1	3	MH, HA	HA, AD 400-600
305	PLAZA 2, TP1	TOP 12	N/A	N/A
306	2G	SURFACE	NTL	NTL, AD 1150-1500

332	4	LT/SURFACE	NTE	NTE, AD 900-1150
333	94E 23N	SITE 10	N/A	N/A
334	93E 22N	SITE 14	SLL	SLL, AD 800-900
335	93E 22N	SITE 12	TRA, SLE, SLA	SLA, AD 700-900
336	93E 22N	SITE 11	N/A	N/A
337	PLAZA 2, TP1	12	MH	MH, 100 BC-AD 250
343	PLAZA 3, TP1	5	FP	FP, AD 1-250
400	3B	LT9	SLL	SLL, AD 800-900
401	4	LT23	MH, HA, SLA	SLA, AD 700-900
402	PLAZA 3, TP1	13	FP, HA	HA, AD 400-600

(Adapted from Conlon and Ehret 2002)

* The “Area/Mound” column contains the location where each ceramic type was found at either a survey area, structure, plaza, natural feature, or test pit (TP).

^ The “Location/Level” column contains the location where each ceramic type was found at either a unit, structure or structural group, or looter’s trench (LT).

The “Phases” and “Probable Phases and Dates” columns contain abbreviations for ceramic complexes for the Belize River Valley. The abbreviations and associated complexes are: JCL = Jenney Creek Late, BC = Barton Creek, MH = Mount Hope, FP = Floral Park, HE = Hermitage Early, HA = Hermitage Entire/All, TRA = Tiger Run Entire/All, TRL = Tiger Run Late, SLE = Spanish Lookout Early, SLA = Spanish Lookout Entire/All, SLL = Spanish Lookout Late, NTE = New Town Early, NTL = New Town Late.

REFERENCES CITED

Abrams, Elliot M.
1994 How the Ancient Maya Built Their World: Energetics and Ancient Architecture. Austin: University of Texas Press.

Adams, R.E.W., and R.C. Jones
1981 Spatial Patterns and Regional Growth Among Maya Cities. American Anthropology 46:301-322.

Ashmore, Wendy, and Gordon R. Willey
1981 A Historical Introduction to the Study of Lowland Maya Settlement Patterns *In* Lowland Maya Settlement Patterns. Wendy Ashmore, ed. Pp. 3-18. Albuquerque: University of New Mexico Press.

Awe, Jaime J., Mark D. Campbell, and Jim Conlon
1991 Preliminary Analysis of the Spatial Configuration of the Site Core at Cahal Pech, Belize, and Its Implications for Lowland Maya Social Organization. Mexicon 13(2):25-30.

Badaway, Alexander
1966 A History of Egyptian Architecture: The First Intermediate Period, the Middle Kingdom, and the Second Intermediate Period. Berkeley: University of California Press.

Baines, John and Norman Yoffee
1998 Order, Legitimacy, and Wealth in Ancient Egypt and Mesopotamia *In* Archaic States. Gary N. Feinman and Joyce Marcus, eds. Pp. 199-260. Santa Fe: School for American Research Press.

Chase, Arlen F. and Diane Z. Chase
1995 External Impetus, Internal Synthesis, and Standardization: E Group Assemblage and the Crystallization of Classic Maya Society in the Southern Lowlands *In* The Emergence of Lowland Maya Civilization: The Transition from the Preclassic to the Early Classic. Nikolai Grube, ed. Acta Mesoamericana 8:87-101. Mockmuhl: Verlag Von Flemming
2001 The Royal Court of Caracol, Belize: Its Palaces and People *In* Royal Courts of the Ancient Maya, vol. 2. Data and Case Studies. Takeshi Inomata and Stephen D. Houston, eds. Pp. 102-137. Boulder: Westview Press.

Cichy, Bodo
1966 Architecture of the Ancient Civilizations: Mesopotamia, Egypt, the Indus Valley, the Megaliths, the Hittites, the Minoans, the Mycanaeans, the Etruscans, Central and South America. New York: Viking Press.

Clark, John E. and Richard D. Hansen
2001 The Architecture of Early Kingship *In* Royal Courts of the Ancient Maya, vol. 2. Data and Case Studies. Takeshi Inomata and Stephen D. Houston, eds. Pp. 1-45. Boulder: Westview Press.

Coe, Michael
1967 Tikal: A Handbook of the Ancient Maya Ruins. Philadelphia:
The University Museum at the University of Pennsylvania.

1999 The Maya. 6th edition. London: Thames and Hudson.

Conlon, James, and Jennifer Ehret
2002 Time and Space: The Preliminary Ceramic Analysis for Saturday Creek and Yalbac, Cayo District, Belize, Central Belize *In* Results of the 2001 Valley of Peace Archaeology Project: Saturday Creek and Yalbac. Report submitted to the Department of Archaeology, Ministry of Tourism, Government of Belize. Lisa J. Lucero, ed. Pp. 8-17. Department of Sociology and Anthropology, New Mexico State University, Las Cruces, New Mexico.

Fedick, Scott, ed.
1996 An Interpretive Kaleidoscope: Alternative Perspectives on Ancient Agricultural Landscapes of the Maya Lowlands *In* The Managed Mosaic: Ancient Maya Agriculture and Resource Uses. Pp. 107-131. Salt Lake City: University of Utah Press.

Flannery, Kent V.
1998 The Ground Plans for Archaic States *In* Archaic States. Gary N. Feinman and Joyce Marcus, eds. Pp. 15-58. Santa Fe: School for American Research Press.

Hahn, Robert
2001 Anaximander and the Architects: The Contributions of Egyptian and Greek Architectural Technologies to the Origins of Greek Philosophy. Albany: State University of New York Press.

Harrison, Peter D.
2001 Thrones and Throne Structures in the Central Acropolis of Tikal as an Expression of the Royal Court *In* Royal Courts of the Ancient Maya, vol. 2 Data and Case Studies. Takeshi Inomata and Stephen D. Houston, eds. Pp. 74-101. Boulder: Westview Press.

Houston, Stephen D., ed.
1998 Finding Function and Meaning in Classic Maya Architecture *In* Function and Meaning in Classic Maya Architecture: A Symposium at Dumbarton Oaks 7th and 8th October 1994. Pp. 519-538. Washington D.C.: Dumbarton Oaks Research Library and Collection.

Inomata, Takeshi, and Stephen D. Houston, eds.
2001 Opening the Royal Maya Court *In* Royal Courts of the Ancient Maya, vol. 1. Theory, Comparison, and Synthesis. Takeshi Inomata and Stephen D. Houston, eds. Pp. 3-26. Boulder: Westview Press.

Inomata, Takeshi, Daniela Triadan, Erick Ponciano, Estela Pinto, Richard E. Terry, and Markus Eberl
2002 Domestic and Political Lives of Classic Maya Elites: The Excavation of Rapidly Abandoned Structures at Aguateca, Guatemala. Latin American Antiquity Vol. 13, No. 3:305-330.

Pollock, Susan
1999 Ancient Mesopotamia: The Eden That Never Was. Cambridge: Cambridge University Press.

Sanders, William T.
1981 Classic Maya Settlement Patterns and Ethnographic Analogy *In* Lowland Maya Settlement Patterns. Wendy Ashmore, ed. Pp. 351-370. Albuquerque: University of New Mexico Press.

Sharer, Robert J.

1994 The Ancient Maya. 5th edition. Palo Alto: Stanford University Press.

Thompson, J. Eric
1939 Excavations at San Jose, British Honduras. Carnegie Institution of Washington Publication No. 506. Carnegie Institution, Washington, D.C.

Traxler, Loa P.
2001 The Royal Court of Early Classic Copan *In* Royal Courts of the Ancient Maya, vol. 2 Data and Case Studies. Takeshi Inomata and Stephen D. Houston, eds. Pp. 46-73. Boulder: Westview Press.

Trigger, Bruce G.
1990 Monumental Architecture: A Thermodynamic Explanation of Symbolic Behaviour. World Archaeology 22:119-132.

Webster, David
2001 Spatial Dimensions of Maya Courtly Life: Problems and Issues *In* Royal Courts of the Ancient Maya, vol. 1. Theory, Comparison, and Synthesis. Takeshi Inomata and Stephen D. Houston, eds. Pp 84-129. Boulder: Westview Press.

Willey, Gordon R., ed.
1987 Maya Lowland Settlement Patterns: A Summary View In Essays in Maya Archaeology. Pp. 107-136. Albuquerque: Universality of New Mexico Press.