The Archaeology of Monumental Architecture and the Social Construction of Authority at the Northern Maya Puuc Site of Kiuic

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ABSTRACT

Tomás Gallareta Cervera: Monumental Architecture, Urbanization and the Social Construction of Authority in the Northern Maya Puuc Zone
(Under the direction of Patricia A. McAnany)

Research at the archaeological site of Kiuic, located in the Puuc zone of the Yucatán Peninsula, has yielded evidence of long and continuous construction activity that starts during the Middle Formative and concludes at the close of the Terminal Classic Period. Since most large stone buildings located at Puuc sites have not been excavated thoroughly, stratigraphic evidence recovered from Kiuic constitutes a unique window on the development of a Puuc site. During the Classic Period, large sites in the Maya region contain monumental architectonic complexes, called royal courts that were the center of social and political life. Excavations indicate that Kiuic’s main architectonic group, Yaxché, underwent multiple episodic transformations before its abandonment. I argue that this group functioned as a royal court during the Late Classic Period. Moreover, excavations indicate that the urbanization process was continuous and resulted in a distinctive, local tradition of urbanization and court authority. In this thesis, I explore the social construction of royal courts from three perspectives: the urbanization process, material expressions of place making, and courtly activity regimes.
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CHAPTER I: INTRODUCTION

1.1 Introduction

In this project, I investigate the episodic constructions, place making and activity regimes used to create a Classic Maya archaeological site located in the Puuc region of the Yucatán Peninsula. I examine this topic for four reasons: 1) to address the role of monumental stone buildings in the development of social complexity, 2) to examine the under-explored topic of urbanization at the Maya Puuc region, 3) to determine differences and similarities of local traditions of authority within the Maya region and 4) to determine the court’s domestic and ceremonial activities through artifactual, structural and spatial analysis. This research focuses the relationship between royal courts and ancient Maya cities. The general research questions I will address are: *are there different traditions of Maya royal courts during the Classic Period?, are all Classic period Maya courts royal?, can ancient Maya sites be considered urban based on the presence or absence of royal courts?* The goal of this research is to built a conceptual model of Maya cities based on ancient royal courts. Through stratigraphic, architectural and artifactual evidence I argue that there are multiple types of courts which can be both royal and non-royal. Moreover, I establish that courts represent a series of hierarchical networks and alliances between sites, and consider these relationships as evidence of ancient urbanism.

As a case study, I explore this topic at the Maya site of Kiuic in Yucatán, México. I focus on the royal court, the center of power and authority of Maya states. Although these types of buildings have been studied extensively in Mesoamerica, my analysis diverges from traditional
scholarship on Puuc architecture by examining the long term process by which stone buildings became a diagnostic of the construction and consolidation of power through episodic reconstructions, a key part of a long process of landscape identity for all members of ancient communities. The development of the kingship, an institution housed at large masonry monumental buildings and performed at the royal court, is used as a benchmark for the beginnings of urbanism, can be dated back to the Late Formative Period (300 B.C.-A.D. 300). Excavations at Structure N1065E1025, a large stone building interpreted as part of a royal court, suggest a long trajectory of more than 1,800 years of continuous constructions. I suggest that transformations observed in architecture are the result of the constant negotiation of power between the elite and the non-elite groups.

One of the most striking features of Maya sites of the southwest portion of the Yucatán peninsula, also known as the Puuc zone, is its limited stratigraphic excavations which complicate investigations about the development of Puuc sites and their relationship to other cities in the Maya region. This led to the general conviction that the Puuc zone consisted of “one period settlements”, constructed *ex novo*, quickly from scratch, at the beginning of the 8th century. Consequently, there is an incomplete understanding of the local urbanization process and the dynamics that led to the social complexity of the region. More recently investigations at Puuc archaeological sites, like Xocnaceh, Paso del Macho, Komchen, and Xcoch, reveal deep stratigraphic sequences that negate the notion of *ex novo* cities in the Puuc zone.

In this project, I research the long and continuous development of the archaeological site of Kiuic. Excavations from the 2006-2011 seasons have yielded evidence of an early trajectory towards urbanization that took place from ~800 B.C. to A.D. 900. This process is reflected in the construction of a central complex, the Yaxché architectural group, where excavations uncovered
detailed stratigraphic contexts that document the site’s long developmental history. Yaxché, the main architectonic group at Kiuic, has yielded evidence of a series of construction phases that reveal qualitative changes in building function and suggest both the consolidation of power at a local court and spatial shifts in the locus of authority. The purpose of this project is to research the long term and continuous urbanization process at the archaeological site of Kiuic through an analysis of construction sequences, place making and associated activities. My emphasis on well-constructed large-scale stone architecture highlights the distinctive and locally specific manner in which authority was displayed through construction in the Puuc region. Here, my hypothesis is that architecture was the main asset for representing authority in the Puuc after 800 B.C. Other portable artifacts, such as ceramic vessels and stone tools, did not represent major authority assets at the site of Kiuic. In contrast to the southern lowlands, indicators of royal authority materialized in tomb construction and jade personal ornamentation is alas emphatically underrepresented at sites in the Puuc region.

In this dissertation, I propose that construction sequences are the result of social processes in which rulers consolidated and materialized their authority through architecture. Are there different traditions of Maya royal courts during the Classic Period? can ancient Maya sites be considered urban based on the presence or absence of royal courts? Data about urbanization and courtly activities is scarce in the Puuc zone due to the lack of deep stratigraphic excavations and analysis. During the Classic Period, large sites at the Maya region evidence the presence of architectonic complexes, defined as royal courts, that were the center of the social and political order; the archaeological site of Kiuic, located at the Puuc region shows evidence of multiple court models during the Classic period. Moreover, excavations indicate that the urbanization process was continuous and resulted in a local tradition urbanization and court authority.
1.2 Organization and Overview of Research

In Chapter 2, I give a summary of the Maya Puuc zone including its similarities and differences with other regions, such as the northern and southern Maya lowlands, its main geological and cultural characteristics, archaeological research history and the main characteristics of Kiuic, a Maya archaeological site and the main object of this study.

In Chapter 3, I provide the definitions of urban, urbanism, cities, the mechanisms by which they are created; I also introduce the idea of having multiple types of urbanism and contrast the differences between cross cultural and local definitions of cities in ancient urban studies. Afterwords, I give a literature review on ancient urbanism studies, as well as its different approaches used in Mesoamerican archaeology. Finally, I review how these urban models are used in Maya archaeology, including examples of specific sites and archaeological evidence.

In Chapter 4, I revise the literature addressing ancient royal courts, including its multiple approaches, definitions and material evidence. Royal courts have been a point of interest for archaeologists due to its central role in the socio-political organization of ancient Maya societies. Moreover, courts are also linked to monumental buildings located at the center of major archaeological sites. We still do not fully understand their function and know very little about the activities of the court members or “courtiers’ due to the ruler centric nature of the royal courts. However, archaeologists have used multiple approaches to understand different aspects of the court, including its physical, social and political characteristics. These can be observed by analyzing the major building types, such as range structures, temples, council houses and kitchens which represent the habitational, ceremonial, administrative and service areas respectively. All of these areas are present at Yaxché, the main architectonic group at Kiuic.

In Chapter 5, I explore the definition of Mesoamerican royal courts, its origins in the
southern and northern lowlands and their material evidence, including the epigraphic record, built environment and artifactual evidence. Finally, I review the royal court evidence available for the Puuc region at the northwest of the Yucatán Peninsula.

In Chapter 6, I describe the construction sequence of Kiuic’s main architectonic complex, the Yaxché group, which I argue evidences that the site transformed from as small community during the Formative period to a royal court during the Late Classic and finally a ceremonial-ritual area before it was abandoned after A.D. 1050. I focus on the groups main building, Str. N1065E1025, and its associated plazas which conform the main ceremonial, habitational, and administrative spaces of the site. Here I focus on articulating the different changes at the site and their relationship with the development of, what I argue, is Kiuic’s main court.

In Chapter 7, I describe the results from the analysis of multiple midden contexts, caches and ceremonial trash associated to the Kiuic’s main plaza in order to understand the ancient court’s activity regimes. Analysis includes ceramic and lithic assemblages dated to the Late and Terminal Classic period, a period when, I argue, Kiuic’s main architectonic group function as a court. The analysis consists of a general description, by plaza, of the site’s ceramic and lithic samples, and their ceremonial deposits.

Finally in Chapter 8, I resume my findings and discuss how they answer my research questions regarding the form and practices taken place at ancient Maya royal courts and cities in the Puuc hill country. I conclude the chapter by discussing the anatomy of ancient Maya royal courts, from a functional sense, its relationship to ancient cities and the broader impact that this research has in ancient maya archaeology. Moreover, I discuss how the Kiuic construction sequence suggests that the site was socially constructed through monumental architecture, ceremonial deposits and feasting rituals. This is indicated through spatial, stratigraphic and
artifactual analysis from multiple middens from discreet areas at the Yaxché group, an architectural complex that I argue was a court, alas not a royal one. Moreover, I discuss the evidence that indicates that the site was urban and how its changes in layout indicate the use of local models of royal courts based on the use of ceremonial, administrative, habitational and service space.
CHAPTER II: ARCHAEOLOGICAL RESEARCH IN THE PUUC REGION

2.1 Introduction

In this chapter, I summarize and define the Puuc Region and its relation to the larger Maya cultural area. I begin by describing the main archaeological periods, sub-periods and their general characteristics. I then describe the Puuc region emphasizing geological and cultural features; this is significant since the region is characterized by a very particular set of geological and geographic conditions that influenced the cultural identity of dwellers during the pre-Hispanic period. Afterwards, I address the history of investigations in the Puuc area and the lack of problem-oriented research, which traditionally emphasized architectural description due to a lack of stratigraphic excavations. I then turn to the current state of research at the Puuc area. Finally, I describe the archaeological site of Kiuic within the Bolonchén Regional Archaeological Project (BRAP).

This chapter contextualizes my research within current investigations at the Puuc area. Moreover, it also highlights the information gap that has led to under-theorization in the Puuc region, especially in terms of constellations of authority and urbanization.

2.2 The Maya Cultural Area

The Maya region consists of what are now the southeastern Mexican states of Chiapas, Campeche, Yucatán, Quintana Roo and the east of Tabasco, as well as the nations of Guatemala, Belize, Honduras and El Salvador. The region can be divided into three cultural areas: the northern lowlands of the Yucatán peninsula, the southern lowlands of Belize, Guatemala, and the
state of Chiapas in Mexico, and finally the southern highlands in the mountainous region of southern Guatemala.

Maya civilization can be divided into three major chronological periods: Formative (1800 B.C.-A.D. 300), Classic (A.D. 300-1000) and Post-Classic (A.D. 1000-1492). Each of these phases is characterized by different social, political and ideological structures (although there is a tremendous overlap in architecture forms and construction techniques). These changes are reflected in a material record that generates contexts that are the direct result of interaction between objects and individuals. Here I describe the main characteristics of each chronological period with special emphasis on the role of monumental architecture in regards to social and political organization.

The Formative period is divided in three sub-periods: early (1800-1000 B.C.), middle (1000-300 B.C.) and late (300 B.C.-A.D. 300). Generally monumental architecture was not prominent in the early and middle periods although the southern lowland site of Nakbe has a monumental pyramid dated to 600 BC. Early and Middle formative times were characterized by farmers living in small villages with houses made of perishable materials like pole and thatch. The Late Formative period has been argued to have been a time when hierarchy rose, as seen in numerous monumental structures that were decorated stucco facades, and large-scale trade expanded throughout the Maya region.

Nevertheless, other authors, such as Ringle (1998), argue that in the northern lowlands the first construction of monumental architecture, in the Middle to Late Formative, is associated with a largely egalitarian society with limited differences in rank.

Ritual practices established during, and possibly predating, this period (like human
sacrifice, deities such as the Jester God, costumes and office) exhibit a significant continuity into later times, suggesting that during the Formative Period the Maya developed certain organizational principles that conformed the basis of ideological, political and social life in the societies of the Classic and Post-Classic periods (Ringle 1998:185).

However, other researchers argue that elite groups were materially and socially differentiated from commoners by the Late Formative period. These differences were linked to the eventual emergence of divine kingship and sacred bloodlines during the Early Classic Period. Maya temples, as monumental buildings, were built actively between 200-0 BCE throughout the lowlands; the construction of these massive pyramids that housed deities is argued to be a strong characteristic of archaic states, and is evident in several places in Mesoamerica (McAnany 2010); their function was related to the creation of group identity through ritual ceremonies, and the concentration of authority embodied in the large amount of human labor entailed in their labor.

The Classic period, often considered the pinnacle of the ancient Maya civilization, it is divided into three phases: early (A.D. 300-600), late (A.D. 600-900) and terminal (A.D. 900-1000). During this period, monumental architecture, stone carving, and façade decoration are highly elaborated in the northern lowlands. In the south, political leadership is institutionalized, and characterized by divine kinship in which individual rulers affirmed their position through bloodlines of power and reference to material objects (architecture, inherited heirlooms, etc.); Major cities with populations that ranged from 8000-75,000 existed throughout the Maya region. By the beginning of this period, monumental architecture was an instituted part of the landscape. As mentioned earlier, the cultural traditions that originated in the Formative period were appropriated by the elite groups who shifted away from the veneration of gods to particular
individual rulers who conceived themselves as “divine rulers”. The architectural accomplishments of the Late Classic embody a great amount of collective human experience; they reflect economic prosperity, worldview, and political relationships (Abrams 1998).

The Post-Classic period can be characterized as a transformation of political and social organization across the Maya region. This period is most known by a demographic re-arrangement caused by the gradual depopulation of the southern Maya cities of the Classic period. This process was more protracted in the north where the Postclassic regeneration also occurred. After their abandonment, evidence indicates that ancient sites were re-occupied by small populations that reused the buildings for different purposes. Evidence of this can be observed at sites in the form of partial dismantling (recycling carved stones of abandoned buildings used to create new structures), or commemoration rites (evidence of ceremonial objects have been found in post-abandoned contexts). After a period of rapid population increase during the Classic Period, the Puuc area also experienced a demographic re-collapsed around A.D. 950. As a result, the Puuc regions was virtually inhabited until the colonial period.

2.3 The Puuc as a Geological and Cultural Area

The Puuc zone is located in the Northern Maya Lowlands, at the southwestern part of the Yucatán Peninsula in México on a forested, dry and hilly area in an otherwise flat region (Figure 2.1). The Yucatán peninsula is a massive partially emerged platform with a deep and extensive cover of limestone and dolomite. With time the large amount of calcium carbonate and calcium magnesium, both soluble by nature, eroded creating a landscape with various depressions, openings and caverns throughout the peninsula. Vertically, northern Yucatán is characterized by four types of geological layers: 1) a hard cap rock layer of limestone; 2) a layer of soft marl,
known locally as *sascab*, which varies in thickness; 3) case-hardened calcium carbonate; and 4) a layer of soil (Dunning 1990; Isphodring and Wilson 1973).

As seen in Figure 2.2, geographically, the Puuc zone is composed of three major areas: 1) the Sierrita de Ticul, an escarpment rising abruptly from the northern plains and trending SE-NW; 2) the Valley of Santa Elena behind it along its western half; and 3) the Bolonchéén hills district to the south (Dunning 1990, 1995). Dunning (1990:14) describes the Puuc districts as follows:

The Santa Elena District forms the northernmost component of the central hill system. The physiographic district is itself composed of two distinct parts: 1) the northwest-southwest trending ridge system, and 2) a wedge-shaped area of very gently folded, bedded limestone lying south of the ridge. The main escarpment of the ridge system (Sierrita de Ticul) runs about 160 kilometers. The scarpment visibility separated the puuc region from the northern karst plain (Dunning 1990:14-22).

The Bolonchen district is separated by both the western coastal plane and the santa elena district by long fault scarps. The strata of the district is largely thin to medoum-bedded, yellow white and gray limestone and sandy limestone, many of which contain conglomerated and breccias. The synclinic hills of the Bolonchen district occur as knobby cone karst hills. The absolute elevation of the hills generally does not exceed 150 meters above the sea level. Large, flat-bottomed valleys are located throughout the district. The valleys increase in size from north to south.

The region is characterized by a scarcity of permanent water sources and the presence of highly fertile soils. This is especially true for the Santa Elena Valley, the region with the best soils and larger archaeological sites (e.g., Uxmal, Labná, Nohpat and Kabah) (Barrera Rubio
1987; Ringle 2007). In fact, the highly fertile soil has led researchers to call the Puuc the “breadbasket” of the Yucatán, specially when compared to the densely populated but agriculturally poor northern portion of the Peninsula (Dunning 1995; Kurjack, Garza and Lucas 1979).

However, the scarcity of water sources makes agriculture and settlement challenging for local populations. The mean annual rainfall in the Puuc region is about 1100mm (Dunning 1990:36), with seasonal rain from May to September and a dry season from October to April. In contrast to the north, where large natural sinkholes or cenotes provide a permanent water source for many sites, people of the Puuc area had to rely mostly on non-permanent water sources. Some of these include dry depressions (i.e., haltunes) and clay-bottomed depressions (i.e., aguadas) in the shallow aquifers. Caves located in the Puuc provided an important source of water, although most of them did not reach the subterranean water table which lies between 50 and 80 meters below the surface. Caves are particularly abundant near the sierrita de Ticul and Bolonchén districts. Only three deep cave systems, located in the Santa Elena and Bolonchén districts, have been documented to reach the permanent water table: Gruta Xkoch, Gruta Chacc, and Gruta Xtacumbilxunam (Andrews 1965; Metheny 1978; Mercer 1896; Stephens 1843; all in Dunning 1990:28).

To attenuate the lack of water sources, ancient Puuc dwellers built water cisterns (or chultunob) to capture and store rainwater during the rainy season. This water storage system provided a year round source of water over the six-month dry season and was essential for the large-scale settlement of the Puuc region (McAnany 1990:277). These water storage facilities were built in domestic areas as a solution to water scarcity and made local living possible. Water cisterns vary in sizes and usually are located on top of platforms in a low concave area in order
for rainwater to naturally flow into them. Their interiors were plastered in order for the water not to filter to the water table. Simms (2013:19) and A. Willis (2011, personal communication) observe that water cisterns at the Puuc sites of Kiuic, Xocnaceh and Labna range between 1.4 and 38.8 cu m. Although *chultunoob* were enough to support multiple families, the storage water was not enough to sustain high intensity agriculture. Water cisterns are virtually inexistent at settlements outside of large sites, furthering the idea that they were used for domestic purposes not agricultural. Moreover, some researchers also argue that the region does not appear to favor farming surplus and its more likely that residents only produced what was necessary for annual consumption (Gallareta Negron & Ringle, 2002). The lack of cisterns at settlements located outside large site cores indicates that these might have been short-term or seasonally occupied farmsteads, probably relegated to the wet season (Dunning 1992; Carmean et al 2004:440).

The Bolonchéñ region, our zone of interest, is characterized by many smaller archaeological sites (called Rank 3) and an absence of Rank I sites. The degree on which the landscape was modified in prehispanic times is unknown since slash and burn agriculture might have erased evidence of the cultivation record (Dunning 1995). Pollock (1980) and Dunning (1995:30) notice that the native hardwood trees used for architectural constructions (e.g., zapote hardwood, chacte and habin) are relatively scarce now days probably to extended environmental modifications from the past.

Biodiversity is high throughout the Maya area, and vegetation in the Puuc is characterized as a deciduous seasonal forest (Wilson 1980). In the southern part of the Puuc region, the forest is often interrupted by large stretches of savanna. Small savannas are widely scattered in the northern Puuc. Savanas are uniformly found in structural depressions containing deep, poorly drained clay soils (Dunning 1992: 30). Scattered across the Puuc are a variety of
karstic sinkholes, which, either permanently or seasonably, contain greater amounts of water than surrounding areas. These depressions often contain isolated pockets of forest types and plant species, such as many kinds of orchid species. The moist microenvironments of these sinkholes could have been used to cultivate a variety of fruit trees. Ethnobotanical accounts describe how the early colonial Maya used rejolladas for cacao cultivation, as well as more intensive milpa agriculture, fruit, and root crops (e.g., Fedick 2003; Kepecs and Boucher 1996). Overall, the Puuc was highly productive and managed according to local agricultural requirements (Simms 2013). Due to extensive cultivation and cattle ranching today across the northern Yucatan, most of the present day forest is secondary in growth.

The Puuc as a Cultural Region

Current research suggests that populations were established in the hilly fertile land of the Puuc zone around the Middle Formative (Bey 2006) and after that developed a particular regional identity within the Northern Maya settlements. This local regional identity is evidenced particularly during the Late and Terminal Classic periods through a unique set of characteristics, such as architectural styles and a ceramic technology that created a distinct Puuc identity that is different from other settlements across the Yucatán peninsula (Dunning 1990). By the Late Classic multiple large sites in the Puuc region, such as Uxmal, Sayil, Oskintok and Edzna had established particular northern ceramics style which can be classified as fine monochrome slatewares (i.e., Cehpech wares) and rough utilitarian vessel forms (i.e., large rimed basins and chultuneras). Slateware technology was developed in the northern Yucatán Peninsula during the Late and Terminal Classic periods, however it currently does not have a single origin that can be identified (Gunn 2015). Although the trade of specialized wares was an important means of cementing political alliances and larger-scale trading networks (Shaw and Johnstone 2006: 145),
polychrome pottery is under-represented in the Puuc relative to other regions of the Maya area. The Puuc's very old limestone, which is harder and of better quality than limestone located along the coast of Yucatán, created a region in which inhabitants became experts in stone working, which became a significant part of their ritual economy (Carmean, McAnany and Sabloff 2011). Stonework is particularly displayed in their stone veneer architecture, present in large masonry buildings that emphasize geometric mosaic decorations on their facades, the use of large stone arches, stepped multi-story buildings, and lattice-like roof combs. Puuc architectonic styles have been documented throughly since the first 19th century explorers came to the Yucatán peninsula. This ancient monumental building style is a crucial part of a Puuc regional and local identity and it contrasts significantly with other building styles in the Maya areas, specially that of the Late Classic period. The Puuc architecture style has been extensively studied in terms of its construction technique, design and stylistic elements (Andrews 1995; Pollock 1980; Kowalski 2003). Moreover, enough of the different building sub-styles have been registered and associated to ceramic chronological sequences to establish their development and relative dates (Andrews 1995; Gendrop 1998).

Additionally, traditional symbols of authority, which are typical at other Maya states, like emblem glyphs (Grana-Behrens 2006), and are not common in the northwest Yucatán Peninsula. However, some of the processes reported at the southern lowlands, such as divine kingship and royal kings, were present at the north at the site of Uxmal, the Puuc capital during the Late and Terminal Classic (Shaw and Johnstone 2006:152). The Puuc also has a unique iconographic tradition, emphasizing masks of the “Chac”, the rain god, by decorating multiple vaulted buildings with it (Sharp 1981), suggesting its importance as a regional tenured deity (Kowalski 2003). Another iconographic element frequently depicted in building façades although not
exclusive to the Puuc region, is the double opposing step-fret motif has been argued to represent an abstraction of a mountain or witz and hence suggesting that stone buildings can represent man made mountains (Boot N.D.). Both “Chac” masks and double opposing step-fret motif have also been interpreted as the “Cauac” earth monster, also associated to sacred mountains and seen at the corners of large masonry buildings at southern lowland sites (i.e., Copán) and the Yucatán peninsula such as the Río Bec, Puuc and Chenes regions (Stuart 1997). Moreover, some researchers argue that the region operated in a different calendar count from the rest of the Maya region (Thompson 1937; Proskouriakoff and Thompson 1947).

Despite its fertile soils, the Puuc Region, has been traditionally perceived as a marginal settlement due to a lack of permanent surface water. Dunning’s (1992) investigations of climatic conditions in the Puuc during pre-Hispanic times suggest that the Early Classic period (250-600 AD) was significantly drier then present day while the Late and Terminal Classic were slightly wetter than the present, and the early post-Classic may have been somewhat drier. He concludes that, the build up of Maya occupation in the Puuc may have been in response to a wetter pulse in the region’s climate and that the Puuc may have been a breadbasket of northern Yucatán (Dunning 1992). Hence control of this region’s resources were an essential aspect of the political geography of the northern lowlands; northern coastal plain populations were much higher than their relatively poor soils could maintain during the Late-Terminal Classic period (Vlcek, Kurjack, and Garza, 1978). Some researchers have argued that the high-yielding puuc lands could support a stable population in comparison to the northern coastal sites of the Yucatán that featured a denser population with inadequate soils to maintain its population during the Late-Terminal Classic Period (Dunning 1990, 1992; Vlcek, Kurjack, and Garza 1978). This has lead researchers to argue that by controlling the soils, dwellers of the Puuc had enough yield for
subsistence and surplus. The Puuc was, hence, the most probable surplus producing area that could have supplied food to the northern yucatec population. The occupation of the Puuc soils may have led rulers to expand their political influence across much of the northern Yucatán peninsula as is shown in the many sites exhibiting Puuc architecture that lie outside the Puuc zone during the Late and Terminal Classic periods.

These unique features indicate a local community identity that differs greatly from other regions of the Maya area. Moreover, the unique culture tradition of large architecture, lack of polychrome ceramics, glyphs, jade and other traditional symbols of power suggest a different mode of authority and political integration, specially compared to the southern lowland area.

2.4 Archaeological Research in the Puuc Region

Studies of Maya culture can be dated back to the conquest and colonial periods when Spaniards arrived from Europe. Their landing in the new world sprawled multiple chronicles about the local people, traditions and way of living. The concept of “the Maya” as we know it today was developed in the 19th century during a period in which wealthy men funded explorers to travel to the ancient ruins of the Americas, register the architecture through drawings, paintings, and photography, and publish their romanticized findings to a general audience (Barrera Rubio 2000:15). These explorers and other local aficionados to antiquities were the first to explore the Mexican and Central American jungles, and search for and record ancient Maya sites. Their diverse publications, photos and objects were exported to foreign museums and awakened an interest in the pre-Hispanic cultures.

The professionalization of Maya studies began in the 20th century (Barrera Rubio 1999, 2000). During this period, Maya archaeology moved away from exploratory and anecdotal recordings projects to develop problem oriented projects that tackled specific problems,
especially big questions such as the nature of urbanization. The formalization process was influenced by foreign institutional funding, especially from museums and universities around the world that were partial to the exploration of ancient large urban centers with monumental architecture. The institutionalization of archaeology in México began in the 20th century in Mexico with the creation of the Instituto Nacional de Arqueología e Historia (INAH) in 1939 which fomented archaeological excavations, safeguarded archaeological heritage and conducted scientific research on ancient and modern indigenous issues (Breglia 2009; Navarrete 2011; Walker 2009). However, research of INAH focused on the creation of a national Mexican identity and regulation of local and foreign explorations; this emphasis steered archaeological interventions towards large archaeological sites, mainly the restoration and consolidation of the central architectonic groups with palace and temple complexes. Although excavations took place, they were mostly to explore architecture and recollect basic chronological data and were not as systematic.

*Architectural and Descriptive Focus of Puuc Archaeology*

For the Maya region, the second half of the 20th century was marked by an interest in understanding ancient settlement patterns and the relationship between city centers and rural peripheries (Hammond 1978 in Barrera Rubio 2000). In the Puuc zone, however, architectural and descriptive studies dominate above other topics. This was due to emphasis on consolidation and restoration of stone architecture from large sites.

Some of the most important first surveyors include Teobert Maler (1928) and Edward Thompson’s (1892). During the 1930’s and 1940’s Harry E. D. Pollock (1980), from the Carnegie Institution of Washington, compiled and described in excruciating detail the main architectonic styles and features of a large number of Puuc sites and their principle architectonic
groups. More recent endeavors to document and understand the origins of the Puuc style include the works of George Andrews (1975, 1995) and Paul Gendrop (1990). These authors provide extensive description of ancient sites of the Yucatan Peninsula, which they categorize as cities, and conclude that their construction was the result of ancient civic planning in the Puuc region.

More recently, the work of Jeff Kowalski (1998) explored the relationship between architectural style, space and iconography of the site of Uxmal to argue its function as a royal court. These studies managed to accumulate large amounts of data on architecture, settlement pattern and iconography of the Puuc. However, the lack of excavation data crippled these investigations and relegated them to the superficial characteristics of stone buildings located at monumental sites. The lack of intensive settlement studies made it difficult to interpret how ancient Puuc sites were organized, how they developed, and how Puuc courts compared to other Maya sites in the Southern Lowlands.

Projects that included deep excavations at Puuc sites were relatively uncommon during the second part of the 20th century. Even though some excavations took place at large sites such as Uxmal, Kabah, Sayil and Labna, research tended to focus on settlement patterns and surface surveys of site cores (Sabloff et al 1984:3). The superficial nature of the archaeological research at the Puuc region did little to contribute to the deepen Formative development of the area and rendered the population of its sites as a rapid one-period occurrence that lasted between 200 and 250 years.

The availability of satellite photography and the incorporation of new global positioning technologies into the registration of archaeological sites generated an interest in settlement pattern studies of the region. As a result of this effort, the Atlas Arqueológico del Estado de Yucatán (Garza and Kurjack 1980) was published, providing exact locational information along
with other features of archaeological sites in Yucatán, including multiple Puuc sites. This marked the first time that an official database, not focused on architecture was used for comparative research of Puuc settlements.

In 1984 the Sayil Project, headed by Jeremy Sabloff and Gair Tourtellot, mapped and registered the expansive settlement surrounding the monumental core, taking advantage of the good visibility of the area during the dry season (Sabloff and Tourtellot 1991; Smyth Dunning and Dore 1994; Tourtellot and Sabloff 1994). However, lack of deep and systematic excavations led researchers to conclude that the site, as well as much of the Puuc region, was occupied and abandoned quickly in the Terminal Classic Period. The lack of excavations also rendered Puuc sites smaller than they were (Andrews 1975:381). In sum, the project was tackling the gap that existed at the time regarding the growth of ancient Maya civilization in the Puuc region of the northern Yucatán (Sabloff et al 1984:12). However, the project did not provide any data with which to infer the construction history or tome depth of Sayil.

*Discovery of a Long Occupation History in the Puuc*

Within the past two decades, new research projects are yielding new ideas about the occupation of Puuc sites, specifically, their development in the Formative period. The first indication of an earlier occupation was reported in the late 1970’s at the site of Komchen (Ball 1977), where the project established that early village occupation in the northern peninsula began as far back as 700 B.C. (Andrews V 1988). Other evidence of Middle Formative occupation (1000-300 B.C.) has been reported at the sites of Ek’ Balam (Bey et al. 1998), Yaxuna (Ardren and Johnstone 1996), the northwest corner of the peninsula (Robles Castellanos and Andrews 2000, 2001, 2003), Paso del Macho (Gallareta N. et al. 2003), Xocnaceh (Gallareta N. and Ringle 2004), Tipikal (Peraza Lope et al. 2002) Xococh (Smyth 2010), and Xtobo (Anderson
Furthermore, evidence from these sites indicates considerable social complexity, as suggested by monumental civic-ceremonial architecture, regional exchange and contact with the Gulf Coast region during the Middle Formative period (Bey 2006:20-25).

Dunning’s (1994) settlement pattern work at multiple Puuc sites, with a cultural ecology focus, concluded that the region’s Late Classic population was the result of a seasonal increase of rainfalls. Moreover, Dunning (1994:12) also suggests that population during the Early Classic Period was relatively insignificant due to the lack of rainwater and archaeological evidence. However, more recent research at Chac II (Smyth 2000) and Oskintok (Varela Torrecilla 1998) contribute evidence that the Puuc region might have been occupied during the Early Classic Period. Moreover, multiple researchers argue that megalithic-style architecture, dated to the Late Formative and Early Classic and located in northern Yucatán, suggests multiple spheres of interaction between the first urban centers (Mathews and Maldonado Cardenas 2006) and represents a symbol of regional identity (Hutson 2010, 2014). Hutson (2014:120) calls this the internationalization of the northern lowlands.

Barrera Rubio (2000:16) notices that during the 1990’s there was a tendency to return to exploring large monumental centers. This was especially true for Yucatec sites such as Ek’ Balam, Dzibilchaltún, Uxmal and Oskintok where excavations and the epigraphic record have revealed the presence of royal burials.

Currently, there are two main theories or models that explain the occupation of Puuc sites. The first theory or “colonization model” states that the Puuc was colonized by migrating groups from the Petén region in Guatemala (Rivera Dorado 2000). This model is based on the appearance of vaulted buildings and the introduction of a new ceramic complex at the site of Oskintok, both tentatively introduced by people from the southern lowlands during the Late
Formative Period (300 B.C.-A.D. 300). The second theory or “breadbasket model” is based on architecture and geological studies. It suggests that the Puuc was used as a “breadbasket” area due its fertile soils (Dunning 1992). This is based on the observation that populations in the northern plains appear to be much denser than the relatively poor soils could maintain in the Late Classic and Terminal Classic Periods. Although these theories suggest the existence of an early occupation since pre-ceramic times, they also assume that there was not a significant population until the Late and Terminal Classic periods (Dunning 1992).

Puuc Archaeology Today

Yucatán archaeology in the 21th century has established that the peninsula had a long and complex occupation that extends back to the Middle Formative Period and continues throughout the Classic, and in some areas the Postclassic Period. This has been corroborated by stratigraphic excavations from multiple projects throughout the peninsula (e.g. Izamal, Mayapán, Acanceh, Cobá, Kiuc, Xocnaceh, Labna, Huntichmul). Moreover, multiple archaeological projects at Puuc sites have been revising their research designs to include more problem oriented questions. These include: Oenkintok (Rivera Dorado 1991, 1994), Uxmal (Barrera R. et al. 1989; Huchim and Toscano 1999), Xkipche (Prem 1991, 1994, 2003a,b; Reindel and Prem 2003), Kabah (Carrasco and Perez 1993; Toscano Hernández y Novelo Rincón 2015), Xculoc-Xcochkax-Chunhuhub (Becquelin 1994; Michelet et al. 2000) and Xcalumkin (Bequelin and Michelet 2003).

However, there is still an overall emphasis on architecture, chronology and style studies in the region that research buildings as isolated units (Gallareta Negron et al. 2011:1-4). Definition and function of architectonic groups, as well as regional pattern and a general understanding of the built environment is still poorly understood in the Puuc region. The tradition of excavating large urban centers has led to much less focus on smaller sites and ways
of life at these modest locals. Just as there is a bias in research towards large monumental architecture of ceremonial centers, there is alas a lack of interest in ancient Maya utilitarian items. Analysis of overall ceramic materials at multiple sites such as Mayapán (Smith 1971), Cobá (Robles Castellanos 1990), Edzna (Ball 1977), Oxkintok (Varela Torrecilla 1998) and the overall Yucatán Peninsula (Brainerd 1958) usually focus on the ceramic type-variety for overall site chronological studies. There are few available analyses of ceramic sequences at Puuc sites (with the exception of Varela 1992, 1998) and even fewer studies that explore the association of artifacts with specific building types. For example, un-slipped rough textured ceramics, typically used for cooking and storing, are poorly understood in the Puuc region despite their presence in virtually all sites. Moreover, materials associated with Puuc royal courts in middens or activity areas, are virtually un-analyzed. As a result, we do not know much about the material signatures of Puuc court activities in which royals engaged on a daily basis.

At Kabah, archaeologists have recently studied the function of a palace complex, possibly the residence of the royal family, dated to the Late/Terminal Classic period (Toscano Hérnandez y Novelo Rincón 2015). They were able to identify a royal kitchen through the presence of multiple grinding stones (i.e., metates), multiple ceramic vessels (some of them with up to 60cm rim diameters), lithic artifacts and pH analysis. They suggest that large quantities of food were prepared to feed large numbers of people, probably in ceremonial feasts. In this research, I will use Kabah’s model for royal kitchens as a control context for royalty behavior during the Classic period at the Puuc region. To do this, I am assuming that the site of Kabah did have a royal kitchen and its evidence represents typical Classic period royal behavior of Puuc elites.

Other major projects in the area include those at Labna (Gallareta N. 2003a), Chak II (Smyth 1998, 2003; Smyth et al. 1998), Xcoch (Smyth and Ortegón 2008), and Kiuic (Gallareta
N. et al. 2001-2014). However, there are still very few archaeological projects in the Bolonchén district interested in social issues.

The Bolonchén Regional Archaeological Project (BRAP), focused on the Bolonchén District, has focused on the distinctive nature of Puuc urbanism (Gallareta N. Et al., 2011:1-4). They observe that sites at the north of Yucatán Rank I sites dominate large extensions of flatlands (these sites are located between 50-60km within each other) suppressing the presence of Range II and III sites. In the Puuc zone, however, Rank I and II sites are scarce and the medium site centers (Rank III) are located closer to each other (within 5 and 8km if each other). Gallareta N. et al. (2011) suggest that the small size of the settlements might have been as a result of the small size of the cultivated land. Moreover, they suggest that numerous low-elite groups managed the region, whose residence were located at the top of hills from were they administered agricultural land. The lack of evidence of manufacture facilities or markets and the high incidence of large stone buildings at Puuc sites suggests that productive agricultural land was the main source of income.

2.5 Archaeological Site of Kiuic

The Bolonchén Regional Archaeological Project (BRAP) is a multidisciplinary project directed by archaeologists George Bey III (Millsaps Collage), Tomás Gallareta Negrón (INAH-Yucatan), and William Ringle (Davidson Collage). Since 2000 they have carried out excavations at archaeological sites of the southern Puuc region. A main objective of this research is to understand the relationship between urban and rural landscapes and their social and political development in pre-Hispanic times. The project has carried out archaeological survey, mapping, excavation and restoration of numerous ancient structures. Additionally, BRAP has collaborated with other institutions to enhance knowledge of the site via additional methodologies (Ground
Since the project began, the archaeological site of Kiuic has been central to the project (Figure 2.3). Its urban features, such as public buildings, courtyards, pathways, temples, and general architectural characteristics are typical of the Puuc area during Classic times. During fifteen years of exploration in the center of the site, the project has generated a vast amount of archaeological data. In particular, excavations have focused on the Yaxché group, the main civic center. Investigations revealed an architectural complex with numerous construction phases; among the excavated structures of Yaxché are three plazas (Dzunun, Icim and Ulum), 18 vaulted buildings and a large pyramid structure. Excavations at Kiuic are unique within the Puuc region due the highly detailed recording of its construction sequences, which tended to be an uncommon practice in the southwestern part of the Yucatán Peninsula (Bey 2006). Excavations at the site, although concentrated on the Yaxché group, have focused on documenting and interpreting the construction sequences of the main buildings, plazas, and the relevant features. Due to this focus, the project was able to record Kiuic’s long construction sequence (over 1800 years), which provides evidence of the process of place making that ancient builders consciously manufactured as an instrument of power.

Archaeological Site of Kiuic: General Characteristics

Excavations at Kiuic indicate that the area was settled ca. 790 B.C. and inhabited continuously until circa A.D. 950. The site core is surrounded by a sparsely inhabited zone, which was likely used for agricultural purposes; in turn, this zone is surrounded by a ring of heavily occupied hills (May Ciau and Bey 2002; Gallareta N. et al. 2001-2002). The site,
including its main core, agricultural zone and hill settlements, extends over approximately 5km². The majority of civic architecture lies in the 500m² central quadrant of Kiuic, which was mapped in detail between 2000 and 2002 and was found to have a high density of both masonry and perishable domestic structures (Gallareta N. et al. 2000, 2002; May Ciau and Bey 2002). The site core was composed of nine architectonic groups out of which Yaxché, Kuche and Chulul are the largest (Figure 2.4). Features traditionally associated with urbanism, such as public buildings, courtyards, pathways, and temples have been identified at the site.

**Yaxché Group**

The Yaxché group (Figure 2.5), located at Kiuic’s center, is composed of three main plazas (Dzunun, Ulum and Icim) and three patios (Patio A, B and C). Significantly, the spatial and architectonic characteristics of the plaza indicate discrete functions for each space. Moreover, its administrative, ceremonial, residential and service spaces suggest that the compound functioned as an ancient court during the Late Classic Period (Figure 2.6). This characteristic makes the Yaxché group somewhat unique, since it allows us to identify and understand the activities of Kiuic’s elite residents. Excavations at the group have have focus on Structure N1065E1025, a 9 meter tall pyramid-temple that connects Yaxché's three main plazas and its service area (Patio B). I describe each plaza and highlight the features that suggest their function in this courtly compound.

**The Dzunun Plaza:** The Dzunun Plaza is located directly to the south of the pyramid temple (Str. N1065E1025), which is the largest and most central structure of the Yaxché group. The plaza was constructed artificially on top of a naturally elevated terrain and was renovated six times between its initial construction ~ 850 B.C. and its abandonment ~A.D. 950 (Figure 2.7). Architectonically, the plaza is bounded by six currently visible structures. Both the pyramid
temple to the north and the council house (Str. N1015E1015) to the south have the longest construction history of the Yaxché group.

Patio B: Patio B is a rectangular plaza located at the north side of the pyramid temple in the Yaxché group (Figure 2.8). Its location and configuration pinpoint the plaza as a kitchen area. The patio is contained by a large raised platform with retaining walls made out of large rough stones. The artificial platform covers an area of approximately 671m$^2$ with a water cistern or chultún on its central axis. The patio was bordered by two small secondary structures made of perishable materials on the east and west sides of the patio and a “C”-shaped structure on the north side. The first, Structure N1090E1055, measured 9.5m in length and 3.4m in width with probably two rooms opening to the west. A second building, structure N1075E1045, located in the southeast corner of the patio faced north, and contained masonry walls that are still standing to a height of 1.3-1.6 m.

The “C’-shaped structure (Str. N1100E1040), is non-vaulted. The structure has a foundation made of a double line of carved stones; both walls and ceiling was built of perishable materials. The structure measures 9.5 m wide by 3.4 m in length during its last construction phase and has three rooms (west, central and east) all of which opened to the south towards the patio. The west room’s area is 31.4m$^2$ in which there are three low benches at its north, east and west sides. The east room had an area of 17.36m$^2$ and two low benches, one at the west and another at the north. The central room was the smallest with an area of 12.13m$^2$ and contained no benches.

The Ulum Plaza: The Ulum plaza is located at the easternmost sector of the Yaxché group. The main structure of the plaza is the East-Temple (Str. N1050E1065) a 6.1m long, 3.6m wide and
5m tall building with one vaulted room (6.9 m north to south and 4.10 m east to west) looking to the west on top of three terraces and a wide staircase entrance. Characteristics of this building, single room entered through a single doorway located on top of stepped platform, identify it as a temple (Andrews 1975). At the center of the plaza there is a depression, which Pollock (1980: 362) suggests may be due to looting. Adjacent to this depression are three large well-dressed stones (flat stelae), measuring 225x62x28 cm, 174x60x34 cm, and 138x66x34 cm respectively. Pollock (1980: 363, Figure 609) notes that one was carved with a skeletal motif, however this monument is missing from the plaza. Ulum Plaza was constructed during the Early Classic Period; however, construction at this local had taken place since the Middle Formative Period and continued through the Terminal Classic period.

The Icim Plaza: Plaza Icim is located to the west of the Dzunun Plaza at a slightly lower level in elevation. During its final construction stage, the plaza measured approximately 55 m north to south by 40 m east to west, creating an area of 2200m² that supported 10 structures and a patio. The plaza has four major construction phases that range from the Middle Formative to the Terminal Classic periods. Its main construction period is the Late Classic, when the plaza space and buildings were consolidated to form the main elite residential space of the Yaxché group. The plaza was divided in two major areas, Icim North and Icim South. The first was a relatively open area that lacked structures on the east and west sides and probably function as a work area. The later can be characterized as a quadrangular plaza that was defined by multiple vaulted masonry buildings that faced towards the open plaza located to the west of Yaxché and is identified as an elite residential space.

Kuché and Chulul Groups

The Kuche Group: Plaza Cuzam is the main open space within the Kuche Group, which is
located to the west of the Yaxché group to which it is connected by a 70m long *sacbe* (Figure 2.9). During its last construction phase, the plaza area of 3044m$^2$ was framed by at least five multi-room vaulted structures. The plaza has two major construction phases that can be dated between A.D. 500 and A.D. 950. However, ceramic evidence indicates that this area could have been occupied as early as 800 B.C.$^1$. It is likely the ceramic remains belonged to the same group of people who were dwelling on the 1$^{st}$ Floor occupation of the Dzunun plaza, *sans* the early architecture.$^2$ Excavations in the central plaza indicate that the group had two major constructions phases before it was abandoned. Evidence indicates that Kuche’s elite residential space replaced Yaxché’s as the court’s main residential space. The Yaxché group was transformed into a ceremonial area and connected to Kuche via a causeway, or *sacbé*, with flat stelae.

**The Chulul Group:** This group is located directly to the south of the Kuché group. The group's architecture can be dated to the Terminal Classic period and it is, by far, the biggest conglomerate of buildings of the site. Its main plaza is open to the north side and sustains multiple range buildings, including two six-room buildings to the east and one two-story building at the north. The plaza also has a rounded, radial altar located at its center. The two-story building featured 11 rooms on its bottom floor (Str. N0895E085) and 12 rooms on the upper level (Str. N0875E0880). Although the group has not been excavated, there is evidence that construction of the buildings and plaza were not finished before the site was abandoned.

Characteristics of its annexed plazas identify Yaxché as a civic/ceremonial complex habituated by the ancient royal court (Bey et al. 2005, 2007; Bey et al. 2009; Dunning 1994; Gallareta et al. 1997; Gallareta et al. 1998; Gallareta et al. 2009; Ringle 2005; Ringle and Bey 2001). The floor sequences of Dzunun, Ulum and Icim plazas reveal that Yaxché was first
occupied during the Middle Formative period (750-400 B.C.) and underwent several periods of modifications until around A.D. 950 (Gallareta N. et al. 2001-2008). This analysis will focus on the growth synchronicity of these plazas and their courtly activities during the Late and Terminal Classic periods.

2.6 Summary

In this chapter, I described the main characteristics that give the Puuc region its unique identity. The area's multiple natural resources, such as its fertile soils, stone quarries, flora and fauna, are contrasted by a lack of permanent water sources. Due to this, the dwellers of the area devised multiple solutions to address the lack of water (i.e., the creation of artificial water cisterns and settlement near caves). This has also led researchers to propose that the area was not heavily populated despite of its highly fertile soils. Moreover, the Puuc is also characterized by a unique set of architectural styles and construction techniques. Opposite to the southern lowlands, the Puuc emphasized geometric patterns, abstract representations of mountain motifs, masks and house representation to decorate its facades.

The lack of deep stratigraphic excavations in the area also created a vacuum of data that has led a bias in archaeological interpretations in which the Puuc was considerate populated mostly by single-period sites during the Late Classic and Terminal Classic periods. Other characteristics of Puuc sites, such as construction sequences and the function of buildings and plazas, remained relative obscure until fairly recently.

The Bolonché Regional Archaeological Project (BRAP) has as its main objective the excavation of the cite center of the archaeological site of Kiuic. Research has revealed a long occupational sequence of the site, which expands from the Middle Formative to the Terminal Classic period. Excavations at the site's main architectonic group, Yaxché, have reveal that site
changed qualitatively multiple times throughout its history. Moreover, artifacts retrieved from its administrative, ceremonial, habitational and service areas open a unique window to understanding the activities that elite members of the Puuc undertook during the Terminal Classic period.

1 Ceramic types at Poso 3: Achiotes Unslipped (800-300 A.C.), Complejo Bah Tardio, Dzudzuquil Complejo Bah Tadrio, Chancenote Striated Complejo Bah Temprano / Och (300 A.C.- 300 D.C.), Sierra red Och (300 A.C.- 300 D.C.), Aguacate orange Complejo Yuc (500-700 D.C.) and timucuy orange polichrome. This means that they rock floor one and then filled with trash as base and then placed rocks as a more efficient base for the plaza floor. This speaks of the intentionality they had to build heavier buildings or maybe to raise the platform over Yaxché. Other interesting detail is that the size of the rocks indicates acquisitive power. Where did they get those rocks? This process is completely different at Yaxché.

2 It is possible that the group of people living in this area had leveled the naturally ridge with soil and build houses out of perishable materials. However, we did not find direct evidence of this architecture during the excavation process.
FIGURES FOR CHAPTER 2

Figure 2.1 Large Archaeological Sites and Kiuic Location in Relation to the Yucatán Peninsula

Figure 2.2 Location of Kiuic in relation to other Puuc Sites
Figure 2. 3 Map of the Archaeological of Kiuic
Figure 2. 4 Main architectonic groups of Kiuiic

Figure 2. 5 Yaxché Architectonic Group
Figure 2. 6 Yaxché Group by Functional Areas

Figure 2. 7 Floor Sequence, Dzunun Plaza
Figure 2. 8 Patio B Excavation Areas

Figure 2. 9 Kuché Group
CHAPTER III: CREATING CITIES: URBANIZATION AND MONUMENTAL ARCHITECTURE

3.1 Introduction

The topic of cities has been one of much interest for many disciplines, including anthropology, archaeology and sociology. Many scholars have debated about what constitutes a city, why and how they form, how urban settlements compare from different parts of the world and time periods, and how urban status affected modern and ancient populations. Ancient cities are known to us today primarily through ethno-historic accounts and their archeological remains. Due to this, information regarding these ancient settlements are usually not preserved. Hence, the origin and functions of these settlements are inferred indirectly through tangible and measurable observations on the ground archaeologically (e.g., settlement patterns, construction techniques and sequences, architectural style, city layouts and artifactual remains). Methodologically, due to budget and time constraints, archaeological studies characterize complete ancient cities based on knowledge of only a small percentage of its total extent. It is very difficult to record a significant sample from a site, especially when structures are located several meters below the ground and/or dismantled (Chase and Chase 2006:39; Marcus and Sabloff 2008:19). Traditionally, the urban status of ancient Maya settlements was determined by the presence of large stone buildings, large settlement and population density, writing and other "civilized" features. Moreover, views of ancient cities were (and some still are) based on western conceptions of
urbanism that may be inapplicable to non-western settlements. Consequently, there is limited consensus on the definition of a Maya city and its parameters.

Ancient cities are palimpsests by nature, they were not static entities, but changed from generation to generation based on specific historical and social circumstances (Houston et al. 2003; Hollis 2009; McAnany and Hodder 2009). Changes in city planning and layout is an important topic and one of the most difficult to research. Moreover, cities might have multiple degrees of planning and some cities may experiment with periods of planning and non-planning as they grow (M. Smith 2007:39). This point is best illustrated by Hollis (2009) who discusses ancient buildings. For him, there is an inherent paradox in architecture in which buildings, which are designed to last, outlast the insubstantial pageants that made them. He states that: “each alteration is a retelling of the building as it exists at a particular time--and when the changes are complete it becomes the existing building for the next retelling. In this way, the life of the building is both perpetuated and transformed by the repeated acts of alteration and reuse. This is exactly how stories are transmitted from generation to generation” (Hollis 2009:12). This form of incremental change through time is the mechanism by which buildings create powerful narratives and give meaning to their landscape.

Defining the characteristics of urban settlement has been an especially productive discussion within Mesoamerican archaeology. Multiple sites located in this cultural area have characteristics that suggest their urban nature such as monumental stone temples and palaces, large paved plazas, connecting roads, specialized craft production and public monuments. However, most of these sites also lack other urban features such as writing (i.e., Teotihuacan), the wheel, carrying animals, extensive agricultural works and in some cases
population and settlement density (Fox 1977; Sanders and Webster 1988; Sanders and Webster 1988; Sjoberg 1960). Consequently, scholars are in perpetual disagreement about the urban nature of large sites in Mesoamerica, particularly ancient Maya settlements (Andrews 1995; Chase, Chase and Haviland 1999; Ciudad Ruiz and Iglesias Ponce de Leon 2001; Cowgill 2004, 2006; Fletcher 1995, 2012; Joyce, A. 2009; Marken 2011; Sanders and Price 1968; Sanders and Webster 1988; Smith, M. E. 2007, 2011, 2012). Current accumulation of data, such as settlement maps, site comparisons (Smith, M.E. and Peregrine 2012; Smith, M.L. 2012; Stanton 2012), built environment research (Ambrosino 2003; Ashmore 2009; Bey and May Ciau 2014; Houston 1998; Ringle 1998; Villamil 2007), core and hinterland comparative studies (Neff 2010; Yeager 2003) and detailed stratigraphic explorations of ancient royal complexes (Bey 2004; Inomata and Houston 2001; Robin 2004), have yielded multiple new perspectives on ancient urbanism, its development, and what it meant to ancient city dwellers. Current studies are not only breaking away from defining ancient urban settlements based on European models, but more importantly, further research exploring the idea of multiple kinds of urbanism that emerged from varied social and ecological factors. The objectives of this chapter are to: (a) describe and explain the multiple definitions of urban settlements, (b) describe the origin of the major ideas that influenced Mesoamerican and Maya urbanism, (c) summarize current Maya approaches to urbanism, and (d) characterize Maya urban settlements.

3.2 Urban, Urbanization and Ancient City Definitions

The term urbanization refers to the creation of the physical settlements and social conglomerates which are known as cities. Urbanization is defined as a long term dynamic and continuous process which is the direct consequence of people settling in one location in a
nucleated settlement (Cowgil 2004:527; Marken 2011:15). However, there is little agreement about what indicators, either material or social, make a settlement urban after people settle a locale.

During the first part of the 20th century, researchers viewed the creation of writing as a sign of civilization and urbanism in prehistoric contexts. Gordon Childe (1950), displeased with this point of view, suggested that settlements around the world should have ten criteria to be considerate urban. He suggested that their acquisition resulted in a revolution, the urban revolution, which created a new economic stage in the evolution of society. However, the abstract and descriptive nature of these points did not provide an analytic framework, which made them difficult to apply archaeologically to ancient cities (M. Smith 2003:9). Moreover, Childe does not explain any of the social processes of urbanization nor their social implications to people living in the cities. These criteria were based on demographic and environmental ideas, which caused researchers to categorize him as an ecological determinist (Marken 2011:38). Additionally, his criteria were based on the demographic criteria proposed by Wirth (1938), which led him to think of cities in a western perspective (Marken 2011).

Since then other researchers have distinguished urban from non-urban settlements by the use of multiple indicators. Marcus and Sabloff (2008:13), for example, mention some of the most common: (a) heterogeneous population, occupations, crafts, classes, and status; (b) diverse political, social, religious, economic, and administrative buildings, institutions, wards, neighborhoods, and associated personnel; (c) dense packing or crowding of residential and nonresidential structures; (d) a monumental core of unique buildings; (e) a skyline or “city profile” that shows maximum buildings height at the center of the city and less and less
height as one moves away from the city center; (f) a central focus—sometimes a sacred center, whose access was restricted and where temples predominated, and sometimes an administrative center where governmental buildings were concentrated; and (g) special organizational features, such as grid-like modules like city blocks, streets, city walls, ward or barrio walls, canals, sewers, aqueducts, parks, and public square.

Other researchers, such as Cowgill (2004) and Renfrew (2008), suggest a city definition that emphasizes different kinds and degrees of urbanization and that is based on cross-cultural tangible data. Cowgill (2004:526) defines the city as:

“a permanent settlement within a larger territory occupied by a society considered home by a significant number of residents whose activities, roles, practices, experiences, identities and attitudes to life differ significantly from those of other members of the society who identify most closely with rural lands outside such settlements...populations of at least a few thousand seem a necessary, if not sufficient, requirement for a settlement or a society to be urban.”

Renfrew’s (2008:31-32) definition of city emphasizes population density and its relation to a heterogeneous urban center that offers specialized services to a wider society. For both authors these two criteria differentiate ancient urban centers from ritual centers. However, definitions based on multiple criteria, specially population density which has been problematic to calculate, leave multiple sites out of the urban spectrum. For example, sites like Stonehenge in southern England, and Catalhöyük, in Anatolia, are not considered urban due to their lack of specialized services and population density. These last two sites may not be urban, however, using "checklists" to determine if a settlement was urban or not does not help us, as archaeologists, to understand the social processes that generated these large conglomerates. This is specially true for early studies of Maya cities which did not take into account:(a) how the built environment shapes, reinforces, and transforms social relations, and
consequently how it becomes a source of power; b) roles of other social groups (that is, non-royal elites and commoners) in shaping the built environment of Maya centers; and c) how the built environment varied through time and between sites.

Moreover, the use of multiple cross-cultural variables to determine if a settlement is urban, while helpful to conceive of the complexity of a site, does not explain the local mechanisms that make it urban. The use of cross-cultural characteristics is subjective since they are not absolute or truly cross-cultural; in fact current research on ancient cities assets that the lack of many of these features does not render a site non-urban (A. Joyce 2009). Furthermore, urban studies and definitions are heavily influenced by state formation and social complexity theories, both paradigms that have their roots in the western notion of multi-lineal social evolution (M.L. Smith 2003:12; Marken 2011: 9). As a result, debates about the main characteristics of urban settlements and their identification in the archaeological record continue (Marken 2011).

Other researchers have opted for a functional definition of cities (Cowgill 2004:526; Marcus 1983; Marcus and Sabloff 2008b; M. E. Smith 2002, 2007b:4, 2008:172; M. L. Smith 2003a; Trigger 1972; Wheatley 1972). This analytical shift broadens the range of settlements to be included under the urban heading, facilitating comparison of large population clusters across widely differing cultural contexts. Emphasis on function is broader than using demographically based definitions, which focus on population size, density, and social complexity (M.E. Smith 2007, 2010:8, 2011b). By emphasizing urban functions and focusing on measurable features, such as the built environment, use of space, standardization of urban forms (i.e., districts and neighborhoods) and activities and institutions that affect a larger hinterland, such definitions of the city can accommodate multiple urban settlements.

Cities have also been studied as socially constructed entities by focusing on social aspects that agglutinate these settlements. This perspective addresses cities by viewing urban settlements as communities formed from constant interactions and negotiations among multiple actors with different perspectives (Joyce 2009:195). Ancient cities emerged and developed not as the result of leaders’ directives, but through the agency of people who lived in the core and hinterland zones (M.L. Smith 2003:2). In this sense, urban centers are “communities that are to varying degrees demographic, political, economic, and cultural nuclei linked through complex and varied ways to a broader hinterland” (A. Joyce 2009:189). Urban centers are social formations manifest in physical surroundings and by definition are constantly transforming through leadership as well as spatial and economic dynamics (Monica Smith 2003:8). Houston et al. (2003:236) argues that urban transformation is an organized activity that follows a royal strategy, based on leadership, and represented by the moral authority of the monarch.

Other scholars have also moved away from contracting urban and non-urban qualities of a settlement, to focus on how landscapes are socially constructed through identity and memory (Ashmore 2004, 2009; Ashmore and Sabloff 2002; Carrasco 2012; Demarest 2006; Miller 1999; Stanton and Magnoni 2008; Van Dyke and Alcock 2003; Yoffee 2007). These perspectives focuses on individual experiences, the active process of giving meaning to the landscape through the adoption and rejection of ideas (Yoffee 2007:4). Even though this perspective does not directly address the characteristics of an urban settlement or its qualities, the creation of a place is an important characteristic of ancient cities. Although created
places are not necessarily urban, cities do need to be socially created and do invoke a sense of belonging and identity.

In a review of ancient Mesoamerican urbanism A. Joyce (2009:189) notices that in the past 20 years accumulated data from multiple sites and archaeological projects have confirmed the tremendous variation in urban settlements across time and space. The heterogeneous nature of cities and their different material manifestations has lead scholars to abandon universal categories for cities and focus on other urban aspects such as the difference between urban centers and hinterland communities (M.L. Smith 2007; Yeager 2003) and cities as seats of political authority (Houston et al 2003; Villamil 2007; Sanchez 2005; Sarro 2006; M.L. Smith 2001; Yeager 2003). These definitions, influenced by central-place theories in geography, aim to fully encompass the complexity of “the city” as place, community, and as a set of coordinated institutions (Marken 2011:15-16). As a response to the heterogenous nature of cities, researchers started to develop more flexible definitions and to focus on multiple kinds of urbanism (Cowgill 2004; A. Joyce 2009; Marcus and Sabloff 2008; Renfrew 2008).

After reviewing the general literature on ancient cities, I observe that there are five fundamental features implied in most definitions. First, cities constitute a network between different sectors of a settlement. As part of the urbanization process urban cores are linked to a wider hinterland through social, economical, and political relationships (Hannerz 1980) that form the base of larger networks (Yeager 2003:123; also Fox 1977:24). These links or networks are formed through the urbanization process and are continually reconstituted through the social practices of urban core and hinterland dwellers (Marken 2011:14).
Second, although population density has been argued as a key component of urban settlements (Cowgill 2004, 2006; Renfrew 2008) current research indicates that some societies practiced a low-density agrarian based urbanism (Fletcher 1995, 2009; Smith 2011b; Yeager 2003). These low-density settlements, defined as domestic units widely spread out whose members recognize themselves as part of one social entity (Fletcher 2009), were the norm for human populations across a wide spectrum of time.

Third, urban settlements are a significant long-term physical investment in the landscape through the construction of monuments, buildings, roads and other types of urban infrastructure (Houston 1999; McAnany 2010; Rappaport 1969; Smith 2003:7; Webster 1998). Moreover, the physical environment also represents a social consensus: monuments designed by leaders and built by followers (M. Smith 2004:8). The physical investment and social consensus go beyond the material realm; they evoke particular behaviors in which the daily practice of dwellers takes place, and hence, create a socially constructed environment (A. Smith 2003; Rapoport 1982). Monumental architecture can be viewed as inalienable objects that are created to both naturalize power and as a mnemonic aid to the social order (McAnany 2010). The sum of these purposeful human modifications to the landscape create the city’s built environment (Rapoport 1982), a dynamic entity that is actively manipulated to create and re-create the social order through the modification of spaces and the creation and maintenance of multi-generational place (Smith 2003; Villamil 2007:189; McAnany 2010).

Fourth, urban settlements play a significant role in the identity of its dwellers. They are entities socially constructed through agents, a central process in identity formation and integral to the construction of social orders (Preucel and Meskell 2004: 215). I view the social construction of cities as a series of conscious strategies, decisions and actions that can
be observed archaeologically (Demarest 2006; Houston et al. 2003; Villamil 2007). Identity formations are integral to the diverse ecological and economic changes that mark urbanism (Yaeger 2003:124). Yeager (2003:123) observes that three aspects of the city—the center of large social networks, a physical place, and a symbol of identity—cannot be separated, because they all interrelate to structure social practice and thus affect urban development. Urbanism entails the formation of a large social group which Yeager (2003:123) calls an “imagined community” (after Anderson 1991) when referring to its unifying horizontal aspect, and a polity (following Ferguson and Mansbach 1996) when alluding to its hierarchical political aspect. Moreover, portable objects and their distribution as important material symbols can also be important to create shared identities between a site center and its hinterland (Bey, Kohut and Yates 2012; Jackson 2009; Monica Smith 2007, 2012; Yeager 2003).

Fifth, urban settlements arose independently across the globe as a result of different historical, social and political circumstances (Smith 2003; Renfrew 2008; Trigger 2008), all of which are tied to multiple processes of urbanization. All settlements that became cities had particular forces (internal and external) that led their dwellers into a more complex mode of administration. Their particular urbanization process, internal heterogeneity and discrete social and urban characteristic all serve to make cities vary greatly and render them difficult to categorize or define using universal terms (Renfrew 2008).

Finally, research on the variability of urban settlements has also shown that large size does not make a settlement urban. Although very large sites have a larger probability of being a city, it is their internal characteristics, such as services, public institutions, and internal diversity that determine their urban character (Marcus and Sabloff 2008:20).
As discussed before, the basic idea is that urbanization denotes the creation of a city by a society that formerly lacked urban settlements (Cowgill 2004:527). A settlement is considered urban, when its political relations and structures of authority began to produce relations of dominance and dependence among people dwelling in both its core and hinterlands (Joyce 2009:189; Michael Smith 2007:4; Michael Smith 2010; Monica Smith 2003). Urbanization is, hence, a social process in which central places exhibit increasingly large and dense populations, increasingly differentiated workforces and architecture that houses them, and increasingly centralized or incorporated administrative districts at their core (Rise 2006:267). Due to the urbanization process and its social base, cities are always in the process of changing (Marken 2011:15; M. Smith 2003:8-9).

In this sense, I agree with Harring’s (2006:36) definition of Maya cities. For him, they are defined as low-density urban arrangements in which lesser architectural group-homes, workspaces, administrative and trading depots, neighborhoods—sprawled irregularly outward from city-centers, tapering raggedly off into the hinterland. Maya urban centers are low-density garden cities (Fletcher 1995) that consisted of lesser architectural groups scattered in irregular halos around impressive nuclei of monumental temples, plazas and palaces. As I discuss Chapter 4, this low-density settlement is also characterized by the presence of a social administration system, which in the Maya area is embodied by the royal court.

### 3.3 Studies of Ancient Urbanization

The idea of the city, its characteristics and development as a unique human feature that emerged in multiple parts of the world independently, has been a topic of discussion in the social sciences since the 19th century (Marken 2011). In part, this discussion arose due to
rapid industrialization and urbanization at that time in the Western world. This rapid change, added to reports of new societies outside of Europe, helped to place the city as an important object of cultural study. Moreover, the dramatic shift in population nucleation driven by industrialization encouraged a strict dichotomy between urban and rural (Marken 2011:33). Additionally, dominant ideas about what constitutes a city and its origins were paralleled by a theory of unilinear social evolution (a trend that continued throughout the 20th century). These ideas were based on western concepts of cities and conceived the ideal city as a European settlement with written records (an indispensable quality to be considered “civilized”). Cities were not seen as independent entities, but as a consequence of state formation and, hence, questions regarding what defined a city were not as predominant (M.L. Smith 2003:12).

The anthropology of urbanization developed by African and Latin American researchers came from an interest in contemporary large-scale movement of rural peoples to cities and their adaptation to new environments (Fox 1977:14). During the first part of the 20th century, new ideas about what constituted a city and its characteristics emerged from multiple fields of study, especially sociology, anthropology and archaeology. First attempts to use anthropology for the study of cities focused on the study of social inequality and discrepancies between urban and rural settlements (e.g., Redfield 1941 and Lewis 1959). Anthropologists often viewed indigenous societal practices and institutions as the most relevant objects of anthropological study. This resulted in an exclusion of alternative city contexts from contemporary ethnographic synthesis (Marken 2011:35).

These ideas and the notion of “city life” defined through anthropological methods, such as participant observation, inspired the Chicago School of Sociology (Blanton
1976:249). This school viewed the city as an ecology of communities” (Scott 1980:66) where various class groups competed for desirable and advantageous urban environmental niches (Marken 2011:35). The Chicago School developed multiple models for different urban configurations, allocation of people and their probable causes (see Marcus and Sabloff (2008:4-12) for a complete summary). These ideal models of urban settlement include the concentric model (University of Chicago, 1920-1930), the sector model (Hoyt 1939), the multiple nuclei model (Harris and Ulman 1945) and the residential area model (Wirth 1938). Unfortunately, these models were rigid and had limited applicability outside the metropolitan zone of Chicago (Parker 2004).

During the middle half of the 20th century theories about the development of urban settlements were focused on cross-cultural features of urbanism with emphasis on ecological factors (Blanton 1976). In general, urban studies during this time had two major biases. First, cities were conceived as small self-contained societies (Weber 1958), which left peripheral settlements with little to no attention. In other words, research was centered on the city-core leaving the role of its hinterland counterpart in academic darkness. Second, urban studies used European cities as their ideal model¹, making them ethnocentrically biased for the study of non-western cities.¹ This was partly due to the adoption by archaeologists of Wirth’s (1938) model and the influence of the folk-urban concept proposed by Wirth, Simmel and Redfield (Blanton 1976:250; Sanders and Webster 1988:522). Sjoberg (1960) broke away from earlier scholars by acknowledging that there might be different kinds of urbanism and urban origins, specifically between industrial and pre-industrial cities. His comparative study, based on cities from both past and present, concluded that cities developed independently around the word (Sjoberg 1960:26) and their development required certain ecological and
social prerequisites (i.e., ecological base, advanced technology and a complex social organization). For him, technology and social power were the crucial variables that ultimately lead to the origin and proliferation of cities (Sjoberg 1960:64). The first allowed societies to take advantage of local resources and while the second allowed a well-developed power structure without which cities could not derive sustenance from the hinterland and grow (Sjoberg 1960:68).

*Ancient Urbanization and Mesoamerican Archeology*

During the middle half of the 20th century the development of new techniques, such as remote sensing, mapping and air photography, revolutionized the way that archaeologists studied ancient settlement patterns. These techniques allowed more systematic surveys at community and regional levels. Mesoamerican archaeology spearheaded ancient settlement pattern studies (Nichols and Pool 2012), specially Gordon Willey (1956) with his settlement pattern study in the Virú Valley of Peru and his later excavations in multiple sectors to understand the supporting population of Copán, Honduras in the 1970’s (Willey and Leventhal 1979). His approach consisted of intense survey, registration and mapping of cultural features outside the main core of sites. At Copán mapping beyond the central urban core of the site illustrated inner and outer settlement variation. The heterogeneous character of the Copán dwellings led to one of the first classifications of buildings or “hierarchical types,” based upon the size and elaboration of their constituent structures (Willey and Leventhal 1979). These pioneer studies illustrated the relationship among urbanism, population density, and available agricultural land (Fash et al. 1992:422). Willey’s interpretations, however, were criticized and considered simplistic and descriptive by some archaeologists. [such as?] The goal of his methodology was to construct cultural histories of
ancient cities, not understand the processes of urbanization.

Newly generated data from multiple areas of archaeology, (e.g., mapping efforts, settlement pattern studies, household archaeology, etc.) generated new ideas regarding ancient urbanism. Moreover, the archaeological paradigm shifted from culture history to processual archaeology (i.e., from describing cultural stages to examining the process of change). This change coupled with new technical advances in the discipline allowed scholars to move away from a view of cities as self-sufficient social entities and to recognize the role of the larger society in the development of urban sites (Berger 1978:7-9; Marcus and Sabloff 2008). Regardless of these advances, the second half of the 20th century was characterized by a lack of significant theoretical development on the topic of urbanism. City-centric theories overemphasized the role of cities in social change and did not provide satisfactory explanations or ontological tools to study urban settlements cross-culturally (Blanton 1976:249). Most of the research focused on developing archaeological correlates for new typologies of political organization and the origins and development of complex societies. Attention shifted from central place theories to regional and dynamic processes that eventually resulted in domestication, urbanization, and formation of the state (Blanton 1976; Cowgill 2004:526; Marken 2011:10, 40). The notion of "urban society" and its characteristics was seen a part of "the state.", and not an autonomous entity (Cowgill 2004:526).

One of the most influential studies of urbanism at the time was done by Richard G. Fox (1977). His analysis had a diachronic framework and a wider viewpoint then a single urban site or one of its components. He linked cities with social-political organization by focusing on two subjects: (1) the ideological ties that are embedded in the culture of cities and (2) how city interaction with a hinterland acted as a socio-economic and political factor in the
organization of entire societies (Fox 1977:17-18). Both are dynamic and are manifested differently though time. Due to this dynamism, he introduced the concept of adaptation to stress the dynamic aspect of city formation.

Fox (1977:40) defines urbanization as the physical movement of people from rural areas to cities and a city as a population concentration or a ceremonial and prestige center. His definition requires that cities are a demarcated zone (i.e., demographically, socially or ritually) that is separated from the surrounding state society and that it represents more complex human settlement (i.e., social organization and ideological functions) than surrounding rural environs (Fox 1977:30). Based on these distinctions, he developed an urban typology in which cities could be considered regal-ritual, administrative or mercantile depending on their socio-political complexity. In general, the problem with conceiving the city in terms of urban typologies is that it remains under theorized obscuring important cross-cultural variability and eliminating dynamic qualities such as evolving spatial and social communities (Marken 2011:62). These early urban models are city-centric and do not take into account other important variables that affect the formation of cities such as individuals and their decision making, symbolism, culture, rituals and religion (Marcus and Sabloff 2008).

The ecological approach views urbanism as an adaptation to the natural environment and observes the relation between local ecology and the communities that developed from it (e.g., Fox 1977; Sanders and Price 1968; Sanders and Webster 1988). This approach was popular in the first half of the 20th century but was criticized[ by whom?] for its ecological determinism and lacked emphasis on human agency.
During the beginning of the 1980s, archaeologist started to focus on household activities. This approach emphasized the analysis of ancient structures as part of a group, opposite to isolated entities, to determinate their function (Becker 2004: 128; Hendon 1991). Households were seen as nesting identities through kinship ties, co-residence and shared cooperative activities (e.g. Hirth 1993; Wilk and Netting 1984; ). Excavations and general data from households brought to light how groups were integrated and how they negotiated relationships among themselves and with civic institutions (Marken 2011:71). Within urban societies, household identities – forged by kinship and co-residential practice – form the most basic social unit of affiliation (ibid). By participating in specific extra-household social, economic, religious and political interactions, household members actively generate, maintain and reinterpret their social practices, markers and meanings that define the ideational and physical construction of community (Cohen 1985 in Marken 2011)

This functional approach starts with settlement pattern studies and focuses on how the built environment reflects urban complexity, its function and meanings (e.g., Fox 1977; Marken 2011; M.E. Smith 2007, 2010, 2011a; Willey 1953). This approach is usually cross-cultural, comparative and focuses on tangible evidence and empirical urban theory. Sub-variants include the comparative approach (M.E. Smith 2011), multi-scalar approaches (Marken 2011), multi-regional approaches (Cowgill 2004) and architecture grammar (Becker 2004; Catesby 2011). The large amount of accumulated data from the excavation of ancient cities, has led researchers to observe various characteristics in ancient settlements that tend to parallel or repeat in multiple parts of the world. These approaches are based on the assumption that the diversity of cities is not infinite, but has a limited number of cross-cultural features (Marcus and Sabloff 2008). Using data from ancient urban cities around the
world, the comparative approach observes similarities in patterns and functions in order to isolate possible explanations for the function of cities and the emergence of urban settlements and to establish criteria in order to distinguish cities from other settlements (Marcus and Sabloff 2008:24; Marcus and Sabloff 2008b: 336; M. E. Smith and Peregrine 2012; Yeager 2003:122).

During the middle of the 1980's, post-processual or interpretative archaeology emerged and exhibited an opening to multiple perspectives often excluded from mainstream processual archaeology. This new paradigm assumes that all individual in a society have agendas that are constantly negotiated (e.g., rulers negotiating their power over subject populations and subject populations during various means to affect their agency within the constrains of hierarchy). This new paradigm affected how material evidence was interpreted with the incorporation of new concepts from social theory, such as agency and practice, that were particularly attractive to processualists searching for alternate explanations of social change (Marken 2011:64). These ideas generated new perspectives on the interaction between individuals and their environment. Postprocesualism shifted the theoretical compass from focusing on archaeological processes (i.e., how did this context came to be?) to explanatory ideas (i.e., why did this context came to be?). As a result, topics such as identity formation (Hutson 2010; Villamil 2007), social construction of settlements (M.L. Smith 2003; Yeager 2003), place making and community building (Anderson 1981; Ashmore and Sabloff 2002; Ashmore and Knapp 1999; Nieves Zedeno and Bowser 2009), were prioritized over “big picture” theories based on cross-cultural patterns and typologies.

In general, these studies deepened our understanding of the social complexities of creating a place and its relation to the process of urbanization. By observing the landscape as
a socially constructed entity, the stratigraphic record generates more than small-scale
geological epochs, but rather yield clues about how genealogies were constructed and
deconstructed their past, how histories are made and erased, and how the past can be hidden,
erased, selectively filtered, manipulated and imbued with positive as well as negative charge
(McAnany and Hodder 2009:21). This standpoint represents a break from studies embedded
within cultural evolutionist and functionalist theoretical frameworks by acknowledging the
variability among ancient cities due to the multiple kinds of urban formations linked to
different evolutionary trajectories (Joyce 2009: 189-190). These social approaches help
archaeologists to break away from a descriptive epochal framework and embrace a more fine
grained and nuanced approach to sediment histories (McAnany and Hodder 2009:20).

The study of place making at ancient settlements, although not directly concerned with
urbanization, is an important branch of archaeology that focuses on how people give
meaning--both symbolically and through action--to their physical surroundings at multiple
scales and the material forms that meanings can take (Bowser 2004:1). Place making can be
described as a process of constructing, maintaining, and modifying social worlds. Place
making is the power to appropriate nature and to make culture, to develop bonds to, make
homelands, create order and negotiate power to, integrate practices and worldviews with
those of others and to anchor experiences in the landscape by naming features or building, so
that we can remember them and learn from them in the future (Nieves Zedeno and Bowser
2009:8). Its analytical focus is the process of creating a place; these studies aim to describe,
reconstruct, interpret and explain the form, structure and the temporary meanings that human
ascribe to their environment (Nieves Zedeno and Bowser 2009:2).

In Mesoamerica, archaeologists have invoked the concept of landscape as both a cultural
and natural product to understand how people created and experienced places and how places are socially, politically, and ritually charged (Nichols and Pool 2012). Other researchers have focused on the social aspects of ancient cities and the way they are configured by social groups (Monica Smith 2003:2). This standpoint focuses on the complex interactions among people with varying identities, viewpoints, and access to resources and power (Joyce 2009: 195). These interactions are interpreted as social negotiations between different human groups which yield a sense of place and meaning. To understand the urbanization process of a city from this perspective, we need to look at the individual construction history of cities and the decision making processes that resulted in their particular urban layout through the processes of place making (Houston et al. 2003; McAnany and Hodder 2009; Nieves Zedeno and Bowser 2009; Villamil 2007).

Social Memory can be defined as the construction of a collective notion about the way things were in the past. Social memory is not monolithic, it varies by gender, ethnicity, class, religion and other salient factors, allowing for a multiplicity, and possible conflicts, of memories in any society (Van Dyke and Alcock 2003:2). McAnany and Hodder (2009:10) define social memory as the construction of links to the past in relation to social collectivities, at whatever scale, and the transmission of those constructions through social means and institutions. Rowlands (1993) distinguished between inscribed memory, characterized by repetition and public access (materialized in visible ceremonial activities such as the construction of monuments) and incorporated memory, characterized by opaque symbolism and secrecy. Incorporated memory leaves little, if any, archaeological remains. Identity, memory and landscape perspectives are effective to study how and why things changed through the active process of adoption and/or rejecting of ideas by human agents.
(Yoffee 2007:4). Such social approaches to human collectivities have been criticized for their abstract nature. Smith (2011:168) for example, observes that high level theory has not satisfyingly contributed to the creation of concepts or methodological tools that effectively deploy empirical data towards understanding ancient urbanism.

Michael Smith (2010; 2011a; 2012:322) advocates research on ancient cities from an empirical perspective that focuses on observable cross-cultural characteristics (such as city layout, planning, access, visibility, and spatial patterns; see Smith 2007, 2010, 2011a, 2011b) can be productive in multiple ancient cities from the old and new world (Blanton and Fargher 2012). Smith and Peregrine (2012:4-5) argue theories based on empirical data are a more productive avenue for the analysis of archaeological data from ancient cities, since empirical data can be used to identify regularities in human behavior and features in human societies and how they change over time. Empirically based urban theories can link the actions of people in cities to the urban built environment through the process of design, construction, modification, and destruction and measure their impact (Smith 2011a: 183). However, there are some difficulties with researching the origin and development of ancient cities with a comparative approach. Firstly, only a few sites have been excavated systematically in a manner that yields evidence of this process. Hence, there are not enough data to document this process on all kinds of cities. Secondly, site specific approaches are better for understanding this problematic, since they can explain this process without extensive data collections from the perspective and specific context of the studied society; finally, by privileging a regional focus, the empirical view can miss some of the localized social phenomena that complicate (or “complexify”) individual cities. Moreover, Maya urban models may be biased due to researcher’s overwhelming interest in large ceremonial centers.
of the Classic period, which some have argued to be the exception rather the norm of ancient settlement (Laporte 2001; Ciudad and Iglesias 2011:13; Marken 2011). This emphasis obscures the diversity in social segments and economic functions of ancient cities (Ciudad and Iglesias 2011:29). In short, as data accumulated it became clear that urbanism was (a) not universal, (b) occurred independently around the world and (c) no single factor could explain its origins (M. Smith 2003; Renfrew 2008). Moreover, excavations of domestic units and households indicated a complex integrative relationship between urban and rural residents indicated by similarities in space use, architecture, ritual behavior (Storey 2006:18; Small 2006), and other complex networks of social, political, and economical relationships (Yeager 2003). This evidence suggests that urban formation can be arranged along a continuum (M. Smith 2003:2; Storey 2006:20). Also, incorporating and acknowledging the role of commoners and their dwellings in the definition of cities (i.e., their role in production, consumption patterns and participation in ceremonies) shifted the study of ancient urbanism from focusing on the city and its leader to the interaction between the rulers and the ruled and the organization of authority based on controlled labor’ (Monica Smith 2003:2). The dynamics of these interactions can affect the composition of the population by the pull-push effect from core to periphery and vice versa.

Although the city-hinterland continuum is currently accepted, as is the complex dynamic between these two entities, studies of urbanism continue, for the most part, to be city centric. However, multiple discoveries and analysis of the integration of these two sections of the populations, combined with the multiple theoretical advances have generated a variety of new perspectives to study ancient cities. Although many authors emphasis different perspectives on urban studies (see Cowgill 2004; Joyce 2009; Marcus 1983; M.E.
Smith 2007, 2011a; Thomas 2012), I consider M. L. Smith’s (2001 in Fash, and Lopez Lujan 2009) to be the most appropriate to illustrate overall archaeological approaches to ancient urbanism.

3.4 Research on Urbanization of Maya Settlements

Until the later part of the 20th century, Maya settlements were not thought to be not urban due to dispersed settlement patterns and a lack of some of the prerequisites that urban researchers though were universal to urban settlements, for example: cargo animals, the wheel and other technological advancements, very large population size and density, programs for landscape transformation and agriculture engineering, varied social composition, institutions of economic and political specialization, raw materials and manufactures (Ciudad Ruiz e Iglesias Ponce de Leon 2001). The lack of these “universally urban features” has always presented a challenge for Maya scholars who were interested in the cultural evolution of societies. Moreover, ethno-historical accounts of Aztec urbanism, such as the chronicles of Hernando Cortez, Genaro Garcia, Fray Diego Duran and Fray Bernardino Sahagun, became the standard for theorizing Mesoamerican cities (Marken 2011:100). As a result, some scholars argued that real urbanism was only present at some sites located in the Mexican Basin and that the rest of Mesoamerica contained only low-population farming settlements (e.g., Sanders and Price 1968).

During the first half of the 20th century the archaeology of cities focused on large ceremonial centers and their main central core. In Mesoamerica, archaeological projects concentrated on the excavation of places such as Tikal, Chichen Itzá, Teotihuacan, Cholula, Monte Albán, Palenque and Copán. However, most of the generated literature was
descriptive. Much of it consisted of technical reports of large architectonic groups and cultural history of city cores.

Currently, new accumulated settlement data from site mapping, now a basic element of archaeological projects, and regional settlement-pattern studies have shown the importance of prehispanic cities in Mesoamerica and their diverse forms, making urbanism a rich topic in Mesoamerican archaeology (Blanton 2012; A. Joyce 2009; Manzanilla and Chapdelaine 2009; Manzanilla 1997; Mastache et al. 2008; Sanders et al. 2003; Sanders and Webster 1988, 1989; Smith 2007). Mapping efforts at sites like Copán, Tikal, and Dzibilchaltún, resulted in a high number of residential structures recorded, indicating that Maya centers were occupied by much larger populations than suggested by early models of Maya agricultural surplus potential (Marken 2011:113). However, there still was a lack of knowledge of the internal function of large Maya sites. This might be due to the limitations of methods for recognizing cities as objects of study and the overall dominant interest in large ceremonial centers of the Classic period (Ciudad Ruiz and Iglesias Ponce de Leon 2001:13).

*Mesoamerican Urban Models*

The key characteristics of the Mesoamerican urban tradition are thought to have emerged in the Middle Formative period at sites like San Lorenzo and La Venta, and later expressed in other Mesoamerican sites (Clark and Hansen 2001; Ciudad Ruiz and Iglesias Ponce de Leon 2001:21-22). Settlement location and construction in Mesoamerica was based on local topographic features and landscape resources (e.g., Andrews 1975; Hirth 2000; Kowalewski et al. 1992; Marcus & Flannery 1996). Ancient urban planning varied, but
evidence suggest that construction practices were based on cardinal directions, urban grids, the use of large platforms with a pyramid on top, large plazas, E-groups, royal residences, sculptures, offerings, burials and stone works (Ciudad Ruiz and Iglesias Ponce de Leon 2001:22).

The Mesoamerican urban tradition has been researched extensively since the middle of the 20th century. Projects in large ancient sites such as Teotihuacan, Monte Alban, Cholula, Tula, Tikal and Dzibichaltun have molded the way scholars view urbanism and urbanization (Marken 2011). These studies prompted an extensive discussion about the nature of Maya cities and how to properly define them (Ciudad and Iglesias 2001; Fash and Lopez Lujan 2005; Joyce A. 2009; Marcus 1983; Marcus and Sabloff 2008a, 2008b; Renfrew 2008; Webster and Sanders 2001).

Maya cities currently are being studied from a variety of different angles. In general, discussions of urban settlements focus on settlement patterns (Demarest 1992, 2006; Miller 1999), how they compare to other urban settlements (Cowgill 2004; M.E. Smith 2007, 2010, 2011a, 2011b, 2012; M.E. Smith, and Peregrine 2012), their relation to the state (Carneiro 1970; Demarest 1992; Sanders and Webster 1988), their planning in terms of royal and social strategies (Houston et al 2003; M.L. Smith 2003; Villamil 2007), place making and construction of landscape (Ashmore 1981, 2002; Ashmore and Sabloff 2002; R. Joyce 2001), its ideological power (Carrasco 2012; McAnany 2010; Love 1998; Ringle 1998), its relation to the hinterlands (Yeager 2003; LeCount and Yaeger 2010; Marken 2011; M.L. Smith 2007), their internal organization (M.E. Smith and Novic 2012) and how ancients dwellers view urbanism (Marcus 1983; Ringle and Bey III 2001).
Discussions of ancient Maya urbanism have been relevant to the discussion of centralization and decentralization of Maya political organization. Sanders and Webster (1988) proposed a very influential model that champions the decentralized perspective. They characterize ancient Mesoamerican cities based on Fox’s (1977) regal-ritual and administrative city models. This functional perspective focused on size, density, and nucleation of populations to determine economic functions political power and group integration (Ciudad and Iglesias 2001:15). For Sanders and Webster, the majority of urban centers in Mesoamerica could be characterized as regal-ritual cities, which had relatively small populations of "low energy societies" due to few sources of energy besides human power along with constraints of transportation, communication and production (Sanders and Webster 1988:529, 541). For them, only a few highland Mexican cities, i.e., Teotihuacan, had the characteristics of an administrative center with large, dense and more heterogeneous urban communities, a political function as capital state with multiple urban centers, and residence of the ruling family and military officials (Sanders and Webster 1988: 525). Hence, they concluded that Central Mexican cultures developed a distinct type of urbanism, but the remainder of Mesoamericans, and the Maya particular, did not.

Sanders and Webster favored Fox’s (1977) definition of cities, considering it a step forward toward understanding Mesoamerican settlements due to its focus on process and the idea that variability in urban centers can be understood by the overall structure of the societies in which they are embedded (Sanders and Webster 1988:523). However, Sanders and Webster’s (1988) adaptation of Fox (1977) model has been criticized by other scholars. Chase, Chase and Haviland (1990:499) observe that the Regal-Ritual model does not fit the evidence for Maya urbanism. Moreover, the model inherits some of the biases of Fox (1977)
and Wirth (1938) such as a typology based primarily on old world examples, a high reliance on quantitative measures that are ill-suited for cross-cultural comparisons of urbanism, and defining the nature of Maya urbanism based on three sites (i.e., Tikal and Caracol and Belize) (Marken 2011:122; Storey 2006).

Other authors argue for a more centralized perspective on Maya political organization and cities (Chase, Chase and Haviland 1990; LeCount and Yaeger 2010). They suggest Maya centers were seats of powerful ruling dynasties, their cities were planned and some sites, like Tikal and Caracol, had a substantial population. Excavations indicate that Mesoamerican urban settlements were not just elite households writ large, but economically specialized complex settlements that extended beyond their epicenter into all sectors of society (Chase, Chase and Haviland 1990:501; Iannone 2005; M.E. Smith 1989, 1990).

Marken (2012:124) observes that the material expectation of the decentralized-centralized debate are not mutually exclusive. He argues that rather than emphasizing either conceptions of Classic sociopolitical structure, it is better to assume that organization within and between Maya polities was multifaceted and variable in space and time. He suggests that acknowledging variation among Maya centers will lead to a better understanding of their social, political, and historical contexts. Perhaps because the lack of acknowledgment of this variation, and n spite of the large amount of detailed studies, there is still no overall synthesis or definition of urbanism in ancient Mesoamerica (Carrasco 2012:444; Joyce 1983).

Additional reasons for the lack of a urban synthesis include: (a) urbanism models based on massive sites (e.g., Tenochtitlan, Teotihuacan and Tikal) that were exceptionally large for their time rather than the norm (Ciudad Ruiz e Iglesias Ponce de Leon 2001); (b) models of urbanism from central Mexican cities have been adapted to other Mesoamerican cities that
might have featured different kinds of urbanism (Joyce 1983; Marken 2011); (c) highly heterogeneous cultural areas create a large amount of variability, creating different settlements that use similar cultural elements; (d) high variability in urban strategies to adapt to variable ecological conditions; and (e) a lack of understanding of individual site processes of urbanization (Ciudad and Iglesias 2011).

**Ancient Maya Cities**

Due to an accumulation of data from excavations and mapping efforts, it is widely accepted that some ancient Maya settlements were urban in character. Chase and Chase (2006:40) envision the Maya landscape as a continuous occupation of settlements that culminated in ordered urban places, each with constructed spaces used for the multiple necessities of its dwellers. Smaller settlement occupation depended on urban places to be economic and administrative knots, as part of extensive political units or larger cities (A. Chase 1998, 2004; A. Chase y D. Chase 2003).

In the Maya area, the appearance of monumental architecture in the Middle and Late Formative periods (1000 B.C. - A.D. 300) at sites like Nakbe, Tikal, and El Mirador in Guatemala and Lamanai in Belize, is taken as a benchmark for the beginning of social complexity and urbanization (Estrada-Belli 2011; Hansen 2001; Ringle 1998). New evidence indicates that some sites in the southern lowlands and the Pacific coast may have already reached urban status by the middle Formative Period (Love 2011). The process of urbanization included the construction of new features such as earthen and stone constructions and paved roads within and between sites. The enormity of this architecture suggests a growing economic and social differentiation and the capacity of emergent elites to
organize collective labor to build significant public works between 300 B.C. and A.D. 300 (Hansen 2001; McAnany 2010; Yeager 2003).

In some cities, like Tikal in Guatemala, the construction of monumental architecture during the Late Formative period is clearly associated with individual rulers, a characteristic that often is linked to the development of hierarchical differences in the population. In other words, the act of building colossal structures appears to have accelerated and amplified social distinctions in general (McAnany 2010:162). Hence, such constructions have been interpreted as a symbolic projection of elite authority, a key means of organizing society around monumental architecture and of entrenching such beliefs and practices in fixed spaces (Houston et al. 2003: 215).

Although, there are no written records that indicate the relationship between individuals and urban settlements, epigraphic and ethnographic records from the Maya area yield evidence of some indigenous categories that are associated with cities. Recent research indicates the presence of at least two Mesoamerican concepts associated with large settlements — possibly cities — named altepletl and tollan. The concept of Altepletl referred to the act of place making and urbanization in Mesoamerica, mostly near the center of México (Carrasco et al 1991; Fash and Lopez Lujan 2009:7). Hirth (2003: 69, 70) describes the altepetl as having three components: the ruler, the supporting population and the geographic territory that supported them. In conceptual terms, there is no separation between urban and rural space, since the altepetl very often represented the community as a whole. For Hirth, Mesoamerican socio-political integration occur at the level of the altepetl with urban communities occurring as a byproduct of regional political integration.
The concept of *tollan* has been greatly debated since the 1940’s when researchers believed that the term referenced to the cities of Tula or Teotihuacan (Carrasco 2009:447). Now we know that, just as *altepletl*, it can be interpret as an archetypal concept of a place. The word *tollan* is roughly translated as “the place of the reeds” and is associated with early great capitals such as San Lorenzo, El Mirador, La Venta and Teotihuacan (which were located near watery places). It is a reference to a civilized place, a place where the arts flourished and one with a distinguished history. Aztec and Quiche Maya identify Tollan as the first city, the cradle of maize agriculture, calendrics, writing, artistry and the shrine of the deity Quetzalcoatl. The first people who created urban life lived at a tollan (Fash and Lopez Lujan 2009:8).

Marcus (1983) and Ringle and Bey (2001) propose a native typology for Maya settlements based on Yucatec ethno-historical and linguistic records (Brinton 1882; Martinez Hernandez 1929; Roys 1943). Their typology includes a *cah* the basic term for a town or place; a *noh cah* or large town of importance or a city; a *chan cah* or small town; a *chan chan cah* or a village; a *cacab* or the larger unit that consisted of a town, township or commune and the land belonging to it; finally the *baalcah* was the land in which people the town and its inhabitants lived. This native typology suggests that there is some linguistic reference regarding the size of a settlement, but it is unclear what parameters where used to distinguish between a large and a small *cah*. Moreover, Ringle and Bey (2001) observe that when referring to cities, the term *cah* seems to refer more to a place or land than an actual urban conglomerate or its built environment. On the other hand, larger sites, referred to as *baalcah*, are interpreted to have a sense of territorial control, favoring the idea of larger cities, perhaps regional capitals, and smaller settlements.
A different typology has been suggested by Roys (1943) who describes the Colonial Period political organization in a somewhat similar matter. This typology describes ancient settlement organization as consisting of a large unit, headed by one individual, which administrated multiples settlements that controlled territory and labor. During this period, settlements were divided into *provincias*, which were governed by a *halach uinic*. A *cuchcabal* was the highest organizational level; this office always had a toponym, although it was not necessarily territorially continuous, and its function was to administer several subject towns (Okoshi and Quezada in Ringle and Bey 2001). A second rank of settlement organization, classified as small towns or *cahcab* were governed by *batabils*. Finally, a third rank settlement defined as the ward of a town, or *cuchcab*, was represented by an *cuchcab*. The *chuchteloob* were identified by a toponym, and members had access to designated parcel. Ringle and Bey (2001) suggest that they collected labor and tribute (i.e., formed a taxation unit), although there is no evidence that associates this office with a lineage head.

Both typologies seem to imply that during the Post-Classic period there were at least two levels of political organization of Maya settlements in which a large site administrated multiple smaller entities. These typologies also suggest that the Maya considered land, people and minor settlements controlled by one ruler as a significant landscape unit. There seems to be no distinction between hinterland and core residents of cities. This lack of contrast between core and periphery supports the idea that for Mesoamerican and Maya urban dwellers, the capital was where the ruler's palace was (Marcus 1983:56; Marcus and Sabloff 2008:22). Marcus (1983:57) suggests that it was probably the residence of the ruler, rather than the size of the settlement, that placed many cities at the tops of their respective hierarchies.
Ancient prehispanic cities, just as any other kind of urban settlement, present a high degree of variation. As presented in future chapters, it is my goal to explore local Puuc variations on the concept of urbanism, how urbanization developed at Kiuic and, how it compares to other urban centers.

3.5 Summary

This chapter discusses concepts of urbanization and city, and explores the origins of the terms, how they are used in Maya archaeology and some of the issues in archaeological theory of urbanism. These issues include theoretical debates over what constitutes a city and when a settlement begins to be urban. For most of archaeology's history, ancient cities have been conceived based on site-center models. As a consequence, city cores of large archaeological sites were taken as the major object of study without considering populations on the outskirts.

There is still no consensus about the parameters that define an ancient city. However, new methodological and theoretical perspectives in conjunction with data from different archaeological sites have yielded multiple approaches to studying ancient settlements. These approaches include multiple social aspects of the urbanization process that tell us about how people socially constructed their cities and how giving meaning to a landscape constitutes a critical part of urbanization. Here, I propose to view urbanism as a multi-form social phenomena. We know now that urban settlements emerged independently in different areas of the world; if urbanism is a stage of complexity that settlements acquired independently in different times and places, is there only one kind of urbanism or is it more productive to talk about multiple forms of urbanism? Following this logic, I propose to study the urbanization
of Kiuic as a presence that parallel urbanization at the Puuc sites but differed from the
urbanization and the construction of political authority in the southern lowland sites.

1 For him, more planning may refer to either: the degree of coordination or standardization, the effort involved, or the extent at which a city shows overall planning (Michael Smith 2007:7).

2 Child (1950) ten criteria are: 1) population density; 2) multiple social classes; 3) taxes (surplus); 4) monumental architecture; 5) people that did not farm and were sustain by surplus; 6) a recording system or sciences; 7) Writing; 8) specialized labor; 9) imported goods or trade; 10) craftsman that were city exclusive.

3 In this sense, urbanization can be both centralizing and expansive, since it centralizes power into a “compressed” core while it expands its influence over the hinterlands and far away.

4 Some of the main terminology used in studies of ancient cities is still biased by European ideas; this can be seen in the use of terms such as “palace” and “temple”.

5 Sjoberg (1960) is addressing Wirth’s (1938) ethnocentric definition of city. Because it was based on three characteristics that could be quantified (large population size, population nucleation and high internal heterogeneity) it was very popular with archaeologists at the time (Sanders and Webster 1988:522).

6 Smith (2011a) gives the following examples of empirical theories: Environmental-Behavior, Space Syntax, Urban Morphology, Reception Theory, Generative Planning Theory, Normative Urban Theory and City Size Theory

7 Small (2006:318) mentions that although archaeologists have incorporated the hinterlands into the research of cities there is still a prominent assumption that the city is somewhat dominant.

8 Child (1950) and Sjoberg (1960) consider Maya cities anomalies in their study of cities.
CHAPTER IV: RULING THE CITIES

4.1 Introduction

Classic Maya royal courts have been studied from a range of materials that include the decipherment of royal titles, the excavation of royal tombs, and investigations of these durable examples of stone architecture. Royal courts vary from site to site and are usually identified archaeologically as a cluster of stone buildings and temple structures that occupy a centralized location at large archaeological sites. Direct references to royal courts come from very limited sources, mainly polychrome vessels with court scenes (Reents-Budet 2001; Jackson 2009, 2013; Tokovinine 2010), ancient monumental architecture (Bey and May Ciau 2014; Ciudad Ruiz 2001; Fash and Lopes Lujan 2009; Iannone 2005; Inomata 2001; Valdes 2001), ethno-historic sources (Ringle and Bey 2001) and artifactual remains (Folan et al 2001; Gongora et al. 2009; Hendon 1991; Inomata 2010). Some researchers have identified courts indirectly through analyzing archaeological markers of the ruling class such as household size, extravagant burials and funerary offerings, skeletal markers of wellbeing, and associated belongings (Haviland and Moholy-Nagy 1992; Tourtellot, Sabloff and Carmean 1992). However, and with the exception of royal burials and epigraphic evidence that directly name Maya governors, court members have proven difficult to identify archaeologically, especially non-royals (Chase 1992). Royal courts also vary from place to place and through time and have a dynamic character (Slim 2004). Similarly to the concept of cities, universal, a priori definitions are unproductive. Ancient Maya royal courts connect to global, regional and local traditions of rulership and must be defined based on a close examination of data in
the context of specific cultural and historical situations (Chase 1992; Inomata 2001:27).

Current evidence indicates that royal courts emerged during the Classic Period when the principle of divine relationship began to dominate state craft in the lowlands. During the Late Classic royal compounds became a staple presence as the central administrative and ideological axis of Maya sites. In this section, I trace evidence of the emergence of the royal courts and the institutional developments that allow cities to appear. The major objectives of this chapter are to define the material manifestation of Classic Maya royal courts, its role in administrating cities and its relation to urbanization. Here I focus on: (a) defining a Maya royal court and its main characteristics, (b) theoretical perspectives used to study them, (c) its archaeological markers, and (d) the main buildings associated to royal courts during the Classic period.

4.2 Approaches to Ancient Maya Royal Court

“With the city came the king” — Webster 2001

Studies of Classic Maya royal courts originated with the study of Maya cities. Settlement pattern studies and mapping efforts from the 1960’s generated a wide view of Maya sites that expanded beyond ceremonial centers and established urban places. Of particular interest was the mapping and excavation of city centers from large monumental sites like Tikal, Copán, Palenque, Uxmal and Chichén Itzá. Excavations uncovered complexes of large stone buildings, some of them located on raised platforms or acropolis as well as sculptures, stelae and altars, all suggesting the existence of a ruling class. The form and spatial arrangements of these large stone buildings at sites like Tikal evoked western terms such as “palace” and “palace complex”, and established that the fact that some of them
might have had a residential function (Harrison 1999; Haviland 1982:427). Moreover, most of the 20th century Maya archaeology was focused on the exploration of cores of major sites. This resulted in the discovery of multiple evidence of ancient royalty, such as elaborated burials with luxury items (i.e., jade, eccentric flints, red ore, polychrome vessels, figurines, among others) and iconography located in private chambers at centrally located temple or palace type buildings. This, in conjunction with the decipherment of Maya hieroglyphs, royal titles, diverse rituals, diplomatic visits, conquests, and emblem glyphs led scholars to accept the presence of rulers and dynasties during Classic times (Christie 2003; Inomata and Houston 2001; Slim 2004). This new information influenced Maya scholars to consider royal courts as central elements of ancient Maya settlements. 

Regardless of the tremendous advances in Maya archaeology, royal courts are still not completely understood. Their functions, forms and development are obscured by a lack of sufficient archaeological evidence and by their variation (Iannone 2005; Slim 2005). Moreover, researchers disagree on how to define Classic Maya courts and often use different criteria, which depend largely on the researcher’s experiences. In this chapter, I review the four principle lines of reasoning employed to understand royal courts, which focus on different evidence and aspects of court life. These are (a) the built environment, (b) epigraphy, (c) ritual economy, and (d) royal households.

**Built Environment Approach**

Traditionally, Maya archaeology has focused on site centers and monumental architecture. The central location of monumental stone buildings at virtually all large Maya sites has played an important role in researching the urban nature of these ancient sites. Due to this, architectural approaches have been widely to recognize royal courts. Webster (2001)
suggests that studying courts from the perspective of central place theory is one of the most productive approaches since Maya rulers were tethered to particularly large central places and, the well-preserved evidence we have of Maya royalty from large stone buildings. From this perspective, royal courts are defined as an entourage attached to a ruler or other powerful leader that may include royal relatives, lesser nobles and their families, advisers and officials, military personnel, visiting dignitaries and ambassadors, prisoners and political hostages, scribes, scholars, physicians, religious specialists, entertainers, artists and artisans, other retainers, servants, dependents, guests and hangers on (Webster 2001:131; also see Clark and Hansen 200:3).

The study of the built environment extends beyond individual structures. Although in the Maya area stone buildings do not present much variation, their particular arrangement and the layout of groups of buildings, sometimes called a “city-scape”, varies tremendously (Martin 2001). Moreover, although some researchers have argued in favor of a basic Maya city cosmogram (Ashmore and Sabloff 2002) and plaza plan (Becker 1992), others favor a much more individualized vision of ancient cities where every site has its own city-scape (Martin 2001). A similar argument for variation can be made for royal courts and their diversity across the lowlands. Although their arrangement varies from site to site, they present some core characteristics independent of their organization such as the presence of vaulted structures located on elevated platforms, open spaces with multiple degrees of access, lavish decoration and central location (Martin 2001:170).

A recurring theme of study within this approach is the correlations between particular types of structures and their overall function. Inferring from ancient buildings has proven particularly difficult in the Maya area due to a general lack of significant variation and
artifactual evidence. In the Puuc region this situation led researchers to focus on comparing standing buildings from multiple sites to infer function. Early comparisons between buildings resulted in multiple descriptive typologies of structures and regional architectural styles (Andrews 1995; Pollock 1980). These observations and their consolidation of architectural data opened the door to multiple types of analysis and provided the basis of our current knowledge of Maya monumental buildings. Some of the different arguments include the use of royal courts as stages for political theater, schools for the elite (Jackson 2013), households and central parts of city planning (Ashmore and Sabloff 2002; Martin 2001).

*Epigraphic Approach*

The study of royal courts has been a popular topic among Maya epigraphers since the decipherment of ancient rulership by Tatiana Proskouriakoff (1960). Since then, books such as *The Blood of Kings* (1992), *A Forest of Kings* (1992) and *Maya Chronicles of Kings and Queens* (Martin and Grove 2001), consolidated the notion of royal kingship and its central role in ancient Maya cities during the Classic Period. Supporting evidence for this approach comes from paintings, sculptures and iconography that is integrated unto large stone buildings through carving of stone and wooden lintels, jambs and other architectural elements. Other sources of royal iconography include stelae, altars and polychrome ceramic vessels recovered from courtly contexts. This last category has been used extensively to describe royal courts due to the overall emphasis on rulers and the court in the composition of painted scenes on polychrome vessels (Houston and Stuart 1996:300; Jackson 2013; Reents-Budet 2001). Currently, there is enough information to reconstruct many dynastic sequences from multiple courts (Martin and Groove 2001), plus the titles of courtiers (Jackson 2013), their sense of identity in relation to the landscape (Tokovinine 2013) and the
rulers’ main ceremonial activities (Inomata 2001; Reents-Budet 2001). Some of these include: royal visits, reception of tributes/gifts, marriage negotiations, presentation of war captives, auto-sacrifice/divination rituals, court banquets and drinking rites, consultation of codices/artistic pursuits and dance rites.

One of the most influential edited volumes on royal courts is based largely on epigraphic perspectives: *Royal Courts of the Ancient Maya* (2001), edited by Inomata and Houston. Most contributors agreed that courts should be defined by focusing on the people that composed it or “courtiers” and their relation to the ruler (but see Webster 2001). The “courtiers” are responsible for ceremonies and other court activities such as creation of art objects, recording of astronomical observations, and the transmission of knowledge. Courtiers are composed of biological kin, servants, assistants, guards, artisans, advisors and administrators (Folan et al 2001:224; Inomata and Houston 2001; McAnany and Plank 2001). Courts are political entities because they are constructed, molded and organized by both the actors across the stage or compound of buildings (Houston and Stuart 2001; Inomata 2001; McAnany and Plank 2001). Courts are also social places since they consisted of a group of individuals, including the ruler and those who are in his physical proximity; all were located within a culturally ordered spatial settings (Inomata 2001:27).

The epigraphic perspective has multiple limitations. Firstly, it has a chronological and locational bias since most of the evidence is found at large Classic Period centers located in the Southern Lowlands. Although current evidence indicates that the system of divine kingship was already active by the Late Formative Period at the site of San Bartolo (Freidel and Guenter 2006; Jackson 2013), the vast majority of epigraphic evidence dates to the Late Classic Period. This perspective focuses almost exclusively on the Petén and Usumasinta
area of the southern lowlands and leaves out written records from the Northern Lowlands. Consequently only one kind of kingship tradition, the one represented by Classic Period southern lowland sites, is taken as a model for all Maya sites (Chase and Chase 2001). Another problem is that evidence of courtier activities does not provide a direct link to their specific court roles (Inomata 2001:36), since epigraphic evidence on monuments is ruler centric. Courtiers appear only as secondary or supporting actors to the ruler’s activities. The represented kingly activities are standardized in their display and provide evidence of the public ceremonies and particular life events of a ruler without any insight on his daily life or relation to his subjects.

**Ritual Economy Approach**

Defined as the “materialization of values and believes through the acquisition and consumption of objects that facilitate symbolic communication” (McAnany 2008, 2010:159), ritual economy approaches are central to the study of social difference and political authority. This view emphasizes the naturalization of sacred authority through objects and practice as the basis of social difference. Moreover, its emphasis is on social aspects that cause inequality between different groups of a community. Authority can be materialized in inherited and labor-intensive items and performed through ritual. In this perspective, the subject of study is Maya nobility and the many ways in which social differences was embodied in objects consumed, body modifications, diet (Chase and Chase 2001), craftwork and sculptures (McAnany 2008). Each Maya ruler constructed or modified a court complex, that provided a stage for rituals and materialization of authority, order and knowledge.

In this perspective, royal courts are central places for consumption (Ball 1993). McAnany (2010:148) observes that: a) much of the production on courts depended on goods
and labor relocated from commoner households; b) raw materials were probably produced elsewhere within the domestic economies of commoner households; c) what was produced at the palace often was consumed by palace personnel (see Folan et al. 2001); and d) the direction and volume of energy flow in the political economy points to the court as a nexus of the political economy in a primary consuming sense. McAnany (2008, 2010) suggests that this pattern of consumption created a sort of “social speciation’ that was actively embodied by rulers. Their palaces or “stone houses” provided the built environment within which social difference was shaped, performed and reproduced. In this sense, courts are "seats of power", which might be the indigenous equivalent of what we call urban or a city (McAnany 2010:162). That is, a place was perceived primarily in terms of the power and charisma of its ruler or leader and perhaps secondly in terms of its architectural mass or the quality of the ruler’s family sacra (Houston et al. 2003; McAnany 2010).

*Approaching Royal Courts as Households*

This perspective focuses on the ruler and a court as a place of residence, emphasizing the roles of court inhabitants (Houston and Stuart 2001; Inomata 2001; McAnany and Plank 2001). Data generated from palaces structures indicates certain parallels and continuities between commoner households located beyond counts and royal precincts. As a household, palace structures share similar functions with regular dwellings. Their architecture, although quantitatively larger, overlaps in function and basic form with commoner residences (Lucero 2008; McAnany and Plank 2001; Webster 2001). Both the head of household and a king resided on top of large residential platforms and were in charge of administration but at opposite end of a scalar spectrum (McAnany and Plank 2001:90).

Social roles are also similar since royal courts and households are hierarchical and
patrilineal (although the scale was dramatically different since rulers were positioned within hereditary dynasties with ancestral pedigree). McAnany and Plank (2001) notice that ritual evidence in both households and royal courts (i.e., mortuary/ancestors and house dedication) seem to differ only in scale, although some of them are only observed in royal courts contexts (i.e., agricultural calendars, succession/heir designation, military/ballgame, and scattering rituals). These parallels led researchers to interpret royal courts as the household of the ruler and the central body of political administration (Inomata 2001:31; Jackson 2013: Webster 2001:146). The court served as the ideal domestic space to be stylistically imitated by individuals of lower status (Jackson 2013:22).

Archaeological and epigraphic evidence from royal courts indicates that some activities were primarily associated with royal courts such as record keeping (i.e., scribal tools) and textile production (Hendon 2006; McAnany 2010) while evidence of cooking tended to be scarce (as opposed to commoner dwellings which yield a high frequency of cookware). Administrative duties, activities associated with courtiers, are minimally represented at most court buildings, which has led some researchers to suggest that bureaucracy in the Maya region was underdeveloped and its operation was probably based upon personal relations among courtiers (Inomata 2001:31-32, 46-48). From this inference, it has been suggested that most administrative activity was conducted orally by communication among courtiers.

There is very little published on artifacts associated with royal courts, which makes it difficult to interpret royal behavior (Webster 2001:141; but see Folan et al. 2001). A problem with the built-environment perspective is that, although royal courts are composed of multiple types of buildings (i.e., temples, palaces, council houses, and kitchens, among
others), the main focus of this approach falls on palace structures or range buildings that are often identified as the residence of rulers. As a consequence of this palace-centric view, all other kinds of buildings and spaces (i.e., ceremonial, civic, administrative and otherwise) and their relation to the court as a whole remain under theorized. The built environment approach tackles one aspect of the court which, in my view, is insufficient to understand this institution as an essential part of an urban settlement. In this study I integrate the artifacts excavated from the Kiuic court in order to gain a fuller understanding of the activities of the court.

### 4.3 Royal Court Definitions

For the ancient Maya, rulers were the embodiment of the universe and conduits of communication between secular and divine worlds. The construction of monumental architecture was a projection of authority and a means for organizing society, and the city, around the ruler and its royal court (Demarest 1992; Houston et al. 2003:215). Courts were composed of palaces, temples, council houses and other buildings with unclear functions. These structures were arranged on top of raised platforms, forming groups of structures that are associated with the ruling family, the central political and ideological substance of Maya cities (Love 1999:427). The spatial extent and attraction or constituents to urban settlements (state) may be based on personal ties to the ruler and not so much on the basis of land and territory (Chase, Chase and Smith 2009:181). The use of religious and ritual support is a primary characteristic of ancient Mesoamerica. Political dynamics were closely bound up with processes of urbanization in ancient Mesoamerica. Almost all Mesoamerican cities were capitals of polities, and Mesoamerican urbanism cannot be understood outside the domain of politics. The public architecture that anchored ancient Mesoamerican cities was overwhelmingly political and religious in function. Cities were designed and built by rulers
who used architecture and urban design to make political statements (Chase, Chase and Smith 2009:181).

Based on the multiple approaches discussed here, it is possible to propose general characteristics of royal courts and their built environment and to theorize about their functions. It is clear that royal courts are complex entities with multi-functional compounds. Evidence suggests that there were four kinds of people dwelling at the royal court. The first was the ruler who was the center of the court and city (Chase and Chase 2001:105; Inomata and Houston 2001; Jackson 2013) and was outside of society’s reach due to the sacred authority embodied in him and his privileged access to resources (Jackson 2013; McAnany 2008, 2010). The second were the courtiers; these group of people were in charge of administrating local and extra-local matters in the civic, ceremonial and public spaces (all under the command of the ruler). Visiting courtiers that are housed as guests from other settlements are also included in this category. The third group people dwelling the court consist of servants. There is no evidence indicating if servants resided at the royal court or commuted from the outside of settlements for their daily tasks; however, in this study I am assuming that servants circulated in and out of the site regularly to obtain resources for the court. Finally, the fourth group of people consists of captives and retainers that are brought in as part of a conflict.

Evidence supports the assumption by Ball and Taschek (2001) and Harrison (2001) that the royal court was mobile. The court could switch location as the city grew and/or there was changes in political power as seen in places like Copán, Tikal, Chichén Itzá, Labna and Kiuic. Additionally, some authors have suggested the presence of secondary courts located on strategic locations at subordinated sites (Ball and Taschek 2001). Epigraphic inscription
indicates that some it was common that lords from large centers visited royal courts located at other sites. Strontium analysis from multiple sites also indicate that residential mobility of royal men and women was a common strategy to establish political alliances and that perhaps as many as 20% of individuals studies have isotopic signatures that are non-local (Somerville, Schoeninger and Bramwell 2016). These included foreign-born kings (Price et al. 2010) and possible enclaves of foreign people (Price et al. 2014). This approach suggests that the complexity of the royal court that goes beyond a static royal household of the ruler. Ancient Maya courts are dynamic social entities. Hence, their final built design is the result of multiple factors that depend on local traditions. Moreover, excavations indicate that rulers would constantly build, re-build and renovate the royal court. At some sites, the presence of multiple palace complexes suggests that the court could also change location within the site, since its likely that only one complex was actively used as the main court.

Maya courts vary in their functional and spatial arrangements depending on local Maya traditions and circumstances. Hence, all courts are arranged differently, according to local tradition and time period (Chase and Chase 2001). Evidence suggests that the duets and functions of courtiers were malleable and varied from site to site independently of their epigraphically identified titles (Jackson 2013). To understand royal court activities and functions, it is important for researchers to understand the purpose of a court at a local and regional perspective. While maintaining basic principles, there are multiple kinds of courts which emphasis different aspects of its administration. For the purpose of my research, I use Webster’s (2001:141) definition of court complex, which states that they are:

“The whole set of court facilities that maintain the royal family and its closer associates, as well as the larger institution of ruler ship in all its political, ritual and ideological dimensions, and provided the stage for royal drama.”
These complexes include all the structures and spaces accommodating the activities of the court throughout its history, with the actual domicile of rulers or families composing a subset of this. Hence, the royal court is a multi-functional compound that includes multiple buildings and a spatial design for different functions, which may be administrative, religious, habitational or militaristic (Chase and Chase 2001; Folan et al 2001:253). For this research, these different spaces represent the core characteristics of what constitutes a royal court. In this sense, I also acknowledge Kowalski’s (2001) definition of ancient Maya royal courts as a central axis of urban activities, defined as “a complex of buildings and spaces that include discrete ceremonial, civic, residential and public functions”. These are places of identity negotiation and performance. In this sense, they act as open and vital performativity institutions that reproduce governmental structures and also serve as an example to other members of society (Jackson 2013).

4.4 Royal Architecture: Palace, Temple, Council House and Kitchen Structures

Maya monumental architecture, an important portion of the Maya built environment, was a fundamental element in the pre-Hispanic landscape due to its central role in the political and ideological organization of Maya settlements; it provided space for the performance of human and divine dramas, some of which were highly formulated and structured by tightly controlled conventions (Inomata and Cobean 2006; Houston 1998; Webster 1998). The use of ritualized space can also be observed visually and literally at multiple archaeological sites where many architectonic elements (i.e., carved or painted stelae, lintels, door jambs, altars and stairs), display texts typically associated with the ruler and his administrative and ceremonial activities. Consequently architecture, in conjunction with a previously established system of believes, functioned both visibly and symbolically as
the means of legitimizing power over a certain space (Ringle 1999); through its large tangible, immobile nature which constantly reminds the audience “who” is in charge and “why” it is that way (McAnany 2010).

Archaeologically, elite places are identified by means of their standing architecture which is described as stone walled and/or corbel-vaulted buildings (Tourtellot, Sabloff and Carmean 1992:80). These stone buildings form and appearance have roots in a principle of vernacular domestic architecture (Miller 1998). The royal built environment was linked to commoner houses through a continuity in the use of space, general building form (that included a platform, hut, plaza, path and steps) and the animation of structures through ritual deposits (Lucero 2008; Miller 1998: 108, 1999:22). In both elite and non-elite structures, physical spaces created by the distribution of buildings (i.e., the plazas and open courts) served as venues for diverse activities where multiple individuals could participate. Both elite and non-elite architecture were marked during important events such as construction, maintenance, remodeling and abandonment by ceremonial deposits such as caches and burials (Chase and Chase 1998; Miller 1998; Walker 1995). This ritual behavior is observed in virtually all monumental architecture, arguably, to preserve or change the social meaning of buildings through inscribed memory (McAnany 2010; Rowlands 1993).

The royal court was the central built environment of cities and the main space where these activities took place. Now I will discuss some of the main types of buildings that are frequently found in these complexes: namely temples, palaces and council houses. After surveying how these individual terms have been used, I focus on the local Puuc tradition of royal court complexes.
**Temple Structures**

Temple structures, also called temple-pyramids, are buildings associated with ritual and ceremonial activities. They are the ceremonial aspect of Maya vernacular architecture and an essential part of the built environment for all sectors of society. Architecturally, temples were constructed in various materials and sizes, however they often consist of a central room, which can be entered through a single doorway, located on top of a stepped platform (Andrews 1975). Temple structures can be classified as funerary and non-funerary. The former type is less common while the latter was constructed from the Formative Period and sometimes maintained through a site’s history (Lucero 2007:413). After the passing and burial of a royal subject, temples dedicated to them became landscape markers and places to remember and commemorate kings and queens. The incorporation of ancestors into the built environment was practiced by both elite and non-elite parts of the population (McAnany 1995:272-274). For the royal elite however, ancestor incorporation into the built environment served as an expression of social hierarchy and power. Royal funerary temples were built by individuals to claim a given area, which became more important with time as the best agricultural lands were taken (Fitzsimmons 2009; McAnany 1995, 1998). Using a temple to materialize ancestral roots, groups could appropriate the landscapes with best natural resources, a behavior known as the “principle of first occupancy” (McAnany 1995; Fitzimmons 2009), and over time cause severe social inequality. The combination of monumental architecture and individual status of the burial created a powerful hybrid (Latour 2005) that reinforced the political, ideological and social importance of dominant groups over a place or land and helped royal families to claim ownership of cities through a genealogy of place (Fitzimmons 2009).
Non-funerary temples were constructed to commemorate or “house” particular deities. Temples located within royal courts linked rulers with the gods and the dead, developing a divine authentication that provided a strong basis for authority (McAnany 2010). Iconographic and linguistic evidence also suggests that temples were considered metaphorical houses dwelling of the gods⁠ and a model for the center of the universe (Lucero 2007; Stuart 1987:33-39; Taube 1998:428).

Arguably the first evidence of temple construction dates to c.a. 1000 B.C. in the form of low circular platforms that were used for non-residential purposes (Aimers et al. 2000, Hendon 1999 in McAnany 2010; Ringle 1999). Researchers suggest that their sacred quality and cosmological significance alludes to consensus-based rather than coercion-based modes of authority (Feeley-Harnik 1985; McAnany 2010; Ringle 1999). Therefore, recruitment and retention of migrants would have been central concern among the leadership of these emerging polities (McAnany 2010; Ringle 1999). During the Late Formative and Early Classic periods, Maya temples usually were placed in a central location. Between 200-0 BCE monumental pyramids were actively built and used as symbols of ideological authority in the Maya Lowlands (McAnany 2010; Taube 1998; Valdes 2001:139). Monster masks, ball courts, sacbeob and imagery associated with rulership were present at temple structures during this period (Ringle 1999). During the beginning of the Early Classic Period (AD 250), iconographic evidence changed focus from the supernatural world to rulership themes where gods where conflated with royal lineages (Sharer 1994: 125). Ringle (1999), argues that tribute and command over labor would have been the basis for Formative wealth and the recruitment of people, through temples, would have been of special concern to emerging centers.
Temples were acoustically engineered such that those below could easily hear the words of ritual and royal specialists from up high (Houston and Taube 2000). Rulers and other temple builders became performers whose success was judge by audience members (Inomata and Coben 2006). Activities (e.g., human sacrifice), ritual objects and certain deities linked with this structures are suggested to be of an interactive nature, making attendees active participants rather than just passive witnesses (Houston and Taube 2000; Lucero 2007; Ringle 1999:185). Temple-pyramids are frequently associated with incense burners, as they symbolize the kitchen hearths of gods and ancestors (Taube 2001: 446-447). Taube (1999) observes that some Late Formative censers resemble temple façades, making urns miniature temples during ritual acts. Moreover, ceramic censers and cache vessels are tied to temple architecture and iconography, which, as early as the Late Formative Period, display the same iconographic formats found on stucco temple façades.

At Kiuic, architectonic analysis and excavation indicate that at the Yaxché group there are at least two temple structures. The first is a pyramid-tempel located at the center of the group; before its excavation it was unclear if this structure was a funerary or non-funerary temple dated to the Terminal Classic period. The second temple is an east temple located at the east of the Ulum Plaza. Excavations indicate that it had at least two construction sequences and that it was likely a non-funerary temple dated to the Late and Terminal Classic period respectively.

_Palace or Range Structures_

The term palace or range structure is used to describe a series of buildings that are different from the rest on the basis of size, ground plan, and relationship with other structures. These structures frequently act as the main object of study in royal court research.
due to their prominent location at the center of sites and assumed function as the main residence of a ruler. In fact, it was early explorers who first started to call these buildings “palaces” due to their resemblance to royal households. The term has stuck and, with it, interpretative baggage that interprets these structures as royal households from a European lens (Inomata 2001), creating a bias that is still present. The term palace is frequently used uncritically making it a catch-all category for monumental architecture (Ambrosinio 2003:253).

Classic Period palaces can be defined as elite or royal dwelling places that are usually constructed using stonewalls and a vaulted roof (Chase and Chase 2001:103). The permanence of palace structures derives from the higher quality of materials used in palace construction and the monumentality of the building (Kurjack 2003:281; McAnany 2010). They are also called “range structures”, because they could have one, two or three rows of rooms. Stone benches are not uncommon, although their presence, characteristics and function vary. Christie (2006:354) defines palaces as:

“A series of court yards surrounded by buildings of several sizes. These buildings sat on low platforms and were very long, gallery like range structures, that is, they were divided longitudinally into small single rooms. Rooms can be opened at either sides or only one. Very large palaces could have two longitudinal galleries separated by a central wall. Walls were usually made of stone masonry, the majority of stones exhibit stone corbeled vaults, allowing for only small and narrow interior spaces. Palaces were used through generations, growing over time, and therefore the layout of individual courtyards was not necessarily symmetrical.”

These buildings are by far the most common structures found in Classic Period urban cores and are generally interpreted as elite residences (Liendo Stuardo 2003). This assumption comes from the typical cellular plan, which suggests an organization of small subgroups consisting of related nuclear families who probably lived in individual cells, which together formed a large composite family (Kurjack 2003:275). However, most
scholars now accept that these buildings could have served a variety of functions from residential to administrative to other public uses (Ambrosino 2003; Chase and Case 2001:103; Folan et al 2001; Kowalski 2003; Kurjack 2003; Valdes 2001:142).

Epigraphic evidence indicates that range structures were associated with rulers from the Late Formative period; there is currently no evidence of any early structure made from perishable materials that suggests an equivalent function as the royal residence, suggesting that range structures and royalty were closely acquainted (Cheek 2003). Stone palace structures came into use in the Late Formative Period with the invention of the cobbled vault in the Peten Region (Valdes 2001:139) in places such as Tikal, Uaxactun, El Mirador and Nakbe (Coe 1967; Hansen 1992, 1998; Valdes 1992, 2001). During the Classic Period, palaces made of carved stone masonry became one of the most common structures at large Maya sites and arguably were the main residences for royal and non-royal elites. The use of vaults, fine-stone carving, raised platforms and stucco and painted decoration became a staple for these types of structures (Chase and Chase 2001).

The transition between Formative and Classic Periods brought a shift from religious monumental architecture, such as temples and triadic complexes, what Stuart (1997) calls the sacred mountain myth, to palace complexes as the main focus power and authority. The appearance of palace structures is a marker of the separation, or at least a more explicit differentiation, among religious, civic and domestic spaces. Valdes (2001) suggests that after Formative-period populations satisfied the gods, they needed to satisfy the rulers, which resulted in the creation of palaces and the luxury items that represent the royal court institution and the king. As we shall see, sites were the kings appear to have been a higher priority among southern lowland courts than in the north.
Construction sequence and settlement patterns at multiple large sites such as Tikal, Uxmal, Calakmul, Caracol and others, suggests that each site's ruler built a palace. Each new ruler usually constructed a palace structure, sometimes by remodeling an old building, and at other times constructing a completely new palace in different location (Chase and Chase 2001). Moreover, during the Late and Terminal Classic periods when palaces at some sites were no longer constructed near the center of sites, they spread to other parts of the site (Valdes 2001). Architectural evidence indicates that palace structures became increasingly larger during the Classic period to become multi-chamber buildings with larger rooms.

Just as temples, range structures were also designed to be part of ceremonial venues for public ceremonies (Valdes 2001). A study of polychrome vessel courtly imagery by Reents-Budet (2001) revealed that palace structures were, by far, the predominant building displayed. Other structure types such as ball courts, pyramids, terraces, and plazas were underrepresented in her sample. These *emic* representations of royal affairs indicate that most of the royal court business, such as ceremonies and gatherings, happened at range structures, specifically on their wider approach staircases, low platforms, and benches (*ibid*).

At Kiuc, there are at least 14 range structures distributed between Yaxché’s main plazas. Out of these, four have three rooms while the rest only have one. Inomata (2008) suggest that three roomed range structures might indicate residences of elite members in which one room was for the royal man while the lateral room was for his wife. Most of these buildings are dated to the Late Classic while one is dated to the Terminal Classic period.

_Council Houses_

Epigraphic and ethnographic evidence suggest that the ruler consulted other elite
individuals from the elite class to make decisions regarding their cities. This has led some researchers to argue for a specific building where the elite resided and held their meetings/reunions (Christie 2006:353). Based on historical records, iconography and architectural evidence, archaeologists suggest that this council house or *Popol Na* was the location where Maya rulers met with council members for the administration of public affairs.

Proskouriakoff (1962b: 89–90) observed that there were connections between some structures at the site of Mayapan’s and two types of men’s house in Aztec society, the *telpochcalli* and the *calmecac*. She identified these structures as long buildings, raised on platforms and arranged around plazas. Other archaeologists and ethno-historians (Carmack 1981:154–160; Carmack and Wallace 1977; Ichon et al. 1980; Wallace 1977 in Cheek 2003) suggest that this buildings had similar functions to the *nim ja*, or “big houses,” of the Quiche lineages in the Maya Highlands.

Architecturally council houses can be observed in the Maya area during the early Late Classic Period (Bey and Ciau 2014), although some researchers have argued for a Late Formative appearance (Valdes 2001). Council houses imply that more than one voice is being heard at every city (Fash et al 1992; Jackson 2013; Lucero 2007). The first, and most famous, effort to identify a council house archaeologically was at the Classic period site of Copán. There, Fash and colleagues (Fash et al. 1992) observed that the façade of Structure 10L-22-A had multiple iconographic elements, such as *mat* symbols and sculptures of individuals sitting on top of glyphs, that suggested its function as a council house. The headdress and pectoral insignia from the sculptures were interpreted as representatives of institutional offices (Fash et al. 1992:434; Stomper 1996). Cheek (2003) identified another council house (Str. 10L-223) at the site and dated it to the Early Late Classic Period. This
building did not present any evidence of iconography, and its interpretation was based on architectural attributes such as a single long and large room, large landing and staircase, large benches and wide doors (Cheek 2003:134).

Fox (1987) Identified council houses during the Post-Classic Period at sites in the highlands (Fox 1987) and in the northern Yucatec peninsula; they are described as structurally long vaulted structures with a single or central room, an open, large and accessible interior space and multiple entrances formed by either doorways or colonnades (Bey and May Ciau 2014:336; Christie 2006; Ringle and Bey 2001). These buildings typically have benches running along the back or sidewalls and are commonly associated with an additional set of structures that may include a temple pyramid, shrine, and ballcourt (Fox 1987).

In a review of Post-Classic ethnographic literature on council houses, Ringle and Bey (2001) observe that during this time the Yucatán Peninsula was organized as Provincias or cities, smaller cities, and small towns (Roys 1943). They suggest that during this time period there was one regional court (administered by a Halach Uinic) and multiple local smaller ones (administered by batabs) that responded to the regional court (Ringle and Bey 2001; Roys 1943). Moreover, ethno-historical evidence also indicates that the administration of courts was based on kin relations since most sources emphasize lineage as a basic organizational feature of Maya society (Ringle and Bey 2001; Stomper 1996).

Ethno-historical evidence also suggests that council houses continued to exist in the highlands of Guatemala and the Northern Yucatán peninsula during colonial times (Carmack 1981; Fox 1987; Ringle and Bey 2001; Stomper 1996). Reference to the “mat house” as the
council house or community house can be seen in 16th century colonial accounts in the Motul and San Francisco Yucatec dictionaries (Martinez Hernandez 1929; San Francisco Dictionary 1870 both in Dash et al 1992). The *Chronicles of Calkini* (folio 14) also describes a building in which people assembled at the doors in order to participate in public consultation (Barrera Vásquez 1957; Ringle and Bey 2001). The Moran (1935 in Fash et al. 1992), dictionary of early 17th century Chorti, also mentions a *popol otot* (*mat* house), which has been translated as “community house”. Other sources also suggest that these buildings served as men’s houses and as a location for the storage of important ritual objects (Cheek 2003: 133).

However, archaeologists should be careful about interpreting the function of this building (Bey and Ciau 2014; Kurjack 2003). Bey and May Ciau (2014:347) observe that there is little consistency in how these buildings look beyond the fact that they tend to be very long. Moreover, Stone and Zender (2011) further caution about considering the *mat* sign as marking a building as a *popol nah*. They note that it is likely that in some cases it refers to textiles and their economic value to elite households. Moreover, *Mat* signs were no doubt used in multiple ways to define the function of Late/Terminal Classic buildings and cannot be assumed on their own to mark a building as a *popol nah*.

Few artifacts tend to be associated with Classic period structures identified as council houses, which obscures the identification and understanding of the buildings function. Although not conclusive, Stomper’s (1996) analysis of middens and artifacts located directly on the floor of str. 10L-22 at Copán, suggests that the materials located in the middens indicate cooking, eating and drinking associated with public festivals represented by plain wares were for food preparation and storage (Stomper 1996: 183). Fash et al. (1992: 426)
also observed the presence of incense burners, utilitarian ceramic vessel types and chipped stone tools, indicating that cooking activities took place there.

At Kiuic, there is at least one structure, located at the Yaxché group, which has the architectonic characteristics of a *popol nah* or council house. As I will discuss in Chapter 6, evidence indicates that this structure, in conjunction with Str.N1065 at the north, were central buildings to the sites royal court during the Early, Late and Terminal Classic Periods.

*Kitchens and Feasting*

Feasting is broadly defined as any sharing between two or more people of special foods (i.e., foods not generally served at daily meals) or a meal for a special purpose or occasion (Dietler 2001). The use of feasts to mobilize collective labor has been a widespread and fundamental economic practice of societies around the world (Dietler and Herbich 2001:240). Feasts are highly ritualized and have practical benefits for society such as mobilizing labor, creation of a cooperative relationship and alliances with and between social groups, investment of surpluses and generation of profits, creation of political power, the extract of surplus produce from the general populace for elite use and the creation and maintenance of important relationships between social groups.

In Mesoamerica, evidence of feasting has been detected from the Middle Formative to the Colonial period. Feasting events have been suggested at palace structures in multiple epigraphic texts (Boot 2005; Reents-Budet 2000, 2001). In fact, a large corpus of Classic Maya visual narratives depicts elite feasts in which ceramic vessels of every kind are used (cf. Reents-Budet 2000). Stuart (in Boot 2005) suggests that some augury glyphs might indicate feasting events, as they include both reference to eat and drink. Events of “abundant
food and drink” are reported in some painted vaulted stones and lintels from elite buildings (Boot 2005; Garcia Campillo 1998). Several vaulted stones with texts have been identified in the north of Yucatán and invariably they always display Kawil, a god associated to royalty, in diverse attitudes. Texts identified on stone vaults are usually associated to abundance of food and water (i.e., k’aaw wah k’aa ha/surplus of food, surplus of water” and “ox wi’il/abundant food). These are interpreted by Garcia Campillo (1998) as registers of rituals or feasts of different kinds.

There is not much evidence of the cooking dynamics at royal court. LeCount (2010) indicates that images of court activities represented in pottery occasionally depict food preparation by people who are perhaps elites. Hence, she suggests that courtiers surrounding the main lord might have been involved in food service and preparation. However, it is likely that servants or other lower-ranked members cooked for the court on a daily basis. The preparation of large quantities of food and specific meals can be considerate as a specialized activity (Inomata 2008; LeCount 2010). This is true for both courtier and servant women, who probably shared a vast knowledge of recipes, local ingredients and particular methods of cooking food for multiple occasions. This leads to the idea that women from the royal court, as experts of their local resources and cuisine, had their particular meals and flavors to offer foreign visitors to feasts and ceremonies. Authority was naturalized by cuisine and diacritical feasting (Dietler 2001: 85-88). This high cuisine is referred to as diacritical feasting by Dietler (1996:98) and suggests that they are symbolic devices for naturalizing concepts of ranked differences in social status. As events that are exclusive to a social rank, diacritical feasts are hosted by wealthy and powerful members of society (LeCount 2001).

Dietler and Herbich (2001) propose a model of “collective work events” which they
use for a basis to understand the functions of feasts and their potential for exploitation. They suggest that collective work events are used to congregate groups of workers performing identical tasks of relatively unskilled labor. They are useful in contexts where the simple multiplication of the number of hands brought to bear on a task is effective in reducing the time of completion or in enabling certain feasts (such as the movements of heavy objects or the construction of large structures) that could not be accomplish by the members of the household alone. Through feasting, elite groups Simultaneously provide a means of harvesting the labor of others in order to acquire economical capital that subsequently can be converted to additional symbolic capital by several other means (Dietler and Herbich 2001:246). This collective work model is a continuum that goes from voluntary feasts, in which people are drawn to the event simply by the reputation of the host for providing feasts, to corvée labor or obligatory feasts. This last type of feast exists only when there is an institutionalized center of authority in the form of religious leaders, chiefs, kings, or other types of apparatus. It requires that a ruler or public institution has the moral authority to require their presence as a form of labor tribute (Dietler and Herbich 2001:244).

McAnany (2010) argues that there was a practice of collective work (corvee labor) which is modulated as a variant of work feasts in which a central authority possess the moral authority to call in labor obligations (Dietler and Herbich 2001: 244). In this sense, female commoners were obligated to provide domestic labor in the homes of nobility on a rotating basis. This might suggest that female elites coordinated this domestic labor, which included cooking and the elaboration of feasts (Inomata 2008). When a large feast was under preparation, labor needs would skyrocket (McAnany 2010).

In the Maya area, cooking areas or kitchens are identified as low platforms behind or
beside domestic structures where food preparation took place and trash deposits are found (LeCount 2010). At Labna and Kabah, Toscano Hernández (Toscano Hernández and Novelo Runcón 2015) identified kitchen areas annexed to the palace complexes. The structures consisted of un-vaulted structures, with low stone walls, thatch roofs, located on top of low platforms with restricted access. Multiple grinding stones or *metates*, ceramic sherds and lithic artifacts (such as blades, flakes, projectile points, scrappers, percutors, burins, *manos*, and polishers) were located near the low wall platform. Most of the remains were located outside the platform.

Costin (1991) proposes parameters to determine the specialization of food production. These are: context, concentration, scale, and intensity. The context of production refers to the nature of control over production activities (Costin 1991:8). For her, *attached production* is sponsored and managed by elite patrons and takes place in areas physically associated with consumers. On the other hand, *independent specialists* are unregulated, produce for general consumption and operate outside immediate oversight in domestic architecture or workshops. The concentration of production refers to the spatial organization of production (Costin 1991:13). The scale of production refers to the size of the labor force and the principles of recruitment. Finally, the intensity of production refers to the amount of time that producers spend on their craft. An ethno-archaeological study at a contemporary family community in the Yucatán peninsula, Robin (2002:260) observes that households that hosted communal feasts had larger exterior work areas because communal feasts involve larger work groups and participation than day-to-day family work.

At Kiuic excavation indicate that Patio B, located at the northeast part of the Yaxché group, was a large kitchen area dated to the Late Classic period. As I will discuss in Chapter
6, other indicators such as grinding stones, a water cistern or *chultún*, the presence of middens and a low-wall three room thatched structure also suggest that this patio was used as a food preparation and short term storage area.

*Royal Architecture and Ritual Deposits*

Buildings in the Maya area are also characterized by multiple deposits associated with their construction. These deposits, or caches, usually consist of a ceramic vessel containing multiple objects, perishable or non-perishable, which are buried in association with architectural remains. Becker (1992:191, 1993:47) defined caches as deposits of ritual objects that are interpreted as offerings. Chase and Chase (1998) define caches as one or more object found together, but apart from burials, whose grouping and situation point to intentional interment as an offering. The presence of these deposits also has been widely observed in the iconographic record of Mesoamerica (Freidel and Guenter 2006).

Archaeologically, caches vary greatly in terms of their context and content (Kunen et al. 2003). Due to this, their nature has been discussed extensively, specially their overlap with burials (Becker 1992), their function as dedicatory offerings (Lucero 2008) and/or termination offerings (Kunen et al 2003; Pagliaro et al 2003), ceremonial trash (Walker 1995) and commemoration (Freidel and Guenter 2006). Dedicatory caches, for example, can mark the beginning of a new construction or work to ritually animate a space. On the other hand, termination caches indicate the de-animation of a space. Smashed and/or burned vessels, for example, can indicate a termination event. The function of these rituals is to activate and deactivate the animus of a building, which is housed in both the offerings and the building (Harrison-Buck 2004).
Caches form part of a symbolic system that was established in the Late Formative Period when the kingship institution based on an *ahaw* was established and eventually consolidated in the Early Classic (Freidel and Schele 1988; Fridel and Guenter 2006). Moreover, it is generally accepted that caches were used as ritual artifacts during ceremonies that defined the ruler as a conduit of supernatural power and direct divine inspiration (Fridel and Schele 1998:563). Maya pyramids, among other built places, could be enlivened with soul force by the interment of cached materials and appropriate rituals (Freidel and Schele 1989). Freidel and Guenter (2006) call caches “cenopaths”, because they represent the essence of rulers, their soul force, in bundled jewels within a cache container. They suggest that in some royal buildings, especially temples and palaces that lack royal burials, these ritual deposits were placed to animate the structure with a royal *animus*.

### 4.5 Summary

The study of royal courts is intricately related to the study of ancient Maya political organization and the administration of power among other sites. Although Maya archaeology has mostly focused on large sites, which might be the exception to the rule rather than the norm, other smaller settlements also have courts. Regardless of all the data accumulation and the different angles we study courts we still do not understand completely the form, function and extent of action. Current approaches do suggest some basic characteristics that define royal courts such as its emphasis on the ruler and his co-habitation with its court or courtiers. Evidence also suggest that the court was dynamic and mobile, that central court complex were constantly modified and could change location within the site. Moreover, although all royal courts functioned under similar principles, they were arranged differently from site to site. All of these characteristics suggest that the court as a constantly changing multi-
functional compound inhabited by different kinds of people that interacted with the rest of the community. Architectonically, royal courts have a range buildings that serve the different functions of the court. These are palace or range structures (habitational space), temple structures (ceremonial spaces), council houses (administrative space) and kitchens areas (service space). Additionally ritual deposits, such as burials and caches, are frequently found associated to the construction of architecture. These deposits indicate rituals of activation and deactivation of buildings.

1 Evidence from sites as San Bartolo and Caucel suggest that the rulership system and culture was developed earlier, circa the Late Formative Period.

2 Physical proximity to the sovereign is a primary parameter to define royal courts (Inomata 2001:40).

3 Rowlands (1993) distinguished between inscribed memory (characterized by repetition, public access and materialized in visible ceremonial activities such as the construction of monuments) and incorporated memory (characterized by opaque symbolism and secrecy that leave little, if any, archaeological remains).

4 The monumental Temple of the Inscriptions at Palenque, for example, embodies the ruler K'inich Janaab' Pakal as the building itself is dedicated to him with his body buried at its base; the grouping of monumental architecture and powerful individuals, creates an authoritative entity that displays the absolute power of an individual in his time and afterwards.

5 This is suggested at sites like Copán (i.e., dynasty founder Kinich Yax Kuk Moo on Temple 16), and Tikal (i.e., Mundo Perdido Complex and later the Temples located at the North Acropolis).

6 For example, David Stuart (1987:33–39) notes that in both the Post-Classic codices and Classic Maya monuments, temples are referred to as Otoch or otot, a term meaning “house”. Grube and Schele (1990) also note that accompanying texts describe these structures as u waybil k’u, signifying “the sleeping place of god.” Taube (1999:428–429) also notes that in ancient Maya temple scenes, gods frequently appear in thatched houses and, just as Maya palaces, supported cloth or math hangings that served as doors. Moreover, he suggests that temples are symbolically represented with false, curtain-covered and checked patterns carved in the doorways in the form of woven cloth or matting at least from the Late Formative on Structure H-X at Uaxactun.

7 Similarly, Taube (1999:463) observes that in Late Classic vessel scenes headdresses appear used in ceremonial dances and on top of thrones, making them sacred articles of the temple. Moreover, Taube also observes that it is very difficult to distinguish between headdresses and censers in Maya iconography, which suggests that they played a similar role in representing the seat or house of the divine being during the ritual impersonation (Taube 1999:464).
CHAPTER 4 FIGURES

Figure 4. 1 Court Members Feasting. Detail of a mural painting from a vaulted building from Calakmul, Campeche (Mirón Marván 2014).

Figure 4. 2 Ker Rollout #4030, ruler and wife on court assembly
CHAPTER V: SOUTHERN AND NORTHERN MAYA ROYAL COURTS

5.1 Introduction

In this chapter, I explore the currently under theorized local tradition of a royal court in the northern Lowlands. The Mesoamerican Urban Tradition followed a canon that was established as early as the Middle Formative at the Olmec site of La Venta. This model was later adapted and modified at multiple sites and readapted based on the needs of communities. Here, I argue that the architectural and spatial features observed at Puuc royal courts are local traditions of displaying power. I follow this argument by exploring evidence of varying models of royal courts throughout the Maya area from the Formative to the Terminal Classic Period. To do this, I trace the origins of the Mesoamerican Urban tradition and describe its commonalities with Maya urbanism. Afterwards, I explore the different court models used in the southern lowlands and compare them to their north homologous. By exploring their commonalities and similarities I explore how the Puuc tradition of royal court manifested and how it differed from the Southern Lowlands.

5.2 Maya Royal Courts

“The act of building colossal structures appears to have accelerated and amplified social distinctions” (McAnany 2010:162).

In order to discuss the function and characteristics of ancient Maya royal courts, we first need to address how this institution was created, what evidence we have of early Mesoamerican courts and how we characterize such places before the Classic period, which
was defined by a highly marked social difference between populations and a complex political authority spearheaded by elite rulers (McAnany 2008:220). This process in which emerging elite groups naturalized their power and authority, reaching its peak at the Classic period, is defined by McAnany (2008: 221) as a type of “social speciation”. She suggests that ancient Mesoamerican royals actively embodied their social differences through physical distinction (i.e., beauty concepts, diet differences, life expectancy, and disease survival), their built environment, production of artistic objects (e.g., polychrome vessels, jade and lithic adornments), and public and private rituals. These material elements, or goods, not only separated royal individuals but also excluded the rest of the population, creating divisions in society (Douglas and Isherwood 1996:109; McAnany 2008).

Marcus and Flannery (1966:168) argue that there are no palace complexes in Mesoamerica before 100 B.C. However, available evidence suggests that the concept of royal power had its base in the Middle Formative period (1000-300 B.C.); this is observed at sites associated with the Olmec culture (Clark and Hansen 2001; Grove 1999; Reilly 1999). At this time, sites like San Lorenzo (1400 B.C.), La Venta (850-600 B.C.) and Chiapa de Corzo (750 B.C.) become regional capitals, influenced the rest of the Mesoamerican world, and served as the foundation for urban settlements patterns (Clark 2001:1; Grove 1999). Evidence indicates that these sites established specific patterns of site planning using monumental architecture and the surrounding natural landscape (Grove 1999). These planning elements include formal public, private and ceremonial spaces, elite residences, important burials placed in strategic locations, ceremonial deposits (i.e., caches), processional ways, and episodic remodeling and movement of the royal court.
Researchers argue that during the Early Formative period (ca. 2250-1150 B.C) Complex A at the site of LaVenta, Tabasco, established the first model for Mesoamerican royal courts (Clark and Hansen 2001:3; Grove 1999). This complex had a monumental pyramid, two ranges mounds, an elite burial (Tomb C), ritual deposits and a liminal space between mounds that Reilly (1999:19) interprets as a processual way. Complex A is an enclosed court with three mounds groups around a plaza bordered by a bracket-shaped wall, a characteristic that suggests that it was not meant to be accessed or viewed by the general public. Moreover, Complex A's multiple renovations indicate that it became more private as it grew, and that all of its major construction phases are characterize by massive ritual deposits of serpentine materials; this suggests that over a number of generations these deposits were part of a strategy for negotiation and creation of a socio-sacred space and defining the identities of elite and non-elite persons in the process (Gillespie 2008:132). A sand stone box with a fence of large basalt columns has been identified as a possible royal tomb and multiple stone monuments, or stelae, display personages standing with a supernatural creature suggests Complex A was a ceremonial court (Grove 1999:272). Furthermore, Groove (1999) suggests that Complex A represented the realm of the ancestors and the past.

Clark and Hansen (2001) argue that the LaVenta site plan was imitated ca.850-600 B.C. by multiple Maya sites and became the initial model for early planned cities. Evidence suggests that the LaVenta urban tradition was borrowed, transmitted and adapted to local conditions in multiple Maya sites (Clark and Hansen 2001:32-35). By 400 B.C. sites like Nakbe, Tikal and possibly Uxactun had monumental and formalized architectural groups. Moreover, the absence of this evidence at El Mirador Basin sites (aside from Nakbe) at this
time can be taken as evidence of two different Mesoamerican urban traditions.

**Precedents of Southern Maya Lowlands**

The Late Formative period in the Maya area marked the appearance of multiple construction projects of massive architectural complexes, a characteristic which has been suggested to be a benchmark for the beginning of social complexity and urbanization (Estrada-Belli 2011; Clark and Hansen 2001; Hansen 1998; 2001; Ringle 1999). Early evidence of social inequality, precursor of court life, is most notably observed at sites like El Mirador, Nakbe, Wakna, and Tintal where monumental architecture suggests an increase in the ability to muster labor (Hansen 1998:61). Some of this architecture was identified as massive platforms for performance and ritual practice (Hansen 1998, 2001; Inomata and Cobeán 2006; McAnany 2010; McAnany 2010; Ringle 1999; Stanton 2000), which suggests an early development of social complexity.

Indicators of social inequality observed at sites like Nakbe, Uaxactun, and El Mirador in Guatemala, Cuello (1000 B.C.), and Cahal Pech include the organized control of labor through the construction of monumental architecture, painted buildings placed on large platforms, and the appearance of imported and prestige goods such as basalt, jade, obsidian and marine shells (Clark et al 2000 in Houston and Inomata 2008). This suggests a growing economic and social differentiation in society in which elite were able to manipulate the masses to build significant public works and to otherwise support and sustain the elite (Hansen 1991, 1998, 2001).

The Middle and Late Formative periods also saw the rise of the first uniform and planned monumental architectural projects such as E-groups and Triadic Building.
Complexes. E-groups are first reported at southern Maya Lowland sites like Cival, Nakbe, Tikal and Uaxactun during Middle Formative Period and are considered the first public and ritual architecture (Chase and Chase 2006; Estrada-Belli 2011; Hansen 1998). The concentration of these complexes within the southeastern Petén and southwestern Belize area during the Formative period and their role as a focus point for ritual life suggest that they were associated with rise of social inequality (Laporte and Torres 1987; Laporte, Torres, Hansen 1998; Hermes 1991; Laporte and Torres 1993; Laporte 1993; Chase and Chase 1995). This is also suggested by other architectural features such as platforms, causeways, large pyramids and 80x80 meter plazas (Estrada-Belli 2011; Hansen 1998:68). E-complexes consist of a pyramidal structure on the western side of a plaza or platform; the eastern side of the plaza is dominated by an elevated, elongated structure on a north–south axis (Hansen 1998:65). During their discovery, and due to their east-west orientation, researchers hypothesized that they functioned as an astronomical observatory or solar calendar. Clark and Hansen suggest that the large platforms of these groups served as residences for the emerging elite due to their architecture and connection, via causeway, to other dominant compounds (Clark and Hansen 2001; Hansen 1998).

A massive augmentation in the size and scale of monumental architecture is evident by about 300 B.C. in the Southern Maya lowlands particularly in the Mirador Basin region. This period marked the appearance of Triadic Temple Complexes at sites like El Mirador, Nakbe, Tikal, Uaxactun, Cerros, Lamanai, Wakna, Tintal, Sacna, and Dzibichaltun (Christie 2003; Estrada-Belli 2011; Hansen 1998; Velasquez Fergusson 2013). The triadic pattern consists of a dominant structure, usually on a platform, flanked by two, inward-facing smaller mounds of equal size (Christie 2003; Hansen 1998:78-79). Although there are no
known Middle Formative antecedents, Hansen (1992a: 55–56 in Hansen 1998:79) argues that the triad might be a stylized descendant of the elongated eastern building of the E-Group complexes. Triadic complexes contain sculptures of deities flanking the primary staircases of structures. More importantly, according to Hansen (1998) the iconographic themes observed in these complexes are associated with rulership (e.g., Stela 1 from Nakbe, Stela 2 from Cival and Stela 18 from El Mirador). Triadic Temple complexes, are usually located at the central axis of ancient settlements and represent the largest architecture of the site, indicating its importance and predominance over other architectural groups (Velasquez Fergusson 2013:19).

The triadic arrangement was used during the Early Classic Period (i.e., Calakmul, Caracol, Seibal, Nakum, Tikal, and Palenque) and probably continued until historic times (Christie 2003; Hansen 1998). Moreover, at sites like Tikal, Copán and Uxmal, this tripartite pattern extended to palace structure floor plans. Christie suggests that the pattern of a tripartite floor plan in palaces from the Late Classic Period could be a symbolic reference to the three hearth stones of creation, one of the basic concepts through which the Maya tried to make sense of the world in which they lived (Christie 2003; Taube 1998).

Folan et al (2001:257) suggest that triadic Formative structures in places such as Tikal, El Mirador, Uaxactun, and possibly Caracol, were official locations of religious, civil and militaristic power. This is best example by Str. II of Calakmul, where elements of the triadic arrangement are combined with temple architecture to create a powerful hybrid that conflates the axes of political and religious power. This building, which was constructed in the Late Formative, but was used until the site was abandoned in the Terminal Classic, could represent a transitional form in which the main offices of government, military,
administrative, religious and the royal family are represented in one building (Folan 2001).

**Classic Period Royal Courts**

Architectural and epigraphic evidence indicates that royal courts were at the heart of Classic Maya cities, with sites displaying evidence of vaulted palaces and large temples. Epigraphic and iconographic evidence indicates the presence of divine royalty and its association with dynastic structures (e.g., Tikal, Copán and Calakmul). Decoration in monumental buildings, such as sculpture and paintings, function to transmit a message to the site residents a social and ideological order that justified the power and authority of the leading elite group (Valdes 2001:140). Royale courts located in the southern lowlands and near the Usumacinta River, contain a much richer epigraphic record than in other regions of the Maya area. These records are present in multiple media including both non-movable (i.e., architecture and stele) and movable objects, allowing archaeologists to gain a finer picture of Classic Period regal activities.

The importance of ancient royal courts in diplomatic affairs is well registered in the epigraphic record. Interestingly, although court scenes always represent the ruler as a central character, and often courtiers as secondary subjects, there is currently no evidence of a collective term for a royal court (Jackson 2013:63). Moreover, there is little evidence of how polities were administrated and operated during the Classic Maya period.

Analysis of the Classic period hieroglyphic record by Jackson (2013) suggests that there are at least five formal titles associated with royal courts. The majority of these titles appear circa A.D.600 under ascension rituals or "siting/chum" in which an individual would take the “seat of power” (Jackson 2013:83). The most common title was *sajal* (50% of
Jackson’s sample), which referred to regional governors or war captains; it is translated as “the feared one”. The second most frequent title was Ajk’ uhuun (around 32% of Jackson’s sample), which is also known as the God C title and roughly translates to “he who guards/worshiper/he of the holy books/he of the temple” (Ringle 1988), “architect” (Schele 1992) or “political mediator” (Stuart 1992). The third most frequent title, Yajaw K’ahn, translated as “lord of fire”. A fourth courtly title, Ti’huun translated roughly as “the edge of the white paper.” Finally, an un-decipher title referred as “banded bird” was also present. Jackson (2013:6) suggests that most of these titles might indicate different offices, ranks or jobs that courtiers hold. However, Jackson (2013) also observes that the roles of court individuals are not exclusive to their titles. Particular offices might have been modified and tailored to local courtly needs or the skills and talents of the individual who held them.

Epigraphic, ethnohistorical and archaeological sources indicate that architectural spaces were divided by gender and that women were in charge of the domestic world (Ardren 2015:118-119; Inomata 2008, 2010; McAnany and Plank 2001; McAnany 2010; Robin 2004). While man and children also lived at the domestic compound, this space was gendered female, and the activities that took place there were situated within an arena in which the space defined the people in it (Ardren 2015:121). Certain civic architecture was the setting for male behaviors that upheld a conceptualization of dominant masculinity as competitive and hierarchical. Epigraphic evidence observed in different media (i.e., ceramic vessels, stele, sculptures and paintings), portray the ruler, how is invariably male, as the main protagonist of the narrative. Moreover, buildings that are associated with power, such as palaces, temples and council houses are associated to the ruler or male court members (Inomata 2010).
Based on ethnohistorical and archeological date from the north of Yucatán Ardren (2015) argues that commoner domestic compounds were closely associated with an idealized notion of femaleness and the productivity of the family unit. The productive activities of the Maya domestic compound such as food preparation, gardening, and the care taking of domestic animals constituted circulations that reinforced the potential of female power and productivity (Hendon 1997, Hutson 2010, Pohl and Feldman 1982). This can also be observed in Joyce’s (1993, 1996, 2000) analysis of small portable ceramic figurines, where women are represented in productive roles such as food preparation, weavers, caretakers of animals, and take care of children (Robin 2004:152).

Rulers and courtiers displayed in ancient records are, for the most part, male and while some female courtiers are shown they were secondary to the male ruler (Marcus 2001:324). However, the epigraphic record at powerful Classic period sites, like Palenque, show no ideological barrier to having a woman on the throne (Marcus 2001: 327) and moreover, they indicate that many maya royal women became politically powerful. These included mothers of kings, wives of kings, or temporary regents who ruled before their came to age. Hence, the low numbers of documented female rulers do not necessarily reflect the actual political power of royal women as “whispers behind the throne” (Marcus (2001:335). Marriage alliances, for example, were an important strategy that large paramount settlements used for incorporating smaller villages into their political sphere. These type of residential mobility, in which royal women from powerful polities married to lower-level men and moved to less important and smaller sites, was common in many archaic states (Marcus 2001). Somerville, Schoeninger and Bramwell (2016) argue that this pattern was also observed for elite men at the site of Pusilha, Belize. There, isotope analysis of tooth enamel
suggest that foreign elite man, from the site of Copán, were brought to marry local women from the Pusilha royal dynasty.

During the Early Classic period political leadership was institutionalized by rulers through divine kingship, a system in which the sovereign inherited royal position through bloodlines of power and material objects (architecture, inherited heirlooms, etc.). Major cities with populations that ranged from 8000-75,000 emerged throughout the Maya region. Monumental architecture with elaborate decorations in stucco, carved stones and painting that illustrate rulers in conjunction with gods were common during this period.

During the Late Classic period, rulership shifted away from veneration of gods to emphasize individual rulers who conceived themselves as divine. Moreover, as a result of a wide-ranging adaptation to changing pressures of the Late Classic, royal courts started to include a broad set of individuals in the governing structure (Jackson 2013:63). Some elite residences within palatial complexes, for example, were not exclusively for the use of the ruler. Evidence at Uaxactun and Tikal suggests that these palace complexes housed other nobles with enough wealth to build their own palaces (Valdes 2001:144). Moreover, these elite buildings were also constructed away from the main monumental core of sites, indicating an expansion of wealth among elite members (Valdes 2001:151).

Range structures were integrated into the landscape in order for people who participated in public ceremonies to observe their leaders while listening to the conversation that took place in the interior of the chamber (Demarest 1997; Valdez 1993, 1997).

There is very little published on the types and distribution of artifacts around a royal court (Webster 2001:141). When in use, elite structures were periodically cleaned of refuse
(Moholy-Nagy 1997:299); debris usually placed in the corners of the plazas or at the back of the structures. Ethnographic studies of trash disposal in contemporary Maya communities by Smyth (1991) indicates a similar disposal pattern. Some researchers suggest to be cautious with the analysis of ancient trash middens since they can be a problematic indicator of production areas; this is due to the spatially flexible nature of prehispanic technology and site-maintenance activities which could have shifted artifacts from primary into secondary contexts (Moholy-Nagy 1997).

Trash deposits from palace complexes located at Tikal, Calakmul and Dzibilchaltun (Gongora et al 2009; Folan et al. 2001; Moholy-Nagy 1997) suggests that both everyday household tools and special products were produced at the royal complexes. At Calakmul, for example, palace and temple trash deposits suggest engagement with multiple activities such as: preparation/consumption of food, production of stone tools, water collection, ceremonial activities, shell work, spinning and confectionary, storage areas and dormitories (Folan et al. 2001). On the other hand, productions of special items, such as polychrome ceramics made from imported materials, are sometimes associated with temple structures (Folan et al. 2011; Moholy-Nagy 1997). This suggests that although there is somewhat of an overlap between activities and spaces, in general range buildings are associated with household production activities and temples with specialized production of sumptuary objects.

Royal courts are also characterized by multiple special deposits, especially in ceremonial spaces. Traditionally, these are classified as caches, burials or other ceremonial deposits. The Classic period epigraphic and archaeological record indicates that royal courts were important venues for multiple ceremonies such as conjuring and fire ceremonies (Jackson 2013; Stuart 1998; Taube 1998), ancestor veneration (McAnany 1998), house
dedication, agricultural calendar events, succession ceremonies, military and ballgame events (Jackson 2013), and scattering rituals. Moreover, some of these ceremonies were critical for construction and renovation of the royal court. Ceremonial burnings, such as fire and censing dedication rituals, are intimately tied to the construction and renovation of monumental architecture, as well as important stations in the Maya calendar (Stuart 1998:403). Epigraphic and archaeological evidence also point towards a periodic revitalization of elite structures through the placement of ceremonial deposits. Moreover, the epigraphic record indicates that these rituals of revitalization were hosted by a member of the royal family, one of its representatives (i.e., a Sajal), or both.

5.3 Formative Architecture at the Northern Maya Lowlands

As mentioned earlier sites located at the Puuc zone of the Yucatán peninsula, which lacked permanent water sources (Dunning 1992:102), are traditionally considered most populated during the Late (A.D. 600-900) and Terminal Classic (A.D. 900-1000) periods. It is currently accepted that the relatively level terrain and the fertile, deep soils lured populations into establishing permanent settlements and eventually developing communities of considerable size such as Uxmal, Kabah and Ooxkintok. Problems with limited permanent water sources were averted by constructing underground water cisterns or chultunob to capture rainwater. Known water cisterns are limited to the Classic period, suggesting to archaeologists that communities during the Formative were small and sporadic and perhaps non-permanent. Architecture and ceramic evidence in the Northern Maya settlements also suggested that Puuc sites were mostly populated during the Late and Terminal Classic Periods. Both architectural and ceramic evidence are distinguished by homogeneity (i.e., Cehpech Ceramic Complex) and the architectural style of stone buildings (Andrews 1986,
1995, Brainerd 1958: 26; Pollock 1980; Ringle, Bey and Gallareta 2014; Sabloff and Tourtellot 1991). As a result, the Puuc region was considered for a long time an area with “one period sites” that had a brief fluorescence and later was abandoned due to overpopulation and resource scarcity.

However, current research indicates that the ceramic and architectural homogeneity of the region, as well as its “one period” sites, was more of a result of research bias than scientific investigation. Lack of published data, as well as a lack of stratigraphic excavations at most Northern lowlands sites was responsible for the Late Classic Period occupation-only theory (Bey 2006; Ringle, Bey and Gallareta Negrón 2014). Recent investigations report major civic-ceremonial architecture constructed during the Middle Formative period and later at multiple sites such as Yaxuná (Stanton and Ardren 2005), Komchen (Andrews, Bey and Gunn 2008; Ringle 1999), Acanceh, Dzibichaltun, Xocnaceh (Gallereta Negrón 2005), Xtobo (Anderson 2011), Xaman Susula (Peniche May 2014), Poxila and Kiuic (Bey 2006). This new evidence, especially ceramic and architectural, indicates that the Northern Yucatán Peninsula, and particularly the Puuc region, had a much earlier regional development, social complexity and continuity than previously thought (Bey 2004, 2006; Ringle, Bey and Gallareta Negrón 2014; Stanton 2012).

Evidence, including ceramics, architecture and some stratigraphy, from multiple sites in the Northern Maya lowlands and the Puuc region suggest the presence royal courts at the Late and Terminal Classic period. However, as new evidence accumulates and refutes the Late-Terminal Classic Period occupation-only theory, it is important to reconsider and re-examine the role of courts and kingship at the North. Here, I summarize current evidence regarding monumental architecture, spacial layout, iconography and artifacts at major
northern sites, as these are the most notable indicators of regal behavior. Moreover, I describe how these indicators changed through time and culminated in the Late and Terminal Classic court culture. The purpose of this examination is to identify evidence of royal behavior in the north, its main characteristics, and its local variations within this cultural area.

**Early and Middle Formative Northern Lowlands**

Current evidence indicates that there was not a significant Early Formative period population living in the northern lowlands. There are two main theories regarding this period and its relation to the development of Middle Formative societies. The first suggest an arrival of sedentary villagers from eastern Petén and Belize (E. Andrews 1990, 2003 in Bey 2006; Rivera Dorado 2000) while the second suggests a local development (Stanton 2000).

The Middle Formative (~800/700-400/300 BC) was a period of increasing social complexity. Current data indicate the presence of a large number of sites with Formative Period materials on the surface of multiple northwestern lowlands sites (Andrews and Robles Castellanos 2004). The northwest portion of the Yucatán peninsula in particular, presents multiple sites with monumental public architecture such as Poxila, Xtobo, Xocnaceh and Xcoch that date to this period. Ceramic and/or architectonic evidence has also been reported at sites like Labna and Loltún and the Mani sink hole near the Puuc region, as also from sites like Tipikal (Peraza Lope et al 2002 in Bey 2006), Caucel, Aké, Izamal, Mayapan, Acanceh, Isla Cerritos, and Coba.

Construction of early public architecture included ball courts (Andrews and Robles 2004), two of which have been investigated at Xtobo (Anderson 2011) in the northern
peninsula and Paso del Macho (Bey and May Ciau 2005; Gallareta Negrón et al 2003) in the Puuc region. The Triadic Complex tradition has been reported at Puuc sites associated with predominately Middle and Late Formative occupations at Xtobo, Paso del Macho and Xocnaceh. These sites are also characterized as having multiple buildings and infrastructure. Xtobo for example is reported to have a dense settlement pattern with multiple structures, plazas, pyramid structures up to 7.5 meters tall and intra-site roadways systems that connected multiple buildings. Xocnaceh presents a massive megalithic acropolis of approximately 21 meters on top of a basal platform that is approximately 130x140 m and rises to a height of 7.5-9 m above datum. Stratigraphic pits indicate multiple construction sequences that are dated from the Middle to the Late Formative Period. Buildings located on the acropolis resemble a triadic group, which suggests a civic-ceremonial function (Gallareta Negrón and May Ciau 2007; Robles 2004).

It is notable that these early sites possessed both ceremonial and monumental architecture at an early date. Triadic complexes located at site centers and on top of large platforms were common. Ringle, Bey and Gallareta Negrón (2014) suggest that there were at least two different regional styles of buildings, one represented by Paso del Macho, which resembled the architecture of the northwestern plains (based on the ballcourt tradition), and the other by sites like Yaxhom and Xocnaceh which had large megalithic acropoli which are only registered in the Puuc region. Uriarte (2013) also notices that there might be multiple local traditions based on similar triadic patterns and causeways at the sites of Xocnaceh and Xtobo. Robles (2004) suggest that these distinctions might indicate different territorial entities with different organizational characteristics.

Although there is a lack of Olmec pottery during this time, recent discoveries of green
stone, foreign ceramics and basalt tools at Poxila (Robles 2014), Xocnaceh and Paso del Macho, suggests that Northern Lowland Maya were active participants in long distance exchange during the Middle Formative (Bey 2006; Stanton 2010). Robles (2004) suggest that both the architectonic evidence of monumental architecture and imported artifactual goods represent social inequality and the adoption of Mesoamerican symbols of authority. Although we still know little about the Middle Formative in the northern lowlands, it is clear from current evidence that the area was much more complex than previously thought. However, none of these structures rivals the contemporaneous monumental architectures of sites like El Mirador in the southern lowlands (Stanton 2010).

The boom in stone construction and population nucleation increased during the Late Formative period (~40-300BC-AD250-300). Bey (2006) characterizes this period as “marked by growth, change and increasing regionalism.” Current evidence indicates a widespread and substantial increase in Late Formative settlements, especially in the Bolonchén region (Bey 2006:26; Gallareta Negrón et al 2003). This period is also marked by the construction of major civic-ceremonial and public architecture throughout the northern lowlands (Bey 2006:27). This is observed at sites like Komchen, which by 500 BC was already a dominant site, incorporating other sites, like Dzibichaltun into its polity. Elite architecture during this period consisted of platforms with three-meter tall pyramids on top and other substantial platforms supporting secondary platforms, what Ringle calls “local temples.” The site of Yaxuná has a triadic group of mounds, ceremonial dancing platforms (Suhler 1996) and an acropolis that rises 26 meters high (Stanton 2010). The site of Xaman Susula, near the current city of Merida, shows of evidence multiple platforms and two groups united by a *sacbe*. Structure 1714-Asub presents a single room structure with a rectangular bench with
rounded edges that may have been a throne room (Peniche May 2014).

Evidence indicates that just as in the south, although a little later, the northern lowlands exhibit a significant development of monumental architecture and residential re-organization at large ceremonial structures (Ringle 1999). This can be seen at sites like Komchen, Yaxuná and Ek’ Balam where structures like ball courts and roads or *sacbeob* linked major architecture groups and connected ritual structures (Ringle 1999:205). Ringle (1999) suggests that the main goal of emerging elites was to successfully recruit migrants through local temples. In his vision, the emerging elites in the north developed a hierarchical structure in the Late Formative that was expressed in centralized platforms and pyramids, minor temples and platforms next to local temples. For him, the emergence of hierarchy was based on a residential re-organization and ceremonial construction as a way to deal with issues developing due to increasing population levels that demanded some concentration of authority. Religion and ideology were integrated in creating centers as places for pilgrimage and ritual procession. These centers served as places where religious cults were sponsored and supported and created the frame for the emergence of a “big man” system of authority that did not heavily involve hegemony or politically administrative structures as prime movers (Ringle 1999:211).

In some areas the end of the Formative period for the Northern Lowland Maya was characterized by site abandonment and a massive depopulation until the Late Classic (Bey 2006; Stanton 2010). Large northern lowlands sites, like Xocnaceh and Komchen, were abandoned during this period. However, some sites were not abandoned, although their construction was limited to renovation rather than major construction (Bey 2006:28).
Although most of the models used for explaining the rise of complexity and the construction of monumental architecture generally involve a leader that organizes labor, there is no direct evidence of individuals who played this role. Moreover, there is currently no evidence of any royal burials or epigraphic indicators of a ruler, or of divine kingship in the northern lowlands at time (but see Nancy Peniche 2014). This is in direct contrast with the southern lowlands in which some sites (i.e., San Bartolo) contain evidence of kingship at this time.

A pattern that is present in major Maya sites is the presence of civic-ceremonial compounds at the centers of large sites. Particular intriguing is the presence of triadic temples and monumental platforms located at major formative sites all over Mesoamerica. Ringle, Bey and Gallareta Negrón (2014) suggest that monumental construction, especially in the Puuc zone, was a strategy to mark places. The distribution of early monumental platforms indicates construction at locations that almost certainly took advantage of the fertile soils accumulating from erosion of escarpments. Moreover, the large number of artifacts made out of foreign material at major sites indicates that some of these settlements practiced long distance exchange from this early period.

5.4 Classic Period Royal Courts in Northern Yucatán and the Puuc Region

Until recently, the northern lowlands were considered a late development in Maya archaeological literature. This bias had multiple causes including the lack of archaeological coverage, scarce epigraphic evidence of dynastic histories, absence of a local polychrome ceramic tradition and the overall low level of publications by researchers working on the area (Bey 2006). Additionally, there is a lack of understanding of the Early Classic Period in the Northern Lowlands, which in tandem with the evidence of population decline at places such
as Dzibilchaltun and Komchen, led researchers to accept the notion that between A.D. 100 and A.D. 700 the north was underdeveloped with a very low population. However, new excavations indicate that, although with low population levels in comparison to the Late Formative Period, the north was going through a period of continuity, new growth and social complexity during the Early Classic (Bey 2006:31).

*Early Classic Monumentality: Northern Megalithic Style and the Triadic Complex*

The “megalithic style” represents a tradition of constructing stone buildings that was developed and used almost exclusively during the Late Formative and Early Classic Periods. Although this style is present at multiple sites it is only recently that researchers are starting to understand its extent and importance in the northern lowlands. These buildings are characterized by the use of large and roughly cut stones decorated with a thick layer of stucco. The megalithic style was used in the construction of both elite residential, non-residential, and modest domestic platforms (Hutson 2014). Multiple researchers suggest that this architecture represented a sphere of interaction that extended areas at the Yucatán peninsula (Bey 2006; Hutson 2014; Mathews and Maldonado 2006:97).

The *Kinich Kak Moo* pyramid at Izamal is one of the best examples of megalithic architecture. The pyramid has a base measuring 185 meters a side and 17 meters high (Millet Camara and Burgos Villanueva 2006) making it one of the biggest Early Classic structures at the northern lowlands. Moreover, Maldonado Cardenas (1979, 1995) argues that by this period Izamal consolidated its control over the area. Hutson (2004) argues that the site shows early traces of urbanism due to evidence of open spaces, a complex inner and outer causeway system, and the possible absorption of other sites (Burgos Villanueva et al. 2005:428). Based on its scattered settlement, Hutson (2014) suggests that Izamal appears to resemble the low-
density cities of Tikal, Caracol, and La Milpa.

Megalithic architecture is associated with corbeled vaults and triadic groups. Mathews and Maldonado (2006:100) observe that corbeled vaults and megalithic architecture are present at the sites of Aké, Kantunilkin, El Naranjal, Sihó, and Yaxhom. They also observe that triadic groups are associated with megalithic architecture at the sites of Aké, Huntichmul, El Naranjal, Site 38 and Yaxuná. This has led Mathews and Maldonado (2006:107) to suggest that the sites of Aké, Izamal and Naranjal might have been models emulated by other sites, since these are the biggest sites with megalithic architecture currently known.

Research at sites like Xocnaceh and Yaxhom indicate that the Puuc zone participated in the Megalithic style from the Late Formative to the Early Classic Period. Research by Ringle (2011) indicates that Yaxhom had an extensive population since the Formative period and a construction boom during the Early Classic. This include the construction of an acropolis, which consists of a platform measuring 145 m on a side, built on sloping ground, and rising between 5.5-7.5 above the surrounding terrain. Its retaining walls on two sides were constructed of massive megalithic blocks. The acropolis was chiefly an expansive open central plaza bordered by several secondary mounds rising about 11-12 m above the plaza surface (19.5 m above ground level). Ringle, Bey and Gallareta Negrón (2014) observe that the arrangement of the site’s secondary mounds fall within the E-group category known to be among the earliest civic complexes in the southern lowlands (Inomata et al. 2013; Laport and Fialko 1995). It is important to notice that although both Xocnaceh and Yaxhom featured a similar building technique — megalithic architecture — the forms did not have vaulted architecture while the latter did. Additionally, although both are considered acropolis, their
main groups are based on two different “old” building layouts, the triadic complex and the E-complex. The megalithic style is considered a northern lowland tradition in both its monumentality and the homogeneity of associated ceramics (Mathews and Maldonado 2006:100). The architectural and ceramic evidence in this region indicates a strong in situ evolution, making the megalithic style a regional expression of Maya culture in the north (Bey 2006:31-35; Hutson 2014). This suggests that by the Early Classic, there were multiple traditions of site layouts based on old models but constructed with local techniques.

Excavations at predominately Early Classic Puuc sites in this area are still scarce. The northern Maya stone vault was first registered during the Early Classic at the site of Oxkintok, near the Puuc region. The development of this new construction technology allowed the first palace structures to be built with stone sealing’s in the northern lowlands ca. A.D. 300-500/550 (Rivera Dorado 2000). The corbel vault allowed the construction of monumental elite buildings with stone roofs and its use spread throughout the northern lowlands.

The archaeological site of Yaxhom features an E-group arrangement within the central acropolis. E-Groups, just as triadic complexes, are considered the earliest religious architecture in the Maya area (Chase and Chase 2006). The continuous use of these buildings arrangements during the Late Formative and Early Classic period resembles what Chase and Chase (2006:47) call the “ideological foundation of cities”, the first part of a three mode process (i.e., dynastic and administrative foundation) in which some Maya cities were founded. For them, the “jump” from a religious foundation to a dynastic foundation of cities is evidenced by the interment of a royal burial as seen in places like Tayasal and Caracol.
Evidence points to increasing complexity beginning in the Middle Formative and continuing until the Terminal Classic period at the Puuc region. However, due to the lack of any significant regal evidence, there is little discussion about the presence of royal courts during this period. The construction of massive architectonic complexes, ceremonial architecture, the development of regional construction techniques and ceramic spheres indicates a large degree of labor control. However, there is little evidence on how this labor was administrated or by whom. In the dissertation, I suggest that at Kiuic, the presence of a large megalithic platform, a council house and their location on a raised platform suggest labor control by part of an elite group. The megalithic style also indicates that the site was connected politically, socially and economically to a wider network of Yucatec sites.

**Late and Terminal Classic Periods: Northern Kings**

The Late and Terminal Classic periods in the northern lowlands have been characterized as a florescence in terms of architecture, material culture and demography. During this period, multiple polities grew to become cities, and others like Uxmal, Dzibichaltun, Ek’ Balam, Yaxuná and Cobá, were consolidated as regional capitals. During the first part of the 20th century, archaeologists working on the Puuc region and its surrounding areas recorded and described these regional capitals extensively, but mainly focusing mainly on architecture style, iconography and construction techniques (Andrews 1975, 1995; Gendrop 1998; Pollock 1980; Kowalski 1998).

Many authors have pointed out a change in building type, construction technique, and overall settlement layout as a result of the Early to Late Classic transition. Formative and Early Classic elite buildings such as E-groups and Triadic Complexes built on top of tall acropolis fell in disuse during the Late Classic. Instead, elite architecture shifted to a more
horizontal plane based on range structures placed in top of platforms. This shift was made possible by the invention of vault stones, which allowed the construction of stone ceilings (Rivera Dorado 2000). The northern megalithic style of construction, widely used in previous times, also fell in disuse and was gradually replaced. Between A.D. 500-600 masonry buildings were built using what Andrews (1995) calls “Early Oskintok” or “Proto-Puuc” construction techniques, which includes roughly dressed rough block stones, slab vault stones, and liberal use of stucco for decoration.

As mentioned before, the Puuc region did not rely heavily on iconographic evidence for commemorating events or projecting statements of power and authority. Indeed, authority was monumentalized in stone. However, sites like Oskintok, Ek’ Balam, Kabah and Uxmal do exhibit the southern style of visualizing royal activities in multiple architectonic contexts such as stelae, jambs and lintels. The earliest dates registered for the site of Oskintok are based on lintels 1 and 2, dated between A.D. 475-494. However, it is not until the Late Classic that monuments start to show images suggesting Maya royalty such as Oskintok’s Stelae 3 (A.D. 849), 9, 11, 12, 20 (A.D. 751) and 21.

Changes in building types and construction technique transformed the general layout of Puuc sites and allowed the appearance of the first range structures. Puuc Palaces have local characteristics that differentiate them from range structures at other sites. These include: the presence of low basal platforms (Ambrosino 2003), a combination of both palace and temple characteristics as in the case of Sayil, Uxmal and Kabah (Ambrosino 2003:257), multiple floor levels, specially during the Terminal Classic (i.e., Edzna, Sayil, Kiuiic) and the presence of carved woven-mat signs. Their high presence in the Puuc region, which contrasts with the absence of other traditional Classic Maya status indicators, have led researchers to
suggest that palace structures could have function as central nodes for feasts where their numerous rooms could have sheltered elites periodically (Gallareta Negron, Ringle and Bey 2011).

These Late Classic period changes mark the construction and use of new building types, predominately range structures and council house; their architecture and spatial layout are associated with royal kingship. Council houses are identified during the Early Classic at Copán, but are not identified in the northern lowlands until the Late Classic at Ek’ Balam (Str. GT-20), Labna (Str. 7) and significantly the Puuc site of Kiuic (Str. N1015E1015). Bey and May Ciau (2014) suggest that their development might have been somewhat earlier, during the later part of the Early Classic. Most of these structures can be dated to the beginning of the Late Classic, from A.D. 550 to 700. This suggests that this type of building was conceived and constructed before most large palace complex as were built in the later part of the Late Classic. Moreover, council houses appear to have been a prelude to regal behavior at the Puuc, suggesting that they played a significant part in the early civic-ceremonial areas (Bey and May Ciau 2014). Bey and May Ciau (2014:344) suggest that council houses served as community houses and places from which to administrate life at Puuc sites, designed to be accessible to a larger number of community members and lineage leaders.

The use of council houses, range structures and pyramid temples in the Puuc region were combined to create what Gallareta Negrón and Bey (2013) call “Early Puuc Civic Complexes” (EPCC). EPCC have been identified at Bolonchén district sites such as Huntichmul, Kiuic, Labna, Chac, Xcanacruz and Xkalotpec. Chronologically EPCC’s are dated to A.D. 700-800. Architectonically, they are composed of a defined set of buildings
which include: a) a *popol nah* or council house, b) a small pyramidal building, c) ramps, d) walls that together define a plaza space or precinct and e) these features are usually linked to palaces complex through a causeway. Gallareta Negron and Bey (2013) interpret the EPCC’s as an architectural and spatial expression of the sacred pact of cooperation among important social groups in the community and the local authority. Moreover, they suggest that the EPCC was replicated at sites of different sizes due to the shared structure of organization at Puuc sites. Gallareta Negrón and Bey (2013) also suggest that the growth of EPCC’s could have been a local solution reached by Puuc communities to manage land and resources. If true, then *pool nah’s* materialized “sacred” alliance among local rulers and local landholders.

Based on spatial distribution, surrounding buildings, and associated hieroglyphic texts, Kowalski (2003) suggests that northern Maya palaces conform to three architectonic patterns and functions: 1) a somewhat isolated distribution of vaulted-masonry residential courtyard groups with none standing out as a royal palace; 2) centralized palaces of impressive size coupled with a focus on powerful, elaborately costumed individuals on the stelae of sites (such as Dzibichaltun, Uxmal and Sayil), which suggests that the cities had a more centralized form of rulership in which the political system was dominated by a paramount ruler; and 3) large, multi-room palaces (like the three story palace at Sayil and the main palace at Labna) which were probably residences for extended ruling elite families and their retainers, while other multi-room vaulted buildings (again, at Sayil and Labna) may have served public administrative purposes or been meeting places for local councils.

During the Terminal Classic period (A.D. 750-950), scholars suggest that the power of elite families increased considerably, if the stone architecture of northern archaeological sites can be used as a proxy. By this period, powerful nobles formed their own secondary
courts, which emerged as wealthy households (Webster 2001). This shift in power can be observed in the changing architectonic patterns of multiple Puuc buildings. Council houses, a building in use throughout the Early Classic, are reported to stop to function at individual sites and were now used to administer on a more regional scope (Bey and May Ciau 2014:345). This can be seen in GT-20 from Ek Balam and Structure 7 at Labna, which became significantly less central – if not peripheral – to the life of the court. Moreover, Ringle and Bey (2008) suggest a tendency in the Puuc region to replace Early Puuc Ceremonial Complexes or first palaces (such as exhibited at Labna, Kiuic, and Huntichmul) with huge, new palaces composed of much larger buildings.

Terminal Classic epigraphic evidence indicates a complex political structure, which include multiple tiers of power as reflected in royal titles. Some of the most commonly used titles at Cobá, Dzibichaltun, Chichén Itzá, Ek’ Balam, and Uxmal are ahuob (religious leaders and civic heads of states), kalomte (a leader with an office superior than the ahau, as this individuals ruled more territory than a single site) and sahal (a subordinate official that ruled towns for their overlords and served as war captains and court officials). At Uxmal and Ek’ Balam, the use of emblem glyphs with the k’uhul ahau title, suggest that divine lords were leading these polities and had multiple other sites under their control (Shaw and Johnstone 2006:143). The sites of Dzibichaltun and Ek’ Balam identified individuals with the title Kalomte, followed by a directional toponym naming the first the west kalomte and the later the north kalomte (Graña- Behrens 2006:107; Ringle and Bey 2008). Ringle and Bey (2008) notice that kaloomtes appear at Coba, Edzna, and Oxkintok 70 years or more before their appearance at Dzibilchaltun and Ek’ Balam. The title occurs several times at Oxkintok, including at the Palacio Chiich and on the ballcourt ring with a date ca. A.D. 713 (Graña-
Behrens 2002: 452). They also observe that Oxlintok is the only Puuc center with a clear mention of the title, which to them it suggests that other large sites, like Uxmal, might have adopted other political strategies (Ringle and Bey 2008).

Moreover, sculptural traditions at Dzibilchaltún and Cobá have an emphasis on individual rulers during this period. This led researchers to suggest that a paramount ruler dominated particular sites and regions in the northern lowlands (Kowalski 2003: 210). At Dzibilchaltún, settlement pattern analysis indicates that range structures shared a common raised platform and a centralized courtyard. These elite architectonic groups are also connected by a road or *sacbe*. Kowalski (2003:2010) suggests that this pattern indicates that residences of elite families had members or representatives at the site’s council house (Str. 44). During the Late Classic large central plazas at sites like Dzibilchaltún and Ek’ Balam were used as expansive arenas for public spectacles of investiture presided over by local *kaloomtes* (Ringle and Bey 2008).

The Terminal Classic Period (A.D. 770-950) is traditionally considered the florescence of the northern lowlands. Growth into the Puuc region is in marked contrast with the southern lowlands, which started to show signs of depopulation and a halt in the construction of monumental architecture. Terminal Classic Puuc sites were heavily populated, including marginalized areas away from urban cores. Land pockets, full of fertile soils and other resources, were colonized and used extensively by local rulers (Dunning 1992).

Architectural features that make the Terminal Classic Puuc style unique include the use of a stone-mosaic technique, freestanding arches, ramps, and multistory palaces.
Iconography associated with Puuc buildings, in contrast to the southern and northeastern lowlands, emphasize abstract geometric patterns (Gendrop 1998). Similarly, royal kingship and its associated rituals were not as commonly represented in buildings carvings, facades or even on associated materials such as polychrome ceramics. Instead, the local tradition of sculpture focused on other elements surrounding ancient Maya surroundings, such as animals (e.g., birds, turtles, and owls), wood, mud and thatch houses, textile patterns (i.e., lattices), mythical monsters and gods (i.e., Chenes “witz” monster, the feather serpent, and chaak masks).

5.5 Summary

This chapter reviewed current definitions of royal courts as well as theoretical approaches and archaeological evidence. I have defined and contextualized Maya buildings associated with royalty and the different traditions from the Olmec in the Formative to the northern lowlands in the Terminal Classic. My argument here is that within the Mesoamerican Urban Tradition (Sanders and Webster 1988), there are local variations in which rulership and power was expressed uniquely.

Monumental architectural constructions are evidenced at multiple northern sites from the Middle Formative through the Terminal Classic period. Moreover, current evidence points to a diversity of city plans and monumental architecture that was inspired by pan-Maya traditions but refined within local traditions.

During the Middle and Late Formative, large acropolis with triadic building patterns and E-complexes were common. There is currently no definitive evidence of individual rulers or regal behavior during this period. Architecture focused on religious buildings and palace structures are absent. Shrines dedicated to founding dynasties are also absent during the
Formative period. This has led researchers to suggest that early settlements were administrated by a series of collective works through *corveé* labor modulated by work feasts (Dietler and Herbich 2001: 244). These ritual works were part of a central power that possessed the moral authority, as opposed to coercive muscle, to call in labor obligations (Houston et al. 2003; McAnany 2010; Ringle 1999). In other words, competition between groups’ rather than internal social divisions likely provided the rationale for the construction of early ceremonial buildings (McAnany 2010:162). Although it is difficult at this time to argue the specific mechanisms by which authority functioned in the Puuc region, it is safe to assume that agriculture lands, permanent sources of water (such as caves and *aguadas*), and possibly hard limestone (suitable for construction), were important resources since the Formative period (Gallareta Negron et al 2014; Gallareta Negrón and Bey 2012; Ringle et al 2014).

I consider the Late Formative and Early Classic as dynamic periods during which there is remarkable change in the political system from moral to royal authority. On one hand, megalithic constructions and architecture styles become a prominent characteristic of the northern lowlands and signal a pan-peninsular identity (Hutson 2014; Mathews and Maldonado 2006). On the other hand, sites were still borrowing heavily from city planning models (i.e., triadic complex, e-complex and large acropolis) from the south of lowlands. By the 5th century northern sites show both the emergence evidence of a writing system, the construction of range structures and the first archaeological visible evidence of royal courts. Northern royal courts borrow elements from the *kuhul ahaw* system in the south in which a holy lord was responsible for administrating a region, a system that prevailed during the Late and Terminal Classic periods.
So far, I have suggested that the development of the northern lowlands political system, as evidenced by city planning and building types, was heavily influenced by the south. However, the north had its own local identity as evidenced by the megalithic architectural style and the Cehpech ceramic sphere. Likewise, in the Puuc region social differences and authority were based on specific local indicators, such as monumental architecture decorated with abstract designs. This is observed in the relative absence of carved monuments displaying courtly activities, imported goods, and prestigious portable objects, especially when compared to the southern lowlands. These differences are evidence of a qualitative difference in the exercise and display of authority in the Northern Maya Region. Although some sites located near in the Puuc region do possess traditional southern court evidence, many large sites have relatively few.

The identification of urban layouts (i.e., the EPCC) that are exclusively associated with the Puuc zone during the Classic period is an example of a local idea designed to address local political and social needs. Its progressive change into a different iteration of the layout during the Terminal Classic, I argue, is also an adaptation to the political and economical circumstances of the region.

Moreover, I suggest that these qualitative differences between the north and south, represent multiple stages of the Puuc local tradition of urbanism and its urbanization process. Evidence indicates that sites located in the Puuc hybridized multiple global, regional and local characteristics of Mesoamerican cities. It is within this frame that the Puuc region developed its own version of a royal court institution to fulfill local needs as a low-density agrarian society.

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1 Reilly (1999:28) interprets this enclosed court as a lying-down-sky, First-Three-Stone-Place, the site of the
present creation and the location of the first father, the maize lord (See Freidel et al. 1993:59-122).

2 i.e., Chiapa de Corzo and El Mirador, and Zapotec sites such as La libertad, San Jose Mogote and Monte Alban.

3 Middle Formative Chiapas Pattern (and will later be called E-gorup complex), which consists of consists of a North-South axial arrangements of buildings with regulate spaced pyramidal platforms and plazas (Clark and Hansen 2001:4). In MFCP the tallest platform or pyramid is located to the north, and in the south is a paired arrangement of a long, low mound flaked on the west of a tall pyramid. Nearly equidistantly placed between the principal northern and southern mounds of MFCP sites is a smaller platform located near the center of a large, central plaza (ibid). The appearance of E-Group Complexes is also associated with this pattern.

4 Hansen (1998) suggests that use of large raised platforms (2-3 meters tall) of vertical wall, sascab floors, rich midden deposits with densities as high as 4000 sherds per m³ (Forsyth 1993a, 1993b in Hansen 1998), exotic imports and symbols of ruler ship.

5 However, after examining multiple E-Groups in different sites, Aveni and Hartung (1989:451-455) concluded that these complexes did not exhibit exact solar alignments putting their astronomical functions in doubt.

6 The earliest recorded indications of Middle Formative architecture (ca. 800 B.C.) are reported at sites like Kiuic, Xocnaceh and Yaxhom in the form of well-preserved floors dated through ceramic deposits and C-14 dates (Bey and May Ciau 2001; Ringle, Bey and Gallareta Negrón 2014).

7 These has been no ballcourt reported at the site of Xocnaceh.

8 Due to poor preservation and later cover up by Late Classic buildings, megalithic architecture has been poorly understood and hence not taken into account in early architectural synthesis of the northern lowlands.
CHAPTER VI: FROM A MILLENNIA OF MODESTY TO ‘SUDDEN’ AFFLUENCE: THE CONSTRUCTION SEQUENCE OF KIUIC

6.1 Introduction

The construction sequence at Kiuic’s main architectonic group, Yaxché, spans a period from 800 B.C. to circa A.D. 950. Within this long period the site changed significantly in size, form and function. Stratigraphic and architectural analyses indicate an accelerated period of construction that started during the later part of the Early Classic and increased in tempo and mass during the Late and Terminal Classic before Kiuic was abandoned. This construction sequence evidences the social construction of spaces through the appropriation of space, the consolidation of power, through the construction of a royal court, and finally, the malleability with which a landscape could be transformed from residences to ceremonial spaces in just a few generations.

In this chapter, I describe the major construction phases of the five plazas located within the site’s main architectonic groups: Yaxché and Kuche. Architectonic evidence indicates that these plazas had discrete functions as administrative, ceremonial, habitational and kitchen areas. Excavations at these plazas allows us to understand the social construction of these spaces from a chronological standpoint. The first group, Yaxché, is located at the center of the site and has three main plazas at its center, west and east sides (i.e., Dzunun, Ulum and Icim plazas) as well as large patio at its north. The second group is located to the west of Yaxché and has a plaza to the east of its main buildings (i.e., Cuzam plaza). This chapter focuses on the major architectonic changes in each plaza, including floor and
building construction. Through the use of relative and absolute dating techniques, I interpret the diachronic set of events that made the plazas what they are now and their relationship to the urbanization process. I also focus on the construction rhythm (Tsukamoto, Kotegawa and Campaña 2012), formality of the fills, size of the plaza expansion (Catesby 2011), and quality of stone buildings as major indicators of construction activities. Although all plaza construction sequences will be addressed, particular focus is given to the Pyramid-Temple due to its long construction sequence and central position at the site.

6.2 BRAP Field Methodology, Registration and Analysis

**Mapping.** Mapping of topography, architecture and other visible cultural features at Kiuic began during the 2000 season directed by Dr. William Ringle. Data from the survey were registered using high precision recording equipment (i.e., Total Station and GPS) and pared with CAD and GIS computer software. Daily explorations produced detailed drawings of archaeological features through the use of drawing paper and measuring tapes. These drawings were later scanned and integrated into the map using CAD and drawing software. Survey also included a photographic and paper registry of the observed architectonic features in order to identify construction technique, room size, building dimensions, architectural style, chronology and decoration.

**Excavation.** Excavation at Kiuic started in 2000. Since then explorations have focused on the growth and development of the Yaxché group and its adjacent plazas. Excavations were based on previous methodological procedures developed by Bey, Ringle and Gallareta N. at the sites of Ek’ Balam and Labna. The site map grid was used as the basis for excavation units. Multiple cement datums (i.e., “mojonera”) were placed at strategic georeferenced location to provide the basis for the Yaxché group excavation grid. The grid was
traced in 2x2 meter segments with a unique letter and number (the first depending on its east
to west position and the second to its south west position) as a unit identifier. A unique lot
number was assigned to each excavation context (i.e., unit, layer, zone) and associated
artifacts. The lot number system allows effective and detailed control of the cultural features
recovered from the excavation process and permits comparison and analysis between
different units across the site. Units were excavated using arbitrary levels of 20cm or cultural
levels where applicable. Excavation information was recorded in situ using paper forms.
These included basic contextual information (structure number, unit, level, zone and lot
number), measurements of the top and bottom elevation of each level, description of the
unit’s fill, soil color, architectonics and other features. The forms also included general
artifact information recovered at the field site, photographs, drawings and excavation
comments.

**Data Management and Analysis.** Materials recovered from excavations were tagged
and placed in temporary plastic bags before washing. After artifacts were cleaned they were
analyzed, re-bagged and boxed by material and field season. Materials are stored at the
BRAP laboratories at Oxcutzcab, Yucatán, México. All ceramic materials were analyzed by
George Bey (Millsaps College), Chris Gunn (University of Kentucky) and Betsy Kohut
(SUNY Albany). Non-ceramic artifacts from seasons 2000 through 2006 were analyzed and
cataloged by Rebecca Hill (Tulane University).

**Research Objectives, Sampling and Analysis Methods**

My investigation is part of a larger BRAP research goal which is to understand the
development and nature of settlement in the Puuc region. Specifically, I address the
development of the royal court in the Yaxché group and its archaeologically detectable
activities during the Late and Terminal Classic Period. I have three research goals: first, to analyze the stratigraphic sequence of the Yaxché Plaza, specifically Structure N1065E1025, to understand how structures changed through time and what this change meant for the site’s socio-political organization. My aim is to understand the practices that created Kiuic’s social stratigraphy of place (McAnany and Hodder 2009). Here, I propose that construction sequences are the result of social processes in which rulers consolidated and materialized their authority through architecture.

Second, I want to understand the royal court activity regimes by analyzing trash deposits. These discarded artifacts were detected at the corners of major plazas and are associated with the different activities that took place before Kiuic was abandoned. The deposits were recovered over multiple archaeological seasons from different locations of the site; these include both the Yaxché and Kuché groups. The different material assemblages, including ceramic sherds and stone tools suggest that a range of activities, including feasting, took place at these buildings during different times. I correlate these deposits with architectural stages in order to understand both the functions of specific architectonic spaces and the activities that took place in them.

Finally, I compare Kiuic’s urbanization process, royal court and its activity regimes to other sites in the southern lowlands. My goal with this comparison is to contrast the differences and similarities between northern and southern Classic cities and define the essential characteristics that make them urban centers. For this purpose, I compare the stratigraphic history of Kiuic, including its activities and ceremonial deposit regimes to other southern lowland Classic sites.
Kiuc's Relative Chronology: Architecture

The Puuc architecture style, a unique feature for which the region is known, has been extensively studied and described by multiple authors since the 19th century. Researchers like Pollock (1980), Gendrop (1998), Andrews (1995) and Kowalski (2003) have studied the Puuc’s architecture features including both its style and construction technique. Although there are multiple sites that have not been reported, all architectural styles and sub-styles in the Puuc region are currently very well preserved and represented (Andrews 1995a:103).

According to Andrews (1995a) there are four different and continuous architectural phases for Puuc style buildings roughly dated to different chronological periods. During the first phase, buildings have two different architectonic styles:

**Early Oxkintok (A.D. 500-600) and Proto-Puuc Style (A.D. 600-650):** In both styles, buildings are constructed using slab vaults and block walls. Stylistically, these have stone block jambs, exposed roughly dressed stones and heavy plastered decoration. Early Oxkintok buildings also have a plain lower wall zone, low narrow doorways, rough rock masonry and roof combs. Proto-Puuc buildings have a rectangular base with a slightly projected molding, roof combs and plain lower walls, which consist of small dressed blocks with concrete hearting (the facing walls cary all the building weight).

**Early Puuc Style (A.D. 650-750):** During the second phase, buildings are considered to be experimental in their construction technique and design; this change marked the beginning of a local construction tradition. These buildings were constructed using concrete walls, small square blocks and wedged faced vaults. Stylistically, they have round columns, square capitals, single member rectangular moldings, carved glyphs on lintels and jambs, columns carved in human figures, heavy stucco decoration (mostly on the top part of the
structure), broken medial moldings, multiple doorways and small recessed panels.

Puuc Colonette (A.D. 750-850) and Puuc Mosaic (A.D. 850-1000): The third phase is characterized by two architectural styles with the same construction technique. They consist of carefully cut lower walls of concrete, with varying vault stones, and walls are covered with veneer stones. Stylistically, Puuc Colonette buildings have multiple split continuous rows of colonettes for decoration (also called junquillos), specially at the medial molding, multi-member cornice moldings, high vault rooms, lack of human sculptures, slopping upper wall zones and plain or banded colonettes with geometric decoration. The Puuc Mosaic is similar to the Colonette style but more elaborated; it consists in buildings with the upper facade decorated with geometric motifs (i.e., double “G” and “X” pallets, long nose masks, “matt’ and zig zag dented symbols), and stone mosaic technique for decoration buildings.

Late Uxmal Phase (A.D. 1000-1050): The final phase is characterized by the same construction technique (but more sophisticated) and similar style that the Puuc Colonette and Mosaic buildings. Motifs include humans, animals, flora, serpents, thatch houses, masks, plain and complex lattice works, over sized medial and cornice moldings, doorways with receded jambs and lintels, high vaults, and general fine stone work. The style is considerate the peak of the Puuc Style architecture and its only present in the Late Classic Period Capital of Uxmal.

Unfortunately, due to lack of stratigraphical excavations, the vast majority of architectural data is based purely on stylistic features and dates to what Andrews (1995a:7) calls the Classic Puuc Period (A.D. 770-1000). Hence, Formative and Early Classic period architecture are difficult to date. Recent research suggests that megalithic style of
architecture, conjoint with corbelled vaults and triadic groupings, was present at multiple sites in the northern lowlands during the Late Formative and Early Classic period, as evidenced by both ceramic chronology and radio carbon dates (Mathews 2001), and is interpreted as an important part of the regional architectonic identity (Hutson 2014; Mathews and Maldonado 2006; Ringle, Bey and Gallareta Negron 2014; Shaw and Johnstone 2006; Smyth 2000). Megalithic architecture is defined as having large well dressed stones with rounded edges overlying a rubble core (Taube 1995). Stones are over a better in length, pillow shaped, stacked with roughly broken chinking stones placed in between and thickly coated in plaster (Taube 1995:49).

*Kiuic’s Relative Chronology: Ceramics*

Type-variety and chronological analysis of the Kiuic ceramic material was completed by George Bey III (Millsaps College) and Chris Gunn (Kentucky University) throughout the 2000-2006 seasons. The base ground for the ceramic type-variety typology was based on multiple ceramic complexes from northern Yucatán sites that date from the Formative to the Terminal Classic period; these include Oxkintok (Varela T. 1998), Chac II (Smyth 1998), Xkipché (Vallo 2000) and Mayapán (Smith 1971). Based on tens of thousands of sherds, Bey and Gunn (Gallareta Negrón, Bey and Ringle 2001-2006; Gunn 2015) divided the ceramic evidence into six complexes that range from the Middle Formative to the Postclassic period. These are: *Bah* Complex, Middle Formative (800-300 B.C.), *Och* Complex, Late Formative (300 B.C. - A.D. 300), *Chiic* Complex, Early Classic (A.D. 300-500), *Yuc* Complex, Late Classic (A.D. 500-700), *Ceh* Complex, Terminal Classic (A.D. 700-950) and *Zodz* Complex, Postclassic (A.D. 950 + ).
Kiuic’s Absolute Chronology: Radio Carbon Analysis

A total of six samples of charcoal from different contexts located within the pyramid-Temple at the Yaxché group were selected for radiocarbon dating through the accelerated mass spectrometry (AMS) technique. Priorities were given to samples associated to important construction changes and ritual deposits from the structure. The main goal of these analysis was to determine chronologically accurate dates for the major construction phases of the pyramid-temple in particular and the site in general. The location and context of the samples is shown in Figure 6.3. AMS analysis was performed by Beta Analytic Labs in Florida. The specific results including contexts, 13/12C ratio, sigmas and calibrated date ranges are observed in Table 6.1. The location of the calibrated dates in relation to the atmospheric curve is observed in Figure 6.4. The contexts are as follows:

**Beta-377111, Temple 2**: The charcoal sample was located at the center of the unit 5cm under the renovation of Floor 2 (sascab), in a level of construction fill composed of sascab and small to medium amorphous stones. This sample dates the construction of Floor 2 (sascab) interpreted as part of the second pyramid-temple renovation. The sample produced a calibrated date of A.D. 768-900 or Terminal Classic period. Ceramic sherds from associated to this contexts belong to the Ceh Complex, also dated to this same period.

**Beta-377112, Temple 1**: The charcoal sample was located just above the second sascab floor associated with the first construction of the Temple-Pyramid. The sample produced a calibrated date of A.D. 668-778 or Terminal Classic period. Ceramic sherds from associated to this contexts belong to the Ceh Complex, also dated to this same period.

**Beta-377113, N1065-North**: The charred wood from this context is associated with a
deposit of broken ceramic vessels located on top of Structure N1065-North’s floor. The cache, which includes a vase, was found in the northwest and northeast corners. The sample produced a calibrated date of A.D. 688-751 or Terminal Classic period. Ceramic sherds from associated to this contexts belong to the Ceh Complex, also dated to this same period.

**Beta-330900, N1065-East:** The charred wood recovered from this contexts was located beneath a floor level associated to Structure N1065-East, an Early Puuc Style building (A.D. 650-750). The sample produced a calibrated date of A.D. 685-885 or Late to Terminal Classic period. Ceramic sherds from associated to this context (only 5 fragments) belong to the Chiic and Yue complexes dated to the Early and Late Classic period respectively.

**Beta- 377114 and 330903, North Platform B:** The charred wood recovered from this context is associated to the North Platform B. The sample produced a calibrated date of 590-404BC or Middle Formative period. Ceramic sherds from associated to this context belong to the Bah complex also dated to the Middle Formative period.

**Beta- 330902, North Platform A:** The charred wood recovered from this context is associated to the North Platform A floor, one of the earliest evidence of built architecture registered at the site. The sample produced a calibrated date of 522-382 BC or Middle Formative period. Ceramic sherds from associated to this context belong to the Bah complex also dated to the Middle Formative period.

**6.3 Dzunun Plaza Construction Sequence**

The Dzunun Plaza is located directly to the south of Str. N1065E1025, the largest and central pyramidal structure of the Yaxché group. The plaza was constructed artificially on top
of a naturally elevated terrain and was renovated six times between its initial construction ~ 850 B.C. and its abandonment ~ A.D. 950. Architectonically, the plaza is the basis for six currently visible structures. Str. N1065E1025 to the north and Str. N1015E1015 to the south have the longest construction history of the Yaxché group. A summary of plaza construction sequence can be observed in Table 6.2. Below I describe the construction phases chronologically.

**Middle Formative Period (800-300 B.C.), Floors 6 and 5:** The first building on the Dzunun plaza was a long rectangular walled platform located on top of a stucco floor (Dzunun Floor 6) (Figure 6.1 in red). The platform (South platform A) was located in the southern portion of the plaza, built out of small rough stones to measure approximately 0.75 m high and 14.5m N-S x 14 m E-W (Gallareta N. et al. 2004; Bey et al. 2006). The walls and roof were likely made of perishable materials, however no evidence of post poles have been detected. Ceramics and stratigraphy indicate that this long rectangular platform was built sometime between 810 and 760 B.C.

Evidence of a second Middle Formative platform was found at the north end of the plaza (North Platform A). This northern platform is evidenced by a 50cm tall wall made out of semi-carved stones (Figure 6.2). The platform walls were covered with stucco and associated with a stucco floor. Recovered ceramics were identified as belonging to the *Bah* Ceramic Complex, dating this platform to the Middle Formative Period. There is no evidence of any buildings or activities that took place on this platform. A radio carbon sample from the North Platform A is dated to 480-460 Cal BC/410-390 Cal BC (Table 6.1).

Some time after the construction of the South Platform A and North Platform A,
during the Middle Formative Period, both platforms were raised 30cm and renovated with new stucco floors (Dzunun Floor 5). The physical evidence of this floor is observed in both the southern and northern portions of the plaza. The extent of these new platforms (North Platform B and South Platform B) is uncertain. Test pits located evidence of this stucco floor in most of the southern section of the plaza, but not in its northern part, specifically underneath Str. N1065E1025’s southeast, east and northeast corners specifically. A possible reason for the absent floor at the southeast and northwest corners was that they did not preserve due to their close proximity to bedrock.

At some point North Platform B was re-floored and raised about 27cm until it reached the elevation of North Platform A (approximately a 5cm difference) and expanded to the south (its exact dimensions are unclear). Two calibrated radiocarbon samples extracted from the northern platform date to Cal BC 760 to 680/Cal BC 670 to 410 and Cal BC 750 to 685/Cal BC 665 to 640/Cal BC 590 to 405 (Table 6.1, Figures 6.3 and 6.4). The absence of a platform and floors between the northern and southern section of the plaza suggests that during this time there were two platforms, one at the north and another one at the south. Evidence indicates that South Platform B had a superstructure at its southern edge namely (N1015E1015-D). The superstructure consisted of a 30cm high and 13.3 meters long platform with rounded corners that were accessed through a central stairway (Figure 6.5). The two lowest steps of the platform stair consisted of inclined carved rocks, or a inclined wall-style. It is very likely that North Platform B also had superstructures; however, excavations have not revealed any evidence of them. This may be due to the practice of dismantling carved stones from masonry buildings for the purpose of recycling them into new structures. An approximate reconstruction of the group during this time can be seen in
Late Formative Period (300B.C. – 300 A.D.), Floor 4: During this period the southern portion of the plaza was raised 16.5cm and renovated with a new stucco floor. The new plaza measured approximately 28m by 16m in its southern section, dimensions that will remain unaltered until the site’s abandonment around A.D. 950. Architectonically, South Platform C supported at least two superstructures, one located at the easternmost section of the plaza and another in the south (Figure 6.7). The first (N1025E1040-sub) was evidenced by an 8 m long, low retaining wall along its eastern side. The stones were large, roughly cut and rectangular (approximately 50cm long by 22cm high). It is also worth noting that the lowest step is vertical while the second step is an inclined wall-style similar to the steps of N1015E1015-sub. Floor evidence indicates that this structure was contemporary with Floor 5 of the plaza and that Floor 4 partially covered the lower step of the substructure. The second superstructure, N1015E1015-sub, featured a new stairway that measured at least 5.7 m long by 1m wide (Catesby 2011:115). The sub-platform of N1015E1015-sub also retained its inclined wall-style incline. A C-14 sample dates this substructure to 400-350/300-210 BC. The building was approximately 2.25 meters high and built of better-cut stones than those used in previous constructions. An approximate reconstruction of the group during this time can be seen in Figure 6.8.

Early Classic Period (A.D. 300 - 600), Floor 3: Between A.D. 300 and A.D. 600 ancient architects placed a layer of rough rock pavement over most of the plaza before setting a stucco floor (Figure 6.9). Stratigraphically, the rock pavement marks the Formative-Classic transition at Dzunun Plaza. Ceramic materials located below the rock pavement clearly correspond to the Formative Period, while ceramic materials above were dated to the Classic.
Moreover, the pavement also denotes the intention of formalizing the Dzunun plaza as the main center for the Yaxché group. After the plaza was paved, a layer of compact soil and small stones was deposited to fill and construct a thick stucco floor of approximately 7 cm (Figure 6.10). As a result, the plaza was approximately 15 cm higher in both its northern and southern sections. The eastern structure, N1025E1040-sub was dismantled and Floor 3 of the plaza completely covered the first step of this substructure (Bey and May Ciau 2002; Gallareta N. et al. 2004).

During the Early Classic multiple masonry stone buildings were constructed in the plaza, including N1065E1025-sub, in the northern portion, and N1015E1015-C to the south (Figure 6.11). Stratigraphically, the construction of N1065E1025-sub is evidenced by a 16.5 cm level raise with a thick stucco floor in the northern section of the plaza. The new stucco floor was very similar in thickness and color (i.e., orange-yellow) to the floor located at the south end of the plaza, indicating that both were part of the same floor (Figure 6.12). Architectonically, Str. N1065E1025-Sub was a platform made of large rocks of at least three different shapes: a first group consisted of four worked square stones that were approximately 72 cm wide, 88.6 cm tall and 40 cm thick; rough un-carved medium stones; and finely carved square stones that were used for the platforms’ staircase (Figure 6.13). Excavations indicate that Str. N1065E1025-Sub extended about 22 meters to the north, making this structure 22 m by at least 14 m east to west. Its construction was accompanied by a smooth plaster ramp that went from north to south and permitted access to the plaza. The ramp was located on the northwest corner of the plaza; moreover, the platform had its main access to the south in the form of multiple tilted squared carved stones that formed a staircase. The staircase was around 8 meters east-west and composed of at least five steps.
Str. N1065E1025-Sub and its staircase mirrored the southern platform in form and style, making these two structures part of the same architectonic plan. Unfortunately, there is very little evidence regarding what other structures were constructed on top of this large platform of megalithic stones (Figure 6.14).

Sometime thereafter structure N1015E1015-sub was dismantled and renovated into a long single of a slab-stone vaulted building, with a staircase and multiple entrances (N1015E1015-C). These architectonic features suggest that this long rectangular building could have been used as a council house or “popol nah” (Bey 2003; Bey et al. 2006). The new staircase (Staircase C) was approximately 13.4 meters long and extended to the west but maintained its orientation. This change was likely due to plaza renovation and construction of a new dominant megalithic structure to the north. Excavations indicate that the pool nah had six steps that were less than 1 meter in width and inclined, although only the bottom two steps were found completely in situ. Like the steps, the platform walls to the east and west of Stair C were also inclined and built of medium sized, roughly shaped rectangular stones. The tilted line of carved stones was used as an access staircase to the megalithic platform was located at the same floor level as Staircase C (Dzunun Floor 3).

Evidence of white powder combined with large rough stones was located near the bedrock strata at both the south and northern portions of the plaza; because this same white powder and rough stone mix was located in the same stratigraphic context on both sides of the plaza, it suggests a chronological contemporaneity between the northern and southern portions of Dzunun. Architectural changes, aesthetic style, stucco cover and associated ceramics were very similar at both of these buildings during the Early Classic period. This suggests that they were contemporaneous and perhaps conceived as part of the same
architectural plan.

At this time, the pool nah’s superstructure was also modified and renovated. The new building was expanded to 16 m long by 3m wide. The principal façade looked north into Plaza Dzunun and had six entrances, while the back of the building had two entrances on the eastern and western sides. The building’s door jambs, which were composed of multiple carved stones of several sizes, its masonry slab vaulted roof and tenons found in the rubble suggest that the structure was covered in modeled stucco decoration. The characteristics of the building define it as Early Puuc architectural style, dated between A.D. 650 and A.D.750 (Andrews 1995; Gendrop 1983; Pollock 1980).

These large-scale modifications suggest that the Yaxché group was the main focus of political and religious activity during the Early Classic. Based on plaza plan, Bey (2006) suggests that from this time on, Str. N1065E1025-Sub was the main residence of Kiuic’s early ruling family. This is also suggested by the absence of small stone house platforms, which were common in the Formative period (Bey et al. 2006), indicating a new arrangement of space, not only in the Yaxché plaza but also in its surroundings (Figure 6.15).

Late Classic Period (A.D. 500-700), Floor 2: The Late Classic Period is characterized by the construction of multiple vaulted Early Puuc II style buildings throughout the plaza, most of which are still standing today. Moreover, Dzunun underwent a dramatic spatial change when the group was transformed from an open, civic ceremonial area to a more enclosed space. The plaza level was raised 15cm and renewed with a stucco floor. The plaza access ramps located in the northwest and southwest corners were also raised and renovated to connect two newly constructed plazas to the east (Ulum) and west (Icim). (Figures 6.16
Around A.D. 600, a cache deposit of a jar and an obsidian blade were placed in the construction fill of Floor 2 at the northeast corner of the plaza. The cache, interpreted as part of a construction ritual, dedicated to structure N1065E1025-East, a vaulted building dated between A.D. 590-700 (Andrews 1995). The building was constructed on top of a platform faced with carved stones and faced the Ulum plaza at the east (Figure 6.18). C14 samples yielded a calibrated date of Cal AD 440 to 490/Cal AD 510 to 520/Cal AD 530 to 600 (see Table 6.1). Between A.D. 750 and A.D. 800 another vaulted building, Structure N1065E1025-West, was constructed in a Early Puuc Transitional Style at the north end of the Dzunun plaza. The building had three rooms and its floor plan was approximately 2.5 m wide by 21m in length. The three rooms were open to the west with the exception of the southern room, which opened to the south towards the Dzunun plaza. A new building, N1065E1025-North, was constructed on the northern portion of the platform, between the East and West buildings. Evidence of this building consists of two retention walls made of large rough stones and a stucco floor. It is possible that this building was a single room, vaulted Early Puuc style construction similar to N1065E1025-East (Figure 6.19).

At the south end of the plaza, Structure N1015E1015 (the council house) did not have any major architectonic renovations except for the addition of three interior benches (Figure 6.20). The benches were annexed to each wall. Buildings with a similar floor plan and characteristics during the Late Classic have been identified in other sites such as Str. 44 in Dzibilchaltún, Str. 7 in Labna, GT-20 in Ek' Balam and Str. 10L-22A in Copán. All of them are defined as vaulted stone buildings with a long central room with multiple entrances, creating a large and accessible interior space. Long staircases with extended steps
characterize the front façades. As discussed earlier, these buildings have been interpreted as council houses; their function is argued to be that of meeting rooms for civic or ceremonial events.

By A.D. 600 the Icim and Dzunun plazas were connected by ramps, a feature common to civic and ceremonial plazas and to council houses as seen in other northern Maya sites such as like Labna, Chac II and Ek' Balam (Bey et al. 2006). These features gave a new monumental dimension to the Yaxché group, consolidated its status as a palace group and reinforced its character as a center of social, political and religious activity at Kiuic. Big open plazas, such as the one observed in the Yaxché group, could have developed as hospitality and feasting centers. Moreover, Gallareta N., Bey and Ringle (2014) argue that the distribution and building types at this point indicate the consolidation of an Early Puuc Civic Complex, which consists of a modest pyramid, a long structure at the opposite side of the pyramid or by its side, ramps, a rectangular plaza arrangement and vaulted stone roofs. A reconstruction of the Yaxché group during this time can be seen in Figures 6.21 and 6.22.

**Terminal Classic Period (A.D. 700-950), Floor 1:** During this period the space between the three structures was filled with rough stones and little to no soil. Charred material recovered from multiple burned ceramics found on top of N1065-N’s floor (interpreted as a termination ritual), dates the event to Cal AD 685 to 885 (Table 6.1). Both structures N1065E1025 East and West were filled with rough stones but were not dismantled. Although the buildings facades were clearly visible, the structures were partially buried on all sides by seven retention walls that sustained a room with a stucco floor on top (Temple 1c). Charcoal from this floor dates the construction around A.D.670-775 and ceramic evidence from the construction fill dates to the Terminal Classic Period. Charred material extracted
from a *sascab* floor dates to Cal AD 670 to 775/Cal AD 790 to 800 (Table 6.1, Figure 6.23). The architectonic characteristics, form, style and orientations cannot be determined (Figure 6.24).

Finally, Temple 1st also dismantled to construct a second summit temple, Temple 2nd. A radiocarbon date from below the stucco floor dates this structure Cal AD 770 to 900/Cal AD 925 to 945 (Table 6.1, Figure 6.25). Ceramic and architectonic evidence (i.e., “boot stones” used to sustain the vault) also yield Terminal Classic period ceramic types. The temple was around 136cm higher then the previous substructure and had a 3.5 m by 5 m room with a bench (Figure 6.26). The large room area (17.5 m²), paired with its 2.84-meter high vaulted ceiling, makes this temple the tallest and biggest of its kind at the site. The room had four stones with “mat” signs at its corners, a symbol of royalty for the ancient Maya (Figure 6.27). Stucco decoration associated with the structure suggest that the temple was heavily decorated with anthropomorphic faces on its walls (Figure 6.28). At its base, Str. N1065E1025 was 25.5m north to south, 18.2 meters east to west and around 10.5 meters high (Figure 6.29). The frontal staircase of the structure also renovated and expanded into the plaza and a small cylindrical altar, or *picota*, was added right in front the central axis and aligned to the structure’s bench.

Evidence also suggests that the temple might not have been finished. This is observed on the west side of the basal platform, where the covering of structure N1065E1025-West was not completed, leaving part of the building and its roughly filled rooms partially exposed. Moreover, evidence suggests that the bench or altar located in the temple room was looted. A large square rock placed on top of the altar seems to have been taken out of the bench and later replaced with smaller carved stones to fill the gap. The remains of a skull
sculpture made of limestone was located as part of the bench fill. Room floor shows evidence of being burned at multiple locations. It is unclear if this indicates a termination ritual or use marks from other burning activity. A reconstruction of the Yaxché group during this period can be seen in Figure 6.30.

6.4 Patio B Construction Sequence

Patio B is a rectangular plaza located on the north side of Structure N1065E1025 in the Yaxché group. Its location and configuration pinpoint the plaza as a service area or kitchen for Structure N1065E1025. The patio had two major occupations during the Late Classic period, both associated with the construction of the Kiuic royal court. The patio is contained by a large raised platform with retaining walls made out of large rough stones. The artificial platform covers an area of approximately 671 m² with a water cistern or *chultún* on its central axis. The patio has two small secondary structures made of perishable materials on the east and west sides of the patio. The first, Structure N1090E1055, measured 9.5 m in length and 3.4 m in width with probably two rooms opening to the west. A second building, structure N1075E1045, located in the southeast corner of the patio faced north, with masonry walls that are still standing to a height of 1.3-1.6 m. The primary building, Structure N1100E1040, is a “C” shaped, non-vaulted structure located at the northern edge of the patio. The structure has a foundation made of a double line of carved stones; both upper walls and ceiling were made out of perishable materials. The structure measured 9.5 m wide by 3.4 m in length during its last construction phase and had three rooms (west, central and east) all of which opened to the south towards the patio. The west room had an area of 31.4 m² and three low benches at its north, east and west sides. The east room had an area of 17.36 m² and two low benches, one at the west and another at the north. The central room was the smallest with
an area of 12.13m² and had no benches.

**Middle Formative Period (800-300 B.C.), No Floors:** The area where Patio B is currently located was first inhabited during the Middle Formative Period as suggested by artifacts such as early ceramic sherds, worked shell and flint recovered under the patio’s construction fill, and two substructures located to the west and south of the patio’s retaining wall (Gallareta Negron, Ringle and Bey 2010). Both of these substructures are interpreted as residential foundation braces, probably of apsidal shaped houses (Figure 6.31).

**Late Formative-Late Classic Period (300 B.C.-A.D. 500), No Floors:** The transition from the Middle Formative to Late Classic Period was marked by the destruction, *via* termination ritual, of the Middle Formative foundation brace located at the west end of the patio. The ritual was evidenced by a shattered vessel and shell pendant cache. Afterwards, a stucco floor covered the area between A.D. 300 and A.D. 500.

The first construction activity dated to the Classic Period at Patio B occurred around A.D. 500. Str. N1100E1040-2* consisted of a rough stone platform with a small room and a stucco floor in the northern section. Although this first floor did not expand to the east, stratigraphic and ceramic evidence indicate that Structure N1100E1040-2nd had the same length of its later version *sans* west and central rooms. Structure N1100E1040-2nd was probably rectangular in shape and opened to the south.

**Late and Terminal Classic Period (A.D. 500-950), Floors 2 and 1:** During this period, which corresponds to the creation of the Yaxché royal court, the main Patio B plaza was built and annexed to the north of Structure N1065E1025-North. The platform was built in a single episode between A.D. 500 and A.D. 600 using roughly shaped large and medium stones as
construction fill with little soil. The lack of formality, rough materials and reuse of stone materials in comparison to the construction of other plazas, such as Dzunun, give the impression of a “cheap” and fast construction with little planning. It is likely that the platform was covered with a stucco floor, however it did not preserve. During this same construction event a *chultún* or water cistern was built in the center of Patio B. The cistern was constructed into *sascab* and covered with stucco. The inclination around the opening to the *chultún* was effective for capturing rainwater. The *chultún* mouth was 42cm at its narrowest portion and 75cm at its widest. The cistern was rectangular/spherical in shape and measured 45.5 by 43.7 inches. This gives an estimated capacity of 610.61 gallons or 2311.4103 liters at full capacity, enough to supply 1.9 liters of water daily to 10 people for 120 days.¹

Between A.D. 600 and A.D. 700, Structure N1100E1040 was remodeled and expanded. The building was raised and remodeled into three open rooms with benches (east, center and west) and a 2nd stucco floor. The east room was probably constructed in a separate event, as indicated by the slight misalignment of the east and central rooms.

### 6.5 Icim Plaza Construction Sequence

Plaza Icim is located to the west of the Dzunun Plaza at a slightly lower level in elevation. During its final construction stage, the plaza measured approximately 55 m north to south by 40 m east to west, creating an area of 2200 m² that supported 10 structures and a patio. The plaza has four major construction phases that range from the Middle Formative to the Terminal Classic periods. Its main occupation period is the Late Classic, when the plaza space and buildings were consolidated to form the main elite residential space of the Yaxché group. The plaza was divided in two major areas, Icim North and Icim South. The first was a
relatively open area that lacked structures on its east and west sides and probably function as a work area. The later can be characterized as a quadrangular plaza that was defined by multiple vaulted masonry buildings that faced towards the open plaza.

**Middle-Late Formative Period (800 B.C. – A.D. 300), Floor 4 and 3:** The first occupation of the Icim Plaza dates between 800 B.C. and A.D. 300 B.C. Evidence indicates that during this period the area was raised approximately 58cm above bedrock and leveled with red soil (Figure 6.32). The floor level was detected only in the southern part of Icim, however, ceramics recovered at the north end also indicate the presence of dwellers from as early as 800 B.C. Moreover, extracted charred material dates the floor level to cal BC 920-800 (p=0.95) and cal BC 840-520 (p=0.95), confirming its Middle Formative date (Gallareta Negron, Bey and Ringle 2015). During this time, Icim North contained the remains of two low stone platforms that were built directly on bedrock (Bey et al. 2007; Gallareta N. et al. 2005, 2006). These platforms were probably for perishable houses. Moreover, two roughly circular features composed of burned clay were the only other features dating to the Middle Formative found in the northern part of Icim (Gallareta N. et al. 2006, 2007).

Several hundred years later the plaza was raised and expanded. Stratigraphic evidence indicates that the Middle Formative *sascab* floor was covered by 6cm of light brown soil of fill, followed by a 30cm layer of medium rough stones and brown soil and 20cm stratum of brown grayish soil before constructing a thick (7cm) stucco floor that was built between 300B.C. - A.D. 300. This renovation was contemporary with a curved stucco floor located at the north end of the Icim plaza in Unit B25 (Figure 6.33), indicating that Icim plaza extended around 39.2m by 31.4m. Ceramic evidence dates this floor to the Late Formative Period.
Early Classic Period (A.D. 300 – A.D. 500): Just as in other locations of the site, the Early Classic Period at Icim Plaza was marked by a relatively low investment in building construction. This is also observed at the northend of the plaza, where the next stucco floor dates to the Late Classic Period. This indicates that the plaza might have lacked a floor before the Late Classic Period.

Late Classic Period (A.D. 500 – A.D. 700), Floor 2: During this period the thick Late Formative Floor at the south end of the plaza was covered by approximately 70cm of brown and red soil after which a rough stone pavement and a new stucco floor, filled with red soil, were constructed (Figure 6.34). The floor fill had mixed ceramics including early variations of Yokat Striated and Early Slate dated to the Late Classic Period. The north side of the plaza was also raised and a stucco floor was constructed, although it lacked stone pavement. Ceramic evidence dated to the Early Classic Period was found in this floor fill. Moreover, the stucco floor was located under a megalithic stone that was used as a step or retaining wall for Str. N1065E1025-sub, indicating an expansion of this structure into the Icim plaza as a consequence of Structure N1065E1025-sub being remodeled into a large platform. Furthermore, excavations indicate that a row of carved stones that went from north to south was constructed between the Icim and Dzunun plaza at the north. It is possible that these stones were constructed as a small step into Dzunun plaza, since Icim was at a lower level. A portion of the platform faced with carved stones was also excavated at the northern section of the plaza, however there is not enough evidence to understand its size or function. During this period, multiple vaulted buildings and a patio were constructed to the west. Patio A at the west of Icim plaza was constructed during this period. The patio supported two structures: an annular structure, common for ceramic firing and limestone production in the Puuc region,
and a C-shaped structure, probably a Late/Terminal Classic elite service building (Bey et al. 2003; Catesby 2011; Hill and Bey 2002).

Stone buildings from the Icim Plaza during this time are classified as Early Puuc Style. This regional style is dated between A.D. 700 and 800 (Andrews 1986) and the buildings usually feature one or two rooms with frontal openings, typically with columns and capital. Decoration included the use of anthropomorphic figures of modeled stucco that was attached to stone buildings by long semi-cylindrical stones called “spigas” above the middle molding (Gallareta N., Bey and Ringle 2014). The style was replaced circa A.D. 800 by larger and more costly constructions made on junquillo, colonette and mosaic styles, as evidenced at the buildings from the Kuché group.

Terminal Classic Period (A.D. 700 – A.D. 950), Floor 1: Evidence indicates that the plaza floor was renovated one more time in the southern and central areas. During this time, structure N1020E0990 was remodeled. Floor 1 covered the basal platform and a vaulted three-room building was constructed. The structure had three two-column entryways facing north, each corresponding to one of its rooms. At its rear there were two entrances to the center and east room, similar to Structure N1015E1015-C at Dzunun, although the first was divided in three rooms while the later consisted of one large hallway with benches.

A sacbe that connected the Yaxché group to the Kuche group was constructed during this period (Figure 6.35). The sacbe, which was 68m long by 7.3m wide, is associated with the construction of the pyramid temple that replaced the royal court in the Dzunun plaza and the massive construction efforts that are observed in the Kuche group. A flat stelae was placed beside the road between these two architectonic groups. Evidence indicates there were no other massive construction projects in the Icim plaza after the construction of the road.
Moreover, accumulated trash deposits found throughout the plaza indicate that Icim was no longer maintained. For example, a test pit located at the east end of the plaza evidenced a midden deposit of ceramic sherds located on top of a collapsed wall. This indicates that some structures were not functioning or were partially collapsed while others were functioning or being constructed. Just as with Patio B and Plaza Ulum, it is difficult to assess the function of the vaulted structures in this plaza after the royal court fell into disuse. What is certain is that it was partially abandoned and the royal family moved to the larger and “newer” Kuche group residences.

6.6 Ulum Plaza Construction Sequence

The Ulum plaza is located at the easternmost sector of the Yaxché group. The plaza main structure is N1050E1065 a 6.1m long, 3.6m wide and 5m tall building. It had one vaulted room (6.9 m north to south and 4.10 m east to west) looking to the west, on top of three terraces and a wide staircase entrance. Characteristics of this building identify it as a temple. At the center of the plaza there is a depression, which Pollock (1980: 362) suggested may have been due to looting. Adjacent to this depression are three large well-dressed stones (flat stelae), measuring 225x62x28 cm, 174x60x34 cm, and 138x66x34 cm respectively. Pollock (1980: 363, Figure 609) notes that one was carved with a skeletal motif, however this monument is missing from the plaza. Ulum Plaza’s was constructed during the Early Classic Period; however, activities had been taking place at the locale since the Middle Formative Period and continued until the Terminal Classic period.

Late Formative Period (300 B.C. – A.D. 300): Excavations indicate that a platform of rough stones was constructed on the east side of the Icim plaza, just below where Structure N1050E1065 would be constructed centuries later. The platform was oriented north to south,
there was no stucco floor associated with the plaza at this time. There is currently very little information that can inform about its function or form.

**Late Classic Period (A.D. 500 – A.D. 700), Floor 2:** The plaza’s first stucco floor was constructed around A.D. 500. Evidence indicates that it was an open plaza, but it is not clear if there were any permanent structures at the time. It is worth mentioning that before this period, only the west portion of the Ulum plaza had a stucco floor, probably associated with either Str. N1065E1025-North or N1065E1025-East.

Ceramic and stratigraphic evidence indicates that between the Early and Late Classic Period (A.D. 400), the plaza was raised approximately 50cm and filled with brown soil and *sascab* to form the basis for a plaster floor (Floor 2).

The new floor level was accompanied by the construction of Str. N1050E1065-sub, a one room vaulted building with a west staircase made of rough stones worked into rectangular shapes with rounded corners (Figure 6.36). The main room had no socle and roughly the same shape as its Terminal Classic version. A human skull was placed as part of the floor fill before this structure was constructed. The skull shows no evidence of any funerary treatment; it was placed as part of the construction fill without any offerings.

**Terminal Classic Period (A.D. 700 – A.D. 950), Floors 1:** The Terminal Classic at Ulum plaza is the period with the largest investment in construction (i.e., buildings, floors and ceremonial deposits) and also when the plaza fell in disuse. During this time the floor of the plaza was covered with a layer of paved stones and brown soil as a base for a new stucco floor (Floor 1) and ramps built to connect Icim to the Dzunun plaza. The placement of a pavement in both the Ulum and Icim plazas and their connection *via* stone ramps to Dzunun
was part of Yaxché’s Terminal Classic expansion project (Figure 6.37).

During this time, Str. N1050E1065-sub was partially dismantled, and a new staircase (Staircase A), basal body and vaulted room were constructed in its place. A cylindrical altar or “picota” was placed in front of the staircase and was probably marking the east-west axis of the building. During this new construction phase the building also functioned as a temple. The presence of in situ “espigas” or stone tenons in the temple’s façade and the remains of modeled stucco in the excavation units suggest that the upper part of the building was covered with stucco decoration (Bey et al. 2006). Its architectonic characteristics indicate that it was built in an Early Puuc II style that dates between A.D. 700 and A.D. 800 (Gendrop 1998; Pollock 1980). During its last construction phase the plaza featured at least two structures, one was a vaulted temple in a space that was approximately 25m north to south and 20 meters east to west. An altar and flat stelae at the center were also constructed during this time and associated with the new east temple. During the later part of the Terminal Classic Period the plaza and its temple were abandoned and ritually terminated. The floor and part of the walls of the east temple (N1050E1065) were heavily burned.

6.7 Cuzam Plaza Construction Sequence

Plaza Cuzam is the main open space within the Kuche Group, located to the west of the Yaxché group to which is connected by a 70m x 7m road or sacbe. During its last construction phase, the plaza area of 3044m² was framed by at least five multi-room vaulted structures. The plaza has two major construction phases that can be dated between A.D. 500 and A.D. 950. However, ceramic evidence indicates that this area could have been occupied as early as 800 B.C. It is likely that the ceramic remains belonged to the same group of people who were dwelling on the 1st Floor occupation of the Dzunun plaza, sans the early
Late Classic Period (A.D. 500-700), Floor 2: The first construction project consisted of a platform in the northern sector of the Plaza. This process consisted of leveling the area with soil and small rocks before constructing a 2cm thick stucco floor. The final result probably consisted of a residential plaza or small platform; however, there is little evidence of any other architectonic feature at this time. Based on the stratigraphic evidence I suggest that this first iteration of the plaza was restricted to the north and had an approximated length of 40m by 40m.

Terminal Classic Period, Floor 1 (A.D 700-950): The second, and much more elaborated, construction sequence started by raising (by 1.5 meters) the level of the Plaza (Figure 6.38). This was done through the use of large rough rocks deposited directly on Floor 2 without any soil layer in between. Afterwards, a layer of small rocks was placed on top of the rough stones, following the construction of a stucco floor. Floor 1 did not preserve well, probably due to the lack of quality in its construction fill (a similar technique was used at Patio B and also resulted in a poorly preserved floor). The estimated size of the plaza is 78m from north to south and 42m from east to west.

The Terminal Classic Period in the plaza also was characterized by a large amount of construction. All five-multi room vaulted buildings, one of them two stories high as observed today, were built during this period. These include structures N1025E0830 (Figure 6.40), N1050E0815, N1070E0820, N1095E0830, and N1100E0850. Str. N1050E0815 is possibly the main public building of the Kuche group. The building was roughly 29.5 meters long and 11 meters wide. It is two stories and has a total of three rooms.
Ringle et al. (2001) notice that it is likely that the lower part of the central room consisted of a solid block of masonry that supported the room positioned on the second story of the building. The structure had two tandem rooms on the south and north sides and two rooms in tandem in the center. Ringle et al. (2001) notice that the preserved vault stones indicate that the buildings were amongst the highest and widest at the site. Three Cauac nose sculptures were located between Str. N1050E0815 and Str. N1100E0850. This indicates the presence of mask stacks possibly located at the building corners (Figure 6.41). This feature is found at other Puuc sites such as Labna, Uxmal and Kabah. Moreover, Gendrop (1998:169) dates the particular style of this Cauac nose to A.D. 770-880. This is consistent with the architectural style of the building, a Colonette/Mosaic that Andrews (1995) dates to the later part of the Terminal Classic Period (A.D. 850 – 1000).

6.8 Summary

The site of Kiuic had a continuous occupation from the Middle Formative Period throughout the Terminal Classic Period. The construction sequence can be seen in most of the stratigraphic record of the site, but its most notable at the construction sequence of the Temple-Pyramid located at the center of the Yaxché group (Figure 6.42).

During the Formative period, the Yaxché group was the center of the site, as evidenced by raised platforms, a floored central plaza and surrounding foundation braces. Kiuic remained a small community, marked by a slow tempo of construction from 800 B.C. to until A.D. 300.

During the later part of the Early Classic Period, dwellers raised the height of Dzunun Plaza and constructed at least two structures with inclined-style walls. Although there is very little evidence of the functions of these buildings, their size, access staircases, and overall
architecture, including the construction of a yellow/orange stucco floor on top of the early Formative platforms, indicates a formal investment in architecture and a marked inequality among the site’s dwellers. Moreover, the construction of the yellow floor, stone pavement, and the construction style of multiple stone structures also suggest a formal construction project. Aside from the Dzunun Plaza, there is little evidence of any other large investment in architecture at Icim and Ulum. Evidence suggests that Formative floors were used during the Early Classic or that the plaza walking space was covered by soil.

The Late Classic Period marks the consolidation of the royal court in terms of construction activity and formality. The accelerated process of construction started during the transition from Early to Late Classic as part of an effort to renovate the Yaxché group within a single project. The Early Classic architecture (with inclined walls) was replaced by Early Puuc Style buildings in all of Yaxché’s plazas. Moreover, the construction of N1065-E, N1065-W, N1065-N and N1015-B at Dzunun Plaza, an East-Temple at Ulum and the multiple residential buildings and patios mark the consolidation of power in the Late Classic Kiuic landscape. Moreover, monumentality during this period was constantly maintained through architectonic renovations and re-construction of structures (i.e., Str. N1050E1065 and Str. N1015E1015). There was a clear tendency to privatize space from the Early to the Terminal Classic Period. This can be observed in the following constructions: a barrier between Dzunun and Ulum plazas, the blocking of entrances to N1015-B, and the construction of ramps and other structures to monitor the entrance to the plazas.

The Terminal Classic Period is marked by an even larger construction effort that is manifest in all parts of the site. During this period the Early Puuc Style buildings were no longer renovated and the main focus of the site changed to the Kuche and Chulul groups to
the west and south of Yaxché. The function of Early Puuc Style buildings at this time is uncertain. It is significant that they were preserved (i.e., Icim’s buildings were not looted or dismantled) during the Terminal Classic, which suggests they were still inhabited. Other buildings however, like the Str. N1015, N1065-E, N1065-N, N106-W and the East-Temple, were either partially dismantled, ritually terminated or significantly altered. Str. N1065E1025 was transformed into a large temple (temple 1+) that was renovated at least once (Temple 2+). Yaxché was connected to the Terminal Classic site center, Kuché, through a road or sacbé. The new site center was much more expensive in terms of quantity and quality of construction. The tempo of construction was very high, as evidenced by the multiple Colonette/Mosaic Style stone buildings constructed in a short period of time before the site was abandoned at the end of the Terminal Classic Period. Moreover, some of the structures were not finished at all, a pattern that coincides with other Terminal Classic sites in the Puuc region (Prem 2000:304).

The Late Classic initially marked a period of consolidation of power at the Yaxché group. Buildings were renovated often and the tempo of construction accelerated exponentially from the Early Classic until the site’s abandonment during the Terminal Classic Period. This suggests that by the Late Classic Period, when the construction tempo began to accelerate, each generation of rulers may have sponsored a renovation of the royal household, temple and offices. During this time, Yaxché was the political, ideological and social center of Kiuic, as evidenced by the investment in monumental architecture, ritual activities and enclosed administrative and ritual spaces. In the next chapter, I analyze the activity regime enacted within the Yaxché plazas based on materials from associated midden deposits. All of these deposits date to the Late and Terminal Classic Periods, when Yaxché
hosted residential, administrative and ceremonial activities.

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1 To Brainerd (1958:30), 50 gallons per day per chultún is a reasonable yield figure. This means that a maximum of 25 families might be kept in minimal drinking and cooking water from a single average chultún.

2 It is likely that it was partially used for residence or storage; however, this implies that some part of the court or royal families were still dwelling and somewhat maintaining the plaza.

3 The modeled stucco that covered the sub-temple of Ulum plaza was dismantled, and a new building was constructed. The stucco decoration was found in a midden deposit outside the plaza.

4 This looks a lot like the bench from Temple N1065E1025. Makes me thing that either the design was similar or maybe they recycled stones from the building to construct the bench.

5 Ceramic types at Poso 3: Achiotes Unslipped (800-300A.C.), Complejo Bah Tardio, Dzudzuquil Complejo Bah Tardio, Chancenote Striated Complejo Bah Temprano / Och (300 A.C.- 300 D.C.), Sierra red Och (300 A.C.- 300 D.C.), Aguacate orange Complejo Yuc (500-700 D.C.) and timucuy orange polichrome. This means that they rock floor one and then filled with trash as base and then placed rocks as a more efficient base for the plaza floor. This speaks of the intentionality they had to build heavier buildings or maybe to raise the platform over Yaxché. Other interesting detail is that the size of the rocks indicates acquisitive power. Where did they get those rocks? This process is completely different at Yaxché.

6 It is possible that the group of people living in this area had leveled the naturally ridge with soil and build houses out of perishable materials. However, we did not find direct evidence of this architecture during the excavation process.

7 There is a 50cm difference between the levels of Floor 2 in the northern section compared to the south. This might indicate the presence of a step somewhere in between the ancient Floor 2 plaza.

8 A Colonette Style building which Andrews (1995) dates to the Early Terminal Classic (A.D. 750-850). It has a length of 30 meters by 4.5 of width and four rooms facing to the north.

9 Str. N1070E0820 is a vaulted three-room building of an unknown architectural style. The building is 17.2 meters long by 4.1 meter wide and it's located at the east portion of the plaza and east probably constructed using the east hill as a base for the building.

10 Str. N1095E0830 is a vaulted two-room building of a late Colonette Style or Colonette/Mosaic. The building is 12.3 meters long by 4.8 meters wide and its located at the northeastern cornet of the plaza. The structure had a collapses chultún at its east side.

11 Large and wide rooms are also detected at the “house of diamonds” located at the Chulul Group and the central room of Str. N1065E1025 at the Yaxché group. All of these structures are roughly contemporary.
FIGURES FOR CHAPTER 6

Figure 6. 1 Dzunun Formative South Platforms A and B (from Catesby 2011)

Figure 6. 2 Structure N1065E1025 Pozo 1, East Profile
Figure 6. East Profile of Structure N1065E1025. AMS dates.
Figure 6.4 Structure N1065E1025 Calibrated AMS Dates
Figure 6. 5 Structure N1065E1025 Calibrated AMS Dates

Figure 6. 6 Reconstruction of the Yaxché Group during the Middle Formative
Figure 6. 7 South Platform C (green square) and location of known superstructures

Figure 6. 8 Reconstruction of the Yaxché group during the Late Formative period.
Figure 6. 9 Dzunun Plaza Pavement south of Str. N1065E1025

Figure 6. 10 Dzunun Plaza South Floor 3
Figure 6. 11 N1015E1015-C during excavation

Figure 6. 12 Partially Dismantled N1065E1025-Sub Platform
Figure 6. 13 Str. N1065E1025-Sub details
Figure 6. 14 N1065E1025-Sub, Royal Court Front Façade during the Early Classic period.
Figure 6. 15 Reconstruction of the Yaxché group during the Early Classic period

Figure 6. 16 Icim to Dzunun Plaza Stair Access (South Entrance)
Figure 6. 17 Dzunun-Icim Plazas Stair North Entrance

Figure 6. 18 Structure N1065E1025-E
Figure 6. 19 Structure N065E1025-W

Figure 6. 20 Structure N1015E1015-A
Approximate Extension of Dzunun Plaza

Evidence of N1065-N
Evidence of N1065-W
Evidence of N1065-E

Icim Plaza Access
Staircase Access

Figure 6. 21 Classic Period Yaxché Royal Court
Front Facade
Figure 6. 22 Reconstruction of the Yaché group during the Late Classic period

Figure 6. 23 N1065E1025 Temple 2nd Sascab Floor
Figure 6.24 Structure N1065E1025, Terminal Classic Temple 1a.
Approximate Excavation of Dzunun Plaza

Figure 6.25 Structure N1065E1025, Terminal Classic Temple 2nd
Figure 6. 26 N1065E1025 Temple 2nd Room

Figure 6. 27 Modeled Stucco Masks Associated to Icim and Dzunun Plazas
Figure 6. 28 Stone fragments inscribed with "Mat" or "Pop" motif located at Str. N1065E1025's Corners

Figure 6. 29 Structure N1065E1025 Temple Front Façade
Figure 6. 30 Reconstruction of the Yaxché group during the Terminal Classic period

Figure 6. 31 Patio B's South Formative Substructure
Figure 6. 32 Icim Plaza Stratigraphic Sequence

Figure 6. 33 North Icim Plaza Stratigraphic Sequence, West Profile
Figure 6. 34 Yaxché-Kuché Sacbé (left) and its Associated Flat Stelae (right)

Figure 6. 35 Yaxché-Kuché Sacbé (left) and its Associated Flat Stelae (right)
Temple A-sub, Temple A, and Platform 3 during process of excavation (Catesby 2011:176)

Uum Plaza stone pavement

La Plaza Ulum y la Estr. N1050E1065 durante la primera fase de crecimiento importante de Kiuic se construyó la primera etapa del templo (Estr. N1050E1065) en el lado este de la plaza Ulum (figuras 9 y 10). Dos pequeños templos más, así como una serie de ofrendas halladas dentro de la plaza asociadas al Templo A, indican que la plaza Ulum funcionó como una área ritual privada de los residentes del Grupo Yaxché. La plaza Ulum también contiene varios altares planos y estelas, así como una probable tumba saqueada (Bey et al. 2008, 2009, 2010: 7-16). Durante la temporada de campo del 2005, las exploraciones en la Estr. N1050E1065. Su excavación mostró que los tres peldaños inferiores de la construcción más tardía de la escalera (Escalera A) estaban bien preservados; también se encontró que el peldaño inferior tenía restos de su recubrimiento mostrando que el Piso 1 de la plaza se unía a este peldaño (Bey et al. 2006). La excavación de la temporada del 2006 mostró que la estructura está formada en realidad por una escalera, tres plataformas escalonadas (1, 2 y 3) y un edificio en la parte superior y tanto la escalera como el edificio tenían una fase constructiva previa (Bey et al. 2007: 4-2) (figuras 9, 10 y 11).


Figura 6. 37 Uum Plaza stone pavement
Figure 6. 38 Cuzam Plaza Construction Fill

Figure 6. 39 Structure N1095E0830, Colonette/Mosaic Style, Terminal Classic Period
Figure 6. 40 Structure N1025E0830 Kuché Group. Colonette Style, Terminal Classic

Figure 6. 41 "Cauac" or “Chaak” Nose fragment, Cuzam Plaza
Figure 6. East Profile of Structure N1065E1025

Formative Period Wall
Temple 1st, Sascab Floor
Carved Stone Wall
Not Excavated

Temple 2nd, Room 1
N1065-Sub
Burned Individuals

Dzunun Plaza
Floor 3 (Sascab)
Vessel Cache/Burning Feature/Burning
North Platform A

5 METERS
Terminal Classic Period
Early Classic Period
Formative Period
Late Classic Period
Interpretative Burning Evidence

Figure 6. East Profile of Structure N1065E1025
<table>
<thead>
<tr>
<th>ID NUMBER</th>
<th>DATED MATERIAL</th>
<th>CONTEXT</th>
<th>CONVENTIONAL CARBON AGE</th>
<th>13C/12C Ratio</th>
<th>1 SIGMA (p=68%)</th>
<th>2 SIGMAS (p=95%)</th>
<th>OXCAL (2 SIGMAS)</th>
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<tbody>
<tr>
<td>Beta - 330902</td>
<td>CHARRE D WOOD</td>
<td>NORTH PLATFO RM A</td>
<td>2360±30 BP</td>
<td>-23.2 %</td>
<td>Cal BC 410 to 390 (Cal BP 2360 to 2340)</td>
<td>Cal BC 480 to 460 (Cal BP 2420)</td>
<td>522BC - 382BC (p=94.2%)</td>
</tr>
<tr>
<td>Beta - 330903</td>
<td>CHARRE D WOOD</td>
<td>NORTH PLATFO RM B (1)</td>
<td>2450±30 BP</td>
<td>-25.0%</td>
<td>Cal BC 740 to 690 (Cal BP 2690 to 2640)</td>
<td>Cal BC 760 to 680 (Cal BP 2710 to 2590)</td>
<td>754BC - 680BC (p=26.7%)</td>
</tr>
<tr>
<td>Beta - 377114</td>
<td>CHARRE D WOOD</td>
<td>NORTH PLATFO RM B (2)</td>
<td>2430 ± 30 BP</td>
<td>-24.7%</td>
<td>Cal BC 730 to 690 (Cal BP 2680 to 2635)</td>
<td>Cal BC 750 to 685 (Cal BP 2700 to 2590)</td>
<td>750BC - 683BC (p=19.6%)</td>
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<td>Beta - 330900</td>
<td>CHARRE D WOOD</td>
<td>N1065-EAST</td>
<td>1520±30 BP</td>
<td>-25.7 %</td>
<td>Cal AD 540 to 580 (Cal BP 1410 to 1370)</td>
<td>Cal AD 440 to 490 (Cal BP 1510 to 1460)</td>
<td>498AD (p=29.9%)</td>
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<tr>
<td>Beta - 377113</td>
<td>CHARRE D WOOD</td>
<td>N1065-NORTH</td>
<td>1230 ± 30 BP</td>
<td>-22.8%</td>
<td>Cal AD 720 to 740 (Cal BP 1230 to 1210)</td>
<td>Cal AD 685 to 885 (Cal BP 1265 to 1065)</td>
<td>688AD - 791AD (p=62.7%)</td>
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<tr>
<td>Beta - 377112</td>
<td>CHARRE D WOOD</td>
<td>N1065-TEMPLE 1ST</td>
<td>1260 ± 30 BP</td>
<td>-25.2%</td>
<td>Cal AD 685 to 770 (Cal BP 1265 to 1180)</td>
<td>Cal AD 670 to 775 (Cal BP 1280 to 1175)</td>
<td>668AD - 778AD (p=85.3%)</td>
</tr>
<tr>
<td>Beta - 377111</td>
<td>CHARRE D WOOD</td>
<td>N1065-TEMPLE 2ND</td>
<td>1180 ± 30 BP</td>
<td>-25.7%</td>
<td>Cal AD 775 to 890 (Cal BP 1175 to 1060)</td>
<td>Cal AD 770 to 900 (Cal BP 1180 to 1050)</td>
<td>730AD - 736AD (p=87.5%)</td>
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<tr>
<td>PERIOD</td>
<td>STRUCTURE #</td>
<td>TYPE OF CONSTRUCTION</td>
<td>RELATIVE DATE</td>
<td>ABSOLUTE DATE</td>
<td>FLOOR</td>
<td>ARCHITECTURE STYLE</td>
<td>VAULT TYPE</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>---------------</td>
<td>--------------</td>
<td>-------</td>
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<td>------------</td>
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<tr>
<td>Middle Formative</td>
<td>South Platform A</td>
<td>Stuccoed Platform</td>
<td>Bah Complex</td>
<td>810 and 760 B.C.</td>
<td>6</td>
<td>NID</td>
<td>Un-Vaulted</td>
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<tr>
<td>Middle Formative</td>
<td>North Platform A</td>
<td>Stuccoed Platform</td>
<td>Bah Complex</td>
<td>None</td>
<td>6</td>
<td>NID</td>
<td>Un-Vaulted</td>
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<tr>
<td>Middle Formative</td>
<td>South Platform B</td>
<td>Stuccoed Platform w/superstructure</td>
<td>Bah Complex</td>
<td>None</td>
<td>5</td>
<td>Talud/inclined basal walls</td>
<td>Un-Vaulted</td>
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<td>Middle Formative</td>
<td>North Platform B</td>
<td>Stuccoed Platform</td>
<td>Bah Complex</td>
<td>865-750 B.C.</td>
<td>5</td>
<td>NID</td>
<td>Un-Vaulted</td>
</tr>
<tr>
<td>Late Formative</td>
<td>South Platform C</td>
<td>Stuccoed Platform w/superstructures</td>
<td>Mixed Middle Formative/Bah Complex to Terminal Classic/Ceh Complex</td>
<td>None</td>
<td>5 and 4</td>
<td>Talud/inclined basal walls</td>
<td>Un-Vaulted</td>
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<tr>
<td>Late Formative</td>
<td>N1015E1015-Sub (Staircase D)</td>
<td>Stuccoed Platform w/superstructures</td>
<td>Mixed Middle Formative/Bah Complex to Terminal Classic/Ceh Complex</td>
<td>271 B.C.</td>
<td>5 and 4</td>
<td>Talud/inclined basal walls</td>
<td>Un-Vaulted</td>
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<tr>
<td>Early Classic</td>
<td>N1065E1025-Sub</td>
<td>Platform (w/superstructures)</td>
<td>Mixed Late Formative/Och Complex AND Terminal Classic/Ceh Complex and Terminal Classic/Ceh Complex</td>
<td>None</td>
<td>3</td>
<td>Early Puuc (A.D. 650-750)?</td>
<td>NID</td>
</tr>
<tr>
<td>Early Classic</td>
<td>N1015E1015-C</td>
<td>Council House?</td>
<td>Mixed Late Formative/Och Complex AND Terminal Classic/Ceh Complex</td>
<td>None</td>
<td>3</td>
<td>Talud-Style</td>
<td></td>
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<tr>
<td>Late Classic</td>
<td>N1065E1025-E</td>
<td>Temple?</td>
<td>Terminal Classic/Ceh Complex</td>
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<td>2</td>
<td>Early Puuc (A.D. 650-750)</td>
<td>&quot;Tacones&quot;</td>
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<td>N1065E1025-W</td>
<td>Residential?</td>
<td>Terminal Classic/Ceh Complex</td>
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<td>Colonnete-Mosaic (A.D. 850-1000)</td>
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<td>N1065E1025-N</td>
<td>NID</td>
<td>Mixed Late Classic/Ceh Complex and Terminal Classic/Ceh Complex</td>
<td>A.D. 685-885</td>
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<td>Popol Nah B</td>
<td>Council House</td>
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<td>Early Puuc (A.D. 650-750)</td>
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<td>Terminal Classic</td>
<td>N1065E1625</td>
<td>Temple 1st</td>
<td>Terminal Classic/Ceh Complex</td>
<td>A.D. 670-775</td>
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<td>NID</td>
<td>Botas</td>
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<td>Terminal Classic</td>
<td>N1065E1625</td>
<td>Temple 2nd</td>
<td>Terminal Classic/Ceh Complex and Terminal Classic/Ceh Complex</td>
<td>A.D. 770-900</td>
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<td>NID</td>
<td>Botas</td>
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<td>Popol Nah A</td>
<td>Enclosed Building</td>
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<td></td>
<td></td>
<td>Early Puuc (A.D. 650-750)</td>
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Table 6.2 Zunun Plaza Construction Sequence
Table 6. 3 Patio B Construction Sequence

<table>
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<tr>
<th>PERIOD</th>
<th>STRUCTURE #</th>
<th>TYPE OF CONSTRUCTION</th>
<th>CERAMIC COMPLEX</th>
<th>ABSOLUTE DATE</th>
<th>PLAZA FLOOR</th>
<th>ARCHITECTURE STYLE</th>
<th>VAULT TYPE</th>
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<tbody>
<tr>
<td>Middle Formative</td>
<td>NID</td>
<td>Apsidal Structures</td>
<td>NID</td>
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<td>None</td>
<td>None</td>
<td>Un-Vaulted</td>
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<tr>
<td>Late Classic</td>
<td>N100E1040-2nd</td>
<td>Rectangular/Un-Vaulted</td>
<td>Late Classic</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Un-Vaulted</td>
</tr>
<tr>
<td>Terminal Classic</td>
<td>N100E1040-1st</td>
<td>Rectangular/Un-Vaulted</td>
<td>Mixed Late Classic/Yuc and Terminal Classic/Ceh</td>
<td>None</td>
<td>1</td>
<td>None</td>
<td>Un-Vaulted</td>
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</table>

Table 6. 4 Icim Plaza Construction Sequence

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<th>STRUCTURE #</th>
<th>TYPE OF CONSTRUCTION</th>
<th>CERAMIC COMPLEX</th>
<th>ABSOLUTE DATE</th>
<th>PLAZA FLOOR</th>
<th>ARCHITECTURE STYLE</th>
<th>VAULT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle to Late Formative</td>
<td>NID</td>
<td>Sascab Floor</td>
<td>Ch'oh Complex</td>
<td>2700 +/- 40 BP 2570 +/- 70 BP</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td></td>
<td>NID</td>
<td>Low Stone Platforms</td>
<td>None</td>
<td></td>
<td>NID</td>
<td>Un-Vaulted</td>
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<tr>
<td>Early Classic-Late Classic</td>
<td>N1020E0990-2nd</td>
<td>Multi-Room Stone Building</td>
<td>Late Classic</td>
<td>3</td>
<td>None</td>
<td>NID</td>
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<td>Terminal Classic</td>
<td>N1020E0990-1st</td>
<td>similar to N1015E1015-C West Pavement</td>
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Table 6. 5 Ulum Plaza Construction Sequence

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<th>ARCHITECTURE STYLE</th>
<th>VAULT TYPE</th>
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<tr>
<td>Late Formative</td>
<td>NID</td>
<td>Low Stone Platforms</td>
<td>Mixed Middle Formative-Late Classic</td>
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<td>3-West</td>
<td>None</td>
<td>Un-Vaulted</td>
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<tr>
<td>Late Classic</td>
<td>None</td>
<td>Pavement</td>
<td>Late Classic/Yuc Complex</td>
<td>None</td>
<td>Under Floor 2 2-West</td>
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<td>None</td>
<td>Plaza Floor</td>
<td>Mixed Early-Late Classic Complex</td>
<td>None</td>
<td>2</td>
<td>NID</td>
<td>Vaulted</td>
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<td></td>
<td>N1050E1065-sub</td>
<td>Temple 1st</td>
<td>Late Classic/Yuc Complex</td>
<td>None</td>
<td>2</td>
<td>NID</td>
<td>Vaulted</td>
</tr>
<tr>
<td>Terminal Classic</td>
<td>N1050E1065</td>
<td>Temple 2nd</td>
<td>Terminal Classic/Ceh Complex</td>
<td>None</td>
<td>1</td>
<td>Early Puuc II &quot;Tacones&quot;</td>
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<td></td>
<td>None</td>
<td>Plaza Floor</td>
<td>Terminal Classic/Ceh Complex</td>
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<td>1-West</td>
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Table 6. 6 Cuzam Plaza Construction Sequence

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<th>RELATIVE DATE</th>
<th>ABSOLUTE DATE</th>
<th>PLAZA FLOOR</th>
<th>ARCHITECTURE STYLE</th>
<th>VAULT TYPE</th>
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<tr>
<td>Late Classic</td>
<td>None</td>
<td>Plaza Floor 2</td>
<td>Mixed context, mostly Terminal Classic/Ceh Complex</td>
<td>None</td>
<td>2</td>
<td>None</td>
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<td>Terminal Classic</td>
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<td>Plaza Floor 1</td>
<td>Terminal Classic/Ceh Complex</td>
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<td>N1025E0830</td>
<td>Multi-Room, Vaulted Building</td>
<td>cauac nose A.D. 770-880</td>
<td>None</td>
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<td>Botas</td>
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<td>N1050E0815</td>
<td>Multi-Room, Vaulted Building</td>
<td>cauac nose A.D. 770-880</td>
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<td>1</td>
<td>Mosaic Puuc Style</td>
<td>Botas</td>
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<td>Multi-Room, Vaulted Building</td>
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<td>1</td>
<td>NID</td>
<td>Taconette Style</td>
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<td>Multi-Room, Vaulted Building</td>
<td>NID</td>
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<td>Junquillo or Mosaic Puuc Style (late)</td>
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<td>cauac nose A.D. 770-880</td>
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<td>1</td>
<td>Mosaic Puuc Style?</td>
<td>Botas</td>
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CHAPTER VII: LATE TO TERMINAL CLASSIC COURT ACTIVITY REGIMES

7.1 Introduction

In this chapter I discuss the results obtained from rim analysis of ceramics from eight artifact concentrations associated with multiple plazas at the site of Kiuc. These concentrations were identified as trash deposits or middens associated with activities that took place in or near adjacent plazas. Ten other deposits, such as caches and ceremonial trash, are also analyzed in order to understand the ceremonial behavior of Kiuc’s ancient royal court.

In order to understand ancient activities and behavior patterns I first analyze the site’s general ceramic composition of the samples and classify types into utilitarian, “typical” and “fancy” wares. Then, I group types based upon the general activities that a ceramic vessel may have been used for. The case of Late Classic Kiuc is particularly intriguing since, as seen in Chapter 2 and 6, the site’s three main plazas were discrete in function (i.e., Dzunun was administrative, Ulum was ceremonial and Icim was residential). After grouping types, I explore the individual units in which these material accumulations were found in order to understand particular activities that might have taken place. Finally, I observe the context, patterns and composition of the ceremonial deposits dating to the Late and Terminal Classic Period. The goal of this analysis is to understand the relationship among ceremonial activities, building construction, and the ancient dwellers of Kiuc.

In this section, I describe the artifact composition of the eight accumulations located
in three different plazas of Kiuic. These contexts date between the Late Classic (A.D. 500-700) and the Terminal Classic period (A.D. 700-950). I mainly focus on ceramic and lithic artifacts, as well as ceremonial deposits to establish the general activities that took place in these areas. Using rim measurements, I discern between individual and communal consumption vessels. The purpose if this distinction is to further understand the different activities in the plazas, particularly those that included feasting rituals.

7.2 Activity Regimes: Middens, Ceremonial Trash and Ceremonial Deposits

In this section, I define and describe the method, definitions, and criteria used to analyze the ceramic and lithic materials as well as the ceremonial deposits located at Kiuic. I also provide the variables used to measure function and the main characteristics of the sample.

Ceramic Analysis

Brainerd (1958) published the first comprehensive monographs on the ceramics of Yucatán. His study presented the ceramic collections of multiple large Yucatec sites such as Coba, Yaxuna, Oskintok, Dzibilchaltún, Acanceh, Mayapán, Ticul, Dzab, Mani, “mound near Mérida”, “Puuc sites”, Halactun (Xcalumkin) and Chichén Itzá. Brainerd used the characteristics of ceramic materials (such as vessel shape, form and ware) to create a regional framework that could be compared to other cultural materials. His scheme resulted in a seriation of wares that were diagnostic of specific cultural states in the northern lowlands. His monograph includes a general description and comparison of the kinds of wares, forms and types of ceramics that were used at major northern sites. However, his main focus was to create a ceramic framework that was compatible with other archaeological materials (e.g., architectonic styles).
In his analysis of the ceramics of Mayapán, Smith (1971) acknowledges Brainerd’s (1958:6) lack of specific distinctive phase names to the Yucatán peninsula. He proposed to create multiple phases for Yucatán peninsula ceramics based on the Type-Variety system and the concept of ceramic complex. Smith (1971:7) states:

“Complexes are all-inclusive analytical units in that each descriptively encompasses all the material of a certain kind that is known from a given phase. Thus a ceramic complex, a lithic complex, an architectural complex combine with other complexes to constitute the artifactual manifestations of an entire phase and when considered together as a whole they represent the total material content of a phase”. Smith’s work has been used ever since as the basis for northern Yucatán ceramic analysis (Smith 1971; Willey and Gifford 1969; Sabloff 1971; Lopez Varela 1996).

*Ceramic Function, Type-Varieties and Forms*

I classify the ceramic forms into four major function categories: ceremonial, serving, cooking and storage. I use Smith’s (1971) Puuc Ware classification as a basic framework for this analysis.

**Serving Vessels:** I classify ceramic forms as serving vessels based on the following criteria. Serving wares are usually open forms with a wide rim diameter to permit a high frequency of access and a low content security. They have a flat bottom for stability and are often decorated. Foster (1980) observes that the frequent use of these vessels often results in a short life span. Serving vessels can be used for individual or group consumption, a factor that affects vessels size (Hendrickson and McDonald 1983).

**Cooking Vessels:** Un-slipped coarse vessels, such as Puuc Un-Slipped, are interpreted
here as cooking wares. Cooking vessels are characterized as short and squat, with a large basal surface (mostly rounded), a somewhat restricted mouth (to prevent rapid evaporation of boiling foods), relatively thick walls and an unpainted surface (Brainerd 1958; Hendon 2003; Hendrickson and McDonald 1983; Smith 1971). The rim is wide for easy access but narrow enough for content security. Cooking vessels usually contain a high percentage of temper in order to transfer the heat better. Brainerd (1958:28) observes that un-slipped globular striated jars with a coarse surface were used across the Yucatan peninsula for cooking.

Storage Vessels: From an ethnographic perspective, Hendrickson and McDonald (1983) discern between dry and liquid storage vessels. Dry storage vessels can be used for long term or temporary periods. Long-term storage vessels usually have rolled over or everted rims and are generally tall with thin walls. According to Erickson et al. (1972:89), temporary dry storage vessels tend to be low and squat since they do not need to be pourable. Liquid storage can also be divided by long and short-term storage. Long-term liquid storage vessels are typically large and cannot be moved easily. Temporary liquid storage vessels are noticeably smaller than long term. On average both types are usually thinner and taller than dry storage vessels. Surface treatments such as burnishing and glazing are more frequently on liquid vessels (Hendrickson and McDonald 1983).

As mentioned before, BRAP ceramic analysts used the type-variety classification system to assign types to ceramic sherds and position them within cultural and chronological complexes. Although the classification does not tackle vessel function directly, the multiple modes and variables that encompass specific types can generate a useful overall framework to tackle vessel function. Moreover, the homogeneity of wares and forms from the ceramic tradition at Puuc sites in the Late and Terminal Classic periods help to create clear
distinctions among utilitarian, ceremonial or other wares. The vast majority of the ceramic sherds identified at the site of Kiuic belong to the Cehpech ceramic sphere. Specifically, ceramic belong predominantly to the Puuc Slate Ware (i.e., Muna Slate), the Puuc Un-Slipped Ware (i.e., Chum Un-Slipped), Thin Red Ware (Ticul Thin Slate) and Puuc Red Ware (i.e., Teabo Red).

Puuc Slate Ware: Vessels from this ware have a paste of medium texture, sometimes grading to fine, and contain a variety of tempering materials (see Tables 41 and 42 in Smith 1971). Vessel surface colors from this ware are mostly red or reddish brown. Ceramics forms from this ware are well finished in general (smoothed, slipped or polished).

At Kiuic one of the most prevalent groups is Muna Slate, from the Cehpech Ceramic Complex (A.D. 800-1000). Types include Muna Slate (notched variety), Sacalum Black-on-slate (Sacalum variety), Tekit Incised (Tekit variety), Akil Impressed (Akil variety), Chumayel Red-on-slate (Chumayel variety, modeled variety, and incised variety), Yaxnic Modeled (Yaxnic variety) Nohcacab Composite, Nohcacab variety (incised and impressed) and Xaya Gouged-incised (Xaya variety). Forms include: basins, bowls (with beveled-rim ring stand and with rounded sides), jars, dishes (tripod flaring-sided on flat-based), effigy censers and cylindrical vases.

In his study of the ceramics of Yucatán, Brainerd (1958) observes that slateware jars can be divided in large and small. He interprets the first as water-carrying containers for long distances and the second as small water extractors for Puuc cisterns or chultunes. Due to its characteristics, I interpret this ware as belonging to both utilitarian and fine-ware. Brainerd (1958:84) also observes that Muna Slate basins could have been a local development.
Moreover, he suggests that basins were used for storing *masa*, or corn dough, perhaps for the soaking of corn and lye, which usually precedes grinding. Regarding slipped bowls, he suggests that simple small ones, with diameters that range between 12-20 cm, were used as individual drinking cups.

**Puuc Un-Slipped Ware:** Vessels from this ware have a coarse and porous paste texture. Temper (see Tables 41 and 42 on Smith 1971) is usually clear calcite for jars with a few examples of gray limestone and grog tempers. For censers, grog temper prevails with a few examples of clear calcite or, more rarely, saccharoidal calcite. Color normally is the same as the surface but in some cases varies. The surface of this ware is smooth but without polish or slip and usually is coarsely striated. A large percentage of the censers and some jars have a white calcareous coating. The color for jars is commonly beige, cream, or gray, whereas for censers light brown cinnamon are seem dominant colors.

At Kiuic, one of the most ubiquitous groups of Puuc un-slipped ware was Chum Un-Slipped. Types include Chum Un-slipped (Chum variety), Yokat Striated (Yokat variety, neck-interior variety), Oskutzcab Appliquéd (Oskutzcab variety), Halacho Impressed (Halacho variety), Yiba Modeled (Yiba variety) and Tepa kan Composite, Tepakan variety (appliquéd and impressed). Forms include jars, censers, hourglass, basin, ladle, bowls (flaring, rounded or restricted), figurines, and flutes.¹

Puuc Un-slipped ware produced two kinds of vessels: jars for cooking and storing, and censors. Un-slipped jars are the longest, least changed tradition of any vessel in the Yucatán peninsula (Brainerd 1958). Jars display a globular shape that allows maximum efficiency in heating, and by the uniformly thin wall and the absence of a specialized base,
which prevents cracking due to thermal strain. Un-slipped narrow-mouthed, bulging-lipped, pointed-base jars were used as a portable water container (Brainerd 1958:80). Un-slipped bowls and basins do not show the long enduring tradition to be seen in the jars and suggests that they might be an innovation without direct antecedents in Yucatán (Brainerd 1958:80). Brainerd (1958) characterizes ceremonial forms as usually flare-sided bowls supported by a trumped base.

Thin Slate Ware: Vessels in this ware have a fine texture paste, mostly saccharoidal calcite temper which usually is the same color as the slip, although a few have red paste. The surface is usually well smoothed, slipped, and polished with medium luster, less waxy than Puuc Slate Ware, and generally free from blemishes except for vertical crazing which is common to all deep vessels. Other blemishes rarely encountered are fire-clouding and dendritic purple markings. The slip color is generally gray to cream, usually lighter than Puuc Slate Ware.

The most common group identified at Kiuic was Ticul Thin Slate. This group includes the following types: Ticul Thin-slate (Ticul variety), Xul Incised (Xul variety), Tabi Gouged-incised (Tabi variety) Tikihal and the circle-shading (Tikihal variety). Thin Slate Ticul Group forms include hemispherical and deep bowls, cylindrical vases, tripod dishes with flaring sides, basins, jars, and a disk cover.³

Brainer (1958:27) mentions that Thin Slateware is the only slateware from the Puuc area that has been separately designated with vessel shape as a primary criterion. Due to its characteristics I interpret the thin ware as a fine ware.

Puuc Red Ware: Vessels from this ware have a medium to fine texture paste with a
variety of tempers (see Tables 41 and 42 in Smith 1971) of which volcanic ash is the most common, followed by chalky calcite, calcite and grog combination, clear calcite, grog, and rarely saccharoidal calcite. The ware color is red, reddish orange, or reddish brown, and closely approximates slip color but may be slightly lighter. Usually Puuc Red Ware is thin-walled like Thin Slate Ware but a fair percentage have medium-thick to thick walls. These sherds are tripod dishes, beveled-rim ring stand bowls, and basins. The thin forms are usually those associated with Thin Slate Ware, namely: hemispherical bowls with direct rim and flat or ring stand base, or bead rim and three nubbin feet; cylindrical vases; and some jars. The surface of Puuc Red Ware is well smoothed. The ware is slipped and polished with medium luster and is less waxy than Puuc Slate Ware. The surface smoothness, luster, slight waxiness, lack of blemishes, and oneness of slip-paste color, together with thinness and frequently vessel shape, tend to link Puuc Red and Thin Slate. The red slip color is uniform throughout.

The most represented group within the Puuc Red Wares at Kiuic is the Teabo Red Group. This group includes the following types: Teabo Red, (Teabo variety), Becal Incised (Becal variety, Groove-incised variety), Opichcn Gouged-incised (Opichcn variety), Tekax Black-on-red (Tekax variety, orange variety), Sahcaba--todeled-carved (Sahcaba variety), and Yaxumha Composite (Yaxumha variety). The Teabo Red Group includes the following forms: hemispheric bowls with direct rim and flat or ring stand base, or bead rim and three nubbin feet, restricted-orifice bowls with beveled rim and ring stand base, tripod dishes with flaring or out-curving sides, cylindrical vases, basins, and jars (rare). Due to its characteristics I interpret this group as a fine ware.
Ceramic Variable Recording

Ceramic rim sherds located in contexts with material concentrations were analyzed in order to infer the probable function of vessels. This was done through the observation of multiple attributes on rim sherds from which cooking, serving or storage practices could be inferred. These attributes also determined the range of variation of ceramic artifacts at Kiuic. Sherds that measured less than 4cm in diameter were not analyzed, since rims this small do not provide reliable measurements. Moreover, rims from the same contexts and form were inspected to determine if they belonged to different vessels and avoid inflation of the sample. The following thirteen attributes were analyzed for each of the 1069 rim sherds recovered:

**Basic contextual information:** Unit of excavation, associated structure, layer, zone, and lot number.

**Ceramic Type/Variety:** As defined by Smith (1971), a type represents an aggregate of visually distinct ceramic attributes already recognized within one or (generally) several varieties that, taken as a whole, are indicative of a particular class of pottery produced during a specific time interval within a specific region. The ceramic types were determined through macroscopic observation by the author in conjunction with ceramicists George Bey (Millsaps College), Betsy Kohut (SUNY-Albany) and Chris Gunn (Kentucky University).

**Ceramic Form:** I used Brainerd (1958), Sabloff (1975) and Lopez Varela’s (1996) classifications for identifying ceramic forms. These are:

*Plates:* vessels with a height less than 1/5 its diameter.

*Dishes:* vessel with a height between 1/3 and 1/5 its diameter. Plates can have flared sides, out curved sides or rounded sides.
**Bowls:** vessel with height no more than equal to but no less than 1/3 of its diameter. Bowls can have vertical sides, flared sides, out-curving sides, rounded sides, slightly incurving sides restricted orifice, markedly incurved sides with restricted orifice, incurved sides with vertical neck, incurved sides with out flared neck, incurve-recurved sides with out curved neck and incurved sides with double collar neck.

**Jars:** necked vessel, whose height is greater than its maximum diameter, with an independent restricted orifice. Jars can have a vertical neck, an out-curved neck or an out-flared neck.

**Basins:** This form is hemispherical to globular with an erect or incurving rim, which usually bears an exterior bolstered lip. The bottom is flattened in most types. The vessels are rather heavy-walled; diameter ranges from 20 to 60 cm, and height from one-half to the full measurement of diameter. Interior and lip are always slipped; exterior is slipped in some types. Capacity of these basins ranges from about 2 liters to 50, with an average of about 10 liters (10.57 quarts); the average basin could hold *masa* for a family of five. **Vases:** An unrestricted vessel with height greater than diameter. It can have vertical sides (a cylinder) or out-curved sides.

**Chronology Phase:** Rims were assigned a chronological phase depending on type-variety and stratigraphic contexts.

**Vessel Diameter:** The estimated diameter of vessels was calculated in centimeters (cm) using radius measuring paper. This device allowed the approximate rim diameter of a vessel to be calculated from sherd fragments (Egloff 1973). Ceramic sherds smaller than 3cm in length were not measured due to the lack of accuracy with a small fragment.

**Wall thickness:** Rim sherd thickness (cm) was measured using a pair of calipers.
Thickness was measured using two points of reference.

**Paste Color:** observation were made regarding the past color of each ceramic rim. Observations were classified as: unidentifiable, slim darkened center, thick darkened center, slim red center and thick red center.

**Wall Form:** Consists of a description of vessel wall form. This category is meant to complement the study of other rim characteristics such as rim and lip form. Wall forms include direct, outwards and inwards.

**Rim Form:** A rim is defined as the area between the change of direction or side of the neck and lip or the margin of the vessel orifice. Only when the margin is thickened or displays a sharp change in wall direction, or both, is the rim set off as a distinct part of the vessel (Dutton 1966:6). I based the definitions of rim form on Sabloff’s (1975:24) typology. Rim forms include: direct, exterior thickened, interior thickened, exterior folded, interior folded, horizontal everted and out flared everted.

**Lip Form:** The lip is defined as the edge or tip of the rim (Sablof 1971:24). The forms detected include: rounded, squared, pointed, beveled inward, beveled outward, grooved, thick notch, scalloped notched, and crenellated notched.

**Temper:** Temper was observed through macroscopic inspection. In addition to the type of temper, I also observed the quantity of temper in each rim sherd. The categories consisted of fine calcite/light grain, average calcite/medium grain, calcite and quartz mixed/medium grain, fine calcite, calcite/rough grain, volcanic ash/ fine grain, quartz and sand/fine grain, quartz and sand/average grain, volcanic ash and quartz mixed/middle grain, volcanic ash/medium grain, and quartz/medium grained.
Surface treatment: The surface of the vessel was analyzed macroscopically. Observed types for this category are: glazed-interior, glazed-exterior, glazed-both, slipped-interior, slipped-exterior, and slipped-both.

Surface Characteristics: this category refers to the texture of the ceramic rims at touch. Categories consisted in rough, smooth and hard; medium; smooth interior, rough exterior; smooth exterior, rough interior.

Lithic Analysis

Artifacts and debris that are no longer in the places where they were made or used can provide significant, indirect evidence about the organization of craft production (Moholy-Nagy 1997). For production analysis, direct and indirect evidence can both be employed in the study of craft production (Costin 1991:18-19). The first is associated with the actual process of production; the second is derived from the characteristics of the materials themselves, without regard to the context in which they were found (ibid.). Following Moholy-Nagy (1997), I define refuse as discarded durable material, distinct from biodegradable waste or garbage. Debitage is a special kind of refuse generated by the production of chipped stone artifacts by a reductive process.

Preliminary descriptions of stone artifacts from the 2006-2008 seasons were completed by Rebecca Hill (Tulane University). Lithic artifacts from the 2009-2011 seasons were described and analyzed by the author. A total of 285 lithic artifacts were recovered from Kiuic’s sample deposits. Macroscopic analysis of these materials consists of observing basic characteristics of the stone tools such as material (chert, obsidian, basalt, limestone) stage of manufacture (core, primary, secondary and tertiary flakes), lithic industry (core and flakes, chert blade, chert biface point, and obsidian), lithic product (Axe, bark beater, beak, bifacial...
point, celt, graver, preform, prismatic blade, retouched flakes, stucco polisher, and unidentified tools). In this analysis I follow the typology sequence and classification system for Maya stone tools proposed by Rovner and Lewenstein (1997).

Lithic artifacts from contexts with significant material concentrations were analyzed to yield a better understanding of these assemblages and their overall function. The artifacts were analyzed macroscopically using a 10x magnifying glass. In total 285 lithic artifacts were analyzed from the material concentrations. The attributes analyzed for the lithic artifacts include the following variables:

**Location**: refers to the location where the artifact was found. This includes lot number, structure number, layer, zone, and other additional information relevant to the location of the artifact.

**Object type**: Identification was based on the forms observed by Rovner and Lewenstein (1997). Categories of objects include: Biface (complete, distal, medial or proximal fragments), perforator, unidentified fragments, flake type (retouched and debris), prismatic blade, core, percussion tool, projectile point and scraper.

**Raw Material**: refers to the artifact’s material. Subcategories include:

*Chert*: was commonly used in prehispanic times for the manufacture of cutting tools for everyday use. The color of the material was categorized as: white, cream, red and brownish red. The quality of chert in the peninsula is usually poor.

*Limestone*: there are two kinds of limestone in the peninsula: calcareous spar, characterized by a porous surface and usually used for the manufacture of *metates*; compact limestone,
with a smoother appearance usually used to manufacture smoothers. As with flint, limestone is abundant in the Yucatán Peninsula. *Speleothem:* this material precipitates from drips inside a limestone cave and generally contain crystals. They formed and were extracted from nearby caves.

*Obsidian:* volcanic glass imported from Highland Mexico or the southern Maya highlands. Obsidian was used to create prismatic blades which were applied as cutting tools.

**Color:** artifacts were classified by color. This variable was especially important for obsidian and chert, since color may also indicate place of origin.

**Retouch:** for this variable I followed the definitions and observations from Rovner and Lewenstein (1997:11-16). Observed types of retouch include: superficial, bifacial, lateral, notch (presence/absence) and dendriculated.

**General Measurements:** length, width and thickness (cm) of artifacts were taken with the use of calipers.

*Ceremonial Deposits Analysis*

The placement of ritual deposits is a common tradition among Maya populations from the Late Formative until modern times. Just as with the construction of large stone architecture and other prestigious portable objects, these hidden deposits are essential elements used to facilitate the symbolic communication of power. They are vehicles for giving meaning to the landscape, creating places and nourishing the animus of new constructions. Here, I summarize Kiuc’s ritual deposits and comment on what they tell us about the relationship between the site’s ritual history, space use and the place making of a Puuc royal court.
These deposits were excavated in different archaeological seasons and at different moments of the excavation process and their processing followed different protocols depending on location and artifact composition. For the purpose of this research the ceremonial deposits are given an arbitrary ID number and located on the map of Kiuic. Basic data recorded for these deposits include general location, unit, layer, stratigraphic context, ceramic type-variety, vessel diameter and thickness (when available). Through this information, I infer the order of deposition, chronology and structure association. Through the contextual evidence I differentiate between termination and construction caches.

Special deposits generally correspond to what historical archaeologists call feature contexts (LeeDecker 1994:353). Usually they have defined spatial boundaries, specially prepared repositories, and their material contents are regarded as a primary context. A special deposit is considered to be the intentionally interred residue of a specific event or events, such as activities of a ceremonial nature or episodes of artifact production.

Ritual deposits are defined as intrusions into a building, generally placed as part of a dedication or termination ritual. On one hand, a dedication ritual provided significance or meaning to a space. The function of these rituals is to activate the animus of the building, which the ancient Maya believed to be housed in objects and architecture (Harrison-Buck 2004). On the other hand, a termination ritual indicates the final use and retirement of a structure or space. This is indicated by the presence of purposefully broken, burned and otherwise terminated objects (Stuart 1998). Additionally, Walker (1995) observes that some of these deposits are confused with other kinds of reuse, which he calls ceremonial trash. This kind of debris is created when ceremonial or special objects are no longer in use and discarded. The deposits associated with both dedication and termination rituals are a vital
part of the constructed landscape, building process and investment in architecture since ritual, ideology and memory give meaning to the built landscape (Stanton and Magoni 2008).

In Mesoamerican literature, these deposits are commonly referred as *caches* and defined as “one or more objects found together, but apart from burials, whose grouping and situation point to intentional interment as an offering” (Coe 1959:77). Caches are intentionally intruded into earlier structures or buried within the fill of a building during construction (Chase and Chase 1998:300). Cache form and content vary tremendously and may be difficult to recognize, especially when deposited objects are made of materials that do not preserve (i.e., Pendergast 1998:56). The most common form of a cache, perhaps due to its ease of recognition, is a pottery vessel. However, at some places, like Tikal, caches usually consisted of a specially constructed repository that contained a standard and predictable assemblages of durable artifacts and natural objects of restricted use, and often included considerable quantities of debitage of chert, obsidian, jade and or fine stone, and sometimes *spondylus* shell (Moholy-Nagy 1997:302).

The different modes of caching and their meaning have multiple interpretations. At the site of Caracol, Belize, Chase and Chase (1998) argue that both caches and burials are physical representations of the Maya world. Caches represent an ordered layout that reflects the Maya view of the cosmos (Chase and Chase 1998:303). They observe that the artifacts found in these deposits are grouped in various strata out of which the lower layers, consisting of mercury, jadeite, malachite, coral and shells, are interpreted as the watery underworld and hence, a sacred landscape.

Ceremonial deposits are analyzed based on the following criteria: (1) **Location:**
Ceremonial deposits are usually deposited as part of a construction or a termination ritual. Hence, location, both horizontally and stratigraphically, is essential to understand the building or architectonic feature with which the deposit is associated; (2) Chronology; (3) Container: Ceramic containers are very common caches in the Maya area. Form, type variety and rim diameter of the container vessels will be measured. However, caches can also have containers made of other materials that may not preserve; (4) Content; (5) Type: Based in the variables described previously, I classify caches into two types: (a) termination or (b) construction cache.

7. 3 Sampled Trash Deposits in the Yaxché and Kuché Plazas

Midden definition

A midden is defined as waste that is the product of any human activity that is no longer considered useful, and hence, is abandoned (Góngora et al 2009:43). Archaeologists usually do not use an exact number or weight to define a midden, only the the presence of multiple artifacts made from different materials that are associated with food preparation or craft production (Maldonado Cardenas y Ortiz Ruiz n.d.). Moreover, the majority of the activities in Maya populations took place outside of the household, in the solares. Because the floors of the houses were regularly cleaned, trash deposits were exclusively an outside occurrence (Hayden and Canon 1983; Hutson and Stanton 2001; Maldonado Cardenas y Ortiz Ruiz n.d.). Smith (1971:111) identifies middens as a heap of refuse that consists of more then general debris, discarded food leavings and useful artifacts, with a high presence of utilitarian vessels.

Disposing of artifacts can be the result of multiple activities such as general
maintenance, like everyday sweeping, and provisional discard, which happens near the vicinity of households or activity areas (Deal 1983, 1985). At the site of Chunchucmil, Hutson and Stanton (2001) observed that trash deposits on the edges of patios were the result of sweeping accumulations from both patios and the interior of buildings. Middens observed at the edges of structures likely contain objects that have been discarded provisionally and could eventually be repurposed. Smyth (1991) observes that in contemporary Maya populations in the Puuc, everyday trash was usually burned while other waste that may still be useful is frequently placed inside or underneath storage rooms.

In an ethnographic account, Hayden and Canon (1983) observe that for the final disposal stage, individuals rarely traveled more than two minutes to the locations where they disposed of their refuse. They observe that the change of location from provisional discard area to the final dump location occurred when accumulating refuse became an unacceptable nuisance, hindrance, or eyesore.

In his ceramic analysis of the Postclassic site of Mayapán, Smith (1971) did not find evidence of ceramic function, only major trends. When analyzing ceramics from dwelling areas, he observed that utilitarian sherds comprise 73.1% compared to 44% in ceremonial structures. He also observed that on typical dwellings 92.1% of sherds are utilitarian, and out of these, 72.6% are jars. For kitchen contexts, 94.4% of the pottery tends to be utilitarian, and out of these, 80% are jars (Smith 1971:107).

**Analysis Criteria**

The main criteria for selecting midden deposits to be analyzed included the following: a large quantity of artifacts, located either behind or at the corner of an activity area, and stratigraphy indicates that all materials belonged to the same disposal event. Some of the
excavated units from the Yaxché and Kuche groups had an outstanding quantity of ceramic and lithic material in comparison to other units. These “material accumulations” were present in multiple locations at the site, mostly in the corners of plazas and structures (Figure 7.1). Stratigraphic contexts indicate that some of these contexts were deposited in one event, while others were deposited over time. For this analysis I selected 14 excavated units with material accumulation that belonged to 10 different midden deposits. In order to analyze these contexts and determine what activities led to them, I divided the middens by plaza. Materials from the Kuché group are located in two different plazas (i.e., Calomte and Cuzam) and for this analysis they are going to be considerate as similar contexts, that is, middens from Terminal Classic period residences. All accumulations date to the Late and Terminal Classic periods, although some mixed material from earlier periods is present. Each is described below and their locations are indicated on Figure 7.11

*Material Accumulations in Patio B: the Court Kitchen Area*

**Patio B Northwest Corner (PBNW).** This unit (A-6) was excavated in the 2001 and 2002 field seasons. A total of 58 rims and 65 lithic artifacts were selected for analysis. It is located to the west of Patio B’s basal platform. The large amount of ceramic material found in these units identifies the area as a midden. Unit A-6 was excavated from levels 3 to 6. The contexts are interpreted as belonging to two events. The first is located in level 3, Zone 1 and is dated to the Terminal Classic Period (floor 1 fill) and associated with one of Icim’s Floor 2 levels. The second depositional event was observed in level 4 zone 1, 5 zone 1 and 6 zone 1, which is dated to the Early Classic Period and associated with Icim Floor 2 construction fill. Moreover, evidence of burning and the deposit of a fragmented jar marked this event.

**Patio B Northern Area (PBN).** This unit (F-3) is located at the north end of the
platform of Patio B. A total of 91 rims and 14 lithic artifacts were selected for analysis. This test pit was excavated in the 2001 and 2002 field seasons. Analyzed ceramic rims from this unit came from the first three layers. Due to its location and the large quantity of archaeological materials, this unit was interpreted as a midden dated to the Terminal Classic Period.

PBSW: Patio B Southwest Corner (PBSW). This unit (G-38) was located in the NW corner of Structure N1065E1025, specifically between the front part of the retention wall and Patio B. A total of 49 rims and 3 lithic artifacts were selected for analysis. Excavations indicate that all of these levels were part of the construction fill of the artificial platform were Patio B and Structure N1065E1025 were constructed. The unit was excavated in 10 layers, out of this, only layers 1, 3, 4, 5, 7 and 8 contained rim sherds. The test pit revealed an uncompressed fill of small and large rough stones and very little soil. Due to this, materials filtered from the surface all the way to the bottom of the pit. Hence, I interpret this as part of a single depositional event. The nature of this fill may also indicate a very quick and somewhat “low-cost” construction of the base platform. A fragment of flat stucco indicates where the unit floor might have originally been although very little evidence of this was found. Ceramic and contextual analysis indicates mostly a Terminal Classic occupation.

Material Accumulations at Icim Plaza: a Court Residential Area

Icim Northeast Corner (INE): This unit (B-25) is located between structures N1045E1005 and N1065E1025, and measured 2 meters NS by 2 meters EW. A total of 92 ceramic rims and 6 lithic artifacts were selected for analysis in this unit. Contextual evidence indicates that there were multiple deposits in this material accumulation. The materials analyzed from this unit were located between levels 1 and 4. Ceramic material dates to the
Terminal Classic Period Cehpech sphere.

Icim Southeast Corner (ISE): This context (Units C-7 and B-7) is located at the southeastern corner of the plaza. A total of 217 rims and 56 lithic artifacts were selected for analysis on these units. Unit C-7 was excavated in five layers out of which rim sherds were recovered from the first two. Recovered ceramic materials are mixed, showing ceramic types from the Middle Formative and the Terminal Classic Periods. Stratigraphic evidence dates this material accumulation above Floor 1 of Icim Plaza to the Terminal Classic Period. Unit B-7 is located west of unit C-7 and between the access ramp to the plaza and Room 3 of Structure N1020E0990. The unit was excavated in three levels; rims sherds from the first two were recovered for analysis. Stratigraphic evidence dates this material accumulation to Floor 1 of the Icim Plaza and is dated to the Terminal Classic period.

Icim Southwest Corner (SWC): This unit (Pozo 1) is located to the west of the south edge of Structure N1045E0975. A total of 39 rims and 12 lithic artifacts were selected for analysis. The area was identified as a midden due to its location and high concentration of ceramic material. The test pit consisted of 12 levels. The concentration of materials was located in the first 7 levels of the test pit. Most of the recovered material can be dated to the Terminal Classic Period.

Material Accumulations at Ulum Plaza: a Court Ceremonial Area

Ulum Northwest Corner (UNW): These units (Q-31, Q-32, and P-32) were located at the northwestern side of the Ulum Plaza. A total of 57 rims and 5 lithic artifacts were analyzed. All of the materials were located between Floor 1 and 2 from the Ulum Plaza, in front of the staircase of Structure N1065E1025. The contexts also had flat and modeled
stucco fragments, and a grinding stone (i.e., mano). In Unit Q-32, it was noticed that some rough stones might be delimiting the area where the ceramic concentration was located. There is some evidence to suggest that this concentration was intrusive to Floor 1 of the Ulum Plaza, which is mainly a broken floor. It is unclear if the purpose was to introduce or extract materials. The contents of unit Unit P-32 varied somewhat from units Q-31 and Q-32. Although its contents were still located on top of Floor 2 of the Ulum Plaza, Unit P-32 might reflect two different ceramic depositional events. The event recorded in level 17 was contemporaneous and part of the same contexts as Q-31 and Q-32. However, aside from ceramic and lithic materials, it contained remains of charcoal, burned rock, a circular conch bead, a speleothem fragment, an unidentified phalange and two tenoned stones. A separate event might have been recorded in level 14, where an accumulation of materials was also detected, which included ceramics, flat stucco, tenoned stones, charcoal, burned soil and some small fragments of burned bone. Ceramic evidence indicates that level 14 consisted mostly of Late to Terminal Classic Period ceramics from the Cehpech sphere (i.e., Chum Unslipped, Yokat Striated and Muna Slate). The assemblage from level 17 had the same ceramic types with the addition of some sherds from the Say Group.

**Ulum Southwestern corner (USW):** this unit (Sondeo 12) was located in front of a rough wall south of Str. N1065E1025 retention wall 2, at the southeast corner of the building, and in front of the carved stone platform that separates the Dzunun and Ulum plazas. A total of 48 ceramic rims were analyzed. This unit was 2 meters NS by 0.50 meters EW. The ceramic concentration was located on top of a fragmented stucco floor between layers 4 and 9. The ceramic sherds were large and mixed with flat and modeled stucco fragments, tenoned stones, burned rocks and a chultún ring. The context indicates that the material was discarded.
in a single deposition event at the beginning or during the construction of the platform that divides Dzunun and Ulum Plazas. The deposit was very deep (60cm) and required that the stucco floor from the second step of the platform was broken so all this material was deposited. The presence of burned stones and ashes indicates that something was burned before the material was deposited. Ceramic analysis indicates that most of the material is from the Terminal Classic period.

**Material Accumulations at Kuche/Chulul group: The Terminal Classic Court Area**

**Calomte Plaza Northern Area 1 (KSE 1):** This unit (Pozo 158, Cuadro 2) was located outside the north retention wall of Calomte Plaza in the Kuche group on the upper part of a large accumulation of materials. A total of 160 ceramic rims and 26 lithic artifacts were analyzed at these deposits. This unit was excavated in 12 levels. The ceramic concentration appeared in levels 5, 6 and 7. The concentration was associated with gray soil, which might indicate burning was involved in this deposit. This context probably indicates some sort of ceremonial trash or termination ritual. The ceramic types were mixed with materials dated to the Middle Formative and Terminal Classic periods.

**Calomte Plaza Northern Area 2 (KSW 2):** This unit (Pozo 157, Cuadro 1) is located outside the north retention wall of the Calomte Plaza, in the Chulul Group. A total of 75 ceramic rims and 58 lithic artifacts were analyzed in this unit. Due to the large quantities of ceramic material, this material concentration is interpreted as a midden. The test pit was located at the lowest part of the midden, 2 meters north of Pozo 158, Cuadro 2. Unlike Pozo 158, there was no gray soil in the pit. Most of these ceramic sherds are dated to the Late Classic, although Late Classic sherds were marked Middle Formative and Terminal Classic periods.
**Cuzam Northern Area (KN):** This unit (Pozo 3) is located to the south of Structure N1100E0850 in the Cuzam Plaza, in front of the access stairway to the structure. A total of 74 ceramic rims and 34 lithic artifacts were analyzed in this unit. The test pit had 7 levels; level 1 corresponds to the surface above Floor 1 of the plaza. Levels 2 to 6 correspond to the floor fill above Floor 2. Level 6 corresponds to the layer immediately above the second floor of the plaza, and Level 7 corresponds to the Formative Period Occupation and fill of Floor 2.

The ceramic concentration analyzed in this unit was recovered from Levels 1 to 6, and was more prevalent in Levels 3 to 5. The context indicates that the deposit might have been placed at the same time that the plaza was filled and raised. Another possibility is that materials might have been deposited on top of floor one and the fell through the hollow and non-compact fill. Ceramic types date to the Terminal Classic period.

### 7.4 General Characteristics of the Kiuic Ceramic Sample

A modal analysis of the sherd sample (N=1069) indicates that distribution of vessels by type variety can be classified into three major groups or wares: Puuc Slate (65%), Puuc Un-slipped (22%) and Puuc Fine (13%). More specifically, Muna Slate (48%) and Chum Un-slipped (22%) types 70% of the sample (Figure 7.2). The remaining types (~30%) represent individually less than 5% each of the total sample. Analysis of vessel form based on ceramic rim sherds indicates the use of four major forms: jars (38.5%), bowls (25%), basins (23%) and dishes (12%) (Figure 7.3). Other forms, such as censers and vases represented less than 1.5% of the total sample, making them the most infrequent form at the site.

I now describe the results of the artifactual assemblages recovered from plaza middens from multiple plazas. I describe the ceramic assemblage by three wares (un-slipped, slate and fine), their main forms and physical characteristics as observed from the Kiuic
sample. Based on these descriptions and previously exposed analysis criteria, I interpret the main forms and functions of ceramic vessels and classify them as storage, serving/cooking and ceremonial. Afterwords, I will analyze the ceramic and lithic assemblages by plaza in order to understand the activities that took place in this area.

*Un-slipped Puuc Ware (UPW)*

Kiuic’s sample of Puuc Un-slipped Wares consisted almost exclusively of Chum Un-slipped jars (94.3%). As seen in Figures 7.4 and 7.5, measurements of wall thickness, for both un-slipped and slipped jars, resulted in a unimodal distribution, indicating a lack of specialization. Around 87% of the jars had thin or average walls (between 0.55 and 1.25cm), suggesting that this range of wall thickness was the jar standard. Macroscopic examination of cross sections indicate that the preferred temper for un-slipped jars consisted mainly of calcite (77%) and calcite/quartz mix (18%). Calcite inclusions retain their plasticity under thermal stress, thereby making them ideal vessels for high temperatures. Quartz is not optimal for thermal shock resistance since particles expand with heat causing the vessel to break. This suggests that the majority of un-slipped jars are better built for cooking activities while a relatively small percentage were built exclusively for storage.

The average rim diameter of un-slipped jars is 25.23cm with a minimum of 7cm and a maximum of 50cm. Rim diameter measurement resulted in a unimodal distribution suggesting that un-slipped jars did not have a specialized rim size. I arbitrarily divided the sample into 25% percentiles to separate the sample by size. Rims with 7-20cm diameter are considered small, 21-25cm are considered medium, 26-32cm are considered large and 33-50cm are considered extra large. Under this classification 65% of jars were either small or medium while 35% were large and extra large (Figure 7.6). Most un-slipped jars had out-
curved necks (40%), which tended to occur in small, medium and large sizes. Un-slipped jars with other rim forms, such as vertical (18.7%), out flared (19.6%), and incurved (21.5%), were also present although at smaller rates.

After plotting temper inclusion, rim size and vessel form of un-slipped jars (Figure 7.7 and 7.8) I observed the following patterns: Un-slipped jars with calcite temper do not have a specific neck form or rim size. They varied between small to large in rim size and were predominantly out-curved (41%), although other forms were present as well. Incurved neck jars (17%) had mostly small and medium rim sizes, although large and extra large sizes were also present. Un-slipped jars with mixed quartz and calcite temper, physical characteristics that make them more suitable for storage than cooking, had predominantly out-curved (44%) or vertical necks (29%). In both cases small and medium rim sizes were predominant. Incurved neck jars, optimal for storage, were present in 10% of the sample. Large and extra large rim diameters, which are better for storage, had open (18%), and vertical (6%) rim forms. The low presence of un-slipped jars with quartz and calcite temper might be due to the better preservation of large storage jars; due to their lack of movement. Large vessels tend to break less and preserve for longer periods of time.

In sum, Un-slipped Puuc Wares from the sample are characterized as jars, mostly from the Chum Un-slipped type with a small percentage being Yokat Striated. Wall thickness was not a relevant feature; ancient potters did not construct jars of thinner or thicker walls for any function in particular. The difference between tempers may have been important for discerning jar function, however, it might have also been the result of a natural inclusions in the clay. All Yokat-Striated jars were tempered with calcite, making them more likely to be used for cooking at high temperatures. Striations could have served to augment the vessel
surface friction, making its transportation by hand easier (Bey III, personal communication 2015). Moreover, these vessels frequently had medium to extra large rim sizes (small rim vessels were present only in 5% of the jar sample). However, other formal jar characteristics did not indicate any specific purpose. The physical characteristics and form of the un-slipped jar sample (i.e., un-slipped, sometimes striated, coarse finish and calcite temper) suggests a general utilitarian function which included storage of solids and liquids, and cooking (Brainerd 1958:80; Robles 1990:182; Smith 1971:38-39). I interpret un-slipped jars at the site as *multifunctional* and used for utilitarian activities such as storage and cooking activities.

*Slipped Puuc Wares (SPW)*

Slipped Puuc Wares were the most frequent ware at the site (65%). Approximately 80% of this ware is classified as Muna Slate, 6% as Yaxachén Striated and other types (14%) that individually represented less than 5% of the Slipped Puuc Ware sample. These other wares included the following: Akil Impressed, Early Slate, Sacalum Black-on-Stale, Say Slate, Tekit Incised, Ticul Thin Slate and Yalchac Striated. The most common forms used in SPW are: bowls (35%), basins (31%), jars (17%), dish (16%) and vase (0.25%).

*Slipped Puuc Jars (17%)* As mentioned before, wall thickness measurements from jars were unimodal and interpreted as not relevant for any specific vessel function (Figure 7.9). Most slipped jars had calcite temper, ideal for resisting thermal shock. However, because the analysis consisted only of rim sherds direct indicators of fire exposure, such as fire clouding and smudging, were not detected. I divided slipped jar rims into five sub-categories: extra small (4-10cm), small (11-20cm), medium (21-25cm), large (26-32cm) and extra large (33-50cm). As opposed to un-slipped jars, slipped jars typically had smaller rim diameters
Moreover, rim diameter measurements indicate a bi-modal distribution, dividing the sample into two categories: 1) ex-small to small rim jars (4-20cm); and 2) large to ex-large rims, (21-50cm). Circa 60% of all slipped jars had extra-small or small rim diameter while 40% had medium to extra large rim diameters. As mentioned before the most frequent ceramic type in the sample is Muna Slate (81% of all slipped jars). Modal analysis indicates no differences between neck forms in small slipped jars (Figure 7.11). There are significantly fewer incurved necks, while open and vertical neck forms show greater relative frequency. Slipped Jars with extra-small rim diameters have mostly vertical and incurved rim forms. This pattern indicates that there are two kinds of small-rim, slipped Muna Slate jars: 1) extra-small vertical to incurved slipped jars and 2) small out-curved to vertical neck jars.

The first type of slipped jars has mostly vertical necks, although open neck forms, such as out-flared and out-curved, were also present. Based on neck form, rim size and lip form, I interpret extra small and small rim size slipped jars as liquid containers. Some of these specialized jars were identified as Muna Slate chultuneras, or water pitchers for drawing water from chultunob, a common vessel form in the Muna Slate type. Jars with small rim diameter, open neck forms and a rolled on lip are interpreted here as general water storage containers. Due to their rim size, it is very likely that these jars were ultimately used for different kinds of storage or water transportation.

Modal analysis of Muna Slate jars indicate that medium to extra-large slipped Muna Slate Jars (Figure 7.12) served a different function than the extra-small to small counterpart. Out-curved necks were the most common rim form, all though other forms were also present. Moreover, jars that were painted or other wise decorated were probably placed on display.

In sum, modal characteristics of the slipped jar sample at Kiuic indicate that jars served
at least three different functions. The first two I interpret as two different jars for liquid transportation; the last jar type, I interpret as a general purpose jar. The first type consists of small water pitchers or “chultuneras” of the Muna Slate type. These are characterized as having extra-small and small rim diameters, and straight necks with flat lips (Figure 7.13 g-h). I interpret the second type for water transport and storage jars, and characterize them as having small and extra small rims, rolled-on-lips and incurved rim necks (Figure 7.13 f2-4). Both of these vessels have been reported near caves, underground cisterns and other water sources. Moreover, these types might be some of the only specialized ceramic types from our sample to which a specific function can be assigned. Finally, I interpret a third category of slipped jars as general purpose in function. These are characterized as having medium to extra-large rim diameters probably were used for storage of grains or solids, especially the extra large slipped jars, whose rim forms are almost exclusively inverted (Figure 7.13 a-e).

**Slipped Puuc Bowls:** Measurement of rim diameter from Slipped Puuc Bowls resulted in a unimodal distribution, varying from 9 to 40 cm. I arbitrary divided the sample into four categories based on bowl rim size: 1) small (8-15cm), 2) medium (16-20cm), 3) large (21-26cm) and, 4) extra large (27-40cm). Based on these categories, bowls were 27% small (N=74), 45% medium (N=122), 21% large (N=57), and 7% extra large (N=19) (Figure 7.14). Based on these types, I interpret small and medium sized bowls as used for individual serving and large to extra large bowls as communal serving containers.

The majority of slipped bowls were classified as Muna Slate (71%) and Early Slate (24%). Other types (i.e, Sacalum Black-on-Slate, Say Slate and NID Slateware) individually represented less than 5% of the SPW sample (Figure 7.15). Muna Slate bowls were typically small (18%) to medium (34%) built for individual servings. The remaining 18% of the Muna
Slate bowls had large (14%) to extra large (4%) rims, which I interpret as functioning for communal serving (Figure 7.16). These bowls have two prominent forms: 1) slightly incurved sides, restricted orifices (44%) and rounded sides (20%). The remaining forms represented less than 5% of the sample (Figure 7.17). These two dominant forms presented a similar range of rim sizes when compared to each other and tend to be small and medium in size.

The physical characteristics of the slipped bowl sample indicate that they were used as domestic utensils for eating and serving. Although the sample showed a preference for two bowl forms, it’s likely that there might have been no functional difference between them. Both slipped bowl forms have two sub-types depending on their rim size: 1) small individual and, 2) communal serving bowls. Individual serving bowls have a larger presence than the larger bowls that could have been used for communal consumption. Individual size bowls with incurved sides were probably more practical for scooping liquids or eating out of than rounded sided bowls. Large incurred and rounded side bowls were used for communal serving, eating and public display.

**Slipped Puuc Plates** Slipped Puuc Ware plates are relatively homogenous in form and physical characteristics. Type-variety analysis revealed a majority of Muna Slate (72%) and Early Slate (25%). These were tempered mostly with calcite (97%). Plate rim diameter varied from 14cm to 60cm. I arbitrarily divided the plates into three categories. Plates between 14cm and 25cm diameter, present in 33% of the sample, were classified as small; plates within 26cm to 45cm of diameter, present in 61% of the sample, were classified as medium. Finally, plates within 46cm to 60cm rim diameter, 5% of the sample, were classified as large. General plate form consisted of flared side (50%) and out curved side
(48%) plates. Their dominant forms consisted of small and medium flared side (50%) and out-curved side (48%) plates. I interpret at least two different types of plates based on size: 1) individual small plates, which were used for individual servings and 2) medium and large plates, which served communal gatherings and display.

**Slipped Puuc Basins (Figure 7.18)** Basins in this sample were classified as Muna Slate (70%), Chumayel Red-on-Slate (12%), Early Slate (5%) and unidentified Resist Decorated Slate (5%). All Muna Slate Basins were tempered with calcite and their wall thickness measurements conformed to unimodal distribution that extended from 0.5cm to 1.6cm. Rim diameter measurements also produced a unimodal distribution that ranged from 14cm to 54cm (Figure 7.19). In order to classify basins by size, I arbitrarily divided the sample in four subsets depending on their rim diameter (Figure 7.20). These divisions include the following: small (14-20cm), medium (21-26cm), large (27-40cm) and extra large (41-53cm). Large basins were predominant in the sample (62%), while other sizes, such as medium (13%) and extra large (12%) were present but constituted a small part of the sample. Based on ethnographic observations by Hoil Gutiérrez (2007), I interpret this form mainly as containers.

**Fine Puuc Wares (FPW)**

**Fine Puuc Bowls** The Kiuc sample of fine ware-bowls consisted mostly of Teabo Red (46%) and Ticul Thin Slate (41%) types (Figure 7.21). There was a small presence of Carote Red bowls (6%) but in general other bowl types did not represent more than 5% of the sample. To categorize sizes, I use the same criteria I used for SPW bowls. Teabo Red bowls were mostly of medium (27%) and large size (13%), slightly incurved with restricted orifices (26%) and flared sided (13%) (Figure 7.22). When bowl form was plotted by rim size, its
was observed that the most common Teabo Red form was a medium sized rim slightly incurved with a restricted orifice (41%). Bowls with flared sides were mostly medium and large size. Ticul Thin Slate bowls were present in small (14%), medium (13%) and large (16%) sizes (Figure 7.23). In terms of form, Thin Slate bowls are mostly lightly incurved with restricted orifices (23%), although some feature vertical sides (10%) or flared sides (7%). Bowls that are lightly incurved with restricted orifices tend to be small (20%), medium (12%) or large (20%). Other bowl forms have too few samples to produce any significant trends. Vertical-sided bowls tend to be of medium size, although small, large and extra large sizes are also present. Flaring-sided bowls from the Ticul Thin Slate type were mostly small, but medium, large and extra large bowls were also present. Just as with Slate Ware Bowls, I divided Fine Ware bowls in two sub-categories based on their rim size: individual serving (rim size from 9-20cm) and communal serving (rim size from 21-40cm). As a result, 69% of the sample is interpreted as individual while 31% as communal serving fine ware bowls.

Fine Puuc Plates (FPW) Fine Puuc plate types include Teabo Red (63%), Sierra Red (13%), Tekax Black-on-Red (11%), Timucuy Orange Polychrome (8%) and Dos Arroyos (3%). This indicates that 87% of the fine wares can be classified as Puuc Red Wares and 11% as polychromes. Flared sides (59%) and out curved sides (32%) constitute the majority of the plate forms, although vertical sides (4%) and incurved sides (4%) also were identified. Rim size was divided arbitrarily in three categories: small (14-25cm), medium (26-45cm) and large (46-60cm). When compared to plate form, the most prominent size, in both flared and out curved plates, was medium (Figure 7.24). Only one fine Puuc ware vase rim fragment was identified in the sample. It consisted of a Teabo red type with straight walls and small (14 cm) rim diameter. Like Slate Ware Plates, I interpret these forms as serving wares for
individual and communal rations of solid foods. In general, the fine-ware plates sample was distributes as: small (24%), medium (60%) and large (16%). This suggests that 24% of the fine ware plates were for individual consumption and 76% were for consumption by a large group.

**General Characteristics of the Kiuic Lithic Sample**

As observed in Figures 7.25, the lithic assemblage consisted mostly of flint materials (92%). Other stone materials were present, such as obsidian (4%) and limestone (4%), but they represented a minor portion of the sample. Analysis of the stone artifacts by industry suggests that most of the sample consisted of secondary and tertiary (73%) reduction that resulted on the production of flint flakes. Moreover, analysis of lithic materials indicates that, although multiple stone tools were present in the sample, flake debris is by far the most frequent lithic product (73%). Lithic analysis also suggests that the reuse and retouch of flint flakes to create other tools such as burins and beaks. Moreover, small flint chips resulting from heating were observed in the sample, indicating that the flint was probably heated to make it more malleable or that it had been discarded near a hearth. The high percentage ofdebitage indicates that active tool production and maintenance took place in the proximity within the court.

**7.5 Artifact Accumulations and Ceremonial Deposits by Area**

**Royal Activity Area: Patio B**

Ceramic rims recovered from three sampled units at Patio B indicate the predominant use of Puuc Slate Wares (PSW) and Un-slipped Puuc Ware (UPW), specially Muna Slate and Chum Un-slipped Jars (Figure 7.26). Puuc Slate ware forms at Patio B include: bowl (26%),
basin (18%), jars (12%) and dishes (9%) (Figure 7.27).

Around 24% of Patio B’s sample consisted of general purpose Chum Un-slipped jars. The distribution of calcite and calcite/quartz tempered jars did not allow discrimination between storage and cooking pots (Figure 7.28). Moreover, calcite/quartz tempered jars, which are more suited for storage, were present in all neck forms further indicating their general purpose function. Although all jar neck forms were present in all rim sizes (Figure 7.29), its worth noting that a large presence of incurved necks occur in all rim sizes, suggesting their use as storage vessels.

Slipped Jars (12% of the Patio B sample), consisted mostly of two types: jars with small and large rim sizes (Figure 7.30). Small rim slipped jars (4-20cm) consisted mainly of vertical and incurved necks, although open neck forms were also present. I interpret the first as water transportation jars and the later out-curved and out-flared slipped jars, as multipurpose vessels (i.e., storage and cooking). Large slipped jars (26-53cm) consist mainly of vertical rims (6%), however, the small sample size did not allow association of a major trend. This suggests that 76% of Patio B’s slipped jars were for liquid storage or transportation while 18% were used for other activities (i.e., storage). Slipped bowls were mostly of individual size (74%), although large communal bowls were also present (26%). Both sizes were mostly present as jars with incurved sides, restricted orifices and rounded sides (Figure 7.31). Plates, on the other hand, were more prevalent in large communal sizes (63%) than individual sizes (27%) (Figure 7.32). The forms of the plates were homogenous having flared and out curved sides at both individual and communal sizes. Likewise, although present in all sizes, large basins were prevalent in the sample (68%). Basins were mostly Muna Slate with a small numbers of Chumayel-Red-on-Slate, Early Slate and Ticul
Thin Slate basins.

The PFW identified at Patio B consisted of bowls and plates of Thin Slate (48%) and Red Wares (52%) types (Figure 7.33). Fine ware bowls were found with incurved sides and restricted orifices (38%). Ticul Thin Slate bowls were also found with rounded-sides (9%), although other forms were also present in small numbers. Although most of the fine-ware bowls occur in small sizes (55%), a large number of communal-size fine ware bowls are also present (40%). Fine Ware Plates were scarce and only represented by sherds of Red Wares and a Dos Arroyo polychrome.

Analyzed lithic fragments the Patio B accumulation indicate a predominance of secondary (12%) and tertiary (70%) flakes over other lithic industries (Figures 7.34 and 7.35). This suggests tool production activities through flint knapping. Stone tools were present in minor proportions. These include obsidian prismatic blades, flint primary flakes, a core and some flint bifacial points. Lithic analysis also indicates that most of the stone artifacts at Patio B were debris from flint knapping (78%). Among the remaining identified products are: an axe, bifacial points, scrapers, prismatic blades and an exhausted flint core. The overall assemblage indicates that flint tools were produced at Patio B as part of the activities that took place in this area. Other identified tools such as prismatic blades, scrapers, chert uni-facial and bifacial points suggest food-related activities such as hunting and food processing. Chert celts, also known as utility bifaces, usually present cortex remains and are interpreted by Rovner (1997:18) as part of land-clearing implements (Figure 7.36).

In sum, the ceramic sample from Patio B has a similar distribution of wares in comparison to other Kiuic plaza assemblages: Un-slipped Puuc Ware 24%, Slipped Puuc
Ware 63% and Puuc Fine Ware 13%. There is a presence of multiple utilitarian jars forms and types, the characteristics of which were optimal for storing solids and liquids, as well as cooking and transporting water. There was a preference for both inverted and open rims in all un-slipped jars, with the exception of large rims, which had a strong preference for inverted rims (i.e., storage). Slipped jars at Patio B indicates storage and transporting liquids, and also general storage. The presence of large numbers of bowls, both from slipped and fine wares, of which around 2/3 were individual sized, suggests that stored bowls at Patio B were used for individual serving use. Although basins were represented in all sizes, large and ex-large size were the norm at Patio B, suggesting the need for serving large quantities of liquid or solids. Fine wares were represented by a small portion of the sample that consisted mostly of bowls. The majority of fine bowls were slightly incurved sides with restricted prefaced, out of which 3/5 were of small size and 2/5 large. Ceremonial wares were absent in the middens suggesting that Patio B was not used for storing or preparing ritual paraphernalia. The large bowls and basins could have been used to feed people at construction practices, while the individual serving bowls used to serve those who lived in palaces.

Residential Area: Icim Plaza

Ceramic evidence from sampled units in Icim plaza indicates the presence of mostly Muna Slate (54%) and Chum Un-Slipped (15%) types. As observed in Figure 7.37, 65% of the rims where from the Puuc Slate Ware, 18% from the Puuc Un-Slipped Ware (UPW) and 15% from Puuc Fine Ware (PFW).

UPW vessels consisted of mostly jars (16%) with a small number of censers (3%) (Figure 7.38). Un-slipped jar’s rim size varied, but most of them were small (42%), although medium (25%), large (24%) and extra-large (9%) were also present. The presence of a large
quantity of un-slipped jars with small rim size is unusual, since the overall sample indicates a tendency for large rim size. Un-slipped small rim jars were mainly of out-curved and out-flared form, suggesting that these vessels were used for liquid storage.

About 81% of slipped jars rims were small and extra small sizes while 19% were large or extra large (Figure 7.39 and 7.40). Around 47% of small and extra small slipped jars had vertical or incurved necks, indicating that they might have been used as water pitchers or “chultuneras”, while slipped jars with small rims and open necks (33%) indicate general purpose storage.

Puuc Slate Ware bowls were predominantly individual sized (64%) over large communal sizes (36%). The predominant Puuc Slate Ware bowl form has incurred sides and a restricted orifice (68%) although rounded (21%), flared (9%) and vertical (2%) sides were also present. Fine-ware bowls, which outnumbered slate-ware bowls, were mostly individual sized (68%) with incurred sides and restricted orifices. However, other forms were also present, especially flared side bowls (20%), which were not present in small sizes in Puuc Slate bowls. Large bowls were present in 32% of the fine-ware sample and mostly consisted of incurred sides with restricted orifices (10%) and flared sides (12%) or vertical sides (7%). Rounded bowls were almost non-existent in fine wares. The most used individual sized fine bowls were of the types Teabo Red (37%) and Ticul Thin Slate (26%) (Figure 7.41). Large-size fine bowls were mostly Ticul Thin Slate (18%) or Teabo Red (12%). Plates in the Icim Plaza sample were mostly large communal Muna Slates (62%). The small quantity of individual size plates was exclusively Muna Slate (11%). Fine ware plates consisted mostly of large-size Teabo Red type.
All basins were classified as Puuc Slate Ware. From this, the two most common types were Muna Slate (73%) and Chumayel Red-on-Slate (17%) (Figure 7.42). The majority of basins (51%) were Muna Slate and large in size. Interestingly, basins with drip decoration (Chumayel Red-on-Slate and Sacalum Black-on-Slate) were present in 22% of the sample.

Lithic assemblages in the residential area of Icim Plaza indicate a predominant presence of tertiary flakes (75%). This reduction technique suggests regular production of stone tools. The lithic industries, such as prismatic blades, primary and secondary flakes, bifacial points, and limestone, were also present, but represented a very small portion of the overall assemblage (Figure 7.43). The assemblage was classified based in the final products resulted in 65% of the sample being identified as flint debris (Figure 7.44).

A range of tools was identified in the plaza, but none of them were frequent in the assemblage (Figures 7.45 and 7.46). These included mason tools such as stucco polishers, knives or spear bifacial points, and general-purpose tools, such as beaks, flakes w/notches, gravers and scrapers. Overall lithic evidence indicates that flint tools were produced in the plaza, and a large array of tools were used in everyday activities.

Icim Plaza pottery consisted mostly of Slate Ware ceramics. Overall, the distribution of un-slipped, slate, and fine wares is similar to that of Patio B and the Kuche Group (circa 17% un-slipped, 63% slate and 15% fine wares). Preferred un-slipped jars were mostly small with opened necks, which might suggest storage food (liquid or solid), although other sizes and rim forms were also present, indicating other sorts of storage and cooking. This pattern is significant, since it may indicate a specialized function or a difference in the nature of storage/cooking. Half of the slipped jar sample were of small size with vertical or open rims,
suggesting a water storage function. Extra small jars were also present and may represent water pitchers. Slate-ware bowls were mostly of slightly incurved sides, restricted orifices and rounded side forms; circa 2/3 of these bowls were individual and 1/3 were large communal sized. Interestingly, there is a larger presence of fine ware bowls than slateware (13% of the sample were Fine Puuc bowls). These were mostly of the slightly incurved sides, restricted orifices and flared side forms; 2/3 of these bowls were individual sized and fine wares. Slipped plates were mostly flared (one of individual size and three communal) and out-curved (15 communal) sides. There is a very large presence of basins at Icim in comparison to other plazas. Circa 3/4 of these were of large or ex-large sizes indicating the need for serving large quantities of solids or liquids. The presence of drip-decorated basins also suggests the intention of displaying these vessels. A small, but significant, presence of censers indicates that this areas sponsored ceremonial activity.

**Cuzam and Kuche Plazas: Terminal Classic Residential Areas**

Ceramic evidence from the three sampled units from this residential area indicates a predominant presence of Muna Slate (38%), Early Slate (18%) and Chum Un-Slipped (29%) ceramics (Figure 7.47). Puuc Slate Ware was present in 62% of the sample, Puuc Un-slipped Ware in 31% and Puuc Fine Ware in 8% (Figures 7.48). Most vessel forms, except censers, were present. Overall, un-slipped jars were the most ubiquitous form (31%), followed by plates (19%), bowls and basins (12% each).

Puuc un-slipped vessels in these residential areas consist mainly of Chum Un-Slipped jars (32%), which come in multiple sizes, with small rim sizes (32%) being the most frequent (Figure 7.49). Medium (24%), large (19%) and extra large jars (14%) were also present. Extra small jars were almost absent (3%). Just as in Icim Plaza, the presence of small un-
slipped jars is significant, and may indicate a specialized function. Slate Jars (9%) were mostly small and extra small (59%) suggesting liquid transportation or a storage function. There were a number of slipped jars of medium size, an unusual mode for this sample. Although the sample was small (N=20), the tendencies of size and form are consistent with trends observed across the site. Small and extra small slipped jars, interpreted as water containers, dominate the sample, while extra large jars, optimal for storage, are less frequent.

Slate Ware bowls were mostly individual in size (95%), large sizes were scarce (circa 5%). Bowls consisted mostly of Muna Slate, Early Slate and Say Slate. The main represented bowl forms were slightly incurved sides with restricted orifices (46%) and rounded sides (42%) (Figure 7.50). Slate Ware basins were mostly large (52%), although small, medium and extra large were also present. Around 14% of the basins are Chumayel Red-on-Slate variety, characterized by wet slip decoration (Figure 7.51). The presence of individual and communal Slate Ware plates was similar at the plazas, with 51% individual and 49% communal-sized plates. Slate Ware plate forms generally had flared sides, out-curved sides or rounded sides. Only a small number of fine ware plates was present in the Kuche sample. Both communal and individual-size plates were present in Teabo Red (56%), Timucuy Orange Polychrome (22%) and Sierra Red (23%). The Fine Ware bowl sample was also scarce. As in other samples areas, most of the sample consisted of individual serving bowls (86%) while only a small portion were communal sized (14%). Fine-ware bowls consisted mostly of Ticul Thin Slate Bowls of individual size (40%). It’s worth noting that the sample, although small, had a large variety of types in comparison to samples from other plazas.

Lithic materials recovered from the Kuche group middens indicate the use of
obsidian, limestone and flint as materials for tool production (Figures 7.52 and 7.53). Around 76% of the plaza sample consisted of tertiary flakes and 10% of secondary flakes, suggesting the production of stone tools. Other industries were also present but represented only minor percentages of the sample. These industries included: prismatic obsidian blades, bifacial chert points, and a scraper. After reclassifying the sample to identify the final products of each individual artifact, the analysis revealed that 75% was identified as tool debris. A wide array of tools were present but in small quantities (Figure 7.54). These included tools associated with elite activities such as bark beaters for the preparation of paper, and a ceremonial celt fragment; bifacial points, possibly used for hunting, and general purpose tools such as prismatic blades, gravers and retouched flakes. One of the identified obsidian blades was green and imported from the Pachuca region in central México. The large amount of debris indicates that flint stone tools were produced and retouched at the plaza for everyday domestic activities.

In sum, Slate Wares were significantly present in the Kuche plaza middens. There was also a significant presence of un-slipped and fine wares. The distribution resembles that of Patio B and Icim Plaza to a less extent. Puuc Slate Ware had a high presence of plates in comparison to other forms. Un-Slipped jars were mostly small and medium with a preference for vertical rims. This distribution resembles the un-slipped jars from Icim Plaza, which may indicate similar activity regimes. Slipped jars were mostly small and extra small and I also suggest were for water transportation and storage. Slate Ware bowls were mostly slightly incurved sides with restricted orifices or rounded sides. Circa 4/5 of the bowls were of individual sizes and 1/5 of communal sizes. Slate Ware plates were mostly of flared and out-curved sides and 46% were individual sized while 54% were communal. The presence of
individual plates is significant at Kuche. Most of the basin rims recovered from this plaza were large or extra-large in size (64%). The presence of drip-decorated types suggests that they were intended to be displayed, a characteristic also observed in basins from the Icim plaza. There was a small sample of fine bowls in this group; most of them were slightly incurved with restricted orifices and approximately 5/6 of the sample were individual sized. The sample of fine plates indicates most of them were flared sided and with a relatively balanced presence of individual and communal sizes (44% and 56% respectively).

_Ulum Plaza: Ceremonial Space_

Ceramic evidence from the sampled units in this area consisted mostly of Muna Slate (65%), Chum Un-slipped (11%) and Unidentified Resist Decorated Slate (8%) types (Figure 7.55). Other forms individually represented less than 5% of the sample. In general, Puuc Slate Wares was present in 82% of the sample, Puuc Un-Slipped Ware in 18% with no presence of Puuc Fine ware. Major represented forms include jars (52%) and basins (30%). Dishes (8%), bowls (5%) and censers (6%) were also present but in smaller quantities (figure 7.56).

Un-slipped wares were represented by jars (70%) and censers (30%). Ulum Plaza jar types included Chum Un-Slipped$^{11}$ (47%) and Yaxachén Striated (17%). The number of jar rims recovered from Ulum were not abundant (N=12). Moreover, un-slipped jars were present in all sizes, specially small and extra large. However, due to the small sample size, it is likely that this trend is not significant. Slate Ware jars were predominantly extra large (42%), followed by medium (24%), large (17%) and small (14%) (Figure 7.57). Large and extra large jars were mostly out curved and out flared, with the presence of some vertical and incurved rims. Only six rims were identified as plates in the Ulum Plaza sample (one with
flared sides and five with out curved sides). These were exclusively Muna Slate, five were large and one was individual sized, a pattern that is consistent with other plazas of the site. A total of 24 rims were identified as basins, all of which were Muna Slate. Out of these 22 were identified as large or extra large while the remaining two were small and medium.

In sum, the Ulum plaza ceramic sample differed from the other plazas. The sample did not contain any fine wares, and slate wares were over represented in comparison to un-slipped wares (18% and 82% respectively). Moreover, the small but significant presence of censors indicate ritual activities. Un-slipped and slipped jar samples were too small to discern any significant patterns. The slipped bowl sample was also too small to discern any significant patterns. Slipped plates were mostly of communal size. The plaza had a large number of basins, out of which most were large or extra large. The absence of large quantities of lithic debris, which was abundant at the other plazas, suggests a lack of domestic activities in this plaza and further confirms its ceremonial character.

7.6 Ceremonial Deposits from the Yaxché Group

Excavations at Kiuic have yield evidence of 16 ritual deposits all located in the Yaxché group (Figures 7.58 and 7.59). These consist of cached vessels, both complete and fragmented, located in Yaxché’s main plazas. Most of these deposits are associated with particular structures, final floors levels, and show evidence of burning. Below I describe these deposits.
Between the 2002-2003 field seasons six different caches, dated between A.D. 600 and A.D. 800, were located in the proximity of Structure N1100E1040, to the north of Patio B. These deposits and general characteristics are summarized in Table 7.1. Four of these deposits were located at the north end of this structure, at the lower part of the platform and near the northern retaining wall of the patio. A fifth cache was located to the southwest of Patio B, in the northernmost portion of Plaza Icim. Finally, a sixth cache was located in the eastern room of Structure N1100E1040. The ceremonial deposits are described as follows:

**CD 1, Late Classic Period (A.D. 500-700)** This cache consists of a small jar located inside the east room of structure N1100E1040. The small jar or “chultunera” is similar to the jar located at CD 4. This cache was the only deposit found inside the structure and might be the first ceremonial deposit placed at Patio B. Some sascab was found beneath and around the “chultunera” indicating that the deposit was stabilized for placement. The cache was placed 0.45cm south of the north bench and it had sascab stones associated with it. The structure’s east room had two benches, one at the west end and another at the north end. After excavation it was determined that the north bench was located on top of a lower level than Floor 2. This might indicate that cache 1 was deposited on the original level where the north bench was constructed. Ceramic evidence associated with the unit where the deposit was found contains both Late Formative and Early Classic ceramics, a mix that probably resulted from the dismantling of an old sub-structure and its renovation. The cache was intrusive, Floor 2 of Structure N1100E1040 was broken before its placement. The cache was deposited between A.D. 500 to 700 as part of a construction ritual to either commemorate the renovation of the structure or the construction of its west room.
CD 2, Late to Terminal Classic (A.D. 500-950) Consists of a lip-to-lip cache of two Muna Slate dishes (Figure 7.60). Both were the same size in diameter (34cm or medium sized) and one of them was a tripod dish. Both vessels were possibly deposited underneath the last floor level above the platform. The cache was placed north of Structure N1100E1040. The deposits contained unidentified remains of bones between the dishes. Moreover, one of the dishes has a painted coil or spiral symbol, typical of the Puuc region. Due to its context, I interpret these vessels as a dedicatory cache.

CD 3, Late Formative Period (300 B.C.-A.D. 300) located at the west of the Patio B platform on the northernmost part of Plaza Icim, this deposit consisted of a fragmented unidentified vessel with a shell pendant placed on a burned floor. Its characteristics indicate that the deposit was a termination offering. The cache is located near bedrock level and associated with a rough circular formative structure. Context and ceramics remains indicate a Late Formative (300 B.C. – A.D. 300) date.

CD 4, Terminal Classic (A.D. 800-950) Consists of a fragmented small Muna Slate jar of the variety Chumayel Red-on-Slate (Figure 7.61). The jar was slipped, had handles, a flat bottom, and a 11cm rim diameter. The form suggests a “chultunera” or water pitcher function. CD 4 is located north of Structure N1100E1040, very near Cache/Burial 15. Just as with CD 2, it was located under the informal soil floor behind the north platform of Patio B. The cache is dated to the Terminal Classic (A.D. 700-950) period, but also contained Late Classic sherds. Its characteristics indicate it was a termination ritual.

CD 15, Terminal Classic (A.D. 800-950); Consisted of an infant burial or cache located inside a lip-to-lip vessel arrangement (Figure 7.62). The infant was placed in a large Sacalum Black-on-Slate basin with a rim of 35cm and covered with a medium size Teabo
Red tripod dish of 30cm in rim diameter. The stratigraphy is not clear regarding the location of this burial in respect to Patio B’s construction phases. However, it is likely that it was buried under the last floor level behind the patio platform. The burial was located adjacent to the north retention wall of structure N100E1040. The infant had a necklace made of marine shell goods beads and a jade bead inside its mouth (Figure 7.63) (R. Hill, personal communication, April 2015). Stratigraphic and ceramic evidence indicates that the deposit was placed between the Late Classic (A.D. 500-700) and the Terminal Classic (A.D. 700-950) periods.

**CD 18, Terminal Classic (A.D. 500-950):** This cache consisted of a Cehpech modeled carved medium bowl with a 19cm diameter rim deposited on bedrock as part of the fill of the Patio B platform, at the north end of the east room of Structure N100E1040 (Figure 7.64). The vessel had to be smoked to give a gray color and also has a rope or *mat* sign under its rim, a sign associated with royalty. This bowl was located very close to CD 15, which contained an infant burial. Some charcoal was located inside the vessel. The bowl was resting on multiple small stones to stabilize it, further hinting at the intentionality behind the placement. There are 10 chert flakes in this context, however it is not clear if they are associated with this deposit. Stratigraphic and ceramic evidence indicates that the deposit was placed during the Terminal Classic (A.D. 700-950) period. Due to its characteristics, the deposit is probably a dedication cache.

In sum, the six ceremonial deposits from Patio B consisted of three construction rituals, two termination rituals and an elite infant burial, making this area significant due to the presence of ritual activity. Cache vessels include chultuneras or water pitchers, Slate and fine ware bowls, plates and basins. Child burials in jars are common in the Yucatán
Peninsula and were probably practiced by all strata of the population (Fernandez Souza et al. 2010; Ortega y Cervantes 2009). The context is intriguing since it suggests that the individual might have been part of an elite family. Regarding the second lip-to-lip deposit, in a study of cache behavior at Campeche sites, Vazques Campa (N/D) observes that this type of lip-to-lip cache was relatively common during the Late Classic and associated with growth of cities and their increased interest in public rituals. She suggests that they might have been originally wrapped in cloth and represented “bundles of power” (Ayala Falcón 2010), usually found inside large buildings such as structures and temples.

_Ulum Plaza: The Ceremonial Area_

In seasons 2003, 2004, 2008 and 2009 a total of five ceremonial deposits were located in the Ulum Plaza area. These deposits were associated with architectural features, such as structures and stelae, and were not concentrated in any particular area of the plaza. One deposit was located in the northwestern corner of the plaza and associated with N1065E1025-E; two deposits were located in the center of the plaza near a stelae and a looters pit; finally a cache was located in the southeastern corner of the plaza near the east temple. All the deposits are dated to the Terminal Classic period and hence contemporaneous with the Ulum Plaza.

_CD 5A, Terminal Classic (A.D. 700-950):_ This cache was located on the same unit as CD 5A but at a lower level, under Ulum plaza Floor 2 (Figure 7.65). The deposit consisted of a Sacalum Black-on-Slate jar with a lid. The jar was placed upside down on top of a vessel fragment. Due to this it is interpreted as a Terminal Classic dedicatory cache associated with the construction of the plaza’s paved floor.
CD 5B, Terminal Classic Period (A.D. 700-950) This cache consisted of a Yokat Striated Jar of approximately 15cm in rim diameter (Figure 7.66). The jar was located to the east of the temple between the pavement and Floor 1. The jar was broken and associated with a grinding stone. The context indicates that the grinding stone might have been used to break the jar and symbolized the termination of the plaza. The deposit is dated to the Terminal Classic period.

CD 6, Terminal Classic (A.D. 700-950): This cache consisted of a single vessel interment located between the first floor and the pavement level of the plaza. The cache consisted of a Red-on-Slate jar and we interpret it as a dedication ritual for the temple’s last construction phase. The associated ceramic material was mixed containing sherds dated from the Middle Formative to the Terminal Classic period.

CD 14, Terminal Classic (A.D. 700-950) This cache was found at the northwest corner of the Plaza, adjacent to structure N1065E1025. Stratigraphically, the jar was located on top of Floor 3. The deposit consisted of a Muna Slate jar with a 10cm diameter rim and a gray obsidian fragment. The context identifies the cache as a construction or dedicatory offering. The cache is dated to the Terminal Classic Period (A.D. 700-950).

Ceremonial Trash, Terminal Classic (A.D. 700-950) As mentioned earlier on this chapter, a ceramic concentration located in the southwestern portion of the plaza, under a small wall that divides Ulum and Dzunun plazas, was examined separately. Due the characteristics of this deposit, its location, content (moderated stucco fragments and tenoned stones to support this into a building façade) and evidence of in situ burning, I interpret this context as ceremonial trash (Walker 1995) and not a midden. Ceramic materials from this deposit consisted mostly at Puuc Un-Slipped Ware (56%), some Puuc Slate Ware (29%) and
Puuc Fine Ware (15%). The most represented forms were jars (56%), bowls (19%), basins (10%), censers (8%) and plates (6%). Un-slipped wares were represented mostly by jars (23/48) and censers (4/48). Although the presence of basins (5/48) is not numerous in this context, it is significant that all of the rims had dripped slip decoration, indicating that they were created to be displayed. Basin sizes ranged from medium to extra large. Slate Puuc Ware was represented by four bowls, four jars and one plate. Fine Puuc ware was represented by five Teabo Red bowls and two dishes of the same type. Un-slipped jar rim size from this sample were unimodal and varied from small to extra large, with medium sized jars being the most frequent size. Slipped jars were unfrequent in the sample. However, their pattern is similar to other plazas where there is a bimodal distribution of small and large jars. The bowl sample was small (N=9) and both individual and communal size bowls were present in Slate and Fine wares. There were only three plates present for both Slate and Fine Puuc Wares.

In sum, Icim plazas had multiple caches and a deposit of ceremonial trash, all of these dated between the Late and Terminal Classic periods. Cached ceramic vessels include jars with drip-slip decoration, un-slipped, slate and fine wares. Contexts indicate that the ceremonial deposits were placed as dedicatory or termination rituals for plaza construction.

_Dzunun Plaza: Administrative Area_

In seasons 2004, 2008 and 2009, five ceremonial deposits were located in Dzunun Plaza. The deposits were located in the northern portion of the plaza, at the south end of structure N1065E1025. Other structures of the administrative plaza, such as the popol nah, did not yield any caches. The deposits span from the Late Formative to the Late Classic Period, evidencing ceremonial activity for most of Structure N1065E1025 late construction phases (with the exception of its final construction phase, when it was transformed into a
CD 9, Late Classic Period (A.D. 300-700) This cache was located in the northeastern corner of the Plaza as part of the fill of floor 2 (Figure 7.67). The deposit consisted of a fragmented Yokat Striated jar with two obsidian blades located inside the vessel. Its characteristics suggest that the cache was part of a construction ritual. Although its ceramic context is mixed (containing Early Classic material), the cache can be dated to the Late Classic Period.

CD 10, Late Classic Period (A.D. 300-500) This cache was located in the northeastern corner of the Plaza as part of the fill of floor 3. The deposit consisted of a Muna Slate small jar or *chultunera* located inside another jar. Moreover, an associated obsidian blade was located inside the jar while an obsidian core was located nearby and probably belonged to the same offering. The deposit is interpreted as a construction ritual, probably dedicated to N1065-E, dating to the Early Classic Period.

CD 11, Early Classic Period (A.D. 300-500) This deposit of human bone was located at the northwestern corner of the Plaza. Thaphonomy analysis by Cecilia Medina (UADY) indicates that it consisted of at least two articulated adults, possibly male, buried face down and burned in situ (Figure 7.66). Moreover, burn patterns on the bones indicate that the individuals were burned between 300 and 600 degrees in an open fire. The mortuary deposit was intrusive and cut through multiple floor levels; the individuals were placed on bedrock and sealed by Floor 2. This context is interpreted as a termination ritual and dated to the Early Classic Period (A.D. 300-500). After this event, the individuals were covered by the plaza’s stucco floor, before the court was renovated. The context fits with what Tiesler calls (2007:19) “communion sacrifice”, in which the sacrificed benefit the communion between
humans and the gods to renew the cosmos.

**CD 12, Late Formative Period (300 B.C.-A.D. 300)** is located in the northeastern corner of the Dzunun plaza on Floor 6. It consists of a fragmented jar with some unidentified bone fragments and burned soil that could have originally been inside the vessel. Due to its contexts, which gave no indicators of any funerary treatment of the individual, and stratigraphic location, associated with the construction of the 5th floor of the plaza, it is interpreted as a termination ritual. Associated material and stratigraphic context date this deposit to the Late Formative Period (300 B.C. – A.D. 300).

**CD 16, Terminal Classic Period (A.D. 685-885)** This ceremonial deposit was located above floor 3 of the plaza construction sequence (Figures 7.69 and 7.70). These consisted of seven unidentified Resist Decorated Slates (four bowls, two jars and a dish), two Muna Slates (one basin and one bowl), and three Yaxachén Striated vessels (a basin, a jar and, a bowl). Due to its characteristics this deposit is interpreted as a termination ritual. Moreover, it is likely that the deposit represents a whole set of serving wares acquired between the Late Classic and the Terminal Classic Period. Charcoal dating using the AMS method yielded a date between CalA.D. 685 and 885 (p=0.95) (Table 6.6).

**Feature 1, Early Classic Period (A.D. 300-500)** This cache is located below the 5th floor level of the structure. It consists of a more or less circular area that was marked by medium rough stones. The interior of this feature contained burned soil and stones. The deposit was intrusive since it was dug through the 5th floor level and later covered by the 4th floor. A portion of the 6th floor, which separated the Classic from Formative period materials, was apparently broken indicating that this deposit might be intrusive to that level also. There are no ceramic nor lithic remains from this deposit, which might indicate that the materials
cached were of a perishable nature. This kind of offering is common and has been reported at places like Lubaantun and Caracol in Belize (Chase and Chase 1998; Pendergast 1998). A ritual deposit located at the 5 floor building at Edzna, where two non-slipped vessels were placed under a room, might reflect a similar behavior. I interpret this feature as a construction offering of perishable materials for the construction of an Early Classic floor.

In sum, the northern portion of the Dzunun plaza presented multiple ceremonial deposits associated with the royal court. Deposits consisted mostly of jars with associated obsidian, specially for N1065-E. The presence of two burned individuals in the northwestern part of the plaza suggests a sacrifice event associated with the construction of N1065E1025-sub. Two ceremonial deposits, feature 1 and CD 16, represent a construction and a termination ritual at the royal court.

Icim Plaza: Residential Area

In season 2010, one cache was located in the southwestern area of the Icim plaza, the residential area of the Yaxché group. The absence of caches or other ceremonial deposits in this plaza contrasts significantly with the ceremonial (Ulum Plaza) administrative (Dzunun) and service (Patio B) areas of the Yaxché group. Furthermore, the cache vessel was located in front of a structure near the Kuche-Yaxché sacbe.

CD 13, Late Classic Period (A.D. 500-700) This deposit was located in the southwestern corner of the Icim Plaza, directly to the west of the entrance to structure N1045E0975. The cache consisted of a killed vessel. Due to its context the deposit can be interpret as either a termination ritual or ceremonial trash and is dated to the Late Classic Period. The lack of ceremonial deposits in the residential plaza might be related to its non-ceremonial function.
7.7 Summary

As seen in Figure 7.71, although the Yaxché group has a long occupation sequence, most of the ceremonial activities in the plaza are dated to the Late Classic and Terminal Classic periods. Kiuic’s ceramic evidence indicates the presence of three major wares: Puuc Slate (PSW), Puuc Un-Slipped (PUW) and Puuc Fine Ware (PFW). The majority of sherds were PSW, followed by PUW and PFW. Analysis of wares, forms and rim diameters suggests that certain vessels were more effective for specific functions while others could only be classified as multipurpose. Un-slipped jars were divided into storage, cooking and multifunctional, while slipped jars consisted of liquid containers, liquid pitchers and general purpose vessels. Analysis of bowls indicates that this form was mostly used for individual servings, while plates were more likely to serve as communal display serving ware. Most basins were classified as large to extra-large from PSW. Other forms such as vases and censers were represented by only a few rims and were interpreted as evidence of ceremonial activities.

Late and Terminal Classic Period middens from different plazas at the site of Kiuic indicate that these areas were used for different functions. At Dzunun Plaza, ceramic assemblages from Patio B suggest an array of activities related to large amounts of food preparation and consumption. Consumption was indicated by the presence of multiple vessels used as serving wares, including a large quantity of slate and fine bowls. Rim analysis indicates that Patio B’s vessels had a high frequency of serving forms and a medium frequency of storage and cooking forms. Rim measurements indicate that bowls were used mostly for individual rations of food while plates were likely used for larger communal servings and food display. Although PFW were present, the majority of bowls and plates at
Patio B were PSW. Large basins, used for serving, were present in the sample. This form had a medium frequency when compared to other plazas. Cooking and storage activities are indicated by the presence of large quantities of multifunctional un-slipped jars of all sizes. The presence of incurved un-slipped jars in all sizes suggests storage of different types of food. The presence of extra large and large slipped vessels also indicates storage activity. The presence of vertical and open rim jars identify this form as likely cooking vessels. The high frequency of extra small rim slipped jars with vertical or incurved necks suggest the presence of water storage jars and water pitchers. The large quantity of water pitchers is associated with the patio’s underground water cistern.

Lithic analysis indicates flint tool production and the use of stone tools such as an axe, bifacial points, scrapers and obsidian prismatic blades. Excavations at Patio B also reveal a large number of commemoration and termination rituals at the back of the main northern structure.

Ceremonial deposits include an elite infant burial, as indicated by vessel containers and funerary regalia. Evidence at Structure N1065E1025 also suggest at least one major termination ritual in which multiple vessels were deposited and burned before the structure was renovated.

At Icim Plaza, the prominent presence of un-slipped and slipped jars with small rims sizes suggests storage of both liquids and solids. The number of water pitchers or *chultuneras* is lower than in Patio B, suggesting that the use of Icim’s water cistern was less frequent or with less intensity that of Patio B’s. The high frequency of serving wares, such as bowls and plates, indicate elite domestic activities. The prominent use of large slate basins also
indicates frequent servings of liquids and solids. Moreover, when compared to the other plazas Icim Plaza had most the highest presence for this form. The presence of censers in the plaza is an indication of ceremonial activities associated with Terminal Classic processions from Kuché to the Yaxché group (Bey 2012). Processions would start at the first group, enter Yaxché through the Icim plaza and then reach the Dzunun Plaza. The prominent presence of large basins, some of which were decorated with the drip slip technique suggests their use for display, and they also could have formed part of the procession ritual.

The lithic evidence suggests production of flint tools and the use of other domestic tools such as obsidian blades, bifacial points, beaks, gravers, scrapers and a stucco smoother. The lack of ceremonial deposits in the plaza points towards the domestic character of the plaza.

Ceramics from the Kuche Group middens indicate a high frequency of small un-slipped jars with vertical necks, which were likely used for storage. Open forms of un-slipped jars were not as prominent as in other residential plazas, such as Icim, suggesting a lack of cooking activities in the sampled areas. Slipped jars indicate that most of these vessels were used for liquid storage and liquid pitchers and not as large general storage vessels. Bowls in individual sizes were prominent at Kuche, specially PSW types. However, plates, both in PSW and PFW, were present in the group in significantly higher percentages, in contrast with other plazas, individual and communal sizes were almost equally represented. Although their overall presence is low in comparison to other plazas, large basins were the norm at this group and these included types with wet drip slip decoration, suggesting that this serving ware was meant to be displayed.
Lithic materials indicate that flint tools were produced at the Kuché plaza. Identified tools from the plaza include bark beaters, bifacial points, a celt fragment, gravers, points, prismatic blades, and retouched flakes.

There were no fine ware ceramics at the Ulum Plaza. The ceramic assemblage was characterized by a large number of jars (both slipped and un-slipped) and basins. Compared to other areas at the site, un-slipped jars were scarce and were almost exclusively open neck forms of all sizes. Although slipped jars were present in all sizes, extra large with open or vertical rim forms were the most prominent types. Jars used as water pitchers and other liquid containers were not present at the plaza rim sample. Bowls and plates were almost not present in the sample, both of them having very low frequency in comparison to other plazas if the site. Large and extra-large basins were present; their frequency was high in comparison to other plazas of the site.

The plaza middens lacked any presence of stone tools, suggesting a ceremonial character. Ceremonial deposits in the plaza indicate multiple ritual activities dedicated to the construction and termination of architectonic features.

1 Brainerd names these stages (from earliest to latest): Yucatan Formative (1500 B.C- A.D.100), Yucatán Regional A.D.100-751), Yucatán Florescent (A.D 751-889/987), Yucatán Mexican (N.D.), and Post-Conquest (A.D.1000-1830).

2 Several Formative period sherds are also reported in this study (i.e., Sierra Red). Their provenances are linked to construction fill from structures dated to the Formative period; these were dismantled and reused as construction fill for Classic Period buildings.

3 Smith (1971:28) observes this group at the site of Ake, Chacchob, Chichen Itza, Dzibiac, Dzibilchaltun, Hunacti, Kabah, Labna, Mayapan, Miraflores (Colonia and Quinta), Mulchic, Oxkutzcab, Sayil, Soblonke, Tecoh, Tihoo, Ucu, Uxmal, Xcanatun, Xulmil, and Yaxuna in Yucatán; Aguada Grande, Coba, Cozumel, Ichmul, Tancah; Vista Alegre, Xcaret, and Xelha in Quintana Roo; Canbalam, Caylor, Dzibilnocac, Edzna; Huaymil, Jaina, Queja, Santa Rosa Xtabak, Tohkok, and Xpuhil in Campeche.

4 Smith (1971:29) notices that this group occurs at the same sites where the Puuc Slate Ware is found.
Smith (1971) observes the presence of these ceramic wares at the sites of Acanceh, Ake, Chanpuuc, Chichen Itza, Dzibnikbn, Dzibilchaltun, Kabah, Labna, Mani, Mayapan, Miraflores (Colonia and Quinta), Oskintok, Sayil, Uxmal, and Yaxuna in Yucatán; Aguada Grande, Calderitas, San Miguel Cozumel, and Taneah in Quintana Roo, and Hochob in Campeche.

Smith (1971) observes the presence of these ceramic wares at the sites of Acanceh, Chacchob, Chichen Itza, Dzan, Dzibilchaltun, Hunacti, Kabah, Labna, Mayapan, Miraflores (Colonia), Mulchic, Oskintok, Oskutzcab, Sabacche, Sayil, Tecoh, and Uxmal in Yucatan; Canbalam, Cayal, Edzna, Jaina, and Tohkok in Campeche, and Cozumel, Ichmul, and Vista Alegre in Quintana Roo.

The definition of basin came from Brainerd (1958), since Smith (1971), Sabloff (1975) or Lopez Varela (1996) do not fit this form.

Rovner and Lowenstein (1997:7) define lithic industry as the study of chipped and ground stone by clarifying them according to a particular reduction series.

Caches from the 2002-2003 seasons at Patio B were recovered during the consolidation stage of excavation, which made their documentation less rigorous.

Information from this unit is very scarce. Moreover, it is not described in any of the BRAP archaeological reports.

Out of the 272 bowls from the sample, only 5 were un-slipped.

Sierra Red sherds are dated to the Formative period and are inclusions from other site contexts and indicate mixed levels.

One of this was identified as large Chum un-slipped jar covered in red and white paint.
Figure 7. 1 Location of Middens or “Material Accumulations” at Kiuic
Figure 7.2: Kuiu ceramic percentages by Type-Variety.
Figure 7.3 Overall Kiuic Vessel Form Distributions

Figure 7.4 Unslipped Jar Wall Thickness (in cm)
Figure 7. 5 Overall Jar Wall Thicknesses at Kiuic

Figure 7. 6 Unslipped Jar Size
Figure 7. 7 Rim size of un-slipped calcite temper jars

Figure 7. 8 Rim of un-slipped calcite/quartz and quartz temper jars
Figure 7.9 Jar size by surface treatment

Figure 7.10 Rim diameter measurements of slipped jars
Figure 7. 11 Percentage of small and extra-small rim jars by their form

Figure 7. 12 Percentage of Medium to Extra Large Slipped Jars by Rim form
Figure 7. 13 Muna Slate Jars (from Breinerd 1958)
Figure 7. 14 Slipped Bowls by Size

Figure 7. 15 Slipped Bowls by Type-Variety
Figure 7. 16 Bowls by rim size and type-variety

Figure 7. 17 Bowls by Type-Variety and Rim Form
Figure 7. 18 1 Muna Slate Basin (from Brainerd 1958)

Figure 7. 19 Rim Diameter From Slipped Puuc Basins
Figure 7. 20 Puuc Slate Ware Basins by Size

Figure 7. 21 Puuc Fine Bowls by Type and Rim Size
Figure 7. 22 Teabo Red Bows by Rim Size and Form

Figure 7. 23 Ticul Thin Slate Bowls by Form and Size
Figure 7. 24 Fine Puue Plates by Form and Rim Size

Figure 7. 25 General Lithic Assemblage by Plaza at Kiuic (N=28)
Figure 7. 26 Patio B Ceramic Types

Figure 7. 27 Patio B Ceramic Wares by Form
Figure 7. 28 Patio B Un-Slipped Jars by Rim Form and Temper

Figure 7. 29 Patio B Un-Slipped Jars by Rim Size and Form (N=57)
Figure 7. 30 Patio B Slipped Jars by Rim Size and Form

Figure 7. 31 Patio B Slipped Bowls by Rim Size and Form
Figure 7. 32 Patio B Slipped Plate Rim Size by Form

Figure 7. 33 Patio B Fine Ware Bowls by Type
Figure 7. 34 Patio B Lithic Industries (N=82)

Figure 7. 35 Patio Lithic Products (N=82)
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<table>
<thead>
<tr>
<th>Time Period</th>
<th>800 B.C.</th>
<th>600 B.C.</th>
<th>400 B.C.</th>
<th>200 B.C.</th>
<th>A.D. 200</th>
<th>A.D. 400</th>
<th>A.D. 800</th>
<th>A.D. 1000</th>
</tr>
</thead>
</table>

**Patio B**
- Floor Levels
- Str. N 1100 E 1040
- Patio Platform
- Artifact Deposit East
- Artifact Deposit West
- Ceremonial Deposits

**Dzunun Plaza**
- Floor Levels
- South Platform
- North Platform
- N1065-East
- N1065-West
- Ceremonial Deposits

**Ulum Plaza**
- Floors
- Str. N1050 E1065
- Separation
- Ceremonial Trash
- Ceremonial Deposits

**Cuzam Plaza**
- Floor Levels
- Cuzam Midden 1
- Cuzam Midden 2

**Icim Plaza**
- North Floor Levels
- South Floor Levels
- Str. N1020 E0990
- Middens (3)
- Ceremonial Deposits

---

**Figure 7. 70 Main architectonic features, middens and ceremonial deposit timeline**

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Table 7. 1 List of Ceremonial Deposits from the Yaxché Group

<table>
<thead>
<tr>
<th>CEREMONIAL DEPOSIT ID</th>
<th>ASSOCIATED STRUCTURE</th>
<th># VESSELS</th>
<th># LITHICS</th>
<th>SHELL #</th>
<th>JADE #</th>
<th>BONE #</th>
<th>TYPE</th>
<th>CHRONOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Patio B</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>LATE CLASSIC (A.D. 500-700)</td>
</tr>
<tr>
<td>2</td>
<td>Patio B</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>DEDICATORY RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>3</td>
<td>Patio B</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>ABSENCE</td>
<td>TERMINATION RITUAL</td>
<td>LATE PRECLASSIC (300BC-A.D. 300)</td>
</tr>
<tr>
<td>4</td>
<td>Patio B</td>
<td>1</td>
<td>1 (MANO)</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>TERMINATION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>5</td>
<td>Ulum Plaza</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>TERMINATION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>6</td>
<td>Ulum Plaza</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>NID</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
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<tr>
<td>7</td>
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<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>LATE CLASSIC (A.D. 500-700)</td>
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<tr>
<td>8</td>
<td>P- N1330E1195</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>PRESENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>9</td>
<td>Dzunun Plaza</td>
<td>1</td>
<td>2 (OBSIDIAN)</td>
<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>EARLY CLASSIC (A.D. 300-500)</td>
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<td>10</td>
<td>Dzunun Plaza</td>
<td>1</td>
<td>2 (OBSIDIAN)</td>
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<td>CONSTRUCTION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>11</td>
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<td>0</td>
<td>0</td>
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<td>BURIAL</td>
<td>LATE CLASSIC (A.D. 500-700)</td>
</tr>
<tr>
<td>12</td>
<td>Dzunun Plaza</td>
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<td>0</td>
<td>0</td>
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<td>TERMINATION RITUAL</td>
<td>LATE PRECLASSIC (300BC-A.D. 300)</td>
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<tr>
<td>13</td>
<td>Str. N1045E0975</td>
<td>1</td>
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<td>TERMINATION RITUAL</td>
<td>LATE CLASSIC (A.D. 500-700)</td>
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<tr>
<td>14</td>
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<td>1 (OBSIDIAN)</td>
<td>0</td>
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<td>ABSENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>15</td>
<td>Patio B</td>
<td>2</td>
<td>0</td>
<td>MULTIPLE</td>
<td>1</td>
<td>PRESENCE</td>
<td>BURIAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
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<td>16</td>
<td>Str. N1065E1025</td>
<td>12</td>
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<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>TERMINATION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>17</td>
<td>Patio B</td>
<td>1</td>
<td>MULTIPLE (CHERT)</td>
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<td>CONSTRUCTION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
</tr>
<tr>
<td>18</td>
<td>Ulum Plaza</td>
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<td>0</td>
<td>0</td>
<td>ABSENCE</td>
<td>CONSTRUCTION RITUAL</td>
<td>TERMINAL CLASSIC (A.D. 700-950)</td>
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</table>

Table 7. 2 Summary of Unslipped, Slate and Fine Puuc Wares by area

<table>
<thead>
<tr>
<th></th>
<th>UPW</th>
<th>PSW</th>
<th>PFW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patio B</td>
<td>24% (low)</td>
<td>62% (high)</td>
<td>14% (very low)</td>
</tr>
<tr>
<td>Icim Plaza</td>
<td>18% (very low)</td>
<td>65% (high)</td>
<td>15% (very low)</td>
</tr>
<tr>
<td>Ulum Plaza</td>
<td>18% (very low)</td>
<td>82% (very high)</td>
<td>Absent</td>
</tr>
<tr>
<td>Kuché Group</td>
<td>31% (low)</td>
<td>62% (high)</td>
<td>8% (very low)</td>
</tr>
</tbody>
</table>
Table 7.3 Summary of ceramic form rate by area

<table>
<thead>
<tr>
<th>Area</th>
<th>Vase (very low)</th>
<th>Slate Dish (low)</th>
<th>Fine Ware Dish (very low)</th>
<th>Basin (medium)</th>
<th>Slate Bowl (high)</th>
<th>Fine Ware Bowl (very low)</th>
<th>Slate Jar (low)</th>
<th>Un-Slipped Jar (high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patio B</td>
<td>1% (very low)</td>
<td>8% (low)</td>
<td>2% (very low)</td>
<td>18% (low)</td>
<td>26% (high)</td>
<td>7% (very low)</td>
<td>12% (low)</td>
<td>24% (high)</td>
</tr>
<tr>
<td>Icim Plaza</td>
<td>0% (absent)</td>
<td>6% (very low)</td>
<td>2% (very low)</td>
<td>36% (very high)</td>
<td>6% (very low)</td>
<td>13% (low)</td>
<td>17% (medium)</td>
<td>17% (medium)</td>
</tr>
<tr>
<td>Ulum Plaza</td>
<td>0% (absent)</td>
<td>7% (very low)</td>
<td>0% (very low)</td>
<td>30% (very high)</td>
<td>5% (very low)</td>
<td>0% (absent)</td>
<td>15% (low)</td>
<td>36% (very high)</td>
</tr>
<tr>
<td>Kuché Group</td>
<td>0% (absent)</td>
<td>15% (low)</td>
<td>4% (very low)</td>
<td>12% (low)</td>
<td>24% (high)</td>
<td>6% (very low)</td>
<td>9% (low)</td>
<td>32% (very high)</td>
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</table>

Table 7.4 Estimated percentages of water and storage jars by area

<table>
<thead>
<tr>
<th>Area</th>
<th>Water Jars</th>
<th>Large Storage Jars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patio B</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Icim Plaza</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Ulum Plaza</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Kuché Group</td>
<td>8%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 7.5 Estimate rates of individual and communal bowls and dishes by area

<table>
<thead>
<tr>
<th>Area</th>
<th>Individual Bowl (high)</th>
<th>Communal Bowl (low)</th>
<th>Individual Dish (low)</th>
<th>Communal Dish (very high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patio B</td>
<td>75%</td>
<td>25%</td>
<td>26%</td>
<td>74%</td>
</tr>
<tr>
<td>Icim Plaza</td>
<td>70% (high)</td>
<td>30% (low)</td>
<td>10% (very low)</td>
<td>90% (very high)</td>
</tr>
<tr>
<td>Ulum Plaza</td>
<td>100% (very high)</td>
<td>0% (absent)</td>
<td>17% (very low)</td>
<td>83% (very high)</td>
</tr>
<tr>
<td>Kuché Group</td>
<td>80% (very high)</td>
<td>20% (low)</td>
<td>47% (medium)</td>
<td>53% (medium)</td>
</tr>
</tbody>
</table>

Table 7.6 Estimates of storage, cooking and ceremonial vessels by area

<table>
<thead>
<tr>
<th>Area</th>
<th>Storage/Cooking (Medium)</th>
<th>Serving/Cooking (High)</th>
<th>Ceremonial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patio B</td>
<td>36% (Medium)</td>
<td>61% (High)</td>
<td>Absent</td>
</tr>
<tr>
<td>Icim Plaza</td>
<td>24% (Low)</td>
<td>63% (High)</td>
<td>Present</td>
</tr>
<tr>
<td>Ulum Plaza</td>
<td>57% (High)</td>
<td>42% (Medium)</td>
<td>Present</td>
</tr>
<tr>
<td>Kuché Group</td>
<td>40% (Medium)</td>
<td>60% (High)</td>
<td>Absent</td>
</tr>
</tbody>
</table>
CHAPTER VIII: DISCUSSION AND CONCLUSIONS

8.1 Introduction

In this dissertation I have explored four general themes: the role of monumentality in the development of inequality and authority, the process of urbanization in Maya prehistoric societies, the variability in local traditions of authority and the organization and function of royal courts. As stated in Chapter 1, my research questions include the following: Are there different traditions of Maya royal courts during the Classic Period? Are all Classic period Maya courts royal? Can ancient Maya sites be considered urban based on the presence or absence of royal courts? In this chapter I discuss the results from my analysis and address my research questions.

Firstly, I discuss if the archaeological site of Kiuic was a city according to architectonic and artifactual evidence, as well as the evidence of social construction of the landscape through its long process of urbanization. Secondly, I discuss Kiuic’s evidence of courtly architecture and behavior and contrast how it compares to other areas in the Maya area. The objective is to understand the different royal court traditions if different times and places within the Maya area, and to define Puuc court characteristics of the Classic period. Thirdly, I propose a model for Puuc courts during the Late and Terminal Classic period; this model is focused on the architectural changes observed at the site of Kiuic and how they compare to contemporaneous regional socio-political climates. Finally, I point towards future directions, topics and themes that royal court studies need pursue in order to
understand the variability of courtly behavior in the Maya lowlands.

8.2 Was Kiuic a city?

In order to know if the site of Kiuic can be classified as urban during the Classic period, I answer two questions: 1) does the urbanization process indicate the social construction of a city? and 2) was the Yaxché group a “royal” court? Evidence indicates that the settlement was continuous from the Middle Formative to the Terminal Classic period. Yaxché’s central plaza, Dzunun, was renovated constantly throughout this long period of occupation. This evidence reveals a process of growth that started in the Formative period and increased dramatically during the Classic period. Construction sequences are the result of social processes in which rulers consolidated and materialized their authority through architecture. This constant process of building and rebuilding is more evident during the Classic due to the extensive use of carved stones to build masonry buildings; during the Formative, perishable structures were built and rebuilt generation after generation without leaving much evidence in the archaeological record. In sum, evidence from the construction sequence, architecture and artifacts indicates that during the later part of the Early Classic Period until the early Terminal Classic, the Yaxché group was a Maya court; however, it is unclear if it was royal.

Kiuic’s Formative Period Village

Research at Kiuic, has yielded evidence that the site was inhabited for a long and continuous period of time, from approximately 800 B.C. to circa A.D. 950. Excavations at the Yaxché group yielded multiple plazas, platforms and ceramic artifacts suggesting the the area was active and engaged in socio-political networks with other populations of the Puuc area during the Middle and Late Formative periods. Evidence suggest that during the Middle
Formative a population settled in the area. Evidence of two raised platforms with stucco floors at the center of the group, as well as a stucco floor or plaza to the west of the group suggest the settlement of a small community of farmers during this time. Stratigraphic data indicate that the northern platform was the base for a small perishable structure that dominated both the southern platform and eastern stuccoed plaza. Based on data from other sites, it is safe to assume that both the platforms and plaza sustained structures made of perishable materials. The size, location and disposition of the platforms suggest that they might be domestic groups, although there is no other evidence to back this assumption. Regardless, evidence suggests that this locale was used for hundreds of years as a place of recurrent construction and domestic activity. Unfortunately, the absence of other material evidence (i.e., ceramics) and monumental architecture (i.e., ballcourts, e-complex and triadic temples) makes it difficult to understand the relationship between the Middle Formative Kiuic community and its surrounding neighbors.

Evidence from the Late Formative floors indicates that the north and south platforms were raised and renovated. Just as with its Middle Formative construction, the size, location and disposition of the platforms suggest the presence of a domestic group. We can also assume that both platforms supported superstructures and that the southern platform might have dominated Yaxché at this time due to its higher altitude. Evidence of multiple foundation braces around the platform and non-paved surfaces outside the group center, suggest that the northern and southern platforms were the site center even at this early chronological stage. This suggest that there might have been a change in the dominant group of Yaxché from the Middle to Late Formative period, since in the earlier time the north platform was higher and during the later, the south platform was higher, possibly larger, and
its main structure was on top of a small platform and had access stairs on its southern side. There is little recovered evidence of artifactual or architectural remains that indicate the relationship between the Late Formative community and its relation to the region. During this time other sites in the northern Yucatán peninsula experience a “boom” in population evidenced by large architectonic projects such as acropolis (i.e., Xcnaceh) and e-groups (i.e., Yaxhom) made from megalithic architecture, a style that Hutson (2014) classifies as a local development and symbol of a regional identity. The recruitment of populations through ideology and religion, argued by Ringle (1999), is also invisible at Kiuic’s archaeological record. What the evidence does show is an expansion of the settlement and population, suggesting the presence of a small farming village community.

*The Social Construction of Kiuic’s Classic Period Royal Court*

The Early Classic period at Kiuic can be classified as a transitional period. Architectonically, the raising and renovation of the Dzunun platform, including the fusion of the north and south platforms through a stone pavement, the construction of a stone building at the south (Str. N1015-C) and a platform with megalithic stones at the north (Str. N1065-Sub), both with talud-style walls, indicates a massive overhauling of the site. This massive project was made through amassing a large labor force required for extraction, transportation and assemblage of stone buildings, which included the production of heavy stucco decoration and mortar, as well as project planning and coordination. I suggest that the platform sustained a now dismantled domestic group, probably of the site’s ruler. Changes observed at the site did not happen in a vacuum, but were part of the general socio-political climate of the Early Classic period in there northern lowlands. The megalithic style suggest that the site was participating in the northern sphere of interaction probably spearheaded by the site of Izamal.
Architectonic, ceramic and ceremonial deposit evidence indicate that the Yaxché group assumed the physical characteristics of royal court during the Late Classic period. The Yaxché group presented a *discrete use of administrative, ceremonial and habitational space*. Str. N1065-N, N1065-E, and N1065-W represented a nodule or epicenter in which all of these activities took place. Building, spatial and artifact analysis have determine that the Yaxché group during the Classic period was composed of four plazas and one patio. Moreover, each plaza shows evidence of different use of space for a functions, all of which conform to major characteristics of royal courts (Inomata 2001:27). At the Dzunun plaza, located at the center of the site, excavations revealed renovations of progressively restricted space until it became an enclosed space during the Late Classic period. Moreover, the presence of important administrative buildings, such as the *popol nah* or council house, and the ruler’s residence from the Early to the Late Classic period support this claim. Its location made it a central node between the ceremonial, residential and service areas of the group.

Excavations at the Ulum plaza reveal that the area was in fact ceremonial in nature. This is suggested by its main structure, an east-temple, its enclosed space with very limited access, its location in the east (a direction associated with religious structures in the Maya region), and the presence of ceremonial trash in its southwest corner. Moreover, artifact analysis yielded a significantly different assemblage compared to other residential areas of the site. This is suggested by the absence of fine-ware bowls or lithic production. Most of the vessels were slipped jars, large rim plates, extra-large basins and censers. The presence of censers, which are rare in other middens at the site, also suggests a ceremonial function.
Research at the Icim plaza indicate that it consisted of an elite residential area. This is suggested by its structures (single room masonry buildings), the presence of annexed Patio A and Patio B, and a *chultún* or water cistern at the south end of the plaza. Moreover, multiple entrances and a location next to the administrative building regulated access. Trash deposits indicate the presence of un-slipped jars with small rim sizes. The pattern is unusual and might indicate a specialized form of jar. There is a large presence of liquid storage jars and *chutuneras*, likely used to store water from the nearby water cistern or *chultún* located a few meters to the south. All bowls were slipped and of individual size, while plates were mostly large sized. Just as in Patio B, this might suggest that most of the individual food consumption was served in liquid form in bowls while plates were used to serve large quantities of solid foods, possibly corn tamales. Basins were predominantly large, also indicating their use for consumption and display of liquids or solids. There is a small but significant presence of censers in the middens. These were probably used during the final years that the site was inhabited; I suggest that censers were part of the ceremonial processions that took place at the Kuché group and ended at Yaxché during the Terminal Classic period. Lithic evidence indicates that flint stone tools were probably not produced at Icim plaza; tool evidence suggests similar activities associated in Patio B. The presence of a stone polisher is intriguing, since it suggests a specialized activity such as stucco or ceramic polishing, maybe indicating the presence of masons.

Research for this thesis indicate that Patio B was the court's kitchen and service area. Evidence of this is suggested by the presence of a multi-room structure, multiple grinding stones or *metates*, midden deposits, and a location annexed to the south of Structure N1065E1025. Moreover, the patio was constructed as part of the same construction project as
the court during the Late Classic period. As I will discuss, the patio evidence indicates that
the area was used for storage, food processing and cooking activities.

*Activity regimes suggest heavy use of liquid storage, serving wares and specialized activities.* Courts are places for consumption. Architectonic and artifactual evidence indicates
that Patio B might have been a court kitchen or service area. Kitchens are defined as
dedicated activity areas where food preparation took place and trash was deposited (LeCount
2010). In the Maya area, kitchens are usually identified as low platforms behind or beside
domestic structures with a nearby presence of dense middens or other kinds of trash deposits
(*ibid*). Ethnographic records of Maya populations record a conscious decision to place
structures at the top of a slope, so that all organic refuse could be thrown downhill (Hayden
and Canon 1983). A usage of storage houses has been identified at Classic Maya sites, and
are usually located in masonry buildings that were repurposed (Folan et al 2002; Hendon
2000). However, Patio B resemble a kitchen or storage facility in which maize may have
been stored for daily and seasonal consumption (Smyth 1991). Other types of maize storage
that did not require a storage facility, such the use of maize bins, might also have been used
but not preserved in the archaeological record. Other rooms in Patio B might have been used
to store other utensils for different activities, such as cooking.

Water storage is usually analyzed in terms of general reservoirs (Scarborough and
Gallonpin 1991) and artificial cisterns (Carmean, McAnany and Sabloff 2011), not ceramic
vessels. Un-slipped jars are a common form in the Maya region, in which the Chum Un-
slipped type is particularly prevalent in the Yucatán peninsula. However, their physical
properties have not been extensively studied beyond their macroscopic characteristics.¹
Ceramic materials in middens at Yaxché indicate the presence of large quantities of narrow
rim slipped jars, suggesting liquid storage. At Patio B, there was a notable presence of
slipped vessels used for liquid storage and/or transportation, as well as un-slipped general use
vessels. The physical characteristics of the un-slipped general use jars make it difficult to
discern between cooking and storage activities, since their built materials and design can be
used for both purposes. The large presence of small slipped bowls and mostly large-size
plates suggests that bowls were used mostly for individual consumption of liquid foods while
plates were used for large quantities of solid food. This also applies to Puuc Fine Wares and
can be seen in multiple iconographic images in Maya vessels, where lords would receive
visitors and serve food in their honor. Most of the basins were of large and extra large sizes
indicating that large amounts of liquids were displayed for consumption. Food could have
been processed, cooked and placed in basins at Patio B, and then transported for serving at
other locations, probably at the Dzunun and Icim plazas. Lithic analysis at Patio B might
suggest production of stone tools, as well as other processing activities and hunting, further
suggesting that the patio was a service area for processing and short term storage of food.
However, the general lithic sample was too small to determine production of stone tools.

*Place making was heavily performed, through ceremonial deposits, during the Late
and Terminal Classic period.* As a consequence of the construction of large stone
architecture during the Classic period, ceremonial deposits, used to animate and de-animate
buildings were more common at the administrative, ceremonial and service areas at the
Yaxché group. I return to the dedicatory deposits in the service area shortly. The *in situ*
cremation and possible sacrifice of at least two individuals marked the accelerated
construction and creation of Yaxché’s court during the later part of the Early Classic; this
context fits with what Tiesler (2007:19) calls “communion sacrifice” in which the sacrificed
benefit the communion between humans and the gods to renew the cosmos. Ceremonial deposits continue to be included until the Terminal Classic period when the royal court was moved to the Kuché group and Yaxché became a ceremonial area. This suggests an active effort of place making throughout the time the court was active.

Deposits at Dzunun plaza reflect ritual events that I interpret as associated with power consolidation and legitimization of the court through ritual human sacrifice and the dedication of a complete ware set to animate Str. N1065. During the Late Classic Str. N1065-N was ritually activated by a deposit of at least 12 vessels. These consisted of: seven unidentified resist decorated slates (four bowls, two jars and a dish), two Muna slates (one basin and one bowl), and three Yaxachén striated vessels (a basin, a jar and, a bowl). A C14 dates the deposit between A.D. 685 and 885.

Structure N1065-E had four associated caches in its construction history; three located at its southeast corner and one at its northeast corner. At the SE corner we found a Late Formative deposit of a cached jar associated with fragments of unidentified bone and burned soil (C12). The other three caches were probably dated to the Late Classic and consisted of jars with obsidian blades. I interpret all three of caches as dedicatory to Structure N1065-E, the use of slate jars with obsidian cores and blades indicates that the same rituals were taking place in different periods of time. The presence of jars with obsidian blades at Str. N1065-E is intriguing and may suggest ritual bleeding, a behavior associated with temples and ceremonial behavior. Other catches are interpreted as dedication objects for building construction.

The general presence of ritual deposits associated with major construction events indicates the pan-Maya practice of giving a animus to a building prior to its construction.
However, the inclusion of ceremonial deposits also occurred in the service area of Patio B, most of the caches located at Yaxché were found. Patio B had six deposits all dated between A.D. 600 and A.D. 800. We were able to identify three construction rituals, two termination rituals and a burial. The first construction ritual consisted of an intrusive *chultunera* located inside the main building’s east room. The jar had *sascab* under its base for stability and was covered by a stucco floor after its deposit. The second deposit consisted of a Cehpech model carved vessel bowl deposited at the north end of the patio. The bowl represents one of the fancy wares of the site. The vessel had to be smoked to give it its color and also has a rope or *mat* sign under its rim, a sign associated with royalty. Another broken *chultunera*, which we interpret as part of a termination ritual, was located at the back of the patio. We also identified two lip-to-lip ceramic deposits. The first consisted of an infant burial with an associated shell bead necklace with a piece of jade. Child burials in jars are common in the Yucatán Peninsula and were probably practiced by all strata of the population (Fernandez Souza et al. 2010; Ortega y Cervantes 2009). The context is intriguing since it suggests that the individual might have been part of an elite family. The second lip-to-lip deposit, also found at the north end of Patio B, consisted of two Muna Slate plates, one of them a tripod, encapsulating an offering that unfortunately did not preserve. Researchers at other sites suggest that originally wrapped in cloth and represented “bundles of power”, associated with growth of cities and their increased interest in public rituals (Ayala Falcón 2010; Vazques Campa N.D.)

*Patio B displays evidence of feasting and gendered agency, possibly through hypogamy.* Ceremonial deposits in the patio might have been for the commemoration of constructions rituals in the plaza. The presence of *chultunera* jars and local fine serving wares, as well as an infant burial and a lip-to-lip ceramic bundle suggest that a variety of
important rituals were conducted by members of the royal court and the people who directed work in the service area, which were court women. Space was gendered in Classic Maya society, and kitchen areas even today are exclusively for the use of women. The presence of a large number of ceremonial deposits and a burial in the main kitchen area of the Yaxché court, marked female-gendered space in Maya society and suggests the importance of female courtiers at the site of Kiuic during the Late and Terminal Classic period. The creation of Yaxché’s court during the Late Classic period, the large kitchen area and its emphasis on feasts perhaps indicates the practice of female hypogamy or the marriage of royal women from powerful polities to lower-status men at less important and smaller sites, a common strategy of alliance formation among the Maya (Somerville, Schoeninger and Braswell 2016). This suggests that Kiuic was allied to a paramount ruler which would have differed from other sites at the Bolonché region such as Huntichmul where iconographic evidence indicates an emphasis on warrior poses, fertility scenes and ritual. Gallareta, Ringle and Bey (2011) argue that at Huntichmul these images might reflect the site’s loyalty to Uxmal, the Puuc capital of the Late Classic period.

Terminal Classic Ceremonial Space

Architectonic and ceramic evidence indicate that during the Terminal Classic period the Yaxché group was no longer the location of the royal court. Moreover, the group was replaced by the much bigger Kuche and Chulul palace complexes, located on the east end side of the site. The royal court was transformed into a 17m tall pyramid with a vaulted temple on top. The transformation of the royal residence into a pyramid-temple commemorated an ancient Kiuic founder (Bey 2006). In other words, the building changed form and function; the pyramid-temple now memorialized (or valorized) the history of the
royal family who by this time resided in the Kuche/Chulul groups. Several remains of Chen Mul incensories (associated with the Late Post-Classic period) were found in the rubble of the latest construction phase of the structure, indicating that the temple still retained ritual significance long after the Yaxché group was abandoned. Patio B was also abandoned and multiple metates were reused as part of the back part of the pyramid-temple. The council house was drastically transformed: most of its entrances, except two, were blocked. The building changed from a long gallery building to a long room, which probably was no longer used as a council room. The Icim plaza was no longer maintained and began to accumulate trash deposits. It is possible that the removal of offerings and burials of the Ulum plaza date to this period too, indicating evidence of termination rituals, either reverential or desecrating behavior (see Navarro et al. 2008). The last floor of the rooms of the east temple was heavily burned. Some stucco polishers found in the Icim plaza middens suggest that these buildings were maintained for some time before the abandonment of the site.

Middens from the Terminal Classic residential group Kuché indicate the use of large amounts of slipped jars for liquid storage. The same type of undetermined specialized un-slipped jar found in Icim was also identified at Kuché and Chulul. Bowls, just as in middens from other plazas, were mostly individual sized; plates in these groups were equally individual and communal sized. Basins sizes were extra large and large for the consumption and display of liquids and solids. The small amount of lithic evidence cannot corroborate the production of flint tools, although it is suggested by the presence of other general processing tools such as obsidian blades and scrapers. Specialized tools were also present and indicate activities such as hunting and the creation of paper. Although the presence of stone tools is limited, some of these suggest specialized courtly activities at the Kuché group, such as paper
fabrication. This is significant, since one of the characteristics of a ruler's house is record keeping, a key part of the ritual economy that makes the elites different than other individuals (McAnany 2010). Other tools include the presence of a green obsidian and a ceremonial stone celt. The patterns suggest that the Kuché group was habitational in nature and perhaps the residence of the new elite family of the site.

_Is Kiuic a city?_

Evidence indicates that Maya centers in the Classic Period were not as densely populated as other urban centers around the world (Rice 2006:267). Their settlement patterns share multiple characteristics with low-density agrarian based cities (Fletcher 2009, 2012; Isendahl and Smith 2011; Smith and Novic 2012:11) such as intensive field cultivation, spatial clustering of houses, spatial propinquity of houses, regular interaction among residents and shared economic and social attributes (Smith and Novic 2012:16). Kiuic was a small settlement that started to transform into an urban site around A.D. 500, when a court was established to administrate land and resources of the Bolonchén district. In this study, I proposed that the institution of the royal court was developed in order to control and allocate resources from Kiuic’s surrounding agricultural land. Evidence indicates that this switch happened somewhere during the later part of the Early Classic period, _circa_ A.D. 500. After this date, the site feature a new ceramic complex and the Yaxché group consolidated as a royal court. This suggests that control over lands and resources became bureaucratized and controlled during the Early Classic, a process that increased exponentially until the site's abandonment around A.D. 950. The significant construction of large platforms and perishable architecture during the Formative period in addition to construction of stone buildings during the Classic represents _a long-term investment_ for both elite and non-elite
The architectonic styles of the site’s main buildings, its social practices, such as caching and feasting, and the sharing of a ceramic tradition with other northern sites, evidence its position within a socio-political network with other northern Maya settlements, especially during the Classic period. The networks between Kiuic and other sites are also suggested by the practice of hypogamy. If this proposition holds, Yaxché’s ruler might have gained authority through social and political networking with a major site such as Kabah, Sayil or Uxmal. Kiuic’s court played an important role in administering the fertile land of the Bolonchén district. Other small sites near the region, like Labna, might have played a similar role for another part of the Puuc hills. Opposite to sites like Uxmal and Kabah, there is virtually no evidence of conflict at Kiuic (i.e., protective walls or war imagery). The absence of other important architectonic elements at Kiuic, such as a ball court and large arches, suggest that the court was not royal and, hence, not ruled by an Ahau, but probably a powerful Sajal. Iconographic evidence in the Maya area indicates that royal women were frequently sent to marry lords of smaller sites for the purpose of standardizing networks and consolidating influence over a vast region. Evidence of extensive ceremonial activity at Patio B, a service area and female gendered space, might suggest strong authoritative power and influence over place-making by courtly women. It also suggests that the court women of the Yaxché group might have been of royal decent and brought to Kiuic for the purpose of establishing control over the region. An alternative to this narrative is that local elites were imitating royal behavior.

I suggest that the court of Kiuic during the Late Classic was modeled after a royal court from a paramount site, probably Uxmal the Puuc capital at the time. The extensive land
use of the rich Puuc soils and the cautious and opulent construction of elite stone architecture has led researchers to characterize this period as the “high times” of northern Maya sites (Carmean, Dunning and Kowalski 2004). Iconographic evidence indicates that multiple construction projects and land use were managed by deploying the southern lowland concept of divine ruler system or K’uhul Ajaw (Carmean, Dunning, and Kowalski 2004:425). This system is evidenced at the site of Uxmal. The site, located in the Santa Elena Valley, is arguably the only Rank 1 site in the Puuc region (Garza Tarazona and Kurjack 1980; Kowalski and Dunning 2006). Its urban layout consists of multiple architectonic groups each argued to represent different functions.

Uxmal did have a royal court, controlled by divine lords (Kowalski 1998, 2003). As the Puuc capital and a local socio-political model of authority, many sites in the region, such as Labná and Kiuic, had similar architectonic style buildings and layout as Uxmal. In fact, some researchers argue that Uxmal might have been a city arqueo-type based on the Mesoamerican urban concept of Tollan, which was used by capitals to emote a civilized place with a distinguished history (Fash and Lopez Lujan 2009; Ringle, Bey Gallareta 2009). All Tollan’s consolidated their status by becoming a part of a larger economic, political and social network, the community within the Puuc region. Moreover, Uxmal’s influence probably entailed numerous reciprocal obligations, such as access and control over Kiuic’s recourses. At Kiuic, the absence of military imagery and the suggested marriage exchange suggest that Kiuic may have been a resource administrative node for the larger policy of Uxmal. Hence, although Kiuic has all the characteristics of a court during the Late Classic, it was not “royal”.

However, the recovered architectonic and material evidence display multiple elements of
local Puuc identity, some of which are fundamentally different than sites located at the southern Maya lowlands. In fact, these indicate that *Puuc courts played an important role in the construction of local Identity*. As mentioned before, the Puuc architectural style is unique due to its focus on monumentality and geometric iconography. These styles were widely shared in the region, and together with the local ceramic wares (i.e, Cehpech wares) represented a strong component of regional identity. The enormous public architecture of the Puuc indicates a growing economic and social differentiation by which elites were able to persuade the non-elite collective to build significant public works via *corvée* labor (Hansen 2001; McAnany 2010). At sites, such as Tikal in Guatemala, the construction of monumental architecture is associated with individual rulers, a characteristic that is linked to the development of hierarchical differences.

Most of the ceremonial deposits consisted of a single slateware vessel. These vessels, although simple in design, are considerate by some researchers as technologically advanced compared to other types due to a highly sophisticated construction and firing technique. The Classic period shows a dramatic increase in ceremonial activity associated with the construction of the Kiuic court and its adjacent plazas. At Kiuic, cache deposits are not as elaborate as at southern lowland centers, but they are not simple either. They reflect the effort of local elites to activate and terminate their masonry buildings and socially construct their place in the Puuc courtly landscape.

Just as architectonic style and ceramic wares were indispensable for a regional identity, *the social construction of the landscape with the creation of space through ritual deposits* was fundamental for the establishment of dwellers’ local identity. When monumental architecture is constructed, new spaces are created in a physical and social sense (Rowlands...
One effective way in which social groups integrate these monumental objects into landscapes is through the creation and recreation of memory and place. Monumental objects are produced through rituals and ceremonies that preserve or change the social meaning of an object or place. To remember is not to recall isolated events, but to create meaningful narrative sequences that affect the perception of places (Connerton 1989; Stanton and Magnoni 2002:5). Through the ritualization and practice of constructing large stone buildings, elite individuals are able to strategically manipulate the landscape and justify power and economic inequalities (McAnany 2010).

Evidence suggests that during the Late Classic period the Yaxché group housed a court and hence, can be considered urban. The local seat of power might have not been earned through direct royalty lines, but perhaps though other networking systems such as marriage agreements. It is likely that powerful Puuc sites were interested in Kiúcic's resources and wanted to cement a relationship though alliances. The urbanization process at the sites displays a long period of social construction and place making, especially during the Classic period. Evidence of discrete use of administrative, ceremonial and habitational space, specialized activity regimes, place making and memory, feasting, the creation of socio-political networks with other northern Maya settlements, and development of a local identity suggest that Kiúcic was in fact a Maya Puuc city. I suggest that regardless of the lack of royalty, other characteristics of the site, such as internal differentiation and the social process of city creation make Kiúcic a small, low density Puuc city.

8.3 Future Directions

There is still a lot we do not know about the Puuc’s urbanization process and local
traditions of authority. More data from future excavation and analysis will provide us with more clues about how the royal courts operated and administrated local communities and how they were integrated in the political landscape. Excavations of detailed stratigraphic sequences from Puuc site plazas, as well as detailed exploration of the construction sequence of site’s main buildings are needed to understand the urbanization process and go beyond the presence or absence or architectonic features such style. Comparison between other sites located at other Bolonchén district in particular and the Puuc in general is crucial for understanding how these ancient communities socially constructed their settlements.

Moreover, urbanization and elite behavior analysis of peripheral Puuc sites, such as Kiuic, must be compared and contrasted to the same processes observed in regional capitals such as Uxmal and Kabah. This is especially important to the identification and understanding of the continuities and discontinuities of local courtly behavior at a local and regional level.

Moreover, more excavation and analysis of trash deposits associated to royal courts are needed to understand the behavior of elites in the Puuc and understand how these differ or are similar from other sectors of the populations, such as higher elites or commoners. More precisely, more research is needed to understand the practices of local elites to understand their everyday lives.

A viable line for future research on elite mobility is the isotope signature of the dire but present skeletal sample from Puuc burials. At Kiuic, the presence of sacrificed individuals, an infant burial and several crania located in diverse contexts at the site might provide valuable data regarding how local was the elite.

Analysis of how settlers socially constructed their city through monumental architecture, the use of discrete functional spaces at its central court, ceremonial deposits and other ritual
activities (such as feasting) allows us to understand the Puuc dwellers local urban tradition. These have been studied before through the use of settlement pattern analysis, not considering what the court people actually did in their daily lives. Both of these lives of evidence are essential to understand different models of Maya royal courts and how cities were organized around them.

Formative and Early Classic period communities in the Puuc region are still underrepresented in Puuc archaeology. The ancient practice of dismantling and re-using building materials (i.e., carved stones) for other construction have rendered constructions for these periods virtually invisible. Although some sites dated to this period do exist, we have still much to learn from these ancient communities.

The role of ritual deposit proven to be vital for place making practiced and the social construction of the royal space at Kiuic. These practices gave us hints of how ancient Maya settlers practiced construction and termination rituals associated to important buildings in the Puuc region. Moreover, specific cache and practices (e.g., lip to lip and jars with associated obsidian blades and in situ burned individuals) might have a local significance the needs to be explored as part of both the general spectrum of Classic period practiced and as a local tradition to the region.

Finally, qualitative changes observed at the Yaxché group during the Formative, Early Classic and Terminal Classic periods did not happen in a vacuum. More deep stratigraphic explorations are needed at other archaeological sites of the Puuc region to understand the social and political processes of that surrounded these changes since almost all Mesoamerican cities were capitals of polities, and Mesoamerican urbanism cannot be understood outside the domain of politics”. 
Without specialized analysis it is problematic to assume a specific function for un-slipped jars. Additionally, the limitations of rim analysis do not allow to observed critical characteristics, such as bottom and vessel shape, and the presence and location of handles, that allow a more precise inference to vessel function.
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