Game On: Investigations of Ballcourts 1 and 2 at Xunantunich, Belize

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Abstract

The Maya Ballgame has long held the interest of both archaeologists and the general public. This ritualized game was a significant part of Maya life, and its significance is clearly manifested on the structures it was played on, ballcourts. The ballgame and ballcourts also feature prominently in Maya creation myth, Maya cosmology, and in the resurrection of the Maya maize god.

My thesis focuses on the two ballcourt’s at the Maya site of Xunantunich, Belize. The two ballcourts at the site exhibit significant differences. Ballcourt 1 has ballcourt rings and an architectural style more in line with courts from outside the Belize River Valley, where Xunantunich is located. Ballcourt 2 is smaller, with a more local style, and exhibits an extensive caching tradition in stark contrast to Ballcourt 1. The focus of my research was to conduct a comprehensive comparison of the two ballcourts. Using this data I attempted to discern what kinds of socio-political information monumental architecture, such as ballcourts, can provide about ancient Maya society.
Acknowledgements

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# Table of Contents

Abstract .................................................................................................................................................. ii

Acknowledgements ............................................................................................................................. iii

List of Tables .......................................................................................................................................... ix

List of Figures ......................................................................................................................................... x

Chapter 1: Ballcourts, Blood, and Research ....................................................................................... 1

  Research Questions .............................................................................................................................. 1

  Thesis Overview ................................................................................................................................. 2

Chapter 2: From Xunantunich to Eccentrics, a Brief Background ..................................................... 4

  Contextualizing Xunantunich within the Belize River Valley ......................................................... 4

    Previous Investigations at Xunantunich ......................................................................................... 5

    Site Description .............................................................................................................................. 5

    The Xunantunich Ballcourts .......................................................................................................... 6

    The ballcourts and previous excavations .................................................................................... 7

      Ballcourt 1 .................................................................................................................................. 7

      Ballcourt 2 .................................................................................................................................. 8

    Xunantunich in relation to others ............................................................................................... 9

    Chronology of Xunantunich .......................................................................................................... 10

    Ideology and Cosmology .............................................................................................................. 11

      The Ballgame .............................................................................................................................. 13

    Political Affiliation ....................................................................................................................... 14
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Possible Influences</td>
<td>17</td>
</tr>
<tr>
<td>The Yucatan Influence</td>
<td>17</td>
</tr>
<tr>
<td>Monumental Architecture and Ballcourts</td>
<td>18</td>
</tr>
<tr>
<td>Ballcourt Architecture</td>
<td>20</td>
</tr>
<tr>
<td>Caches and Eccentricens</td>
<td>21</td>
</tr>
<tr>
<td>Eccentric Lithics</td>
<td>22</td>
</tr>
<tr>
<td>Final Comments</td>
<td>23</td>
</tr>
<tr>
<td><strong>Chapter 3: Through the Looking Glass, a Theoretical Framework</strong></td>
<td>24</td>
</tr>
<tr>
<td>The Built Environment</td>
<td>24</td>
</tr>
<tr>
<td>Architecture</td>
<td>25</td>
</tr>
<tr>
<td>Spatial Organization and Imitation at Xunantunich</td>
<td>25</td>
</tr>
<tr>
<td>Interpreting Architecture</td>
<td>26</td>
</tr>
<tr>
<td>Social and Collective Memory</td>
<td>27</td>
</tr>
<tr>
<td>Ritual and Practice</td>
<td>28</td>
</tr>
<tr>
<td>Final Comments</td>
<td>29</td>
</tr>
<tr>
<td><strong>Chapter 4: How do you want to do this, a Methods Chapter</strong></td>
<td>30</td>
</tr>
<tr>
<td>Excavation Methods</td>
<td>30</td>
</tr>
<tr>
<td>Artifacts</td>
<td>30</td>
</tr>
<tr>
<td>Photography</td>
<td>31</td>
</tr>
<tr>
<td>Analysis</td>
<td>31</td>
</tr>
<tr>
<td>Dating</td>
<td>31</td>
</tr>
</tbody>
</table>
Fauna .................................................................................................................................32
Lithics .................................................................................................................................32
Caches .................................................................................................................................32
Architecture .........................................................................................................................32

Chapter 5: Results of Excavation and Artifact Analysis ....................................................33

Results of Excavations .......................................................................................................33

Investigations on Ballcourt 2 ............................................................................................33
Investigations on Ballcourt 1 .............................................................................................41
Final Comments ..................................................................................................................44

Cultural Remains Recovered in the Excavations ...............................................................44

Caches .................................................................................................................................44
Eccentrics ............................................................................................................................51
Faunal Analysis ....................................................................................................................52
Ceramic Analysis .................................................................................................................53
Ballcourt 1 ...........................................................................................................................53
Ballcourt 2 ...........................................................................................................................53
Lithic Analysis .......................................................................................................................54
Ballcourt 1 ...........................................................................................................................54
Ballcourt 2 ...........................................................................................................................54

Comparison of the Ballcourts ............................................................................................55
Final Comments ....................................................................................................................57
List of Tables

Table 1: Periods of Maya Civilization.................................................................11
List of Figures

Figure 1: Map of Xunantunich site core with ballcourts highlighted (From LeCount and Yaeger 2010). ........................................................................................................................................... 7

Figure 2: A comparison of Naranjo’s Group B and Xunantunich’s Group A, which some use as evidence of Xunantunich copying the site layout of Naranjo..........................................................16

Figure 3: Generalized ballcourt layout. a) playing alley b) bench wall c) bench d) playing wall .21

Figure 4: A profile drawing of the units placed in the playing alley of Ballcourt 2. Included are the levels of floors, caches and the earlier structure we located. Drafted by Jose A. Puc, Jr. digitized by myself.................................................................................................................................................34

Figure 5: Units BC2-14 and BC2-15 with earlier structure under the ballcourt exposed........35

Figure 6: Plans of the earlier structure found under Ballcourt 2 ........................................35

Figure 7: Photos showing the progression of work in Ballcourt 2, from pre-excavations at the top to post-conservation at the bottom. Photos are south facing view. ........................................37

Figure 8: Structure A-22, the eastern structure of Ballcourt 2 before and after conservation work was completed.............................................................................................................................................38

Figure 9: The northern end of A-1 and A-22 were excavated to expose the architectural articulation between the two structures. Photos show the area before and after conservation. .39

Figure 10: Photograph showing a detail shot of Structure A-22s bench, with evidence of multiple plastering events........................................................................................................40

Figure 11: North facing profile view of Ballcourt 2. Drafted by Jose A Puc, Jr. digitized by myself. .................................................................................................................................................40

Figure 12: A rough map showing the locations of the units we put into Ballcourt 1 during our investigations. BC1-1, BC1-2, and BC1-2 were placed to mimic where caches were found in the playing alley of Ballcourt 2........................................................................................................41

Figure 13: From top to bottom: BC1-1, BC1-2, BC1-3. Each unit seen here with exposed bedrock. Only BC1-1 had evidence of a floor........................................................................................................42
Figure 14: Left: Photograph of Structure A-19, the western flanking structure of Ballcourt 1, showing the staircase on the southern end. Right: Closing photo of the unit placed into the staircase. No cache was located in this location either..........................43

Figure 15: North facing profile of Ballcourt 1. One important feature includes the upright playing wall with ballcourt rings. Image provided by Dr. Jaime Awe.................................44

Figure 16: Photographs showing Cache 1 in situ, top left is the hole that was the initial............45

Figure 17: Inside of Cache 1’s bottom vessel pedestaled to show arrangement of eccentrics and 2 of the 4 stingray spines found in the cache..................................................46

Figure 18: Four of the eccentrics that were found encircling Cache 1’s vessel. The eccentric on the far left has the distinction of being the first eccentric we found in Ballcourt 2.........................47

Figure 19: A selection of eccentrics found inside the vessel of Cache 1; selected to show variety of form..........................................................47

Figure 20: Cache 2 pedestaled in situ, cache was found in fill of floor without a vessel.........48

Figure 21: A selection of eccentrics from Cache 2, including an obsidian piece on the far right that may have been made to look like a stingray spine...............................................48

Figure 22: Cache 2 pedestaled in situ. Despite the dirt the variety of forms the chert eccentrics take in the cache is evident. After the eccentrics were removed a bed of jute was found under them, distinct from the jute in the fill.................................................49

Figure 23: A selection of eccentrics from Cache 3. On the far right is a spent obsidian core that was part of the cache..........................................................50

Figure 24: A photo of Cache 4 in situ, this cache experienced much bioturbation from tree roots. The edge of one can be seen in the bottom left of the photo. So extreme was this disturbance that one eccentric was found under the large root pictured a day later........51

Figure 25: A selection of eccentrics from Cache 4. Notable is the quatrefoil, which was located on top of the cache, as can be seen in Figure 23...............................51
Figure 26: A selection from all 4 caches to further demonstrate the variety of form of the eccentrics and the diversity of color of chert used to make them.................................52

Figure 27: A drawing with a direct comparison of Ballcourt 1 and Ballcourt 2’s profiles........56

Figure 28: Remains of the ballcourt rings found in Ballcourt 1. The pieces of the two rings are pictured together here. Photo provided by Dr. Jaime Awe.........................................................59
Chapter 1: Ballcourts, Blood, and Research

Blood, sacrifice, and ancient rituals, a heady mix of myth and facts, have all been associated with the Mesoamerican ballgame. Since the Spanish first landed in Mesoamerica to the modern day, the ballgame and their associated ballcourts have been the focus of fascination for the general public and researchers alike. Found as far north as Arizona (Wilcox et al 1996) all the way down through Mesoamerica, ballcourts seem to be near ubiquitous in the cultures of Central America. While the nature and origins of the game is oft debated and remain unclear (Clune 1963), there is no doubt the ballgame and ballcourts played a significant part in Maya society (Scarborough and Wilcox 1991).

There are also regional differences in ballcourts, and by extension the ballgame, across Mesoamerica. For example, (Stantley et al1991) note that the ballgame played by the Aztecs was different to that played by the Maya The Maya ballgame also remains much more a mystery, for there are no written or oral descriptions of the play in this Mesoamerican subregion (Ferguson 1999). As the ballgame takes on a different character in different regions and subregions of Mesoamerica, so do the ballcourts the game is played on (de Montmollin 1997). This regional variation is important to note for these differences can reflect local traditions and affiliations, or influences from outside the region.

Research Questions

The study of monumental architecture dominates much of the modern thought on the Maya. The purpose of this thesis is to examine the kinds of socio-political information that monumental architecture provide. What can monumental buildings tell us of the people who constructed them? Do they reflect status, affluence, local and/or external influences, perhaps even changes of these through time? To address these questions, I conducted investigations of the two ballcourts at the western Belize site of Xunantunich.
Although both ballcourts were previously partly excavated, no comprehensive study or comparison of the two courts has been made. The two ballcourts at Xunantunich are also architecturally different, suggesting that they changed over time, possibly as a result of changing influences or their sociopolitical significance. The larger court, Ballcourt 1, is located in a prominent position at the end of a causeway that leads into the site center, the smaller court, Ballcourt 2, is partly covered by a later structure in the site core. These differences logically leads to the question of why, why are the two ballcourts at this site so different? In this thesis I attempt to address this and the following questions:

Can the ballcourts at Xunantunich provide information about the political relationship between Xunantunich and other polities in the central Maya lowlands?

Did the elite at Xunantunich use architecture and space in relation to the ballcourts to assert/manifest power?

To address these questions, I conducted excavations on both ballcourts at Xunantunich during the 2018 field season of the Belize Valley Archaeological Reconnaissance Project (BVAR).

**Thesis Overview**

In this thesis I describe results of my investigations of the ballcourts at Xunantunich. The first chapter covers the history of investigations at Xunantunich and the significance of ballcourts to the Maya. Also covered is the significance of caches and eccentrics, which became an important topic over the course of my research, and provides the background necessary for contextualizing the investigations, conducted by this project.

The theories I used to guide my research and analysis are addressed in the second chapter. These theories focus on the significance of architecture and the built environment, along with social memory. The theory chapter will further establish how and why the data I collected can be used to answer my questions.
The methods used in my research are covered in the third chapter. Methods for both excavations and analysis will be detailed. This will include descriptions of ceramic and lithic analysis, and the application of XRF analysis.

Chapter four presents the data collected during my field work. This includes detailed descriptions of the architecture of Ballcourts 1 and 2, as well as the caches found during excavations. In addition, the results of artifact analysis will be presented in this section. Finally, chapter five covers the results of my investigations, the conclusions I have drawn from this research, and avenues of future research.
Chapter 2: From Xunantunich to Eccentrics, a Brief Background

Before addressing my research questions, it is important to establish the background used to guide my investigations and research questions; from the political relationships of Xunantunich to the significance of ballcourts, and the cosmological beliefs of the Maya. More specifically, the chapter discusses the background of the site and region, previous excavations, and the significance of ballcourts, caches, and architecture. These topics will help to establish why I approached the ballcourt as a tool for determining political relationships and elite behaviors. The chapter also covers the significance of caching and eccentrics because through the course of excavations they became an important aspect to consider in relation to my research questions.

Contextualizing Xunantunich within the Belize River Valley

Xunantunich is located roughly ten kilometers outside the modern town of San Ignacio, Belize, directly across the Mopan river from the Maya community of San Jose Succotz, and about 15 kilometers west of the large primary center of Naranjo in the neighboring Peten Province of Guatemala. Naranjo was a major power in the Late Classic (600 – 900 AD) Maya lowlands (Ashmore 2010). Along with other major centers such as Buena Vista, Cahal Pech, Baking Pot and Lower Dover, Xunantunich is one of the largest Maya sites in the upper Belize River Valley (Awe 2008; Awe et al. 2019). The site’s position, a kilometer up at the very top of a large prominent hill, provides a commanding view of the Mopan tributary of the Belize River Valley.

When one is atop the tallest structure at the site, El Castillo, the view stretches well into Guatemala and the surrounding Belize River Valley. The effect is evident; the site feels strong and significant when viewed from such lofty heights. The world stretches out around you carpeted in the bright greens of the jungle and the wind blows strong; it feels like you may very well be at the top of the world. The elevation not only gives the site a view of the surrounding
valley, it also gives it a solid defensive position and control of the river below the site’s ceremonial center.

Previous Investigations at Xunantunich

The site of Xunantunich has been the subject of archaeological investigation since the early 20th century. Thomas Gann’s 1925 publication Mystery Cities details his excavations at Xunantunich, among other sites in the Maya Lowlands. More recently, the site was the focus of major investigations by a joint UCLA and University of Pennsylvania Project under the direction of Richard Leventhal and Wendy Ashmore respectively. These investigations took place in the 1990s, under the auspices of the Xunantunich Archaeological Project (XAP) (Audet 2006; Awe 2008; Leventhal 1992). Their focus was to better understand the origins of Xunantunich and how it managed to flourish in a turbulent period of time (Leventhal 1992). Currently the site continues to be investigated by two separate research projects, one that operates under the auspices of the University of Texas at San Antonio, and the other by the BVAR Project under the direction of Dr. Jaime Awe of Northern Arizona University and Dr. Julie Hoggarth of Baylor University (Awe et al. 2017; 2019).

Site Description

The site core of Xunantunich contains three large plazas or courtyards that are enclosed by monumental architecture. Located at the south end of this core area, Plaza A1 is bordered by the massive Castillo to the south, by Structure A1 to the north, A7 and A8 to the west, and by Structures A2, A3, and A4, the eastern triadic group, to the east. Ballcourt 1 is located immediately west of Structure A7 but does not face onto Plaza A1. In contrast, Ballcourt 2 is located on the western flank of Structure A1, and its playing alley provides access into and between Plazas A1 and AII on the western side of the two courtyards.

Plaza AII is located to the north of Plaza A-1, with Structure A1 separating the two to the south. The western edge is defined by Structure A-9, while the eastern edge is defined by A-14 and the Northeastern walkway. The northern edge of the plaza is defined by A-13 and the larger
palace complex. Plaza AIII is inside of the palace complex to the north of Plaza AII, and is defined by structures A-13, A-12, A-11, and A-10. Plaza AIII is not as accessible as the two other main plazas that make up Xunantunich’s main core, with access only being available through Structure A13.

*The Xunantunich Ballcourts*

The current plan of the Xunantunich site core was mapped by XAP in 1993 (Keller 1993). Earlier maps of the center did not show Ballcourt 2, which was only identified by the XAP Project in 1994 (Jamison and Wolff 1994). Originally Ballcourt 2 was labeled as ballcourt 3, but later revised in 1996 when what was originally thought to be a ballcourt was determined not to be so (Leventhal 1996). Figure 1 is a copy of the updated site map, with the ballcourts highlighted. Along with determining a chronology of the ballcourts the work done by XAP also provides important context for the ballcourts within the site.
Figure 1: Map of Xunantunich site core with ballcourts highlighted (From LeCount and Yaeger 2010).

The ballcourts and previous excavations

Ballcourt 1

Ballcourt 1 is located just west of Plaza AI, and consists of Structure A18 to the east and Structure A19 to the west, with Structure A18 directly behind Structure A7. The ballcourt is located just off Sacbe (causeway) 2. Excavations on Ballcourt 1 by XAP in 1996 were mainly focused on determining the construction sequence between A18 and A7 (Jamison 1996). These excavations determined Ballcourt 1 was constructed after Structure A-7.

In the early 2000s further work was done on by the Tourism Development Project (TDP), under the auspices of the Belize’s Ministry of Tourism and Culture and the direction of Jaime Awe (Awe 2008; Awe and Helmke N.D.). Horizontal excavations exposed the architecture of A-
18 and A-19, determining they had been built in a single construction phase (Awe and Helmke N.D.). No ballcourt markers were found during excavations, but fragments of two ballcourt rings were recovered (Awe and Helmke N.D). The presence of ballcourt rings, and a typological analysis of the ceramics found in the excavations led Awe and Helmke (N.D.) to conclude that Ballcourt 1 had been constructed at the end of the Classic period.

Related to the work done on Ballcourt 1 is the investigation conducted by XAP on the major causeways, or sacbes at the site. Ballcourt 1 is located just north of Sacbe 2. Keller (1994) proposes that Ballcourt 1 is part of a larger ceremonial circuit consisting of: Ballcourt 1, Sacbe 2, Structure A-21, plaza A-I, Sacbe 1, Structure A-15, and finally structure D-7. Sacbe 1 leads into Plaza A-I from group D, which was an elite residence. Straight across the plaza from Sacbe 1 is Sacbe 2, directly to the south of Sacbe 2 is Ballcourt 1, And Sacbe 2 terminates at Structure A-21. These elements would have formed a coherent program of construction all intended to create a set of open public places for ceremonies and gatherings (Keller 1994). Supporting this conclusion is the presence of ritual and ceremonial goods, such as fragments of a drum, found in excavations of Scabe 1 and Sacbe 2, not found in the utilitarian northeast entrance to the site. In addition, along with Xunantunich’s site core north-south orientation, Sacbe I and Sacbe II’s east-west orientation transform the layout of the site into a cruciform shape (Keller 2010). The cruciform layout would act to use cosmological association to reaffirm the power of those elites at Xunantunich, and the wide open causeways would have been the perfect place for large ceremonial events to take place (Keller 2010).

Ballcourt 2

Ballcourt 2 consists of the western Structure A-17 and the eastern structure A-22 and is located on the northwestern corner of Plaza A-1 and the southwestern corner of Plaza A-2. Prior to the construction of Structure A-1, Plazas A-I and A-II formed a large single courtyard with Ballcourt 2 on its western edge. When Structure A-1 was built, the ballcourt playing alley then became a narrow passage connecting Plazas A-1 and A-2 (Jamison 1996).
The relationship between A-1 and A-22 (the east building of Ballcourt 2) was extensively studied by XAP, and more detailed information can be found in the 1996 XAP field report. In short, it was determined that A1 was partly built on top of the eastern flank of A-22, and that the basal terrace Structure A1 may have merged with the top of A-22 (Jamison 1996).

The western building of Ballcourt 2, Structure A-17, connects with Structure A-8 to the south and was previously excavated by Thomas Gann in the early 19th century. Unfortunately, no information was ever published on the results of Gann’s investigations (Jamison 1996).

In 1994 XAP excavated what they estimated was the exact center of the ballcourt playing alley. This excavation revealed a cache, consisting of the remains of a possible sub adult, interred in a flexed position in what would have been the exact center of the playing alley (Jamison and Wolff 1994). Excavation in this area produced numerous fragments of unworked slate and a large amount of the freshwater snail locally known as *jute* (Jamison and Wolf 1994). Grave goods found with this burial included mostly shells, jute and other, chert flakes and ceramic sherds (Jamison and Wolff 1994). The ceramics dated mostly to the Middle Preclassic and the Late Classic periods (Jamison and Wolff 1994).

*Xunantunich in relation to others*

Occupation of the Belize River Valley stretches back to the end of the Early Preclassic (1200 – 900 B.C.) at sites like Cahal Pech (Awe 1992; Ebert et al. 20 ;Ball and Tashek 2003). Xunantunich itself has a Preclassic component, though the site would not come into its florescence until late in the Classic period stretching into the terminal Classic period (Ashmore 2010). Taschek and Ball (1991) emphasize the importance of understanding regional cultural development when studying the ancient Maya, because of the separate but deeply connected nature of the polities that make up Maya civilization. They further note that to understand an individual site, it is also important for one to understand how this site would have interacted with other polities.
Such long occupation of sites in such close proximity as they are in the Belize River Valley leads to a close intertwining of culture and politics. Factoring in the power exerted by large sites outside the region—such as Naranjo and Tikal to the west, and Caracol to the south—and the political picture of the Belize River Valley becomes an intricate sociopolitical context which is essential to an understanding of the implications of findings at each individual site, Xunantunich included.

Results of recent investigations at Xunantunich suggest that the site came to prominence during the Late Classic period (600 – 700 A.D.) and persisted through to the Terminal Classic (800 – 900 AD) period (LeCount and Yeager 2010a). The Terminal Classic is considered a period of upheaval, change, and transformation for the Maya, and is associated with the collapse or decline of Maya elite institutions. Archaeologists are still trying to fully understand this particular period of time, and the Belize valley is an excellent area for studying changes in the political structure and affiliations of the Maya lowlands during this period of cultural turmoil. Each site in the region weathered the upheaval differently, some being abandoned early, and some persisting well into the Terminal Classic. Maya ideology is also intimately intertwined with these interregional politics where ballcourts are an integral, symbolic, part of both (Fox 1996).

**Chronology of Xunantunich**

Maya civilization is generally split into several distinct time periods, and Table 1 shows the associated period at Xunantunich and Barton Ramie. Barton Ramie is included because it is associated with the ceramic typology used in my research. As stated above, Xunantunich is a Late to Terminal Classic center and the site’s chronology is further subdivided within the Late and Terminal Classic time frames.
Table 1: Periods of Maya Civilization

<table>
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<tr>
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<th>Barton Ramie</th>
<th>Xunantunich</th>
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<tr>
<td>Classic</td>
<td>Terminal</td>
<td>801CE-900CE</td>
<td>Spanish Lookout</td>
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<td></td>
<td>Barton Ramie</td>
<td></td>
<td>Tsak’ Hats’ Chaak</td>
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<tr>
<td>Late</td>
<td>601-800CE</td>
<td>Tiger Run</td>
<td>Samal</td>
</tr>
<tr>
<td>Early</td>
<td>250-600CE</td>
<td>Hermitage</td>
<td>Ak’ab</td>
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<tr>
<td>Preclassic</td>
<td>Proto-Classic</td>
<td>1-250CE</td>
<td>Floral Park</td>
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<td>Mount Hope</td>
<td>Barton Creek</td>
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<td></td>
<td>Late</td>
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<td>Middle</td>
<td>1001-300BC</td>
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<td>2000-1000 BC</td>
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The Late and Terminal Classic chronology at Xunantunich is divided into the: Samal (AD 600-670), Hats’ Chaak (AD 670-780), and Tsak’ (AD 780-890) phases (Ashmore 2010). These three periods cover the emergence, flourishing, and ultimate fall of Xunantunich as a major regional center (Ashmore 2010).

Ideology and Cosmology

Maya ideology and cosmology are complex systems, the full depth and breadth of which I cannot hope to do justice to in this thesis. Instead I will focus on various core beliefs that will be necessary to contextualize my research.

The Maya viewed the world as consisting of three levels, the heavens, the earth, and the underworld (Coe 1999). At the center of the universe was the world tree, which held up the heavens and whose roots reached into the underworld (McDonald 2016). The world of the Maya was considered flat and quadripartite, each corner representing a cardinal direction (Coe 1999).
The underworld is also known and Xibalba, and is a realm that is closely associated with water (Reilly 1994).

Both the heavens and the underworld were subdivided into several levels, the heavens being split into thirteen and the underworld split into nine (Mathews and Gerber 2004) Each realm was the home of various gods, all with various associated symbolic imagery (Coe 1999).

To the Maya the physical world was not dead; the gods had given souls to all the things they had created, people, animals, and objects such as stone and wood (Freidel at al 1995). This is important to keep in mind when looking at how the Maya interacted with their built and material environment. The idea that everything has a soul, and is in some sense alive, sheds light on some of the practices of the Maya.

An important aspect of Maya belief is the ideological importance of ballcourts and the ballgame. The ballgame has ties not only to the politics of the Maya region, but also to Maya cosmological beliefs. The ballgame and ballcourts feature prominently in the Popol Vuh, one of the most comprehensive ethnohistoric records on Maya religion, cosmology and origin myth (Friedel et all 1995). Fox (1996) argues that the ballgame and ballcourts were also used in conjunction with food production and feasting to link the ballgame to economic and agricultural successes of those hosting such feasts. Being so deeply integrated with politics and ideology, the ballcourt and ballgame are inexorably tied to ritual, religion, and the socio-political structure of Maya society.

One final important point is the significance of bloodletting. For the Maya bloodletting was a way to connect to the world beyond the natural world, and the gods that inhabited it (Haines et al 2008). Stingray spines were one of the instruments used to perform bloodletting, along with obsidian blades, bone needles, and thorny ropes (Stemp et al 2015). It is possible that each of these different materials had differing associations, and stingray spines hold an obvious connection to the water, and from that connection to the water, a connection to the
underworld (Haines et al 2008). While there has been no in depth research into this connection, I would still like to make note of that possibility.

The Ballgame

An important aspect of Maya belief is the ideological importance of ballcourts and the ballgame. The ballgame has ties not only to the politics of the Maya region, but also to Maya cosmological beliefs. The ballgame and ballcourts feature prominently in the Popol Vuh, one of the most comprehensive ethnohistoric records on Maya religion, cosmology and origin myth (Friedel et al 1995). The origin myth in question goes like this:

One day twins One Hunahpu and Seven Hunahpu, who were very skilled players, were playing the ballgame, as they did every day. But on this particular day they had decided to play the game on the path that lead to Xibalba. The noise the twins made angered the gods, who thought it the utmost of disrespect. And so the gods summoned the twins to underworld, where the gods of the underworld tricked them and killed them. Their bodies were buried in a ballcourt in the underworld, apart from One Hunahpu’s head, which they hung from a tree.

One Hunahpu enticed a goddess to come close to where his head hung, and he spit into her hand and from this she grew pregnant. The Goddess went to live on earth where she gave birth to twin boys: Hunahpu and Xbalanque. These boys would grow to be known as the Hero Twins. This pair of twins was just as skilled at playing the ballgame as their father and uncle and one day as they played the game in celebration on the same ballcourt leading the Xibalba that their father had played on, they too angered the gods with the noise they made. The gods of the underworld summoned the twins to play against them in the underworld. The twins learned from the errors of their father and uncle the Hero Twins managed to pass the many trials of the underworld unscathed.

They played many rounds of the ballgame against the gods of the underworld, eventually suffering defeats. Though they were killed they were brought back to life, and then they had the ability to bring things back to life. With this new skill they tricked the gods of the
underworld and killed them. The Hero Twins became deified and brought their father back to life. Their father then fashioned humans out of corn, and became known as the Maize God.

So ends this very brief retelling of the Maya origin story, based on the translation of the Popul Vuh by Allen J. Chistenson (2004).

This story, central to many Maya beliefs, heavily features the ballgame. The Maize God and his twin were excellent players, and their ballcourt was on the path to Xibalba. The Hero Twins were also excellent ballgame players, and were summoned to the underworld for playing the ballgame too loudly. While in the underworld they played many rounds of the ballgame against the gods of the underworld. This prominent role in the origin mythos of the Maya sheds light on the importance and status the ballgame would have held for the Maya. Fox (1996) argues that the ballgame and ballcourts were also used in conjunction with food production and feasting to link the ballgame to economic and agricultural successes of those hosting such feasts. Being so deeply integrated with politics and ideology, the ballcourt and ballgame are inexorably tied to ritual, religion, and the socio-political structure of Maya society.

**Political Affiliation**

The political structure of Late Classic Maya society has not been fully discerned by archaeologists and disagreements persist to this day. The arguments are often influenced by what area in the Maya region the archaeologist is working in (LeCount and Yeager 2010b). For example, there is continuing argument for centralized versus noncentralized political systems (LeCount and Yeager 2010b). A region that is occupied by an exceptionally strong polity with wide reaching influence would lend itself to the interpretation of Maya politics being more centralized, or power being focused in one area. Another region filled with mid-level centers, all competing or cooperating with each other, would lend itself to the interpretation of Maya politics being more non-centralized, or power was shared among many centers with their own limited spheres of influence.
For the purposes of this study the assumption is, as Lecount and Yeager (2010) suggests, that the reality of politics in the region existed somewhere between the two extremes. Xunantunich has been classified as a client state to Naranjo, meaning that formal control was not directly exercised by Naranjo and that Xunantunich retained a certain level of autonomy. It has also been argued that the two sites were simply allies, or even that Xunantunich was under direct control of Naranjo. In addition, the relationship likely fluctuated through time. Since the site of Xunantunich is thought to have emerged quickly as a power in the Belize Valley, it is possible they would have relied on their alliance with Naranjo to lend them legitimacy in the face of much older nearby sites such as Cahal Pech; which has a history of occupation stretching back to the early part of the Preclassic period.

Political affiliation is often manifested in the architecture of important spaces, making the ballcourt an excellent place to glean insights into the political relationships of Xunantunich during this phase of Belize Valley prehistory (Ashmore and Sabloff 2002). The copying of architecture from more powerful places is a way for polities to assert their own power through the demonstration of political affiliation (Ashmore and Sabloff 2002). The elite at a site like Xunantunich, which likely rose to prominence quickly, might have been eager to assert and demonstrate their power through these types of associations with Naranjo. Similar thesis projects conducted at Xunantunich by NAU graduate students supports this possibility, through the excavation of nearby monumental architecture (Slocum 2018). Other previous researchers have also argued that Xunantunich’s Late Classic rise was partly fueled by its client state relationship with the Guatemalan site of Naranjo, and that this relationship is reflected by similarities in the layout of the site cores of the two centers (Ashmore 2010:58). While this is still debated I have included Figure 2 to illustrate this comparison of Xunantunich’s Group A and Naranjo’s group B.
**Figure 2:** A comparison of Naranjo’s Group B and Xunantunich’s Group A, which some use as evidence of Xunantunich copying the site layout of Naranjo.

Investigations of Structure A-9 at Xunantunich revealed the existence of hieroglyphic panels thought to originate at the site of Caracol (Slocum 2018). These panels were originally taken by Naranjo after they defeated Caracol in combat (Helmke and Awe 2016). The appearance of these panels at Xunantunich is further evidence of the connection between Xunantunich and Naranjo. Further support for the relationship between Xunantunich and Naranjo is Stele 8 at Xunantunich. This stele tells of a Naranjo individual officiating period ending rituals, in person at Xunantunich. To date, however, no one has investigated specifically whether there are similarities between the monumental architecture of the two sites. A gap my research seeks to fill.
**Other Possible Influences**

The relationship between Naranjo and Xunantunich is well established in the literature on Xunantunich. Yet, this does not mean there are no other possible influences at the site. It has been purposed that during the Terminal Classic period that influences from the north also started to show up in Southern Maya Lowland sites, such as Xunantunich.

*The Yucatan Influence*

In 1982 Chase and Chase proposed that the architectural similarities between the Yucatan site of Chichen-Itza and the northern Belize site of Nohmul denoted a political relationship between the two sites. Two structures at Nohmul were deemed to be more similar to architecture at Chichen-Itza than local architecture. One example of this was Structure 9 at Nohmul. This structure was a round structure, which they note are found throughout Middle America and with relative frequency in Mexico. Yet their presence in the Maya region is relatively rare and generally associated with the Postclassic (Chase and Chase 1982). Their investigations into Structure 9 at Nohmul, comparing it to contemporaneous sites inside and outside Belize, led them to conclude that round structures are found more often in the Terminal Classic to Late Postclassic time periods and they were initially associated with an exterior influence (Chase and Chase 1982). At Nohmul there was evidence of this adoption of Chichen Itza style architecture as a result of a direct take over by Chichen Itza.

Yet, discerning the origins of non-local architecture is a complex process. At the site of Chau Hiix, Belize the Terminal Classic Structure 150 exhibits certain traits generally associated with an outside influence: The appearance of round columns in a long hall. Andres (2009) identifies both of these features as ones usually attributed to outside influence in the Southern Maya Lowlands, yet he attributes their presence at Chau Hiix to local innovation and changing social needs.

Yucatecan Influence isn't just seen in architecture. For Example, Messon and Rosenswig (2005) found evidence of Chichen-Itza influence in certain pottery types at Caye
Coco. Artifacts representing the Central Mexican rain god, Tlaloc, have been recovered in the region (Zanotto 2015).

Previous BVAR work at Xunantunich has also yielded evidence of possible Yucatec influence. In 2015 excavations of A-20, which is located on the western side of the Castillo, uncovered similarities between it and structures at Mayapan, in the Yucatan (Zanotto 2015). These similarities include round columns and similar room layouts. A-20 was one of the last structures built at the site, after the fall of Naranjo (Zanotto 2015).

**Monumental Architecture and Ballcourts**

Monumental architecture, which ballcourts are considered part of, has ties to social complexity and displays of power (Trigger 1990). Monumental architecture requires a massive investment of time, effort, and resources, even with the aid of modern technological advancement. The utilization of resources on these large architectural projects reflects the social and political significance of the built environment.

Trigger argues that in terms of energy consumption, monumental architecture makes sense in the context of power displays (1990). The cost of monumental architecture is justified as a power display for whomever had the resources to spend on the building of it. People are naturally inclined towards the conservation of energy (Trigger 1990). If people are generally compelled to conserve energy, and still go to great lengths to expend it on monumental architecture, then monumental architecture must have presented considerable gain to the people building it.

If someone has resources to spend on monumental architecture and people to build it, then it follows that they must be powerful. Given the competitive nature of politics in the Maya region, and the prevalence of monumental architecture at civic centers, this seems to be the case for ancient Maya society. Sites with the largest and most impressive monumental architecture are what archaeologists consider the most politically important sites (Ball and
Taschek 1991). Indeed, the presence or absence of certain types of monumental architecture is consistently used by Maya archaeologist to determine site types (Ball and Taschek 1991).

Ballcourts are set apart from other monumental architecture through their significance in Maya ideology. The ballcourts are an archaeological representation of an important facet of life for the ancient Maya: the ballgame. The ballgame is what Clune (1963) classified as a ‘mass game’. Mass games appear in cultures around the world, generally in association with a segmented political structure, much like the disparate polities of the Maya region. Mass games, are organized sport that may take the place of mass activities such as war, or may be utilized by rulers to direct their subject’s energy into something other than revolt (Clune 1963). In his analysis of the sociopolitical function of the ballcourt at Minaha, Belize, Moodie (2013) concluded that the ballcourt represented a political battlefield to replace active warfare and allow for sites to assert dominance without bloodshed.

Ballcourts as monumental structures would have played an important role in asserting political power, through alliances or otherwise, and by making use of the cosmological significance they held to influence social beliefs. I feel safe in asserting that the ballcourts played the same kind of role at the site of Xunantunich, allowing the elite rulers of the site to manifest their own power and to reflect their political alliances with other important centers.

Indeed, Fox argues that ballcourts are not just passive spaces that represent ideology but are instead best viewed as lived-in spaces that were "meaningful settings in a 'lived' landscape which were actively used and interpreted in ritual to create and manipulate perceptions of social difference" (1996). In the same paper, Fox discusses how the ballcourts would have been associated with ritual feasting and displays of power, and held this association from the Classic period of the Maya. The long association with power and ritual would endow the ballgame with significant meaning in Maya politics. Ballcourts are often located in publically accessible areas of site cores, marking them as a civically oriented space (Ferguson 1999).
When these sites were utilized they were not just playing a game they were making statements about status and power.

The Maya were playing the ballgame right up until the time the Spanish landed in Mesoamerica, and still do today (Clune 1963). This indicates that the ballgame had such significance and strong roots in Maya society that the ballgame as a concept survived the collapse of Maya civilization, continuing to be played into historic times. A ritual space that is so prominent in the archaeological record, one which had enough staying power to survive such a collapse as the Maya faced, is an important space to investigate to learn more about those who used them.

**Ballcourt Architecture**

The form of the ballcourt varies temporally and regionally (Clune 1963)(Furguson 1999). While the playing alley with similar parallel structures that bound it is a key defining characteristic of a ballcourt, there are many variations on this theme. Some have an enclosed I shape, with additional structures defining the ends; others are open ended (Friedel et al 1995). Further variation can be found in the structures that define the playing alley. In addition, Maya ballcourts usually display a north-south orientation (Montmollin 1997).

The structures that define the ballcourt are made up of several distinct sections (Ferguson 1999). See Figure 3 for a diagram for the parts of the ballcourt structure I intend to focus on. Within a given period of time there is still regional variation in ballcourt structure (Clune 1963; Montmollin 1997). For example, one key feature of northern Yukatecan ballcourts is the presence of rings or vertical hoops on the structures of the ballcourt (Friedal et al 1999). Ballcourts with rings necessitated an upright playing wall. In contrast, ballcourts without rings can have playing walls of varying slopes. Architectural differences probably lead to different styles of play as well. There are typologies relating to if a ballcourt is open ended, sunken, or has enclosed ends to the playing alley (Ferguson 1999). Both ballcourts at Xunantunich are
open ended and not sunken, making these typologies less useful for my research. Instead I focus in the form of the benches and playing wall.

Figure 3: Generalized ballcourt layout. a) playing alley b) bench wall c) bench d) playing wall

While the Belize River may not have a perfectly unified style (Ferguson 1999) there are certain features that are distinctly not found, such as ballcourt rings. Regional variation is one focus of this thesis as Naranjo, being outside of the Belize River Valley, follows a more northerly tradition in its architecture. Thus, if there is evidence of this in the architecture of the ballcourts at Xunantunich, it may be indicative of the political affiliation between the two sites.

Caches and Eccentrics

The caching of objects has a long history in the Maya area, stretching back to the Preclassic period and likely longer (Vadala 2016). It follows, much as the long history of the ballgame speaks to its importance, the long history of caching does as well.

Stemp et al. (2018) define caches as “one or more objects that are found apart from burials and whose contexts suggest that they were purposefully deposited as an offering.” In the Belize River Valley there is evidence of caches, both dedicatory and termination, from the Early Preclassic period (Awe 1992; Stemp et al 2018). Caches may be laid out to further reflect Maya cosmological beliefs, such as the use of jute to represent the watery underworld (Chase and Chase 1998). Dedicatory caches are caches that are deposited during the construction of a monument or some sort of architecture, while termination caches are left when the use of a structure is being ended, or when the building is closed or built over (Stemp et al 2018).

There is a pattern to where caches are placed in a given structure, this hold true in ballcourts. Caches in ballcourts tend to be found in the center of the playing alley or at the northern and southern ends of the playing alley, along the center line (Fox 1996). Where caches
are placed, how they are situated, even the composition of the caches can have symbolic meaning (Mathews and Gerber 2004). Caches may contain a significant number of objects, that is to say a number like nine or thirteen, to represent the levels of the underworld or the heavens (Sullivan 2017). The objects may be arranged as a cosmogram, representing the three layers of the world or the four cardinal directions (Mathews and Garber 2004).

The purpose of dedicatory caches is tied to dedicatory rituals, in which objects are imbibed with a soul. Since human-made things where not created by the gods they did not have souls naturally and had to be endowed with them through complex rituals (Friedel et al 1995). Termination caches represent the opposite; they represent the release of the soul or spirit that had been previously placed within an object or structure (Stemp et al 2017). Caches then are deeply tied to Maya ideology and are material representations of ideology in an archaeological context.

The composition of caches varies much the same as ballcourt architecture, temporally and regionally, even from site to site within a region. Cache contents can range from ceramics to various types of lithics, faunal remains, and even human remains (Sullivan 2017). One type of object found in caches is eccentric lithics. During the Classic period, eccentric lithics become the predominant cache objects in the Belize River Valley (Stemp et al 2017).

**Eccentric Lithics**

The simplest description of eccentric lithics is that they are chipped stone artifacts (Iannonnen and Conlan 1993). What set these particular chipped stone artifacts apart are the shapes they take. Eccentric lithics, also known as eccentric flints, can take a wide range of shapes, from elaborate and distinctive shapes to undefined flakes (Sullivan 2017). These shapes will often take symbolically important shapes, such as a stingray spine or a symbol representing the quadripartite universe (Mathews and Gerber 2004). Eccentric lithics have been found in contexts that date from the late Preclassic to the PostClassic period, though are most common in the Classic period (Iannone and Conlon 1993).
Final Comments

This chapter provides context for why investigations of the ballcourts at Xunantunich provide an excellent opportunity for understanding the political significance and affiliations of the site during the Late Classic period. Additionally, information needed to understand my research in a broader sense was outlined, including a brief summary of Maya ideology. The theoretical framework this thesis is built upon relies on the prevailing theories that connect monumental architecture, ballcourts, and politics and will be covered in the following chapter.
Chapter 3: Through the Looking Glass, a Theoretical Framework

This chapter reviews the theories that guided both my research and the interpretation of my data. Theory functions as a lens through which we view the data we collect, and understanding the theory I used will allow for a better understanding of the conclusions I draw. While often passed over, theory is the foundation we build our conclusions on. Understanding my interpretations of the data can allow for replication or disagreement of my results without misunderstandings.

In my background I established the significance of ballcourts, and why they are an appropriate avenue of research into political relations and cultural beliefs. In this chapter I will establish how physical aspects such as architecture relate to people and their beliefs. How spaces can be used by people to create memories and associations. In addition, I will establish how I approached interpreting relationships between sites.

Archaeology in the Maya region has a long history of using architecture, spatial organization, and the concept of the built environment as a way to gain insights into the past (Abrams 1994). Ashmore and Sabloff (2002) tie the importance of Maya civic plans to statements about cosmology and political order and discuss how we can use spatial patterning to discern something about the two. In conjunction with archaeological finds, using theories about archaeology, spatial patterning and the built environment, allows for a greater understanding of human behavior in the past (Chase and Chase 2017). Why the Maya built things the way they did, and what it meant to them, are important theoretical concepts for the topics addressed in this thesis.

The Built Environment

Lawrence and Low (1990) broadly define the built environment as any physical alteration to the environment practiced by humans. This includes both actual buildings and spaces the buildings may define, such as a plaza. Analysis of the built environment can be as focused as how rooms are laid out in a home, to the layout of an entire city (Lawrence and Low 1990).
What makes this concept significant is that just as we shape our environment, the environment we build shapes us. This is just as true for the modern day as it was for the Maya. Certain architectural forms can immediately shape our opinion of a space. A house built in a Victorian style suggests something different to those who look at it than a Midwestern ranch house might. The architectural style of a ballcourt would say something to the Maya people who observed them. In addition, where the ballcourts were located in the site may speak to how they were viewed or who had access to them.

Architecture

Briefly touched upon in the background chapter was the topic of architectural variation in the Maya region. Ballcourt architecture varies through space and time, as do many other architectural forms. This is equally true today. Cities on the west coast of the United States have more low-lying and long buildings, cities on the east coast tend to sprawl less. Similarly the presence of a Victorian style home in downtown Phoenix is indicative of some outside or anachronistic influence.

Architecture in Mesoamerica exhibited regional variation as well. The appearance of different architectural styles at certain sites is often used as an indication of contact between different Maya polities (Sabloff 1990; Price et al 2010; Wright et al 2010). I noted in the background section that there is a suspected influx of Yucatec influence in the Central Maya Lowlands as evidenced by changes in architecture. Just as differences are clear to us today, differences in architectural style would have been evident to ancient Maya people as well. People who visited Xunantunich would have recognized architecture that was not local but influenced by outside forces instead.

Spatial Organization and Imitation at Xunantunich

Spatial organization has long been theorized to hold connections to social organization (Lawrence and Low 1990). Ashmore and Sabloff (2002) further note that one way to convey power through space is to imitate the space of more powerful places. This is already suspected
to be the case at Xunantunich, whose civic center layout is thought to copy that of Naranjo's (LeCount and Yaeger 2010). This imitation may extend beyond the layout of the site, and include architectural style

Following this line of thought, similarities between ideologically and politically important monumental architecture, such as ballcourts, may facilitate a deeper understanding of the nature of the relationship between Xunantunich and outside influences; perhaps illuminating how the elites at Xunantunich used these kinds of relationships to express their own power. Spatial and architectural analysis will allow for better understanding of how the ballcourts functioned socially within the site of Xunantunich and in what way they were used to communicate power by the elites of Xunantunich.

Interpreting Architecture

Simply noting differences and similarities in architecture and site layout does not allow us a deeper understanding of their significance. Spatial and architectural analysis must be considered within several broader theoretical approaches to allow for meaningful conclusions. Understanding how people interact with and interpret their world leads to a more meaningful analysis of data.

Ballcourts are spaces that represent certain cosmological beliefs that the Maya held. Yet they were not strictly religious spaces. Representations of elite individuals as players of the ballgame are found on monuments, and may suggest a way for the elite to associate themselves with cosmological myths, and reassert their power through this (Hendon 2010). While there is some doubt that the ballgames of the Maya were spectator sport (Hendon 2010) this does not negate the fact that the ballcourts existed in the environment and would have meant something to those that saw them. Ballcourt 2 was located in the middle of the large main plaza at Xunantunich, Ballcourt 2 was located along a ceremonial circuit in the site core. Ballcourts were exceptionally public spaces.
Hendon (2010) states that ballcourts may be connected to remembering and forgetting, because they can connect events to a place in space and time. Repeated use of a ballcourt would allow for the continual refreshing of the memory of this space as significant to the people who see it. Memories such as these may be used to reinforce the power wielded by elites.

**Social and Collective Memory**

Social memory is, at its core, a way that people know their past (Fowler 2010). Whether this is through oral traditions or the construction of monuments, these past events being passed on are something for people to build their cultural identity on. It is a way for people to build their history.

In her 2010 article on collective memory at Xunantunich, LeCount suggests that during the Late Classic period the people at Xunantunich started to create their own identity distinct from the surrounding area and shaped by their relationship with Naranjo. Though she uses changes in ceramic styles to support this claim, it is likely the elites of Xunantunich were using other methods to reinforce this identity, including the built environment. I have already mentioned the suggestion of the imitation of site core layout between the two sites. I now look at the use of architecture and how it may have been used in a similar manner.

The aforementioned hieroglyphic panels, taken from Caracol by Najanjo and gifted to Xunantunich, may very well have been a way to reinforce the association between Naranjo and Xunantunich. Seeing the hieroglyphic panels every time one visited the main plaza would have helped reinforce the association in people’s memories.

Social and collective memories are not necessarily set in stone, and can be built by people to suit their needs. Elites at Xunantunich would strive to manipulate it to legitimize their positions of power. If a social memory is to take root then it must be presented in some form of repetition (LeCount 2010). She recounts public ceremonies using specific kinds of ceramics; I think repetition may also come from seeing the same monument or building day after day.
Ritual and Practice

The definition of ritual I use in this thesis is similar to the definition found in Fox’s 1996 article: ritual as a highly patterned behavior that serves as a means of social reproduction. While ritual has ties to ideology, a ritual exists in the physical realm which means the results of it can be found archaeologically. From the remains of these rituals we can then attempt to extrapolate information about ideology.

To further understand ritual as a means of social reproduction I turn to the work of Bourdieu. The concept of a cultural practice, as an interaction between social actors and cultural rules, and habitus, the structures built by history that people work within (Moore 2012). Social actors make decisions within the existing structure of the culture. For example, when asked a question we do not know the answer to we may lie, or we may say we do not know, but very few people would simply start screaming.

The ritual practices of the Maya were shaped by their long history. For example, evidence of caching goes back to the early Preclassic, but was malleable in their presentation to serve the particular goals of the people involved. Dedication and termination rituals were found through time in both monumental architecture and in domestic contexts, the difference is the scale (Lucero 2003). Dedicatorily caches and rituals were a way to imbue a structure with spirit, and were shared between elites and commoners alike (Mathews and Berber 2004).

Lucero (2003) suggests that as elites gained power over time, they slowly increased the scale of these rituals and the number of people present for them. Through these ever larger ceremonies elites would have been able to legitimize their own power. Dedication rituals would very much have been part of this legitimization of power, and would have been part of a larger web of public rituals practices by the Maya. Still, the common Maya citizen continued to perform the same rituals in their own homes as well (Lucero 2003). This way the elites worked within the existing structure of their society, finding a way to use it to their own advantage.
And so I would argue that dedicatory rituals and dedicatory caches may be another form of social memory. Large scale public dedication rituals would hold ideological significance, especially in a structure such as a ballcourt. The ritual would imbue the structure with a spirit and repeated rituals held in the same space would perpetuate the significance of the space, and through perpetuating the significance of the place it would reinforce the legitimacy of the elites who held the initial and subsequent rituals in the space.

Final Comments

My research aims to use ballcourts as physical manifestation of ideological beliefs, human intent, and complex political situations. This is impossible without understanding the significance of human interactions with their environment and how it may have deeper meaning. In this chapter I have established the significance of architecture, use of space, and how they can create and enforce memory, as well as how ritual can be used in the same manner.

Within this theoretical framework, we can better understand what the significance of these differences are. How the elites used architecture and space to assert or manifest power relies on understanding the concept of the built environment and social memory. The built environment may thus be manipulated to invoke a certain feeling or memory from those who exist within that would be beneficial for those who created it; perhaps associations with different kinds of displays of power. From this we may then begin to draw conclusions about political connections and displays of power, and how they were utilized by elite parties.
Chapter 4: How do you want to do this, a Methods Chapter

This chapter covers the methods used during the research portion of this thesis. First, I describe the excavation and documentation methods used to gather data in the field. I subsequently discuss the methods used in the analysis of artifacts found during the excavations.

Excavation Methods

Excavations were carried out according to the BVAR Staff manual (Citation). Initially decisions about where to excavate were guided by where previous projects had excavated as well as our general understanding of where caches were placed in ballcourts (Fox 1996; Jamison 1996). While locating caches was not the main objective of the excavations, it became an important aspect of my research for understanding the ideological significance of ballcourts. Each unit was excavated by lots and levels. Levels were determined culturally and were changed when we came across a floor or went through architecture. Lots changed with the levels, but were also changed when a significant feature was uncovered, allowing for levels to be further segregated. This approach allowed for meaningful separation of artifacts, which is necessary for analysis. It also allowed for features such as caches to be grouped together, and to better organized them for anyone wishing to study them in the future.

While the vertical excavations were ongoing, horizontal excavations were performed on the two structures that defined the ballcourt, with the intention to expose the architecture for subsequent preservation. We also illustrated the architectural features of the ballcourt buildings, and drew cross-sectional profiles of the buildings and excavation units in the playing ally.

Artifacts

Ceramic and lithic artifacts were collected from every unit, along with faunal and other remains. Artifacts were separated by type within each level and lot. In addition, artifacts were
separated by the date they were excavated. This allowed for maximum segregation of artifacts as well as for sorting and classifying them in the field laboratory.

Photography

Photographs were taken at the beginning and end of each level and lot, as directed by the BVAR field manual (citation). Photographs were also taken of any feature within a unit. Finally all special finds were documented by photography.

Analysis

The primary goals of our analysis were to acquire temporal information as well as evidence for possible cultural affiliations between Xunantunich and other sites in the region.

Dating

Relative dating was performed through ceramic analysis. To achieve the latter, we applied the Type-Variety-Mode method of analysis originally used by James Gifford (1976) at the site of Barton Ramie in the Belize Valley, and compared the ceramics recovered in our excavations with that of the ceramic sequence he established at that site. Though there are problems with using the ceramic sequence from a different site than the one being excavated, this is the most commonly used ceramic sequence in the Belize Valley. These methods have been used for analysis in similar work done on other structures at Xunantunich, and follow a precedent for the excavation and analysis of monumental architecture at the site (Sullivan 2017; Slocum 2018).

Ceramics were washed and sorted into diagnostic and non-diagnostic sherds. Diagnostic sherds included any sherd that had a defining feature, most of which were rim sherds. They were then typed based on style, form, as well as paste composition. In the Belize Valley, some paste attributes, or the clay makeup of the sherd, are very distinct and have been used to define temporal types. For example, Savannah Orange, a Preclassic type, has a bright orange paste that functions well as a crayon. Another type, known as Belize Red, has a distinct ash paste and is diagnostic of the Terminal Classic period.
Fauna

All faunal remains recovered included freshwater and marine species. Shells were counted and typed to a species whenever possible. Other remains, such as sting ray spines, were given an MNI, or minimum number of individuals based on the preserved remains that were recovered.

Lithics

Lithics were sorted based on form, and how much cortex was visible on a flake. Cortex is the rough outside that forms on nodules of chert. The flakes were sorted into three groups: primary, secondary, and tertiary. Tertiary were flakes that had no cortex left on the flake. Secondary were flakes that had less than half of the surface consisting of cortex. Primary were flakes that had more than half of the surface consisting of cortex.

Caches

During their excavation, caches were pedestaled and photographed in situ, and the depth of the caches measured. After extraction, each individual eccentric was cleaned and photographed. The eccentrics were kept separated by having their own lot within a level, and assigned a number based on the order they were found in. Due to their status as special finds, and in accordance with Belize Institute of Archaeology protocols, none of the eccentrics were exported for further analysis.

Architecture

The architecture of Ballcourts 1 and 2 were compared visually, as well as with the use of metric data and technical drawings. This allowed us to identify differences and similarities between he previously exposed architecture of Ballcourt 1 with the newly revealed architecture of Ballcourt 2.
Chapter 5: Results of Excavation and Artifact Analysis

This chapter focuses on the results of my investigations and the analysis of the artifacts recovered in the excavations of the ballcourts at Xunantunich. I will first describe the excavations, how they progressed and why. I will then cover the results of the various artifact analyses.

Results of Excavations

Investigations on Ballcourt 2

Ballcourt 2 was the initial focus of our excavations. Previous excavations and conservation in Ballcourt 2 were more limited than in Ballcourt 1. In 1994, XAP excavated a 2x2 meter unit in the middle of the playing alley of the ballcourt, finding a cache, as well as performing excavations on A-17 and A-22 to determine the chronology of construction of the ballcourt and surrounding buildings. Our BVAR excavations focused on the southern end of the ballcourt, which along with the center of the playing alley caches often contain caches. While finding caches was not the main objective of this thesis, they can provide important chronological information, and have implications for the ritual significance of buildings.

Thus, the first unit was placed in the southern end of the playing alley, along the center line, as measured off the unexcavated ballcourt structures. The unit originally measured 1.5 x 1 meter, and was later extended to 2x1, and then further to 2.5x1 meter as excavations preceded. In addition to locating caches, excavation of the playing alley allowed us to gain insights into the construction sequence of the ballcourt and other associated structures.

Following the discovery of a cache in our initial unit, we decided to place a second unit in the northern end of the playing alley to determine if the cache might have been part of a set. While the ancient Maya did not necessarily ascribe to modern day notions of symmetry, caches are sometimes found in the northern end of the playing alley as well (Fox 1996).

When two caches were found in the northern end of the ballcourt, we decided to extend our first unit in a southerly direction to determine if the original cache was also paired, mirroring
the northern end of the playing alley. This proved to be the case, and led to the discovery of two caches at each end of the ballcourt. Eventually 2x1 meter units were placed at 50cm intervals along the entire length of the playing alley, except the center which had been previously excavated. See Figure 4 for a profile of the units excavated in Ballcourt 2.

![Figure 4: A profile drawing of the units placed in the playing alley of Ballcourt 2. Included are the levels of floors, caches and the earlier structure we located. Drafted by Jose A. Puc, Jr. digitized by myself](image_url)

Eventually, we uncovered more of an earlier structure that Jamison and Wolff described in the 1994 XAP field report. We decided to place one more unit, in the center, to uncover more of this structure. See Figure 5 for a photo of these structures and Figure 6 for an illustration of these structures.
Figure 5: Units BC2-14 and BC2-15 with earlier structure under the ballcourt exposed.

Figure 6: Plans of the earlier structure found under Ballcourt 2.
In addition to caches, each unit provided evidence of earlier plastered floors. The caches themselves seemed to have penetrated into a previous floor that predated the floor of the playing alley. Many of these floors were only visible in one corner of a unit. The extensive excavations helped create a more comprehensive understanding of the chronology of Ballcourt 2. I believe the floors we found represent at least four distinct building phases. The highest floor (or the floor closest to the modern ground surface) was probably associated with the building of A-1, with the ballcourt floor under that. Below the floor that the caches had been placed in, there was a floor that appeared to be built directly over the previous architecture. There was then also a floor associated with that previous architecture. The previous architecture was made of carved limestone blocks around 30cm high and a plaster floor, that extended east from our excavations under the eastern ballcourt structure. See BVAR 2018 field report for a more detailed discussion of the previous architecture.

While the vertical excavations were being carried out in the playing alley, horizontal excavations to expose the architecture of the ballcourt were also ongoing. The purpose of these excavations were twofold, both to expose the architecture for analysis and to prepare the structures for conservation work. Figure 7, 8 and 9 show the progression of work on the structures. Figure 10 is a detail shot of the bench of structure A-22, showing multiple plastering events on the bench. These excavations also allowed us to draw a profile of Ballcourt 2’s flanking structures to compare to the profile of Ballcourt 1 provided by Dr. Jaime Awe (see figure 11 and 15 respectively for these illustrations).
Figure 7: Photos showing the progression of work in Ballcourt 2, from pre-excavations at the top to post-conservation at the bottom. Photos are south facing view.
Figure 8: Structure A-22, the eastern structure of Ballcourt 2 before and after conservation work was completed.
**Figure 9:** The northern end of A-1 and A-22 were excavated to expose the architectural articulation between the two structures. Photos show the area before and after conservation.
Figure 10: Photograph showing a detail shot of Structure A-22s bench, with evidence of multiple plastering events.

Figure 11: North facing profile view of Ballcourt 2. Drafted by Jose A Puc, Jr. digitized by myself.

The extensive excavation of Ballcourt 2 allowed us to develop a more complete chronology of the caches and the ballcourt, and to determine the number of floors under the playing alley. This was particularly fortuitous because several of the floors were poorly
preserved and only visible in a single unit, or even in a single corner of a unit. I identified four floors in the playing alley.

*Investigations on Ballcourt 1*

Excavations on ballcourt one were limited to vertical excavations in the playing alley as the ballcourt structures had been previously excavated and conserved in 2002. Three 1.5x1 meter units were placed in the playing alley of Ballcourt 1; in the southern end, in the northern end, and in the center. See Figure 12 for map of units placed in Ballcourt 1. The units were placed to both determine the stratigraphy of Ballcourt 1 and also to investigate if the caching traditions of the two ballcourts were similar. All three units hit bedrock 30-50 cm below the surface and only BC1-Unit1 had evidence of a floor, located 3cm below the surface. See Figure 13 for the final photos of each unit in the play alley with exposed bedrock.

![Units in Ballcourt 1](image_url)

**Figure 12**: A rough map showing the locations of the units we put into Ballcourt 1 during our investigations. BC1-1, BC1-2, and BC1-2 were placed to mimic where caches were found in the playing alley of Ballcourt 2.
Figure 13: From top to bottom: BC1-1, BC1-2, BC1-3. Each unit seen here with exposed bedrock. Only BC1-1 had evidence of a floor.

After no caches were found in the three units an additional unit was placed in the staircase on the southern end of the western ballcourt structure, as caches are sometimes
found in the southern ends of the structures themselves (Fox 1996). See Figure 14 for the location of this unit and final unit photo. No cache was located and excavations in Ballcourt 1 were terminated. Excavations in Ballcourt 1 were not as extensive because nothing was found to warrant the level of excavations conducted in Ballcourt 2. Since the TDP had previously illustrated a section plan of Ballcourt 1 we decided to use this drawing as the basis for comparison with Ballcourt 2. See Figure 14 for this profile.

Figure 14: Left: Photograph of Structure A-19, the western flanking structure of Ballcourt 1, showing the staircase on the southern end. Right: Closing photo of the unit placed into the staircase. No cache was located in this location either.
Final Comments

My excavations plans developed organically as I learned more about the ballcourts. While I had not originally planned to look specifically for caches, they became an important aspect of deciding where to excavate to further our understanding of the two ballcourts. In Ballcourt 1 we placed units in the northern and southern ends of the playing alley to determine if the caching traditions of the two ballcourts were similar. We then placed a unit in the center to see if there was a cache located in the center, a common place to find caches in a ballcourt (Fox 1996). The thorough excavations in Ballcourt 2 allowed us to acquire a much more comprehensive picture of the ballcourt, its sequence of construction, and its form.

Cultural Remains Recovered in the Excavations

Caches

As mentioned above, we did not expect to find caches in Ballcourt 2 because the structure had been excavated by two previous projects at Xunantunich. Their discovery,
however, provides important information for changing or different caching traditions at the site. These differences may also have implications for the significance of the two ballcourts within the site, what they may have symbolized and how they were utilized.

Ballcourt 2 had five caches, four located by BVAR excavations in 2018, and one by the XAP excavations in 1994. The first cache was located in the first unit excavated in Ballcourt 2, 68.5 cm below the surface. This was the most impressive of the four caches, comprising 14 eccentrics encircling a large lip to lip vessels and inside a further 28 eccentrics. Figure 16 shows the cache in situ. In addition this first cache held 4 string ray spines, one of which was still complete at the time of recovery. See Figure 17 for a photo of the pedestaled inside of Cache 1 where you can see two of the four stingray spines. This was the largest and most elaborate of the caches found. See Figure 18 for a small selection of eccentrics found outside the cache vessel and Figure 19 for a small selection of eccentrics found inside the cache vessel. We were able to pull the vessels out of the ground while still whole, though during excavations a hole had been made in the top vessel and the bottom vessel had a root growing through it.

Figure 16: Photographs showing Cache 1 in situ, top left is the hole that was the initial
discovery and the first glimpses of the vessel, bottom left shows the position of the first eccentric found outside the cache, top right shows the top vessel completely excavated with the lip of the bottom one visible, bottom right is the bottom vessel in situ after removal of the top.

**Figure 17:** Inside of Cache 1’s bottom vessel pedestaled to show arrangement of eccentrics and 2 of the 4 stingray spines found in the cache.
Figure 18: Four of the eccentrics that were found encircling Cache 1’s vessel. The eccentric on the far left has the distinction of being the first eccentric we found in Ballcourt 2.

Figure 19: A selection of eccentrics found inside the vessel of Cache 1; selected to show variety of form.

Cache 2 was recovered in the northern end of the ballcourt, 49 cm below the surface of the playing alley. The cache consisted of 9 eccentrics, with no vessel, simply buried as they were placed. Figure 20 is the cache pedestaled in situ, and Figure 21 is a selection of eccentrics from the cache.
Figure 20: Cache 2 pedestal in situ, cache was found in fill of floor without a vessel.

Figure 21: A selection of eccentrics from Cache 2, including an obsidian piece on the far right that may have been made to look like a stingray spine.

Cache 3 was also found in the northern end of the ballcourt, roughly a meter to the south of Cache 2. This cache contained 24 eccentrics buried directly in the fill, 55 cm below the
surface. The eccentrics in Cache 3 were also resting on a bed of jute shells. Figure 22 shows the cache pedestaled in situ and Figure 23 is a small selection of the eccentrics contained in the cache.

**Figure 22:** Cache 2 pedestaled in situ. Despite the dirt the variety of forms the chert eccentrics take in the cache is evident. After the eccentrics were removed a bed of jute was found under them, distinct from the jute in the fill.
Figure 23: A selection of eccentrics from Cache 3. On the far right is a spent obsidian core that was part of the cache.

Cache 4 was found in the southern end of the playing alley, in the extension of the first unit where cache 1 was found. Again, this cache was buried in the fill of the floor, 71 cm below the surface, and did not include a ceramic vessel, see Figure 24 for cache pedestaled in situ. Cache 4 contained 14 eccentrics; Figure 25 is a small selection of eccentrics from this cache.
**Figure 24:** A photo of Cache 4 in situ, this cache experienced much bioturbation from tree roots. The edge of one can be seen in the bottom left of the photo. So extreme was this disturbance that one eccentric was found under the large root pictured a day later.

**Figure 25:** A selection of eccentrics from Cache 4. Notable is the quatrefoil, which was located on top of the cache, as can be seen in Figure 23.

*Eccentrics*

Analysis of the eccentrics themselves was not the focus of this thesis and there is an opportunity for further research of these objects. My analysis is therefore limited to a basic
description of the eccentrics, the proportion of obsidian verses chert eccentrics, and a general overview of some of the forms present in the caches.

All of the obsidian eccentrics in the caches were either produced from modified exhausted blade cores, or were simply unmodified cores Figure 23 above shows an exhausted blade core. Each cache had obsidian eccentrics, with a total of 27 of the eccentrics being obsidian. The forms of the obsidian eccentrics were more limited, including blade type forms, serrated blades, and one trident shaped specimen from cache 1.

The chert eccentrics varied in form extensively, from ancestor profiles, to scorpions, birds, rings, cave portals, a quatrefoil, to miscellaneous flakes. The color of the chert varied from red to a nearly translucent white, with brown, gray, and other colors present. The selection of eccentrics from each cache in the previous section’s figures demonstrates the variability in form and color. Figure 26 further illustrates the variety of form and color.

![Image of eccentrics and chert flakes](image)

**Figure 26:** A selection from all 4 caches to further demonstrate the variety of form of the eccentrics and the diversity of color of chert used to make them.

*Faunal Analysis*

A sample of the jute shells found during excavations was analyzed by Dr Burke and the BVAR faunal experts. The rest of the jute was simply counted to see how much jute there was
in the fill. The Stingray spines were also analyzed to determine species and minimum number of individuals (MNI).

Ballcourt 2 produced a significantly larger amount of jute than Ballcourt 1. Ballcourt 1 produced 24 jute shells while Ballcourt 2 produced over 200. This is in line with the excavations XAP performed in the center, where they also noted the significant number of Jute in the fill of the floors (Jamison and Wolff 1994).

Ceramic Analysis

With the exception of the two large vessels found in Cache 1, the ceramics found during the excavations were all recovered in construction fill under floors or in structures. Similarly to the floors of the ballcourt, most of the ceramics found were badly eroded. This made analysis of the sample challenging.

Ballcourt 1

A total of 259 sherds were collected from excavations in Ballcourt 1. As stated previously, even for sherds determined to be diagnostic, such as rim sherds, there was a large amount of unidentifiable sherds. Sixty percent of the 85 diagnostic sherds recovered from Ballcourt 1 were classified as unidentifiable. Twenty four percent were typed to the Preclassic period, while 14% were typed to the Classic period. There was no pure level of Preclassic sherds, and every level that produced typable sherds presented at least one classic typed sherd. The largest proportion of classic sherds came from the Spanish Lookout phase, which is a Terminal Classic ceramic group. This supports the conclusion by TDP that this ballcourt dates to the Terminal Classic period.

Ballcourt 2

Ballcourt 2 produced a higher number of sherds overall, likely due to the more extensive excavations conducted on this ballcourt. A total of 494 sherds were collected from Ballcourt 2. Of this total, 145 sherds were deemed diagnostic, 45% of which were typologically unidentifiable.
Unlike Ballcourt 1, there were several cultural levels, or construction phases, identified below the floor of Ballcourt 2 that did not contain any identifiable Classic period pottery. The XAP excavations in the ballcourt also found a significant number of Preclassic sherds, though no pure or discrete Preclassic levels were identified (Jamison and Wolff 1994). While our investigations recorded several levels with no Classic period sherds, 29% of this pottery was undiagnostic, making it difficult to identify any of the floors below the playing alley as exclusively Preclassic. Based on the stratigraphy and associated cultural remains, it therefore appears that Ballcourt 2 was constructed during the Late Classic period, possibly above an earlier Preclassic period structure.

Lithic Analysis

As stated in the methods section, lithic analysis was limited to sorting based on form and the presence or absence of cortex. Based on the latter attributes, five types of lithic artifacts were identified: primary, secondary, and tertiary flakes, obsidian flakes, and cores. The composition of the lithics found in the ballcourt leads me to believe that it was random debitage used as floor fill.

Ballcourt 1

A total of 53 pieces of lithic debitage were recovered from Ballcourt 1. The largest number, at 70%, was secondary flakes. The second most numerous type were tertiary flakes, at 38%, and 6% representing primary flakes. Cores were represented by two specimens.

Our excavations in Ballcourt 1 also recovered obsidian flakes, all under a centimeter in diameter.

Ballcourt 2

A total of 81 pieces of lithic debitage were recovered from Ballcourt 2. The largest percent, at 52%, was represented by tertiary flakes. The second largest type was secondary flakes at 41%, 5% were primary flakes, and two were cores. Unlike Ballcourt 1, there were no obsidian flakes found in our Ballcourt 2 excavations.
I believe the lithics found in each ballcourt were basically random debitage left over from over lithic production that was thrown in to the fill when they were constructing the ballcourt.

**Comparison of the Ballcourts**

The aim of my excavations was to recover a comprehensive set of data that would allow us to compare Ballcourt 1 and Ballcourt 2. The most obvious differences between the two ballcourts is in their architecture. When looking at the two ballcourts the first thing that stands out is the difference in size. Ballcourt 1’s playing alley is 20.67m long, and 6.17 meters wide, while the court’s structures are 3.15 m tall and approximately 8-9 meters wide (Awe and Helmke N.D.). Ballcourt 2’s playing alley is 5.5 meters wide and roughly 18 m long (Jamison and Wolff 1994). Measurements of Ballcourt 2’s structures has been made more difficult due to natural and modern disturbances, but they were around 3m wide (Jamison and Wolff 1994). The eastern structure, A-22, was at least 3.80m tall, while A-17 was slightly shorter (Jamison 1996). There has been no reason for their difference in height determined, though there was suggestion that the two structures were built at different times and were not originally a ballcourt (Jamison 1996). Ballcourt 1 is quite noticeably larger than Ballcourt 2.

Another important difference is that the playing walls of Ballcourt 1 are the vertical and feature ballcourt rings, while Ballcourt 2 has a distinctly sloped playing wall with no ballcourt rings. The benches of the two are also different, basically opposite, with Ballcourt 1 having a vertical bench wall and sloped bench and Ballcourt 2 having a sloped bench wall and flat bench. The architectural style of Ballcourt 1 is not typical of Belize Valley courts, but more akin to the ballcourts of the Yucatan (Awe and Helmke n.d.), while Ballcourt 2 has a more local Belize Valley style. See Figure 27 for a direct comparison of the profiles of both ballcourts.
on the two courts. Whereas no offerings were recovered below the floor of the playing alley in Ballcourt 1, our investigations on Ballcourt 2 recovered four caches and a cache/burial. The four caches in Ballcourt 2 contained a total of 86 eccentrics, sting ray spines, plus marine and freshwater snails. While there may still be caches somewhere in Ballcourt 1’s flanking structures, there is still a clear change in caching practices.

A third difference between the two ballcourts is their sequence and dates of construction. Our excavations revealed that Ballcourt 1 was constructed in a single phase during the Terminal Classic period. In contrast, Ballcourt 2 appears to have been constructed in the early half of the Late Classic period.

According to Ashmore (2010), Xunantunich experienced a major growth spurt during the early half of the Hat’s Chaak phase (AD 670-780). Associated with this renaissance were major construction efforts in the site core, culminating with the building of Structure A1 in the late Hat’s
Chaak phase, which partly engulfed the eastern flank of Ballcourt 1’s eastern structure (A-22). Ashmore (2010) hypothesized that this growth spurt was associated with a resurgence of Naranjo’s regional power (Ashmore 2010). The latter sequence of construction sequence makes it apparent that Ballcourt 2 predated Structure A-1, thus it is likely that Ballcourt 2 was constructed prior to the Hats’ Chaak phase.

In contrast, it is possible that Ballcourt 1 may have been a part of the Hats’ Chaak remodeling phase. The presence of the ballcourt ring, which measurements mimics those of ballcourt rings found at Naranjo would support being part of the Naranjo backed remodeling. The fact that Ballcourt 1 does exhibit Yucatecan style influences could suggest that Ballcourt 1 may have been constructed during the Tsak’ phase (AD 780-890) when Yucatecan influences becomes more evident in the southern Maya lowlands (Zanotto et al 2015).

**Final Comments**

In this chapter I have laid out the results of my research, including excavations and analysis of artifacts. The information here lays the foundation for answering my research questions, which is the topic of the final chapter of my thesis.
Chapter Six: That’ll Do Pig, That’ll Do, a Conclusion

In the introduction to this thesis I stated that my intent was to examine what kinds of socio-political information could be gleaned from monumental architecture. To this end I focused on the two ballcourts at Xunantunich, and conducted investigation to answer two main questions:

- Can the ballcourts at Xunantunich provide information about the political relationship between Xunantunich and other polities in the central Maya lowlands?
- Did the elite at Xunantunich use architecture and space in relation to the ballcourts to assert/manifest power?

Having laid out the necessary information I will answer each of these questions in turn.

Question 1

As I noted above, Ballcourts 1 and 2 at Xunantunich are different in form and size, and reflect different architectural traditions. Constructed in the Terminal Classic period, Ballcourt 1 is architecturally atypical in the Belize Valley. Its form and incorporation of ballcourt rings make it more like Terminal Classic ballcourts in the Yucatan subregion of the northern Maya lowlands. Only four ballcourts with rings have been found in the central Maya lowlands. These include Ballcourt 1 at Xunantunich, and ballcourts at Naranjo, Tonina and Xultun to the west of Xunantunich. The most striking detail is that the measurements of the ballcourt rings from Ballcourt 1 are different from the average ring diameters of Yucatecan rings, yet quite similar to the dimensions of the ballcourt rings from Naranjo (Awe and Helmke N.D.).
Figure 28: Remains of the ballcourt rings found in Ballcourt 1. The pieces of the two rings are pictured together here. Photo provided by Dr. Jaime Awe.

With what we know, it seems the ballcourts at Xunantunich can help shed light on the socio-political relationships between Xunantunich and other sites. Ballcourt 2 reflects a local tradition while Ballcourt 1 reflects outside influence. While the form of Ballcourt 1 may reflect some Yucatecan influence, I am more inclined to believe that Ballcourt 1 was part of the remodeling of the site during the early Hat’s Chaak phase, and part of the coherent site plan and ceremonial circuit that rebuilding imparted onto the site. This would mean the form of the Ballcourt is indicative of mimicry of Naranjo, instead of a more general Yucatecan influence. I believe the measurements of Xunantunich’s ballcourt ring being closer to Naranjo’s ring measurements is further support for this conclusion. The relationship between Naranjo and Xunantunich has been hypothesized since XAP’s excavations in the 90s, and work by BVAR has been able to expand upon the relationship and begin to build a much more detailed picture of the change in influences at the site of Xunantunich over time.

Ballcourts were public spaces. The cruciform layout of the site core I briefly mentioned earlier was established in the early Hat’s Chaak Phase, placing Ballcourt 1 along an important
ceremonial circuit at the site (Keller 2010). The building of structure A-1 in the late Hat’s Chaak phase would have left Ballcourt 1 as the only functioning ballcourt at the site as well as leaving it in the area that remained an active civic space (Keller 2010). There is evidence there was a Plaza directly to the northwest of the ballcourt which may have functioned as a market, or area for the production of stone goods (Keller 2010). Perhaps the small flakes of obsidian found in Ballcourt 1 may be the result of its proximity to the hypothesized market place just to the west. Ballcourt 1 was an active part of civic life at the site likely until the end of occupation.

So, by mimicking an architectural style of ballcourt, ballcourt ring included, associated with outside powers in an incredibly public space in their center of power, those who ruled at Xunantunich were sending a message. I believe that message was that they were not just a single polity going it alone; they had powerful allies that were backing them up.

**Question 2**

As I have established, there is a connection between outside powers and Ballcourt 1. It follows that the elites at Xunantunich must have had a reason to make this choice when building Ballcourt 1. Ballcourt 1 could have functioned as a way to legitimize their power through their connection to outside forces. If Ballcourt 1 was associated with the remodeling and growth of the site core in either the Haats’ Chaak phase, its construction likely reflects a statement of power through utilization of labor.

The extensive caching in Ballcourt 2 may also be a show of power for it reflects public consumption of wealth associated with a more affluent Xunantunich. As noted in the theory chapter of this thesis, rituals can be used to create social memories. Elaborate public rituals held by the elite at Xunantunich would have imbued the structure with significance. Even after personal memories of the dedication ritual would have faded, continued use of the ballcourt as a ritual space would have reinforced the significance, and in turn the power of those who gave it that significance. Dedication rituals and caching were important aspects of Maya tradition, and
served to imbue buildings with a soul. Yet they were also a perfect opportunity for elites to publicly display and dispose of their wealth.

The caching in Ballcourt 2 was certainly a display of wealth, with 86 eccentrics, stingray spines, and a burial. The obsidian used to make the eccentrics needed to be imported from the Maya highlands. The stingray spines originated more than a hundred miles to the east along the Caribbean coast. The production of eccentrics also requires a relatively high level of specialization and were the products of skilled craftsmen. Dedicatory rituals are important public ceremonies, but in addition to their ideological significance they are events that elites use to publicly display their elevated status and affluence. In Ferguson’s (1999) review of ballcourts investigated before 1999 in the Belize Valley, there are no ballcourts with caches as ostentatious as those found in Ballcourt 2.

The two ballcourts at Xunantunich are also architecturally and temporally different. This in itself is not unique; other sites in the Belize River Valley have ballcourts that are different from each other. It is also not unique that one ballcourt would be decommissioned and replaced by a newer ballcourt (Ferguson 1999). Cahal Pech, for example, has two ballcourts, one dating to the Late Classic and one to the Terminal Classic (Ferguson 1999), yet both ballcourts seem to have remained active ballcourts within the site. At Buenavista del Cayo there are two ballcourts with similar architectural style, but the older ballcourt was very clearly terminated, its access to the main plaza cut off, and its dedicatory cache removed and placed in the newer ballcourt (Ferguson 1999). In the case of Baking Pot, there are three ballcourts. The two earlier courts have a north-south orientation, and the last, Terminal Classic, court has an east–west orientation (Ferguson 1999).

At Xunantunich, both Ballcourt 1 and Ballcourt 2 remained prominent in the site core, even after the building of Structure A1 over Ballcourt 2’s eastern structure, an act that most likely ended its life as an active ballcourt. Ballcourt 2 nevertheless continued to function as a pathway between the newly separated Plazas A-I and A-II. There is also no solid evidence that
Ballcourt 2 was terminated, meaning it would have likely retained its ideological significance within the site core. The fact that the caches were left where they were lends further credence to this.

In sum, besides reflecting public display of wealth, the construction of Ballcourts 1 and 2 also allowed the elites of Xunantunich to express their power and legitimacy through association with the larger and more dominant polity of Naranjo to the west, as well as through their own displays of wealth.

A-1 was constructed to create a more controlled space the public had access to in the site core (Jamison 2010). Ballcourt 1 would have very much been a part of this public space. As part of the public ritual space, perhaps next to a market of some kind, Ballcourt 1 would have been a big part of public life at Xunantunich, even if there was not a game going on in it. A large ballcourt with a foreign flair would have been a constant reminder of elite presence and power. Before the building of A-1 Ballcourt 2 was likely a fully functional ballcourt, and its location off the main plaza would also have made Ballcourt 2 a prominent feature of life in the city center. Through the use of ritual to create a social memory, perpetuated by continued ritual and ceremonial use, Ballcourt 2 would have also functioned to remind people of the ruling elite; for they were the ones who created it and imbued it with a soul.

The eventual relegation of Ballcourt 2 to passageway added weight to the feeling of separation created by the building of Structure A-1; if ballcourts are associated with the underworld, then what does that say to anyone who must pass through one to access the ruling elite? Those who ruled the site had the choice to terminate Ballcourt 2, remove the caches, reinter them, tear down the structure or completely consume it within the architecture of A-1. The fact that they did none of these things suggests that Ballcourt 2 remained an important ideological symbol to those who visited or resided in the site.

I believe then, that the answer to my second question is that we can. By building Ballcourt 1 the elites reminded people of the power they wielded as well as the outside support
that backed it up. The construction of ballcourt 2 was originally a display of wealth and power, through the extensive caching found within it. Over time the significance of Ballcourt 2 changed at the site, but always retained its ideological significance and reminder of wealth and power.

**Future Research**

A few avenues of future research occurred to me as I completed my thesis. The first that occurred to me is that the last comprehensive study of ballcourts in the Belize River Valley was conducted 20 years ago. There has been extensive work done in the region since that time and with the significance ballcourts hold a new comprehensive comparative study may be illuminating.

The eccentrics found in the caches may also present an avenue of future research as the scope of this thesis did not allow for an in depth study of them. Looking at the symbolism and production of the eccentrics could be illuminating. Xunantunich is already associated with a high frequency of eccentric caching (Sullivan 2017). Thus the uncovering of 86 new eccentrics at the site of Xunantunich could indicate that it is a site of eccentric production in the Belize River Valley; another possible avenue of research.

Finally, I believe that the presence of architecture under the ballcourt warrants more study to be done on the Preclassic component of the site core of Xunantunich.
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