

INVESTIGATING EVIDENCE FOR CHILD SACRIFICE IN
LOWLAND MAYA CAVES

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ABSTRACT

INVESTIGATING EVIDENCE FOR CHILD SACRIFICE IN LOWLAND MAYA CAVES

OLENA BUT

Throughout the Maya lowlands, archaeologists have recovered substantial evidence for the practice of human sacrifice. In several cases, the primary victims in these rituals were children and infants. In this thesis, I review archaeological, iconographic, epigraphic, and ethnohistoric records for evidence of child sacrifice. In addition to recording the context for these practices, my research also provides important information on the significance of child sacrifice in both time and space. The study also sheds light on the reasons that children were chosen for sacrifice, and examines whether this practice was directly associated with specific Maya ideologies. The field research for the thesis was conducted in Actun Tunichil Muknal Cave in Belize, where I recorded evidence for children sacrifice and compared it with other reported cases in the Maya lowlands. I further examine Pre-Columbian Maya mythology and inscriptions for further evidence of human sacrifice, especially cases related to children. The thesis also examines whether children sacrifices were associated with rain ceremonies as a tradition of considerable antiquity in Mesoamerica, especially prevalent during the Terminal Classic period in the Maya lowlands.

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Chapter 1 Introduction

The ethnohistoric literature (Tozzer 1941; Thompson 1959) reports that during the early Colonial period (1500-1600 AD) the Maya sacrificed children at sacred places during times of environmental stress such as droughts and hurricanes. Spanish chroniclers are especially elaborate in their descriptions of human sacrifice at the sacred cenote of Chichén Itzá (Tozzer 1941) and in cave sites in Yucatan, Mexico (Thomson 1959). More recently, evidence for this tradition has also been suggested by archaeologists investigating cave sites in the Petén, Guatemala and western Belize sub-regions of the Maya lowlands (Awe 1997, 1998; Awe et al.2005; Brady 1989; Owen 2005).

The purpose of this study is to determine whether child remains discovered at Actun Tunichil Muknal (ATM) cave, located in western Belize (Figure 1.1; Awe 1994; Awe et al. 2005; Gibbs 2000), provide evidence that this tradition occurred in Pre-Columbian times, as well. This study also investigates why children were the preferred victims of sacrifice for ceremonies at these sites. In an effort to address these questions, and to determine the significance of child sacrifice in ancient Maya culture, this thesis combines a multidisciplinary approach that includes data from archeological, bioarchaeological, ethnohistoric, ethnographic, iconographic, and epigraphic sources.

1.1. Research Questions

The main hypothesis of the thesis is that child sacrifice was associated with rain ceremonies rooted in the Pre-Columbian ideology of Mesoamerica. In the Classic period (AD 250-900) Maya worldview, humans were quite literally the food upon which some supernaturals feasted (Scherer 2015:142). This belief is related in part to the understanding that humans were made from maize during their initial creation by the gods (Tozzer 1941). For the Classic Maya, the killing of children seems to have been given mythic charter. One important clue is the placement of child sacrifices in

sacred caves and within ceramic dishes (Brady 1989; Scherer 2015). Dishes in Maya iconography symbolize offerings to the gods.

The research questions based on this hypothesis are addressed in this thesis include the following:

- 1) Are the skeletal remains of children in caves associated with human sacrifice?
- 2) Is the age and/or gender of sacrificial victims significant?
- 3) Are there particular reasons for sacrificing children in caves?
- 4) If children were sacrificed to particular gods, which of these gods were the ritual practitioners invoking?
- 5) What is the significance of child sacrifice in Maya culture?

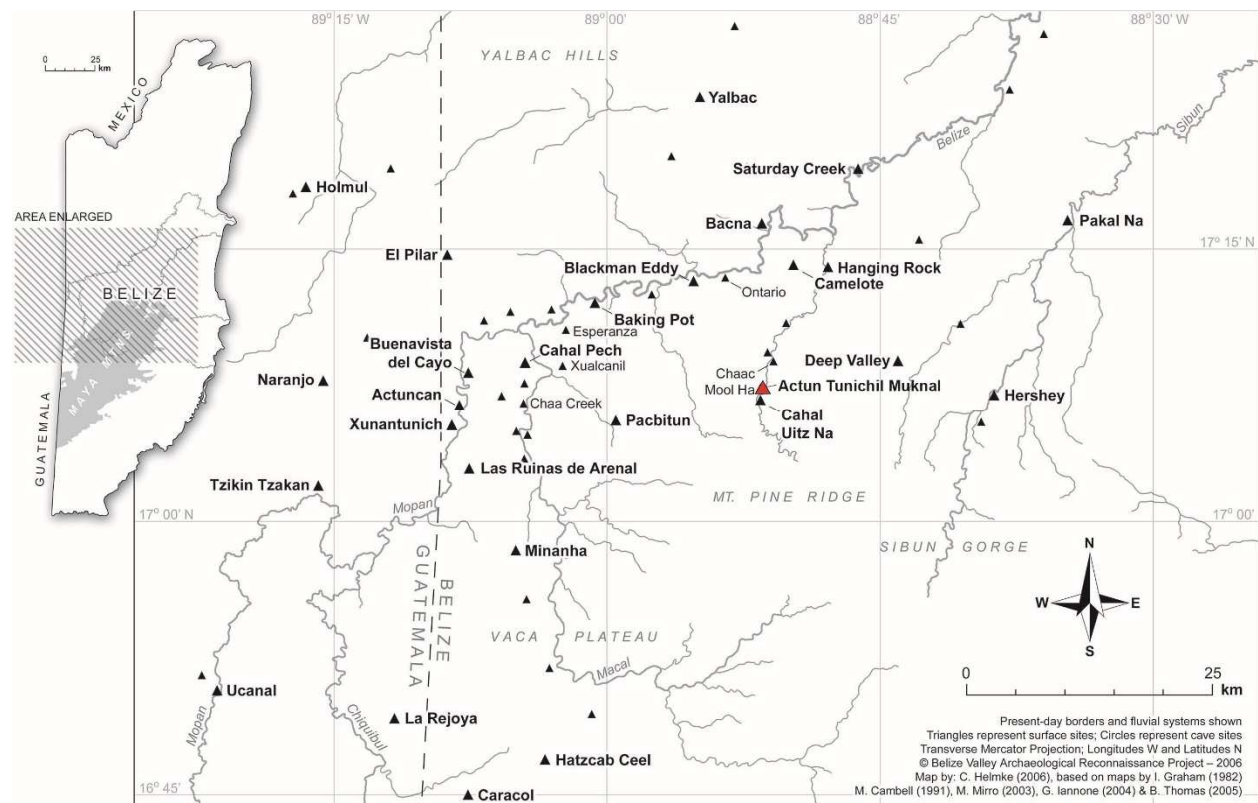


Figure 1.1: Map of Upper Belize Valley, Cayo District, Belize. Actun Tunichil Muknal location is highlighted (BVAR archive).

1.2. Research Background

The Maya lowlands has complex geological features that formed some unique environments such as caves and *cenotes*. The lowland Maya areas of Belize, Guatemala and the Yucatan peninsula are primarily karstic environments. The terrain has been described as: a landscape developed by solution of the bedrock and the loss of water to the subsurface, typically via features such as caves and sinkholes. Karst occurs in areas containing soluble rock, such as limestone, dolomite, gypsum, or halite (Stone 1995).

In the Maya lowlands, many caverns have formed below the water table, so these caves and fractures are filled with water. If the water table falls below the level of the cave, the cave will fill with air and speleothems, that are secondary mineral deposits formed in a cave, may begin to develop. Often, the ceiling will collapse when it is no longer supported by the water flotation. If the collapse continues to the surface, it creates a large cavity in the ground (Stone 1995). If this large cavity or sinkhole contains water at its base, it is called a *cenote* (Thompson 1975).

The geographical contour of Belize contains a series of karstic limestone foothills which surround the larger Maya Mountains. Most Maya caves in this country are located in these foothills, including the Actun Kabal cave, famous for its size (more than 20 km long). There are, however, several hundred other caves in the region, extending between two and five kilometers long, and occasionally descending for more than a hundred meters (Awe 1997).

During the summer 2019 Belize Valley Archaeological Reconnaissance Project (BVAR) field season, Dr. Jaime Awe and I visited the cave site of Actun Tunichil Muknal (ATM) in order to identify remains of children's skeletons and to describe their their archaeological context. ATM cave is located in the upper Roaring Creek Valley of western Belize near the modern town of San Ignacio, Cayo District (Figure 1.1.). The route to the cave crosses through numerous jungle streams

as well as requires swimming into the cave itself. The effort, however, is worthwhile when one encounters the incredibly beautiful, natural speleological formations while simultaneously gaining access to rare and well preserved Maya material cultures dating more than a thousand years ago.

Actun Tunichil Muknal, which translates to *Cave of the Stone Sepulchre* in Yucatek Maya, was first discovered, named, and explored by geomorphologist Tom Miller in 1986 (Miller 1989, 1990). ATM gives an impression of a very spacious and large cave, though its passageways total 5km in length (Figure 1.2). The cave has several chambers and an active river that flows through the major cave passage (Awe 1998; Moyes and Awe 1998).

Initial archaeological investigations at ATM were conducted by the Western Belize Regional Cave Project (WBRCP) led by Dr. Jaime Awe between 1993-2000. During this research, the WBRCP identified multiple line of evidence for human activity near and inside of the cave, including architectural modifications and various artifacts such as ceramics and stoneware (Awe et al. 2005; Helmke 2009; Moyes 2001). In addition, the WBRCP recorded and analyzed human skeletal remains found in the main chamber that were interpreted as having died of unnatural causes (Gibbs 2000). This interpretation was based on several observations. First, it was apparent that the skeletal remains were rarely accompanied by artifacts that could be identified as grave goods. Second, some of the skeletons had evidence of trauma that likely contributed to their death. Third, almost all skeletal remains had been deposited in contexts that were periodically submerged in water, where there was dripwater activity, or where water flowed. Fourth, caves were sacred landscapes that were rarely utilized as places for burial by the Maya. Another important observation by the WBRCP was that while ATM, like most cave sites in western Belize, contained evidence for ritual activity starting in Preclassic times, that the period of most intensive use dated to the Terminal Classic period, a time when the Maya lowlands was experiencing significant droughts throughout the region (Moyes et al.

2009). The work by the WBRCP served as integral background research that I used as a base for my own project.

During my summer visit to the cave, we documented 17 individuals, of which more than a half were children remains. The predominance of *subadult* (less than 18 years old) remains raises questions as to the nature of their death. During the analysis of this data by the WBRCP team, Gibbs (2000) suggested that they likely represent the remains of children who were sacrificed to fertility gods such as Chaac, the rain god, who was believed to live in caves and *cenotes* (natural sinkholes). The following chapters are dedicated to examining whether the data from various disciplines, including archaeology, iconography, epigraphy, ethnohistory and ethnography, can provide evidence to support the interpretation suggested by my hypothesis.

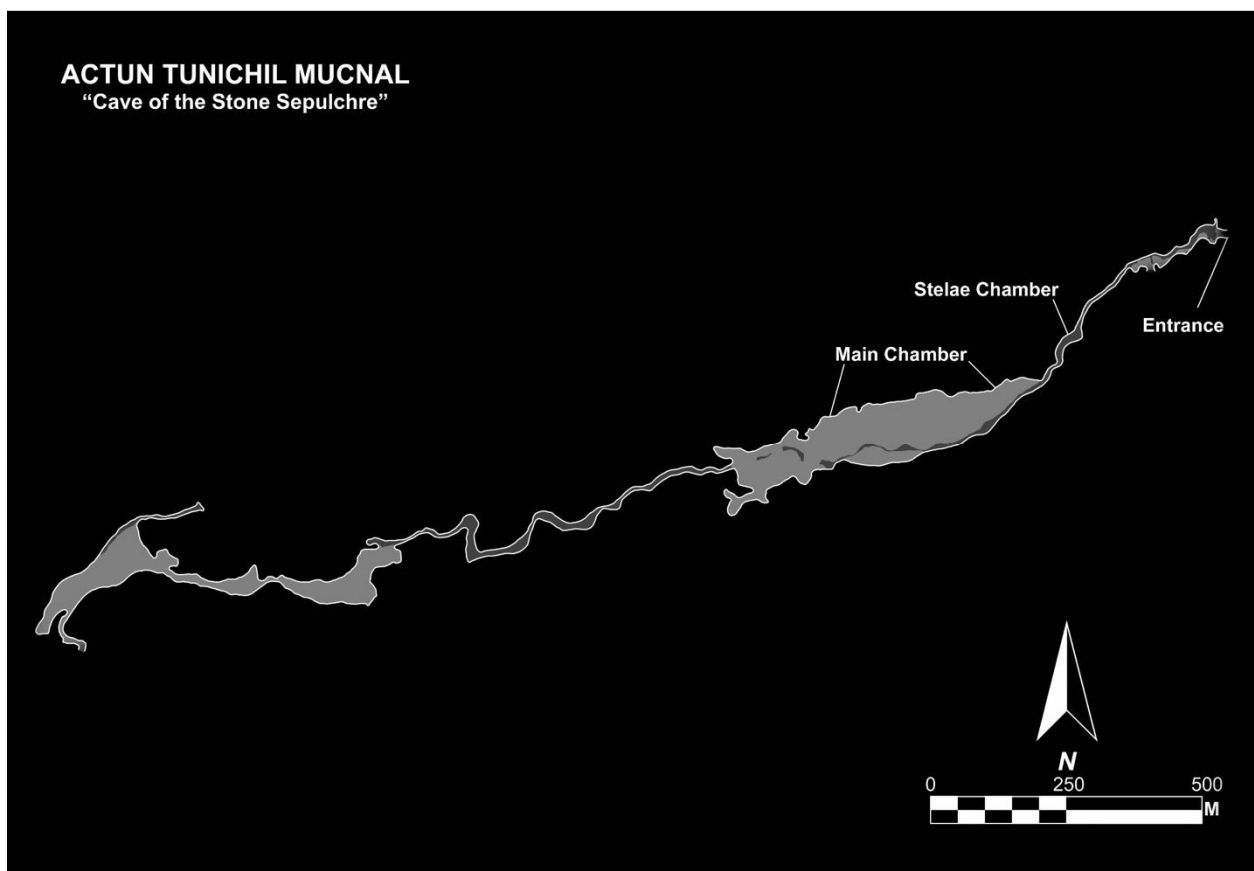


Figure 1.2: Map of Actun Tunichil Muknal cave. Map courtesy of Jaime Awe.

The ritual of sacrifice is well documented among many ancient cultures since it served as one of the major components of human religious experience (Lopez Austin 1988). In order to understand the Maya rituals and sacrifice specifically, in this chapter I expand on the term of sacrifice itself, and provide a background on the research relating to Maya human sacrifice. The word ‘sacrifice’ has its root in the word 'sacred', which comes from the Latin *sacra* (sacred rites) and *facere* (to make, to do). In other words, it means ‘to make sacred’ (Online Etymology Dictionary). Among the Maya, recent research has defined sacrifice as the ritual offering of nourishment to the gods (Tiesler and Cucina 2007). As the Latin origin of the word indicates, objects, substances, people and places were imbued with sacred power through their presentation to the gods (Arden 2011:134). Furthermore, though use of the term sacrifice in many cultures as well as in Western understanding, often suggests a violent nature, for the Classic Maya sacrifice was conducted through consecration, or the dedication of a substance or object to a holy purpose (Arden 2011). Classic studies on the Maya civilization, such as those by Michael Coe (1992, 2015), Mary Miller and Karl Taube (1993), Andrew Sharer (2006), and Stephen Houston (2019) identify sacrifice as an act of nourishment to the gods. Sacred substances such as food, blood, incense, and even life itself were offered to the gods. Such offerings represent some sort of substitution to nourish the gods in return for life and are identified as *k'ex* offering (Scherer 2006:751).

It should be pointed out that, according to Elizabeth Graham (2011), there is no word for sacrifice in Mayan languages. She explains, “There is no word in Yucatec (or Nahuatl) that is equivalent to the Latin-derived word “sacrifice”; it is the Spaniards who introduced the concept” (Graham 2011: 40-41). Stanzione also notes that the worlds of Spain and Mesoamerican didn’t have “too many cultural and social contexts in common; therefore, their worlds could not be translated into that of the other” (Stanzione 2003:86). The evidence collected by Stephen Houston, David Stuart, and

Karl Taube (2006:93), however, provides some Mayan names for sacrificial rituals such as the *yax ch'ahb*, or “first penance/bloodletting” rite. Karl Taube (1994a:669–674) explores evidence for the hypothesis that Maya sacrifice involved elaborate concepts of substitution, or *k'ex*: when a dismembered bird or even human was replacing temporarily the debts and duties owed by a ruler through the sacrifice. Ultimately, those payments needed to be discharged in full, either by bloodletting or by death (in Houston et al 2006:131).

The individuals chosen for human sacrifice tended to be captives, especially elite captives (Sharer 2006:751). Decapitation was among the most common ways in which human sacrifice was practiced. This method is rooted in Maya mythology, closely tied to the decapitation of the Maya maize (corn) god *Ixiim*, who is also associated with royalty (Houston 2007). Decapitation of enemy rulers, consequently, was a special type of sacrifice as it was associated with decapitation of the Maize God to the gods of the underworld in order to be reborn as the first Maya King (Stuart 2005). Heart removal was another common form sacrifice during the Postclassic Period. Heart removal was also one of the most practiced sacrifices by Aztecs. This type of sacrifice was dedicated to war god Huitzilopochtli; Aztecs by cutting through the abdomen with an obsidian or flint blade were turning out still beating heart (Sahagun 1981:76).

Houston and colleagues (2006) also explore the roots of sacrificial practices, which they find in the Maya creation narrative. According to these scholars, in the Maya creation myth a crocodile represents the earth bound like a sacrificial captive. This also hints at the same origin myth that occurs in Central Mexico, where “apical ancestors were seen as sacrifices that allowed the royal dynasty to come into existence. The involvement of an iguana/crocodile at Becan points directly to a connection with primeval acts of sacrifice” (Houston et al. 2006:91). Sacrifice, therefore, was seen by the Maya as part of the creative act. Furthermore, the Maya creation myth showed that sacrifice was the prelude

to rebirth. Blood sacrifice served as “an obligation of Maya kings to ensure the continuity of the world” (Sharer 2006:754).

Scherer divides Maya sacrifice in two types: 1) the torture and eventual slaying of enemies of war, and 2) a more ritualistic practice that involved killing of children, during episodes of transition and rupture, including royal accession and especially the death of an important royal person (Scherer 2013:140). Scherer (2013:106) adds that death was a source of societal rupture, and it “required intense rituals to navigate the disruption that follows the loss of life”. The balance maintained among the living, their ancestors, and the supernatural world of the Maya was disrupted with the demise of especially important social personas: the kings and queens. The Maya navigated such events with human sacrifice and other forms of corporal offerings (Scherer 2013:106). The Maya also practiced a third form of sacrifice, namely of self-sacrifice or autosacrifice. The value of this ritual lay in the value of blood as a catalyst for triggering communication with or appeasement of supernatural beings (Scherer 2013:136). It is important to note that the term “sacrificial victim” holds a connotation in present day speech that does not represent the view from Maya culture. They believed life to be cyclical and sacrificed individuals in any scenario were not seen as victims in our connotation, but rather as offerings for holy purposes that would return once more.

Overall, the literature indicates that death was seen by the ancient Maya not as the end but as a continuation of life, and humans represented food for supernatural beings, which was inscribed in their practice of human sacrifice. The sacrifice of human life as a means to sustain the balance of the cosmos and to compensate the gods for favors both solicited and received, represented, beyond doubt, the most dramatic expression of Maya religious tradition. Historical sources, iconography, and archaeological evidence as we will see further portray the practice of Maya human sacrifice as a shared cultural behavior with particular characteristics related to social context and timeframe (Anda

2007:190).

The aim of this thesis is to determine whether such a paradigm is applicable to what is known as child sacrifice. This study explores whether infants and children located in subterranean sites of the Maya lowlands represent victims of sacrifice. If the evidence indicates that the latter is true, I will explore why children in particular were selected for rituals in caves and other cultural contexts. My study examines data and information that is available in published scientific journals, in ethnohistoric reports, in Maya art, and on ancient monuments. Ethnohistoric sources will serve as evidence to disclose beliefs during the arrival of Europeans or Contact period, while archaeological, iconographic and epigraphic evidence will take us back to the Classic period practice as well to the possible origin of the tradition.

Chapter 2 Theoretical and Methodological Approaches for Identifying Evidence of Child Sacrifice in Mesoamerica

2.1. Theoretical Approaches

The theoretical approach that I apply for analyzing and interpreting the archaeological data I gathered during my research is a combination of processualism and post-processualism. Because my research focuses on the practice of child sacrifice among the Classic Maya, symbolism forms the main theoretical base for my thesis research (Bourdieu 1970; Marcus and Flannery 1994). To better inform use of this tradition, however, I also integrate some postmodern approaches such as archaeology of childhood and agency theory, which can contribute significantly to the interpretation of Maya ritualistic activities and provide new perspectives on my central research question. Incorporating analogy or Middle Range Theory, on one hand, and a historical approach, on the another, will provide me with testable hypotheses based on comparisons and enable me to consider context accordingly. The research, therefore, is synthetic in its theoretical approach in that it combines the scientific methods of processualism with the post-processual interpretational potential of symbolism.

Most contemporary research on the Classic Maya combines both processual and post-processual approaches (e.g., Awe et al. 2005; Awe and Helmke 2015; Tiesler and Cucina 2006). Methods used for data collection, such as use of analogy and ethnoarchaeology are employed from processualism. Post-processualism, on the other hand, enables Mayanists to look at symbolism while recognizing individual actors behind artifacts, as well as to approach a new culture while being aware of our own biases (Hodder 1982). Scientific methods of processual archaeology will allow me to gather various lines of evidence as well as to collect large amounts of quantitative data in order to explore overall function and meaning of cave sacrifices in the Maya region. Bioarchaeological analysis is one of the processual methods that will provide me with data on the human remains I

discuss. A processual approach, in addition, will allow me to test hypotheses made with the use of ethnographic sources (Binford 1967) and at the same time allow me to identify patterns of ancient ritual behavior.

In this research, I also employ Middle Range Theory (Binford 1967) as one of the processual approaches because it allows me to consider analogies between contemporary Maya groups and the Classic Maya in order to better understand the nature of the contexts we are studying. Analogy is defined as reasoning based on the assumption that if two things are similar in some respects, then they must be similar in other respects (Nailson 1965:94). Ethnographic information from ethnohistoric Maya contexts can be used then to make informed hypotheses about archaeological cultures, and to compare societies and culture traits of recorded societies with those of prehistoric sites. In other words, analogy is used in order to interpret and make inferences about the past. Middle Range Theory, according to Binford (1967:10), can be used to match ethnographic and contemporary examples of social processes with archaeological examples. This serves as a useful model of analogical inference that implies linkages between static material remains and the dynamic processes of the contemporary or ethnographic examples (Binford 1967).

While selecting analogies it is important to keep in mind their relevance because of concepts such as time that has been changing through history. Therefore, while the use of analogy in the current research is important, it must be first critically evaluated. In addition, while the appropriate use of analogy can be problematical, it seems to be best suited as a general comparative model for the research (Stahl 1993). There are obvious dangers with projecting the practices of contemporary societies into the past, including assuming historical continuity and ignoring historical relationships focusing on “boundary conditions”, that can cause biases (Stahl 1993). Therefore, my analogies will serve as a comparative model. In addition to analyzing ethnographic examples from the contemporary

Maya region and other parts of Mesoamerica, I will look at how other cultures regarded children as a social group. That will enable me to identify similarities and differences between the ethnographic and archaeological contexts.

Analogy has become the foremost interpretive method in cave studies mainly because it has proven to be useful in establishing that caves were sacred spaces for Pre-Columbian people. Brady (1989) made the single most important contribution to the understanding of the general significance of caves by employing ethnographic analogy to the archaeological record at Naj Tunich Cave in Guatemala. Analyzing ethnographic and ethnohistoric cultural patterns of cave utilization enabled Brady to interpret the cave as a ritual venue and its contents as ritual artifacts. This approach was highly innovative at the time because it introduced an interpretive framework and methodology previously lacking in cave studies. It was primarily Brady's work that established a viable paradigm for interpretation of prehistoric cave use, which marked the beginning of the sub-field of cave archaeology in the Maya lowlands. Hence, Brady's dissertation provided a methodological approach for studying cave contexts, and this approach has been followed by most subsequent archaeological cave studies. Analogies based heavily on ethnographic data, however, may not always account for the disjunction between the types of rituals performed by Classic Maya elites and post-collapse, post-Colonial, and modern cave users. Because this is an important methodological issue in ritual studies, researchers should use multiple sources of evidence to support their conclusions. In spite of that concern, my use of analogies reveals that it can be a powerful comparative tool, particularly in our efforts to understand how other cultures regarded children. The choice of analogies is therefore not strict to source- and subject-side criticism (Stahl 1993).

Drawing from post-processualist approaches, I also analyze symbol and individual within cultural and historical context (Hodder 1982). This approach remains useful for my research as it is

focused on symbolic, structural, and practice-oriented meanings produced in the context of ancient Maya social systems (Preucel 2001:85). Post-processual archaeology enables me to examine how cultural changes such as sacrifice practices occurred instead of simply acknowledging they happened (Hodder 1982). Furthermore, using post-processual approaches, I am able to reflect on possible biases in academic papers, and ethnohistoric and ethnographic sources such as present values and beliefs, especially Western viewpoints, in order not to project them on the past.

Within postmodern framework, I look at children as a poorly understood social category of Maya culture. According to Baxter (2008), a scholar of childhood archaeology, children still remain an unknown category of people in the past. In order to identify children's role in Maya culture, one needs to analyze the Maya adult world and its ideological constructions. Furthermore, on one hand, the agency of children cannot be assumed due to their early age of death. On the other hand, looking at Maya religion and, more importantly, the mythological origins of their beliefs, reveals a significant role of children in Maya culture. Understanding the historical context in which child sacrifice occurred will uncover possible roots of the practice.

One view of child sacrifice is that children were in some way empowered by sacrifice, and were elevated to a special precious category (Ardren 2011). Another is that children, in general, are disempowered, and thus are unable to resist or alter events that affect them (Prout and Brady 2018:8). Both hypotheses have merits. First, because the children were sacrificed at quite an early age their agency cannot be assumed. On the other hand, analysis of ancient Maya religion, and more importantly mythological origins, can help to reveal the significant role of children in Maya culture. Carrasco (1999:84-85), for example, using Maya narratives, suggested that children were associated with young sprouts of maize based on ethnohistoric information. He adds that children were associated with the concept of purity, particularly during their early years prior to the consumption of solid foods.

Therein, we cannot ignore the agency of children, which was rooted in the Maya mythology and ideology. Children could be seen as a category of a spiritual power due to their recent time on earth.

Agency and practice theory can also shed light on the nature of ritual and its variabilities, as well as answer questions about social changes, focusing on the role of individuals inscribed by society and their everyday actions. Bourdieu (1970) analyzed complex symbolic associations of spaces of human activity. His theory can reveal everyday dynamics of human space functions (such as habitation), cultural meanings and how they determine everyday behavior. Looking at the ritual practices through the scope of agency theory can also contribute to our understanding of the issue. According to Bourdieu (1970), spaces associated with human activity can be very complex in their symbolic associations, revealing everyday dynamics of their functions, cultural meanings and how they determine everyday behavior. Applying such an approach, caves as places of ritual activity can serve as symbols. A symbol can be defined as an object, word, or action that stands for something else with no natural relationship that is culturally defined (Geertz 1974).

Symbolism of space plays an important part in interpreting the ancient cultures in general, and their practices such as ritual in particular (Spencer 1996). The role of a cave within space (as a symbol in this context) is determined by Maya ideology as it represents the underworld. Caves also serve as examples of the organization of space, where the entrance and main chamber were periodically used as altars. Furthermore, objects such as artifacts used in rituals can also help to understand human activity and interpret behavior if they are seen as symbolic associations. For instance, the number of prestigious artifacts in cave deposits (e.g., polychrome vessels, long-distance imports) apparently reflects the social setting of the cave (McNatt 1996). The nature of the assemblage together with the physical setting of the room strongly suggests the idea of ceremonial discards deposited in the cave as offerings.

In order to analyze the ritual of sacrifice I also look at the variations of the ritual considered to be offering using modern examples using practice theory, which helps to identify agency that can be seen in the way ritual affected different Maya groups. Tradition imposes the process of ritual, but the way rituals are performed can be different and can therefore infer agency. For example, some ritual practitioners might bring corn as an offering, while others performed human sacrifices as their offering, which perhaps was considered more precious. The way that rituals played out were also a personal choice; while some practitioners preferred to have music others might have just prayed. While tradition imposes the process of ritual, we can infer agency based on the way the ritual was performed. I believe that recognizing agent-based variations can help interpret the ritual, its role in Maya religion, and possible roots. The biggest danger, however, remains in projecting western bias on past societies. Acknowledging this problem is one step towards avoiding biases.

Historic archaeology is another valuable framework for my research. The historical approach also utilizes comparative methods focused on describing the findings within broad variability and historical context. Knowing the context is crucial for understanding the problem. Looking at myth and the ritual of child sacrifice in Maya culture, I consider such a theoretical grounding to be useful for addressing archaeological limitations. The approach I integrate in this study follows that previously applied by Marcus and Flannery (1994) on Ancient Zapotec ritual and religion, where the direct historical approach is the core of their methodology. The direct historical approach can be defined as applying ethnographic data to the past, while trying to avoid generalizations. In research focused on the Maya, there are plenty of ethnohistoric accounts, and therefore the approach is valuable for revealing and understanding ritual practices in the archaeological record. In other words, a hypothesis made based on ethnohistoric sources can be tested archaeologically.

Ethnohistoric accounts provide several advantages in this study. First, ethnohistoric accounts can provide information on what can be considered a sacrifice in the archaeological record, while also giving some clues on its original meaning. Second, because osteological analysis of poorly preserved prehistoric remains often does not allow us to distinguish natural death from a sacrifice, the approach of Flannery and Marcus can serve as a tool to avoid such complications. The ethnohistoric record tells, for example, that the bodies of ‘victims’ were often thrown in cenotes or associated with watery places such as caves (Tozzer 1941:115-116). Central Mexican accounts make clear that sacrifice by drowning (or other watery means) ensured a soul's entrance into the higher and more pleasant realms of the afterlife at the hand of the rain god (Thompson 1970: 301). Thus, ethnohistory can provide significant parallels and information on ancient ritual practices. Finally, Because the ancient Maya also produced original historical records, a direct historical approach should be combined with epigraphic data in order to identify religious features in the archaeological record. Written records can point to the places of ritual as well as its context. Archaeology, on the other hand, can fill the gaps of ethnohistory by pointing to the variety of one ritual.

In conclusion, analyzing archeological data using a “synthetic” approach that combines processual and post-processual or postmodern archaeology can contribute significantly to our understanding of ancient rituals. This combined approach can also yield far more information than if we were to limit our analysis to just a processual or a post-processual approach. By combining scientific methods of archaeology along with parallel evidence that derives from ethnohistory, imagery, and writings, archaeologists can acquire much better insights on ancient Maya ritual practices and traditions.

2.2. Methods and Analysis

As I noted previously, the major focus of this thesis is to determine whether the skeletal remains of children in Actun Tunichil Muknal represent those of sacrificial victims. In an effort to answer this question, my research employed a multidisciplinary approach that combines information from several sources. These sources include information from archeological, bioarchaeological, ethnohistoric, iconographic, and epigraphic evidence. To answer the questions stated in the introduction, I aim to determine if infants and children were buried in these subterranean sites or whether they represent victims of sacrifice. If the latter is true, I will explore why children were especially selected for this ritual. The core of my analytical approach is, therefore, qualitative data analysis.

First, I reviewed the ethnohistoric and ethnographic literature (Tozzer 1941, Thomson 1959), that relates to information regarding human sacrifice during and after the Spanish contact period. I analyzed the ethnohistoric accounts for evidence of sacrifice, the different ways sacrifice was performed, in addition to the meaning, context and objects associated with the practice. This data will also enable me to identify whether if children were preferred in some rituals. If they were, it will also help to determine why. To accomplish these goals, I applied an analogical method. Apart from ethnohistoric sources, ethnographic evidence also shed light on the research topic, and complemented data gained from archaeological investigations.

Much of the archaeological evidence that I used for testing my hypotheses derives from previous archaeological investigations in caves. Caves, as low traffic areas both in prehistoric and modern times, have an advantage in the reconstruction of archaeological contexts in that artifacts tend to be found in or close to their original placement or deposition. Furthermore, natural forces, like animal disturbances and bioturbation produce less disturbance in cave contexts. This is unusual for an

archaeological context (Pugh 2001a:190; Rathje and Schiffer 1980:119-120), but the fact that these conditions exist in cave contexts makes these sites an excellent laboratory to explore the questions outlined in this thesis.

In addition to reviewing ethnohistoric and ethnographic reports for evidence of child sacrifice, I also examined Maya art to see if there is iconographic evidence for this practice. This part of my study was facilitated by the large Kerr digital archive of Maya polychrome vases (Kerr Maya Vase Database: <http://research.mayavase.com/kerrmaya.html>), as well as by visits to museums in Guatemala and Belize to examine their collections of polychrome pottery. Many of these painted ceramic vessels are known to contain scenes of human sacrifice, but no-one has yet examined them to specifically look for examples depicting children as victims of sacrifice. In order to work with and interpret iconographic records, I used approaches for analysis of ancient art. One of the concerns of the approach following Nagao (1989:84) is to avoid literal interpretations and to look for historical basis. Such an approach will helped me to focus on the analysis of the strategies used by patrons and designers to obtain specific desired effects in an audience. In other words, the goal was to look at the communicative process inherent in public iconographic and monumental art of the Maya (Koontz 2009).

Finally, I examined the epigraphic record to see if there are any references to child sacrifice on ancient Maya monuments and codices, and to examine whether they provided any information on the contexts and purpose of this tradition. A similar epigraphic approach, for the purpose of investigating the role of caves in Maya culture, was previously applied in studies by other researchers including Bassie-Sweet (1991, 1996), Helmke (2009), MacLeod and Puleston (1978), Taylor (1978), and Vogt and Stuart (2005). Furthermore, worked with epigraphic text I employed the same approach as for analyzing iconographic records that look for historical basis instead of literal interpretations.

Next, I reviewed the published literature on cave research in the Maya region to record other examples of children's skeletons and their context. By examining published reports and data from other lowland Maya cave sites, such as Naj Tunich, Eduardo Quiroz, Gordon's Cave #3, Petroglyph Cave, Yaxteel Ahau, and the Cenote at Chichen Itza, I was able to record the frequency and age range of subadults in cave contexts. Using analogical methods, I also examined whether other researchers suggested that these remains were associated with child sacrifice, and what evidence they had to support their conclusions. Overall, ethnohistoric and ethnographic evidence helped to set a hypothesis, while archaeological evidence can be used for testing it as well as filling the gaps of ethnohistory by pointing to the variety of one ritual.

A major source of evidence for child sacrifice came from archeological analysis. Primary archaeological data to test my hypotheses was derived from Aktun Tunichil Muknal cave in Belize. The cave was investigated by the Western Belize Regional Cave Project under the direction of Dr. Jaime Awe (1988, Awe et al. 2005). All the human remains recorded in Aktun Tunichil Muknal are still located *in situ* at that cave and were first analyzed by Sherry Gibbs (1997) including previous osteological analysis that I used in my research. Next, during the summer 2019 field season, Dr. Jaime Awe and I visited the cave and located the juvenile skeletons at the site, recorded their contexts, and documented any evidence for trauma on the skeleton. Additionally, we took a sample from a fire pit in the main chamber for AMS radiocarbon dating that would point as we hoped at the period of intense cave usage.

With very few exceptions (Awe et al. 2005, In Press; Brady 1996), the application of a multidisciplinary approach, particularly one that combines data from archaeological, iconographic, ethnographic, and epigraphic sources, has rarely been applied to Maya cave studies. This is unfortunate, for it has been demonstrated that such an approach is very useful for understanding the

cognitive meaning of caves as sacred landscapes among the ancient Maya, and for recording the nature and purpose of ancient and modern Maya cave rituals. As Moyes (2006) notes, this type of approach can also shed light on ancient symbolism, particularly on Maya cave symbolism in our case, and on the various activities that were conducted within these sacred contexts.

Chapter 3 Ethnohistoric and Ethnographic Evidence for Child Sacrifice in Mesoamerica

Ritual activity in Mesoamerica has been a subject of intense study by both the early Spanish chroniclers and modern ethnographers, yet little is known about rituals conducted within cave sites. There is a lack of ethnohistoric evidence regarding this practice in Belize, though more information is available for the Yucatan region of Mexico. Ethnographic information suggests that modern cave rites are esoteric rituals conducted only by ritual specialists and community leaders, but very few of ethnographic reports describe events that occurred within these spaces primarily because ethnographers were either unaware of the occurrence of cave rites or because they were not encouraged to attend these rituals (Moyes 2006). Ethnohistoric and historic sources dating to the 16th and 17th centuries provide insight to the mythological origins of cave usage by Mesoamerican people. The accounts also contain stories depicting children's role in sacrificial rituals. Some ethnohistoric sources suggest that in Mesoamerica sacrifice took the form of the offering of children to rain deities (Reents-Budet and MacLeod 1997).

3.1. Ethnohistoric accounts

To begin with, various colonial sources such as Diego de Landa's *Relación de las cosas de Yucatán*, the *Popol Vuh* (Christenson 2007; Tedlock 1992), and the books of *Chilam Balam* (Edmonson 1982; Roys 1967) mention human sacrifice as a ritual practice by the Maya. Based on these sources, we know that human sacrifice played an important role in the Maya ceremonial life (northern Yucatan area) at the time of European contact. Death is also a common theme in these and other indigenous texts recorded by Spanish priests and missionaries.

The Popol Vuh, a primary historical source, has contributed significantly to our understanding of the sacred nature of caves and the ritual of sacrifice in the Maya area. Sometimes referred to as the *Book of Counsel*, or the *Sacred Book of the Quiche Maya*, the volume was written in the 16th century by the Quiche Maya of highland Guatemala, and transcribed by the Spanish priest Francisco Jimenez (1701-1703) in the 18th century. The Popol Vuh contains a transcription of the Maya creation story, the myth of the hero twins, and the Quiche Maya chronicles. The story provides details on sacrificial practices rooted in the mythological past. The document describes the life and trials of two sets of twins (Christenson 2007). The first set included the Maize God and his brother who loved to play the ballgame constantly on the earth's surface. The constant pounding of the ball disturbed and angered the gods of the underworld, and they sent for the twins. Following their descent to the underworld, the twins were put through a series of trials and were subsequently sacrificed by decapitation. The head of the Maize God was then hung from a barren tree, which began to bear fruit. Though the evil gods forbade people to go and see the tree, a daughter of one of the gods slipped off and approached the tree. The skull then beckoned her to come forward with her hand outstretched. She complied, the skull spat in her hand, and she became pregnant. She eventually escaped the underworld and moved up to earth where she gave birth to a second set of twins.

It is this second set of twins that are known as the Hero Twins. They also played the ballgame like their father and uncle before them. Once again, the evil underworld gods were angered by the constant pounding on their earthly roof so they summon the second set of twins to the underworld. With their ability to do magical tricks, the Hero Twins overcome the trials that they are subjected to by the gods. Eventually, however, they are also sacrificed by the gods, but unlike their parents, they come back to life. They then begin travelling through the underworld conducting magic trips. One of their main acts was to sacrifice each other and then resurrect. The gods ask if this could be done to

them. The twins respond positively but after sacrificing the gods, they do not bring them back to life. They then go and resurrect their father the maize god and then ascend into the heavens where they become the Sun and Venus and where their father creates the first four human ancestors (Tedlock 1996).

The events of the story as told in the Popol Vuh occur in the Maya underworld called Xibalba, the entrance and exit of which has long been argued ethnographically and ethnohistorically to be a cave (MacLeod and Puleston 1978). This story reflects Maya beliefs in caves as means for communication with the gods, which were also closely associated with both death and creation (Tedlock 1992). Descriptions of Xibalba in ethnohistoric sources are fraught with contradictory descriptions of both a hellish and pleasant underworld. According to the sources, fearsome deities reside there (Tedlock 1992). Names such as Scab Stripper, Blood Gatherer, Demon of Pus, Demon of Jaundice, or One and Seven Death suggest that they are associated with human frailty and illness (Tedlock 1992). Bishop Diego de Landa (Tozzer 1941) described the underworld of the Yucatec Maya as a place much like Christian hell (MacLeod and Puleston 1978). Whether the underworld was as horrible as some ethnohistoric documents claim, people on earth still used the caves to communicate with the gods who lived below. These good and evil aspects of caves is consistent with the dualistic nature of Maya ideology where gods were perceived as being both benevolent and malevolent and it was expected that humans constantly needed to appease them to gain their favor and to maintain balance in the world.

According to Sharer (1994:522), the creation myth of the Maya reflects beliefs in life and death cycles. Rebirth was only possible through the sacrifice, which served as a metaphor for life after death. The sacrifice of the ball player, for example, ensured the continuation of the cycle of Maya

cosmology. Agricultural fertility is another theme that is closely linked to the movements of the cosmos as the result of human sacrifice (Gillespie 1991:320). Parsons (1991:319) suggests that agriculture and fertility held important significance in ritual sacrifice of the ballgame. The sacrificial act was a metaphor symbolizing the regenerations of maize, vegetation, and life (Parsons 1991:197). The death of a sacrificed player and the subsequent life that is given to the reassurance of the continuation of the cosmos is positively related to the death and rebirth of the agricultural season. The Maya creation myth also discloses the role of caves in Maya ideology; caves were the places of human origin and emergence from earth unto its surface (Moyes and Brady 2018:152). The ancient Maya saw caves as the domain of entities associated with the life and death of all living things. These concepts surrounding caves seem to be rooted in antiquity and can be traced as far back as the Olmec culture (Moyes 2006). The antiquity of beliefs no doubt increased their symbolic value, as did their association with rain and fertility.

Images painted on Classic Maya vases support the beliefs of the Maya worldview described in the Creation Myth (Figure 3.1). They usually depict various scenes of Popol Vuh most commonly Hero Twins' journey, ballgame, underworld scenes and communication with gods such as shown on the vase K2847. Moreover, common artifacts found in caves such as *manos* and *metates* lead us to recall that these implements were used to grind up the bodies of the second set of Hero Twins thus representing parallel material evidence.



Figure 3.1: Scene depicted on a Maya polychrome vase (K2847 of the Kerr Vase Database archive) that supports the story of the Hero Twins in the Popol Vuh.

Bishop Diego de Landa (Tozzer 1941), a Franciscan Priest who lived in Yucatan during the Colonial period and who is also known for burning hundreds of Maya books in the Yucatan in 16th century, catalogued much information on Maya religion, Maya language, culture and writing system in his manuscript *Relación de las cosas de Yucatán* published around 1566. In this now famous volume, Landa recorded various information about Yucatec Maya ritual including the practice of human sacrifice. For example, a *cenote* (sinkhole) at the Chichen Itza is described by the bishop as a place of sacrifice into which the Maya threw living victims in sacrifice, as well as other “beautiful things”. The sinkhole, or Great Cenote at Chichen Itza, was “formed by a circular and perpendicular opening in the living rock, and the water appears green” (Tozzer 1941:180). Landa also suggests a connection between the rain gods and the Cenote sacrifices at Chichen Itza. He described a cenote ritual where the participants were petitioning for rain. According to his accounts, the ritual practitioners were begging for water that “is necessary for sustenance”, “for good rainy seasons” and “for life and temporal goods” (Tozzer 1941:180). The bishop further adds “besides killing people in their towns, they had two infamous sanctuaries at Chichen Itzá and Cozumel where they sent an infinite number of wretched people to be sacrificed. At the former they were flung headlong down a precipice, and at the latter they tore out their hearts” (Tozzer 1941). According to Spanish accounts (Tozzer 1941), during the first half of the past century it was believed that virgins tended to be the

choice for sacrifice. Eric Thompson also noted that “children (virgins) are sent to fetch the water from a distant spring” for use in ceremonies (Thompson 1959).

According to Landa, a cave associated with the underworld was inhabited by the god Chaac, controlling both rain and wind (MacLeod and Puleston 1978). Offerings to rain gods for fertility, consequently, occurred within caves. The Sacred Cenote at Chichen Itza represented a watery underworld (i.e., a cave), where Yucatec Maya made sacrificial offerings. Landa describes, “...Into this well they had, had, and then had, the custom of throwing men alive as a sacrifice to the gods, in times of drought, and they believed that they did not die though they never saw them again.”

Overall, the ethnohistoric record notes that women and children were sacrificed as frequently as men. The Maya painted victims in blue sacrificial color and put a special headdress on them, after the victim was led to the place of sacrifice (the temple courtyard or the summit of pyramids). Sharer (2006:543) describes the ritual in such a way that a victim had his heart extracted with a knife and thrown down from the summit, and had his body skinned except for the hands and feet by priests. On rare occasions, nobles and other spectators divided and ate parts of the body of sacrificial victims. The scholar alludes to the Chichen Itza wall paintings with such a ritual. The example of autosacrifice by cutting the throat during the Classic Period can be found on a ceramic vessel from Altar de Sacrificios.

Landa was also among the first to record evidence for child sacrifice in the Maya area. The bishop describes sacrifices of infants who “were cached in crevices or thrown into standing pools of water” (Reents-Budet and MacLeod 1997:68) According to Landa (Tozzer 1941:44), during times of drought, the Yucatec Maya would throw children and adults into the sacred Cenote at Chichen Itza. The practice was not limited to the Cenote at Chichen Itza, however, but seems to have been a widespread practice (Scholes and Roys 1938:615). For example, in the highlands of Guatemala,

Fuentes y Guzmán (1932:336) also report that children were sacrificed in a cave, to bring rain and fertility (in Brady 1989).

Another evidence for the practice of sacrifice comes from the first dispatch of Hernan Cortes, the leader of the Spanish Conquista of Mexico, to Charles V (Dispatches of Cortes), where Cortes reports of a cruel Maya custom of sacrificing children. Cortes wrote to the King that:

“Whenever they have anything to ask of their idols, to make their petition more acceptable, they take boys or girls, and even grown men and women, and in the presence of these idols they cut open their breasts, while they are alive, and take out the hearts and entrails. Then they burn these entrails and hearts before the idols, offering the smoke in sacrifice to them” (Blacker and Rosen 1962:17).

Based on the written accounts of the Contact period, Anda (2004) suggests that most of the children that were the sacrificial victims were marginalized. The Sotuta and Homun documents repeatedly mention the kidnapping of children and others who were sold by their own families to be sacrificed, a practice probably transmitted from earlier times (Anda et al. 2004). According to Tozzer (1941), the records of the testimony given by the Maya in Sotuta and Homun, continuously state that the ages of children sacrificed was around five or six (Brady 1989). This age, as we will see in Chapter 6, is consistent with the remains of children found sacrificed in Maya surface sites and those recorded in caves.

The concept of a rain deity living within caves is found in other parts of Mesoamerica as well. For example, the Aztec god Tlaloc also lived in caves or mountain tops and was described by ethnohistorian Diego Durán as the god of rain, thunder, and lightning (Heyden 1975:134). The name

Tlaloc roughly translates to *Path under the Earth or Long Cave* (in Heyden 1975:134). Tlaloc was also associated with children offerings as reflected in the ethnographic literature. Throughout Mesoamerica, and especially in central Mexico, rites of child sacrifice were documented by Spanish priest Bernardino de Sahagun (1981 1-2, 5, 42-44, 192; Nicholson 1976: Table 4; Heyden 1981:19-20; Brundage 1985:54-56). Sahagun specifically documented cases of offerings that involved infant sacrifices to Tlaloc (Brady 1989; Lopez Austin 1988).

Among the Aztec, some sacrificial victims were purposefully bathed in sacred water from a cave spring prior to ritual sacrifice (Sahagun 1981 [1569]). In the Florentine Codex Sahagun describes the fate of children who have died providing descriptions of the Aztec underworld:

“[They were] the ones who never knew, who never made the acquaintance of dust, of filth. I have here the complete story, what awaits, what can be accepted, what can be heard. It is said that when little children die, they become green stones, they become precious turquoise, they become bracelets. When they die they do not go to the terrible place of the icy winds, to Mictlan. They go there, to the house of Tonacatecuhli. They live at the place of the tree of our sustenance. They sip the flowers of our sustenance. There they live at the tree of our sustenance; they nurse from it.” (in Lopez Austin 1988).

Based on the evidence in the chronicles by Fray Diego Duran and Bernardino de Sahagun, Carrasco (1999:84-85) adds that “a very remarkable festival, celebrated on the first day of the month of Atlcahualo, involved the paying off debts to Tlaloc, the god. On this day, children (called “human paper streamers”) with two cowlicks in their hair and favorable day signs were dressed in such colors as dark green, black striped with chili red, light blue, some set with pearls, and were sacrificed in seven different locations. The flowing and falling of the children’s tears ensured rain.”

This is how it is described by Sahagun:

“Second Book, which threateth of the feasts and sacrifices by which these natives honored their gods in their state of infidelity.

The first month of the year was called Atlcaualo... began upon the second day of February. On the first day of this month, they celebrated a feast in honor - according to some - of the Tlaloc gods, whom they held to be gods of rain; according to others - of their sister, the goddess of water, Chalchiuhtlicue; - according to others - in honor of the great priest or god of the winds, Quetzalcotl....

In this month they slew many children: they sacrificed them in many places upon the mountain tops, tearing from their hearts, in honor of the gods of water, that these might give them water or rain.

The children whom they slew they decked in rich finery to take them to be killed; and they carried them in litters upon their shoulders. And the litter went adorned with feathers and flowers.

When they took the children to be slain, if they wept and shed many tears, those who carried them rejoiced, for they took [it] as an omen that they would have much rain that year” (Sahagun Book 2, 1981[1569]:1).

Following the presented ethnohistoric evidence, the practice of child sacrifice to rain and fertility gods appears to have been pan-Mesoamerican, while cave sites and shrines built for these rain gods appear to be the prime locations for these sacrifices. Central Mexican accounts make clear that

sacrifice by drowning (or other watery means) ensured a soul's entrance into the higher and more pleasant realms of the afterlife at the hands of the rain god (Thompson 1970:301), while caves in Mesoamerica have long been viewed as linked with creation, fertility deities, and sacred ancestors. Furthermore, the pervasiveness of the concepts mentioned above suggests that they are quite old and represent continuity at least from the Contact Period and perhaps from the Classic period. Even in modern ethnographic studies, cultural continuity is evident in many Mexican, Belizean, and Guatemalan communities where cave ceremonies are still performed to ensure rain and fertility (Brady and Stone 1986). The following ethnographic data presents modern Maya beliefs and traditions associated with caves as well as continuity of sacrifice rituals, however, in a different form.

3.2. Ethnographic Evidence

Ethnographers in Mesoamerica have had a long-standing interest in the role of caves among indigenous groups. One ethnographer who has had a very significant impact on Maya cave studies was Evon Z. Vogt (1969; 1970), particularly through his 40 years of seminal ethnographic research with the Tzotzil Maya of Chiapas, Mexico. Through his research, Vogt (1969, 1970) identified caves (and some mountains) as modern shrine sites employed by the Maya to communicate with supernatural forces (Figure 3.2). His examination of caves as key elements of a "sacred landscape" was an important theoretical advancement in Mesoamerican religious studies (Vogt 1970).

There is plenty of ethnographic evidence suggesting that caves had, and have, sacred, mythic status. June Nash (1970:23), working in Chiapas, notes a yearly festival procession that passes through a cave entrance on the Day of the Cross which takes place on May 3rd. The shamans, often described as healers, and who lead the procession, are the only ones allowed to enter the cave to speak with ancestors, claiming that inside of the cave lies a lake and a beautiful field. The rest of the group waits outside for the shaman to return, and to be given a year's prognostication.

According to Evon Vogt (1970), among Tzotzil communities caves represent the places of origin of lineage ancestors as well as the places where they return following their death. Caves also served as places to petition for rain, sorcery and other rituals. Vogt (1969:455) noted that during lineage ceremonies in Zinacantan, at the crosses at senior and junior Stomach Cave, “the participants were extraordinarily quiet, and there was an aura of fear as the shamans made their offerings especially to the Earth Lord.” The Earth Lord lives underground and controls the water holes and will exchange riches for a person’s soul (Vogt 1969:302). Also among the Tzotzil is the “blackman”, a hyper-potent cave-dwelling demon that impregnates women causing them die from over-menstruation or multiple births (Holland 1962). Holland (1962:173-180) adds that this 'demon' is one of many deities of death thought to reside in caves.

The Tzotzil Maya fear cave environments due to their association with sorcery; caves are “portals to dangerous Earth Lords” (Fabrega and Silver 1973). Some malevolent activities of sorcerers according to Tzotzil take place deep inside cave passages. There are some healing shamans *hi'lol* willing to make journeys into caves to recover the souls sold to the Earth Lords. “This procedure is highly reprobated and informants will furnish few details”, however, some types of cave features, such as rockshelters, springs, or small cave openings, are still used in pilgrimage circuits and community rituals (Fabrega and Silver 1973:260-261).

Ralph Beals, working among the Mixe, noted that regarding rituals in caves or at mountain shrines, “...the people of the town were so secretive that I almost gave up hope of discovering anything about the rituals...” (Beals 1945:85). Oliver LaFarge (1947, in Moyes 2006), working at Santa Eulalia in highland Guatemala, admitted that he did not have access to many of the esoteric rituals conducted in caves. He was warned “many times not to approach the cave of Yalan Na’, which was clearly of significant importance to the local Maya” (Moyes 2006: 26). Additionally, LaFarge (1947) recorded

a story about a Latino woman who entered the Yalan Na' but was stopped by the cave closing in on her and a serpent binding her legs. Similarly, Tozzer (1907:148-149) reported that, while studying the Lacandon, he accompanied a family on a visit to a cave shrine. Upon arrival, the father and eldest son went to the cave while Tozzer and the rest of the family waited behind in a canoe. Petryshyn (1973; in Moyes 2006:26-37) was the first one to describe Lacandon cave ceremony dedicated to worshipping goods. The cave was called after the god Tsibana who Lacandon prayed for fertility and consulted during heavy rainfalls.

Throughout Mesoamerica caves are considered to be very dangerous places, as well as sacred ones. Physical, and especially spiritual dangers, are associated with caves among modern Mesoamerican people. Guatemalan Maya (Moyes 2006) believed that dangerous entities guarded cave entrances. Allen Christenson (1998:87-90) reported that among the Tz'utujil Maya of Santiago Atitlan, the nearby cave is guarded by pumas, jaguars, and snakes, and only those who are pure of heart may enter without being bitten. Eva Hunt (1977:107) similarly describes caves as the dwelling of Matlacihuatl from the Cuicatec region of Mexico. Matlacihuatl are evil licentious women who seduce men. Hunt compares this entity to the Charcoal Cruncher of Zinacantan who lures drunks into clumps of magueys to have sex. When they touch her sexual parts they turn into excrement (Vogt 1969:332- 340).



Figure 3.2: Photos of the Modern Maya ceremonies taking place in caves (photos compliments of J. Brady).

Fitzsimmons (2005:108) notes that the native population of Oaxaca still perform ceremonial blood sacrifices within caves. Ritual practice of blood sacrifice is also well documented by ethnographers of the region (Parsons 1936). Evidence for the sacrifice of dogs and other small animals

at Blade Cave, for example, have been noted, as well as the presence of bifacially chipped blades, similar to those hafted to wooden handles and observed in use by ethnographers here as recently as the 1950s.

John Monaghan (1995:107) reports that among the Mixtec of Oaxaca caves are considered to be "rain houses" that people treat as shrines. Water dripping from the walls of the cave are considered to be "raindrops" and rain clouds are thought to pour from the cave before storms. In the Maya area, working among the Tzotzil of Highland Chiapas, Vogt (Vogt 1969:387; Vogt and Stuart 2005:164-165) reported having a number of conversations in which he tried to convince local people that clouds formed in the air not in caves. Watching the storm clouds in the Grijalva River Lowlands stream over the highland ridges he had to admit that based on the empirical information the belief was understandable. This concept is an old tradition that is illustrated in the El Rey monument from Chalcatzingo (Figure 3.3), which dates to the Preclassic period (1200-200 BC). In the rock carving a man is shown sitting on a cloud scroll within a cave. Mist or smoke emanates from the entrance and rain is depicted falling from clouds (Angulo 1987:133-158; Reilly 1994:78-79).

The relationship between death and infirmity with caves probably contributes to the idea that caves are regarded as toxic to the body. William Hanks (1984:134), working in Yucatan, noted that caves are considered to be chaotic underworld spaces, polluting to the body and inhabited by harmful witches. At Yalcoba, dwelling within caves were *alux* (dwarves) who play evil tricks and make people sick. The Tzeltal believe that dangerous spirits of the hills and caves have the power to mislead, make slaves of people, or give illness (Nash 1970:23-24). This agrees with the *Ritual of the Bacabs* (Roys 1965:67-68), which describes disease-causing winds as having originated in caves. Hanks (1984:134 in Moyes 2006) summed up the modern Yucatec attitude towards caves as, "the stagnant, dank

atmosphere is itself perceived to be polluting to the body, but beyond this, it is the potential for harboring evil that motivates caution”.

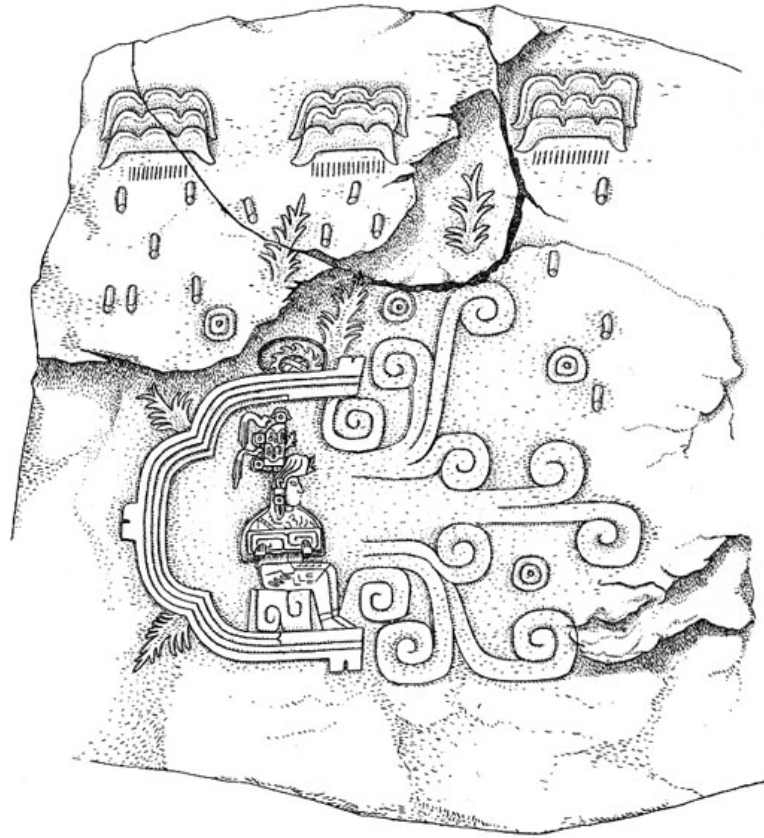


Figure 3.3: El Rey monument from Chalcatzingo (Guernsey 2010: Figure 3).

Ethnographic evidence coming not only from the Maya region, but from Mesoamerica in general demonstrates that beliefs about the nature of caves and the dangers associated with them are quite similar, which alludes to their common pan-Mesoamerican tradition and origin. Caves seemed to represent portals to the underworld, a way to connect with their gods.

Chapter 4 Iconographic and Epigraphic Evidence for Child Sacrifice in Mesoamerica

Iconographic and epigraphic sources are the only sources of evidence created by the ancient Maya themselves that can be used to decode original Maya beliefs. Mural scenes, carved monuments, and elite art objects such as painted and carved ceramic vessels serve as important sources for studying Maya rituals including sacrifice. In order to understand public images such as stelae, murals, and carvings, a grammar and structure for their interpretation should be developed. The eclectic nature of images does not relay a coherent system of iconographic conventions; although such a public iconography must have been coherent to the audience the art was made for. Following the methods of iconographic analysis by Koontz (2009) and Martin (2002; 2006), I analyzed some of the Maya evidence in a discourse of mythology, which may also be traced to several areas in Mesoamerica, in order to interpret the ritual involving infanticide as well its possible roots.

4.1. Iconography: Mythological Scenes

Classic period (AD 250-900) ceramic Maya vessels are known for depicting historical events and a number of specific, complex mythological scenes that are seemingly challenging to understand and identify as a single narrative. However, scenes in murals and ceramic vessels are great sources for exploring ancient narratives associated with caves that were linked to the underworld in the Maya beliefs and associated with child offerings.

One of the Mesoamerican murals predating Classic period Maya art are the murals at San Bartolo, a site located in Guatemala, that date to the first century BC (Late Preclassic period). The San Bartolo murals depict a cave scene, showing food and water that is taken from a cave maw, symbolizing the entrance, in flower mountain (Saturno et al. 2005). The colorful murals depict creation scenes of maize tamales and primordial water coming from the cave of origin offered to

Maize God. The myth also indicates the importance of water originating in caves (Adams and Brady 2005:305; Moyes and Brady 2012:153). Water, then, was seen as one powerful element that seems to have been regularly tied to caves and their access in murals.

Scenes on Classic period Maya vessels, meanwhile, have numerous depictions of child sacrifice. Most of the pottery with these scenes is known as “codex style” pottery (Coe and Kerr 1998). Codex is the term generally used for Maya books, which were folded bark paper documents that were mostly destroyed by the Spanish during the conquest period. The ‘codex style’ on ceramic vessels, primarily cylindrical vases, has washes and frames of red color. Such vases are especially important since only a few codices survived. Maya narrative tales come from such ceramic vessels, which were also actively used in daily life. The Classic codex style pottery was made around the beginning of the sixth century AD. A scene typically painted on this kind of pottery features the sacrifice of the Baby Jaguar (or *unen bahlam*, the Maya name) (Martin 2002). Some vessels also depict an anthropomorphic infant lying in an open dish, in a further allusion to sacrifice and ritual offering.

The most common and popular plot with a child offering (often represented as a Baby Jaguar) usually includes the underworld supernaturals participating in a sacrifice such as the rain god Chaac, the main inhabitant of caves, the Death God, the Baby Jaguar, and sometimes royal elites.

The rain god is represented as a youthful version of the deity Chaac, an important deity in an area where there is a pronounced dry and rainy season every year. Chaac (or the Aztec Tlaloc) was believed to live in the watery underworld, that is also evident in ethnohistoric sources, and was related to agricultural fertility (Miller and Taube 1993:184). All known Mesoamerican rain deities such as the Zapotec *Cocijo*, and the Central Mexican *Tlaloc* including the Maya Chahk are thought to dwell in caves (Brady 1989; Stone 1995). Classic and Postclassic iconographic depictions illustrate Chahk

sitting in his cave or in a cenote. Postclassic codices such as the Dresden Codex (pages 30a and 67b) and the Madrid Codex (pages 29 and 73) depict Chahk seated in his cave. One of the clearest examples is from a Classic Maya vessel (Coe 1978:78, no.11) that depicts the rain deity seated within his house-like cave, which is rendered as the mouth of an anthropomorphic monster.

The iconic example that includes Chahk and Baby Jaguar is the vessel K521 of Kerr Maya Vase Database (Figure 4.1) that is exhibited in the Metropolitan Museum of Art. The scene apparently represents part of an ancient narrative that is also depicted on a number of other Classic Maya vessels, suggesting its prevalence and reflecting the tradition of human sacrifice.

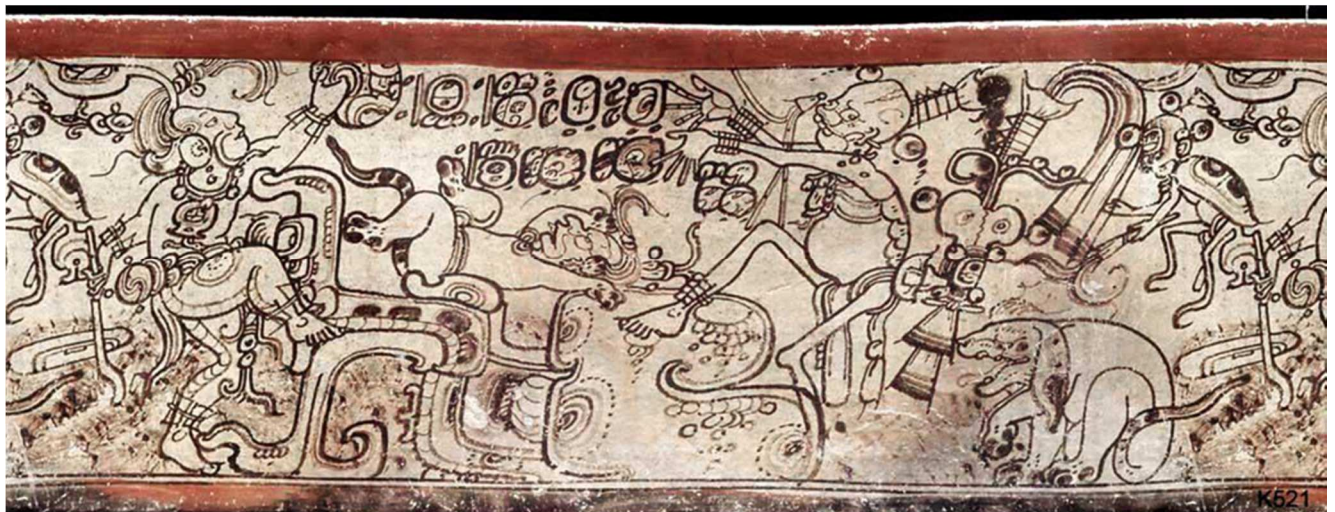


Figure 4.1: Iconic Classic period Maya vessel K521 depicting a mythological scene with Baby Jaguar. The scene depicts sacrifice of baby jaguar or possibly his birth in primordial waters on a mountain (Photograph by Justin Kerr, 1998).

The first character I would like to analyze is Chahk, who is shown on the left of the scene in Figure 4.1. His posture is reminiscent of a dance. With his right hand Chahk is throwing an axe (symbol of lightning), and in his left hand he holds a handstone that looks like an eccentric flint. The character has a noble profile, and his very large ear spoons of *Spondylus* shell reinforce his association with watery environments and fertility. There is also a scaly motif under his thighs and along the back of legs alluding to his reptilian quality. This motif is also depicted on another supernatural in the center

of the scene, on the *witz* (mountain) to evoke watery realm. *Witz* are usually depicted with a zoomorphic face, with a huge gaping mouth and a stepped cleft in the center of the forehead. This serves to animate the mountain and provide it with an “Earth Monster” quality. The open mouth became the entry into the mountain. The bottom of the vase scene seems to represent a watery environment associating *witz* with the underworld realm. The maw of the Underworld confirms its place at the meniscus/point between life and death. On top of the *witz* lies an infant, a representation of the Baby Jaguar. This infant deity character, which is also spread across Mesoamerica (Martin 2002), is depicted with a supernatural face, jaguar tail, and hands and feet (shown as paws). His reclining posture is believed to represent birth or rebirth. On the right there is a death deity depicted as fleshless, skeletal, spindly. He has several attributes including extruded eyeballs decorating his head. His deadly, unhealthy look might represent a decay being the opposite to the vital look of Chahk, they symbolize binaries of decay and death and fertility and life.

The Baby Jaguar is shown just in between the young and vital representation of the rain god and decaying flesh of the death deity. The episode can be interpreted as a birth; interaction of rain and decayed material is necessary to produce the new life, to germinate a sprout that is vital to the Maya worldview and beliefs in life cycles. Moreover, his reclining pose is referent to for birth and infancy. In other scenes of the Maya deities such posture represents their symbolic birth.

Other characters include a dog-like figure behind the death deity and a firefly with extruded eyes elements. The firefly might symbolize the nighttime of the event. It holds a torch, which was an imitation of the bioluminescence of the actual flies and alluding to the cave environment. Light itself was also an important indicator of the divine – important role firefly would play. The Dog character is shown perhaps as another representation of the underworld. Dogs were linked with renewal and human life in the Popol Vuh (Tedlock 1992); they are associated with death and have the job of leading

people into the Underworld. The text painted on the vessel is not clear, unfortunately. The text also does not name a specific owner.

Several other vases show important mythological scenes that depict the Baby Jaguar birth/sacrifice theme and associated deities (e.g. K1370 (Figure 4.2), K2207 (Figure 4.3), K2208 (Figure 4.4), K3201 (Figure 4.5), K1644, and K1815 (Figure 4.7). Some minor differences are present on two of the vases: K2208, for example, has a bird facing the Baby Jaguar behind Chahk. K1644 has another skeletal figure, in addition to the skeletal death deity, that is also depicted behind Chahk. The text on K2208 has the date of *7 Kib 4 Pohp* that may refer to the event in mythological time. Vases K1200 and K8655 (Figure 4.8-4.9) are particularly interesting as they depict a child offering with one of the death deities, God A prime. He holds infant on a bed of leaves in front of a ruler sitting on a throne. This image might be also related to the Hero Twins (see Kerr 2001).



Figure 4.2: Infant lies on Kawak throne with Chahk (left) and skeleton (right) (K1370; Photograph by Justin Kerr, 1998).



Figure 4.3: Codex style vase depicting a baby jaguar in the grasps of a skeleton (K2207; Photograph by Justin Kerr, 1998).



Figure 4.4: Codex style vase depicting Chahk with lightning emanating from his mouth, handstone in hand, while the jaguar pawed and eared infant moves toward the bottom of the scene. God A seemingly tries to hold the infant (K2208; Photograph by Justin Kerr, 1999).

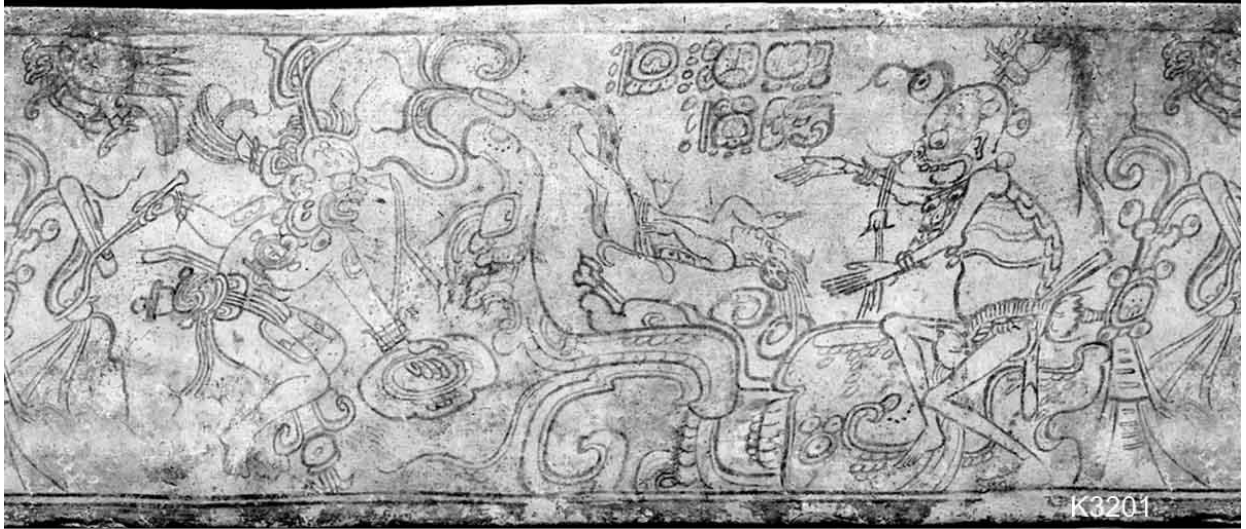


Figure 4.5: Codex style vase depicting a sacrifice of the infant and/or a welcome of an infant into the otherworld (K3201; Photograph by Justin Kerr, 2000).



Figure 4.6: Codex style vessel showing Chahk Cib Chak, a baby with jaguar tail on Kawak throne, and God A. A skeletal deer figure is also present (K1644; Photograph by Justin Kerr 1644).



Figure 4.7: Codex style vase depicting an infant with jaguar tail lies on Kawak throne. God A has back rack with moon sign and small creature. Chahk and bat look on (K1815; Photograph by Justin Kerr, 1998).



Figure 4.8: Codex style vase depicting God A prime holding an infant on bed of leaves in front of ruler on throne (K1200; Photograph by Justin Kerr, 1998).



Figure 4.9: God A prime holds infant in similar manner to K1200 baby jaguar vase (K8655; Photograph by Justin Kerr, 2003).



Figure 4.10: Codex style vase with an infant presented for sacrifice (K4384; Photograph by Justin Kerr, 2001).

4.2. Iconography and Epigraphy: Child Sacrifice as *k'ex*

Taube (1994) has linked many of sacrificial scenes to the concept of *k'ex*, which refers to a sacrificial offering (exchange or substitution) in most modern Mayan languages. Ethnographic sources define *k'ex* as a "substitute" offered to the Underworld in exchange for a new life or recovery from malady. Love (in Scherer 2013:161) observed that Yucatec ritual specialists offer tamales as *k'ex* to placate dangerous winds that cause illness. Bunzel (in Sharer 2013:162) noted the sacrifice of a chicken as a substitution among the contemporary K'iche', and Vogt made similar observations for the Tzotzil. As Taube shows, infant sacrifice was a particularly powerful form of *k'ex* during the Classic period; children were offered to trick or placate supernatural beings who may otherwise have hungered for the souls of more powerful humans (Taube 1994:669–674).

Scherer (2013) connects the killing of children by the classic Maya to the narrative of the Baby Jaguar. At least sixteen Late Classic (AD 600-900) period vessels have been documented that depict the sacrifice of the Baby Jaguar. The Baby Jaguar also was drawn three ways, from all jaguar and

half-jaguar to human. It is suggested that there were three beings the Maya were drawing, also showing the myth's importance and offering some clues to its meaning.

The scenes on the vases K521, K1370, K2208 (shown above) depict *k'ex* substitution. In contrast, vase K1184 (Figure 4.12) and K1247 (Figure 4.14) does not depict the underworld gods as the main participants of the ritual; there humans, perhaps of the Maya elite, sacrifice a child with jaguar paws that might also be representing *k'ex* sacrifice. K928 vase has a similar scene (Figure 4.10), where infants are offered as sacrifices, their bodies lying in large plates. The vases K1184 and K1645 (Figures 4.11 and 4.12) similarly depict a baby offering in a dish with elite members. The dishes rise from the waterlily skull, a motif associated with maize regeneration and emergence from the Underworld (Taube 1994:667). The vase K1184 has also a birth glyph T740. and the calendar round that could denote the years AD 756 or AD 808.



Figure 4.11: Polychrome stucco vase depicting a ruler watching an infant sacrifice (K928; Photograph by Justin Kerr 1998).

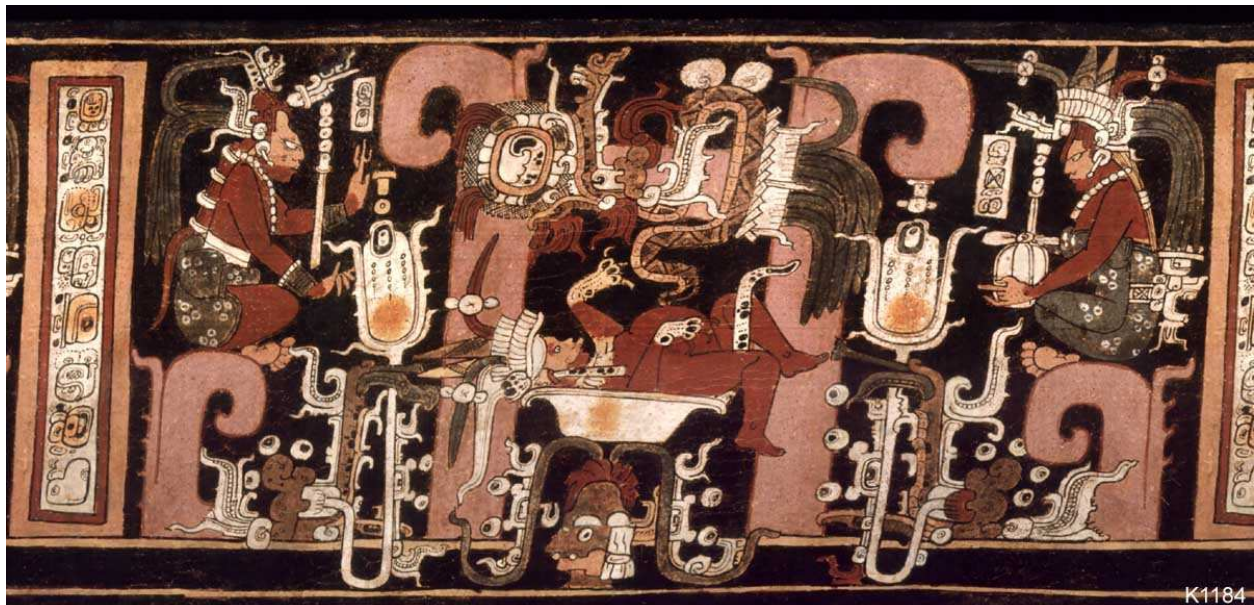


Figure 4.12: Polychrome vase depicting the resurrection of infant in the underworld. The calendar round (left) could denote the years AD 756 or AD 808 (K1184; Photograph by Justin Kerr, 1998).



Figure 4.13: Codex style vase depicting a mythological sacrifice scene with the bundled Patron of Pax and G1. An infant rests in a cache vessel on a tripod, while musicians sleep and watch. Musical instruments in form of turtle carapace and jaguar skin covered drum (K1645; Photograph by Justin Kerr, 1998).

The *k'ex* sacrifice of the Baby Jaguar, in addition, might suggest a mythic duality: the western descent of the sun at dusk is balanced against solar rebirth in the east. The Baby Jaguar looks like it is connected to the Jaguar God of the Underworld (Coe 1973:98). Most researchers accepted that sacrifice is an overarching theme, which is consistent with other scenes depicting the Jaguar God of the Underworld. This god may have been connected to different things, including the sun when it goes

through Xibalba. Sun is also associated with burning; Scharer (2014) argues that burning rituals, such found in El Zotz, were linked to sun accession and the Jaguar God of the Underworld. One scene K3844 (Figure 4.15) depicts a baby *k'ex* sacrifice through burning, which may also allude to the symbolism of child sacrifice especially through burning.

Contemporary ethnographic studies in the Maya region have identified a direct relationship between the solar god and deer sacrifice, which would in turn assure fertility and good crops. Deer is seen as an intermediary between mankind and the gods (Tokovinine 2019). Among the Classic Maya, deer are closely associated with water and rain, but also with sun, and drought. Deer were likely sacrificed to make rain happen. Such iconographic and mythological ties between Baby Jaguar, the Jaguar God of the Underworld and deer sacrifice may hint at a narrative that was connected with child sacrifice.

As Martin (2002) notes, the version of Chahk that appears in these scenes is named “First Rain Chahk” or *Yax Ha'a' Chaak/Chahk*, suggesting that he is the onset of the rainy season. According to Tokovinine (2019), Chahk may be animals’ protector, connected to a specific event of the rainy season. The scene could be an event representing the banishment of the dry season and its sun by the coming of the first rains, and, consequently, the birth of maize.

Baby Jaguar is known also as one of the versions of the Maize God (Taube 1994). Martin (2002:53) hypothesizes that one representation of the Baby Jaguar lying in the offering dish may be a fusion with the handsome young Maize deity that links these themes to the agricultural cycle.



K1247draw Drawing by Alexandre Tokovinine

Figure 4.14: Maya vase depicting child sacrifice on a stone. Some type of sacrifice of infant by masked characters. The scene most likely depicts Hero Twins - Hunahpu and Xbalanque. Other characters of the scene are birds and a tree. (K1247).

That the Baby Jaguar depiction, a being in between the young and vital representation of the rain god and decaying flesh of the death deity, could be a representation and interpretation of the whole idea of child sacrifice in the Maya culture is logical. The scene that can be interpreted as a birth/rebirth or death at the same time is linked to interaction of rain and decayed material as necessary to produce the new life, or to germinate a sprout that is vital to the Maya beliefs in life cycles. According to the Popol Vuh, humans were made from maize and, consequently, food for the gods. Corn seeds, in order to grow, require a hole in soil and water. This process is associated with caves in Maya beliefs as caves are hollow spaces in earth which gave birth to human life. Such an association of a corn seed and sacrifice in the underworld (cave symbol) in the Popol Vuh can be assumed to

symbolize the process of corn germination. Human bones, consequently, can “germinate” too when they are deposited in water as being made of corn. The Hero Twins’ bones were thrown in a river that enables them to resurrect as a result. In addition, the possible association of Baby Jaguar to sun rising from darkness, the cave, might symbolize the rise of a new life. The scenes involving Baby Jaguar suggest its connection to sacrifice, sun, and rain. The idea, overall, presumes an equilibrium between the realms of life and death maintained through compensation offerings to the Underworld. For the Classic Maya, the sacrifice of Baby Jaguar motif evidently served as a mythic paradigm for an actual infanticide, as depicted on certain other vessels, painted capstones and even some carved monuments.

During my summer investigation, I visited museums in Guatemala; in one of them was a mini-stela depicting a scene of a child sacrifice identified by Yuriy Polyukhovych (personal communication 2019). I documented this stela, which is located in in Antigua *Museo Vical de Arte Precolombino y Vidrio Moderno* and comes from the Maya Lowlands, most likely the Petén region though its exact original location is not known. The monument is about a meter long and is carved with a depiction of an infant lying on an altar. There are three other elite individuals depicted, whose looks suggest their elite membership. Two of the individuals stand on both sides of the infant and hold a tool for sacrifice. Above these two individuals is another individual seemingly of higher rank. This individual likely represents a ruler given his central and elevated position on the monument, and the fact that he also wears a big headdress.

Late Classic artwork also depicts human sacrifice involving torture; such as generally via decapitation. For example, public art of Chichen Itza as well as architectural deposits attest to a new heightened level of human sacrifice throughout the city during the Terminal Classic period (Miller 2007). From the art of the Great Ball court to cache deposits in monumental architecture, there is

hardly a locale within the urban core that did not contain human remains in a non-funerary context (Arden 2011:135).

Child sacrifice, overall, is seen as a common scene in Maya artwork. Caves being inhabited by the Maya underworld supernatural beings, including the gods of fertility such as Chahk, were symbolized portals to the Maya underworld. Rainy seasons evidently required some precious offerings (young individuals personified in Baby Jaguar character) in order to give new life (of maize) that was encoded in the idea of substitution. Finally, considering an important function of public art, through the evocation of sacrifice and mythological scenes, the Maya might have intended to reinforce and express the legitimacy and the validity of the divine rulership.

4.3. Epigraphy: Caves and Human Sacrifice

The Mayan word for a cave is usually read as *ch'en* (or *ch'een*). The hieroglyph appears similar, and likely related, to the Maya sign reading *muk* (or *muknal*), meaning “burial”. Thus, the putative, newly identified hieroglyph for “cave” seems to have strong visual affinities with the themes of death, burial, and the underworld (Vogt and Stuart 2005:157). It is also noted that this potential cave glyph often follows the verbal sign *och*, in Maya texts, meaning “to enter,” and is frequently associated with the sign *ha'*, or “water,” again suggesting “cave” as a reasonable translation of the glyph. While other readings might exist, the evidence currently favors “cave” for the glyph (Vogt and Stuart 2005). Some modern Maya languages confirm that; *ch'en* in Ch'olan or *ch'e'en* in Yucatek both mean ‘cave’, ‘well’, or ‘cenote’. In addition, they also may indicate other features of the sacred landscape that are metaphoric equivalents, such as spaces under boulders, rockshelters, and some holes in rocks or in the earth (Brady and Prufer 2001). There are some references to *ch'en* and *kab* ‘earth’, and references to burning, such as he “fired/smoked [the] cave” (Figure 4.14).

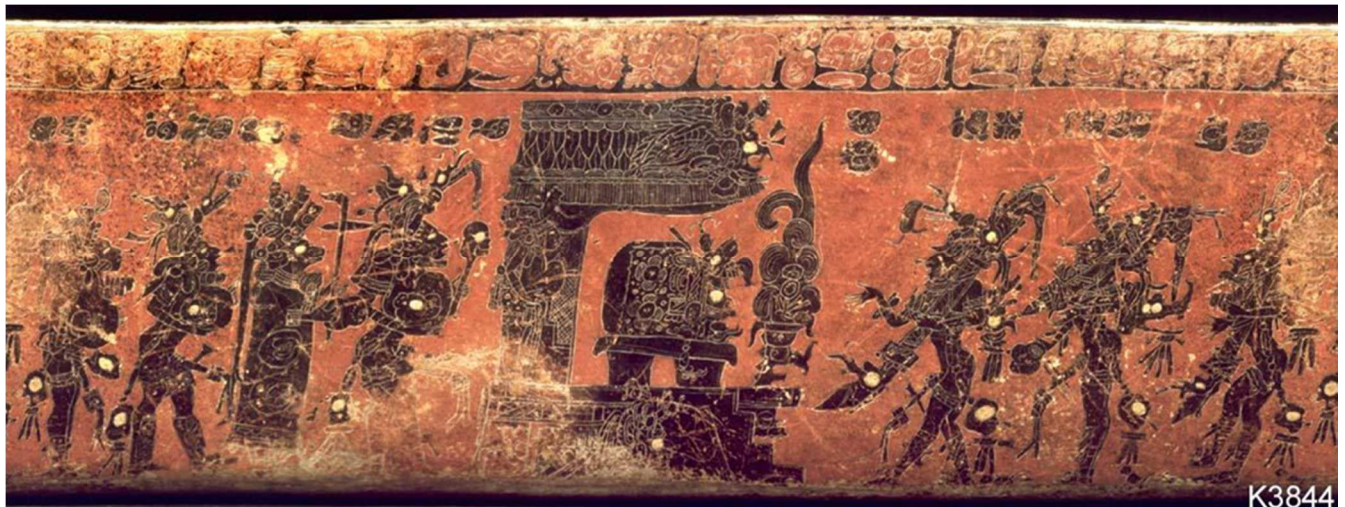


Figure 4.15: The scene of baby *k'ex* sacrifice through burning, K3844. The vase is incised black ware with red background, depicting a mythological temple in a profile with an infant inside of a flame. The temple is approached by supernaturals (named in hieroglyphic text) carrying sacrificial blades. The deity with a large eccentric flint weapon is named as the God of Decapitation (Photograph by Justin Kerr, 1998).

While the Maya did not have the word for sacrifice, however, there are glyphs which are connected to the ritual of human sacrifice. There is a *ch'ahb'* glyph that is associated with bloodletting, which is self-sacrifice. Bloodletting was conducted using a stingray spine. This logographic sign of *ch'ahb'* depicts a perforator or obsidian bloodletter. This word also may be related to the Yukatekan word *ch'ab'*, 'dripper/dropper', which is a derivation from the verb root *ch'a'*, meaning 'to drip' (Munson et al. 2014).

Another known glyph associated with sacrifice comes from the text on a vase K8719. It is *aj laj*, glyph meaning "finished one" (Figure 4.15). According to Stuart (2014) it is based on the root *laj*, meaning "end, finish, die," found throughout lowland and highland Mayan languages. The connections of this word to death appear to be widespread, especially in colonial Tzotzil, where meaning of *laj* can be found as "be dead" and the nominalized form *lajel*, "death" (Laughlin 1988:241). Stuart (2014) suggests that this is a title used to refer to a sacrificial victim.

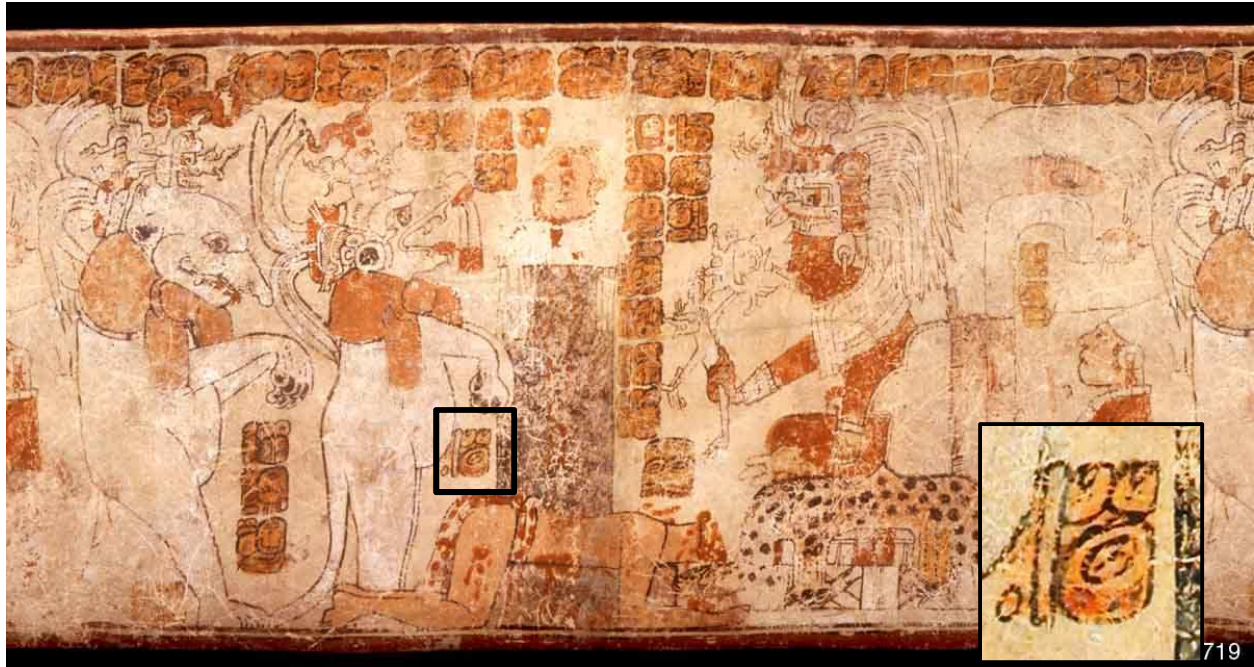


Figure 4.16: Polychrome vase depicting a sacrifice scene and a glyph naming it. The glyph *aj laj*, “finished one,” near the victim (K8719; Photograph by Justin Kerr, 2003).

4.4. Iconography of Human Sacrifice in Aztec Codices

Human sacrifice in Aztec culture according to multiple evidence, including iconographic depictions, was a widespread practice. Such iconographic sources are prehispanic codices that have survived. The pictorial manuscripts, such as Codex Magliabechiano (Folio 70), show many scenes of sacrifice, both human sacrifice and the sacrifice of gods. Heart-extraction was viewed as a means of liberating the soul and reuniting it with the Sun. Codex Tudela also depicts heart extraction as well as self-sacrifice involving bloodletting (Figure 4.16). Codex Laud depicts an individual having his heart extracted (Figure 4.17).

Aztec codices also contain iconography of child sacrifice. The depictions represent a ritual happening on the first day of the month of Atlcahualo, involved the paying off debts to Tlaloc; children with two cowlicks in their hair and who had been born under a favorable sign were offered by their

own parents to the gods of rain to guarantee rains for the next season (mentioned in Chapter 3). The codex painting (Figure 4.18) depicts a sacrifice of child personifying one of the little gods who assist the god of rain (Lopez Austin 2008).



Figure 4.17: Heart extraction and self-sacrifice through bloodletting in Codex Tudela.

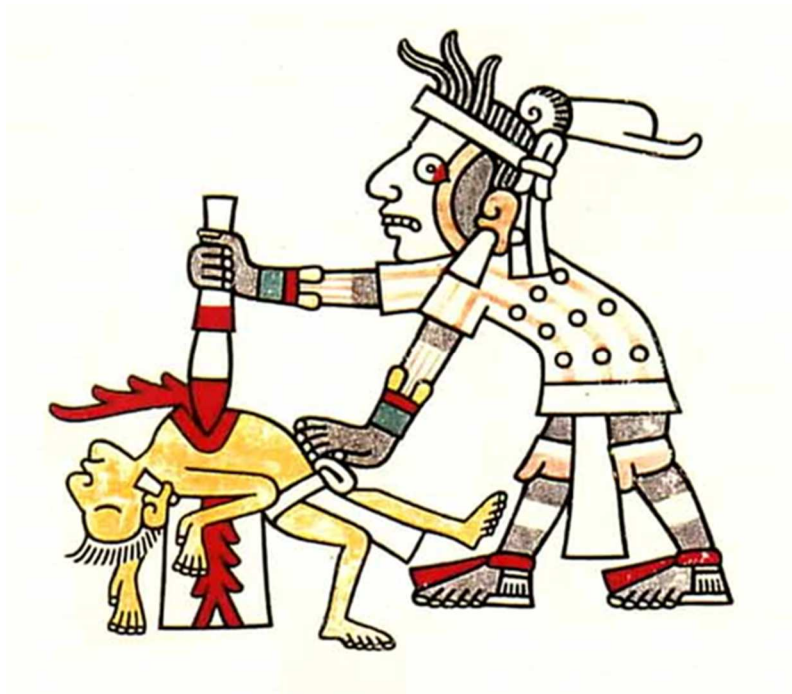


Figure 4.18: Heart extraction in Codex Laud, in Borgia Group Codices.



Figure 4.19: Iconography of child sacrifice in Florentine Codex.

Gods then were ‘fed’ and ‘nourished’ with the sacrificed blood and flesh of children which ensured the continued balance and prosperity of Aztec society. In Nahuatl *nextlahualli* (debt-payment) was a commonly used metaphor for human sacrifice. Other words include *tlacamicititzli* (killing of men) and *nuemana* or *vemana*, meaning to make an offering; *mana* (to spread out) represents the belief that sacrifices helped in the life cycle (Kerkhove 1983; Sahagun 1970).

Chapter 5 Archaeological Evidence for Child Sacrifice in Mesoamerica

One of the major contexts for exploring archaeological evidence for child sacrifice are caves. Caves represent one of the most sacred landscapes in Maya cosmology and, therefore, their worldview. Moyes and Brady (2018:152) suggest that caves served as ritual spaces for the earliest settlers, which later were appropriated by the elites as powerful symbols of legitimacy. Caves, thereby, represented not only symbolic icons but also played an active part of the Maya socio-political environment used by elites for the creation and maintenance of political power (Moyes 2014:4).

Prehispanic human activity in caves, however, is only of relatively recent interest in Maya archaeology. Excellent preservation in caves and high frequencies of ritual contexts in these locations allows us to expand evidence and develop better understanding of Maya worldview and religion. In addition, caves in many ways may be the best context in which to explore the roles of individuals in the culture, such as children, because caves retain “well-preserved, in-situ deposits representing the indisputable remains of ceremonial behaviors” (Prufer 2005:14). Archaeology provides data on caves during their most intense phase of use during the Classic period.

According to Juan Luis Bonor (in McNatt 1996), there are 198 caves containing Maya remains that have been registered by the Belize Department of Archaeology. Caves were used in different and sometimes unique ways. Some caves contain petroglyphs or paintings whereas others do not. Investigated caves in the Maya area usually contain high frequencies of deposits such as broken pottery of all kinds, chert artifacts, obsidian, bone (human and animal), and shell, as well as fragments of *metates* and *manos*. The deposits include not only domestic items, such as undecorated utilitarian pottery and simple grinding stones, but also elite objects such as eccentric obsidian blades and elaborate polychrome pottery. Thompson (1959) interpreted these types of deposits as ceremonial “dumps.” The custom of ceremonially discarding both secular and religious items was common

throughout the Maya area. This activity was an important part of rituals, in particular the renewal ceremonies at the end of Maya calendrical cycles (McNatt 1996:86).

The presence of human skeletal remains in Maya caves is not unusual. Caves represent an important aspect of Maya ideology as a symbol of the underworld and, thereby, stand as a significant ritual activity space. Brady (1989) identified dozens of caves where human remains have been reported, however, so few details are generally provided that it is difficult to interpret the deposits. Some of the caves also contain human remains. While Naj Tunich Cave, located in eastern Guatemala, contains elite tombs (Brady 1989; Stone 1995), other caves such as Actun Tunichil Muknal (Gibbs 1997, 2000; Moyes and Gibbs 2000) and Barton Creek Cave (Owen 2005) in Belize possess evidence for human sacrifice.

Human remains have been found in numerous caves in Belize, and represent several hundred individuals. The difficulties in determining the exact number of individuals is often obscured by the mixing of bones by both cultural and natural processes. For example, even in ancient times earlier burials were inadvertently disturbed and mixed by the digging of later ones, and in recent times the actions of looters have had the same result (Prout and Brady 2018). Burials in caves are also susceptible to natural events ranging from short-term floods, which can wash them away in a single moment, to the slow but steady drips of water, which can conceal them with calcite (McNatt 1996:88).

One of the biggest archaeological challenges with the analysis of bones in caves is determining the nature of death. Roberts (1990) states that while bioarchaeologists can observe skeletal mutilation after death including decapitations, hand and foot removal and intentionally smashed or drilled skulls and long bones, in some cases this is not always possible. Pendergast (1971) comments that “the difficulty of distinguishing between sacrifice and honorific burial of a naturally-deceased individual is such that no identification of sacrifices can be made in the absence of clear signs of violent death”.

McNatt (1996:88) suggested that due to such limitations specific ritual context should reveal if a sacrifice occurred (e.g., sacrificial knives). Current archaeologists mainly disagree with the need to find indisputable evidence for the cause of death of an individual in order to suggest that human sacrifice occurred (e.g., Scott 1997) and suggest that the sacred nature of the cave context clearly indicate that human remains within them most likely were associated with ritual activity.

Until the 1990s most human remains found in caves were treated as formal burials, and archaeologists generally believed that caves were used principally for habitation. Cave burial was, therefore, a logical extension of the idea of cave habitation. In their work on human sacrifice, Cucina and Tiesler (2014) suggested that common use of residential spaces as depositional areas for the deceased could express the continuity between the realm of dead and living. Even though this claim was made about the surface habitational spaces, a similar interpretation was applied to caves in the past century. Cave space, however, does not represent a typical place of burials as observed by Ricketson (1925), so there is every reason to assume that a special context will contain a special population (Scott 1997).

Because human remains in caves tend to be mixed, and because caves are located underground, some researchers made analogical inferences to surface tombs (Berryman 2007). The analogy is based on the proposition that similarities shared by the two cases may reflect similarities in other areas as well (Berryman 2007). The analogy of tombs and cave deposits, however, ignores two very different types of behaviors. One of them is that tombs reflect an “investment in grave preparation”, which is not the case in the cave context (Prout and Brady 2018). Another one is that tombs remove bodies from general view while in caves remains are exposed on the surface (Prout and Brady 2018). Thus, the analogy made based simply on the fact that both superficially appear to contain mixed bones does not consider the specific nature of the cave context.

Jane Buikstra (2007) notes that academic consideration of sacrifice only developed after 1960. Cave archaeology, however, did not begin to address the issue until more intensive and critical studies in the 1990s demonstrated that caves functioned as important ritual sites in Maya sacred geography. As a result, human skeletal remains found in caves have tended to be interpreted in terms of their role in ritual. The first recognized death due to sacrifice of a child was found in Eduardo Quiroz Cave with two unhealed punctures in its skull (Pendergast 1971) but this did not appear to have made an impact on the thinking of the time. A number of years later, Dorie Reents-Budet and Barbara MacLeod (1986) attributed the presence of a number of children's skeletons found cemented into *rimstone* dams (cave formation) to sacrifice. The recovery of another child's skeleton, with *perimortem* (at or near death time) wounds in its skull, was argued to represent sacrifice at Naj Tunich Cave (Brady 1989). It is important to emphasize that Brady's discussion was the first to detail means of separating burial from sacrifice at a site containing evidence of both burials and sacrifice. While general discussions of sacrifice focused on adults, cave archaeological examples were grounded in physical evidence of trauma associated with child sacrifice.

Cave archaeology, in addition, has come to recognize a number of cave-specific contexts that can be linked with sacrifice. One such 'context' is the darkness of caves that seem to be the biggest reason for caves being so special for the Maya. David Stuart notes that the *ch'een* (cave) glyph has a half darkened field illustrating darkness in the representation of caves (Vogt and Stuart 2005). In the investigation of caves, several man-made examples show particular attention to creating a dark zone. Brady (2012) reports a small architectural cave in which the short passage was made in the form of a "Z" to create a dark zone. Allan Cobb noted that the tunnels at Teotihuacan described by Linda Manzanilla and colleagues (1996) undulate to create a dark zone (in Brady 2004). Caves, overall, are recognized to represent the duality of the light places on earth contrasted with a dark underworld

(Morehart 2005:167). Context, therefore, is crucial for understanding the ritual, which in its turn identifies the nature of it such as sacrifice in our case. Some of the darkest (private) zones of caves in the Maya subarea contain remains of highly specialized objects (e.g., crystals, wood benches) which, based on ethnographic and ethnohistoric accounts, were possessions typical of shamans involved in ritual activity.

The prevalence of subadult remains in correlation to the number of adult remains found in caves can be also significant for distinguishing sacrificial ritual behavior. For example, findings in a large river cave in the Caves Branch area of Belize demonstrate that among 26 individuals found there 16 belong to subadults. The predominance of children remains in a clearly ceremonial setting of the cave would, consequently, suggest that they represent special offerings (McNatt 1997).

Although limited, the growing body of evidence can still be used to determine patterns of cave utilization. As the main question of my research is whether child remains found in caves were “victims” of sacrifice, I intend to look at archaeological evidence in detail to see if it supports the hypothesis. And if it does, I intend to research which ritual specifically was involved. The main archaeological evidence I investigate comes from Maya lowland caves, in particular Actun Tunichil Muknal (ATM) Cave located in western Belize. I further compare the data I have from ATM to various Maya caves sites as well as archaeological evidence across Mesoamerica., I will examine the suggestion (made by ethnographic sources) that infant deposits were the results of sacrifice rituals that were often practiced in cave contexts.

5.2. Research at Actun Tunichil Muknal Cave

Actun Tunichil Muknal (ATM) is located in the upper Roaring Creek valley of Western Belize. As already mentioned in the first chapter, the site was first discovered, named, and explored by geomorphologist Tom Miller in 1986 (Miller 1989, 1990). A British speleological expedition

(Marochov and Williams 1991; Roberts 1990) visited the site in 1989 and published the first map of the cave system in 1991. The investigations conducted by the Western Belize Regional Cave Project began in 1993 and continued into the summer of 2000 (Awe 1998; Awe et al . 2005).

The size of the cave is approximately five km in length, and has an active river that flows through the major cave passage (Awe 1998; Moyes and Awe 1998). The investigation team of Western Belize Regional Cave Project (WBRCP) identified four main locations of Maya activity in the cave during the Classic Period such as The Upper Entrance Chamber, the Stelae Chamber, the Sinkhole Entrance, and the Main Chamber” (Figure 5.1; Awe et al. 2005:224).

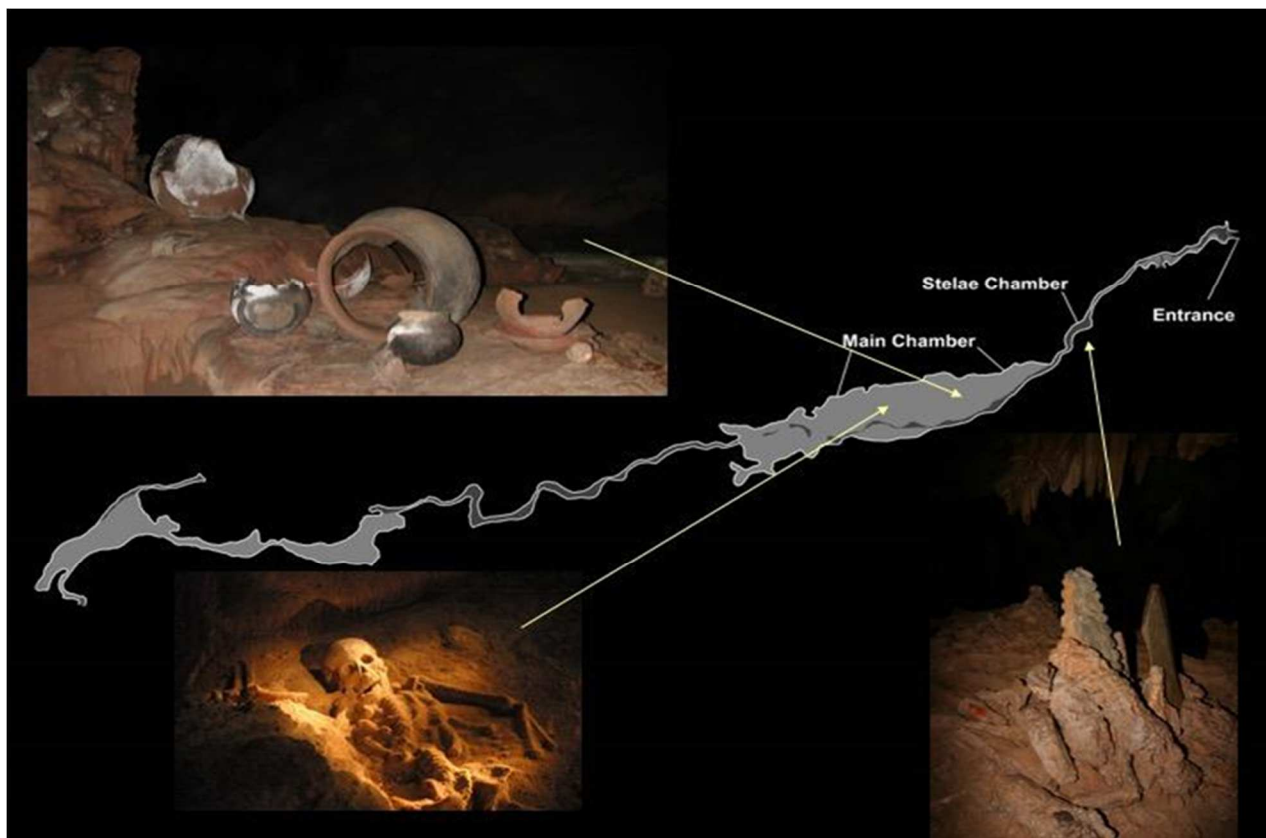


Figure 5.1: Location of findings in ATM. WBRCP Map courtesy of Jaime Awe.

There are two chambers of primary archaeological interest in the cave due to the prehistoric activity recorded there; the Main Chamber and the Stela Chamber. Probably because of deep water, distance from the entrance of the cave (500 m) and difficulty of access to the cavern in general, there

has been no looting in the Stela or Main (or Burial) Chambers (Moyes and Awe 1998). The latter is an elevated chamber, approximately 350 meters long by 50 meters wide, and contains a large quantity of cultural remains scattered along the sides of the floor (Awe et al. 1997, 2005). The northwestern section of the room is covered with an area of active cave formations amid a series of massive columns. Cultural remains within the Main Chamber include more than one hundred whole and fragmented Late Classic ceramic vessels, several *metate* and *mano* fragments, small pieces of jade, pyrite plaques from a mosaic mirror, chipped stone tools, and skeletal remains (Figure 5.2; Awe et al. 2005:224). There are also several smaller passages branching off the Main Chamber, including sections designated as the Cathedral, the Ransom Chamber, Angel Room and the Sepulchre. All these areas contained human remains (Awe et al. 2005; Gibbs 1997).

In total, WBRCP investigation recorded the remains of seventeen human individuals in the Main Chamber, and analyzed by Sherry Gibbs (1997, 1998). Among the individuals nine are infants (under 3 yrs. old), as well as one child (approx. 7 yrs. old) (Gibbs 1997, 1998). Ten of the total skeletons were placed in pools. The remains of three children (Individuals 4, 5, and 6) were found in a small sunken alcove, which is periodically flooded (during the height of the rainy season). The bones are mixed together and are wedged into the floor probably as a result of water activity (Figure 5.3). Individual 4 was approximately between one and one and a half years of age at death. Individual 5 was between two and three years of age. Individual 6, an infant, was approximately one-year-old. Although the sex of an infant can be determined with DNA bone analysis, the sex of these infants was not identified due to the layer of calcite covering the bones and the projects reluctance in removing the bones from the cave (Gibbs 1997).

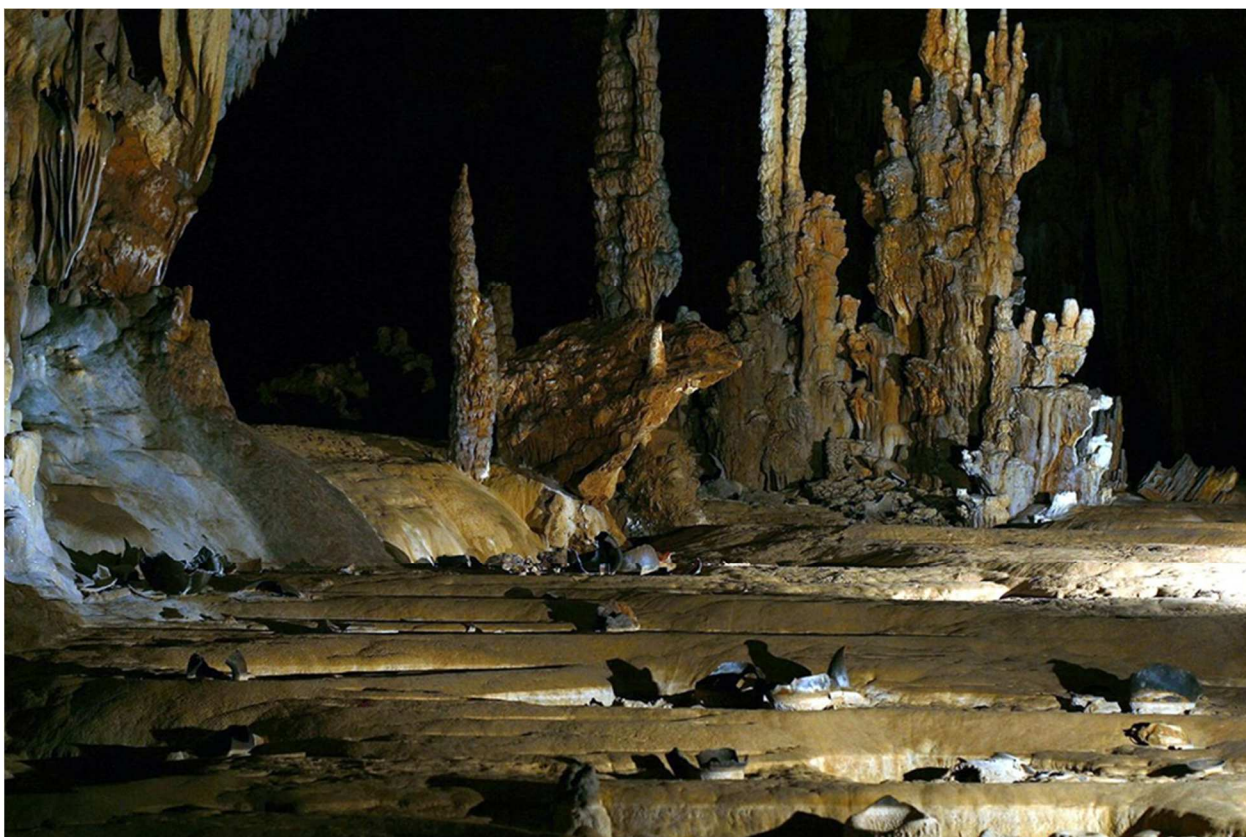


Figure 5.2: Main Chamber, Actun Tunichil Muknal (photo courtesy of Jaime Awe).

The remains of a fourth infant (Individual 7) were found in a tiny alcove within a small chamber (Figure 5.4). It was hidden behind stalagmites and was found in an extended and prone position (Gibbs 1997). As with the other infants, sex could not be determined by measurements of the pelvic curvature due to the young age of the child. Another infant (Individual 11), discovered in the Angel Room, was between one and one and a half years old at death. The body had been placed in a depression, similar to that where the first three infants were discovered. It is possible that the head of the infant was smashed. The implosion of the skull, however, could also have resulted because sutures do not begin to fuse at this early age. The last infant, located in an area designated as the Cathedral, is poorly preserved and many of the bones could not be identified (Gibbs 1998). The presence of the humerus, nevertheless, allowed an age determination to be made. Gibbs estimates that the infant was approximately 18 months at the time of death (Gibbs 1998). Individual 10 was discovered in an area

of breakdown in the western end of the Main Chamber. The skeletal material was relatively well preserved and represented the remains of a juvenile between five and seven years of age.



Figure 5.3: The remains of children in pools that might have been periodically flooded in ATM. Photograph by the author.



Figure 5.4: Remains of Individual 7 hidden in stalagmites in ATM. Photograph by the author.

Only one individual of the adult remains in Tunichil Muknal appeared to be associated with possible grave goods according to the WBRCF investigation. This individual was located in the Upper Entrance Chamber, and the poorly preserved remains were lying adjacent to a large number of pot sherds, jute shells (*Pachichylus* sp.), and animal bones. Several of the skeletons in ATM show signs of trauma to the skull, lending credence to the theory of sacrificial practices (Gibbs 1997, 1998).

Additionally, WBRCP recorded two vertically standing megalithic monuments or cave stelae in the Stela Chamber of ATM. A slate tablet was located 2.33 meters west of Stela 1, and measures 25 centimeters wide, 52 centimeters long, and between 3 and 5 centimeters in thickness (Awe et al. 2005:227). According to Awe et al. (2005:227), “The top end of one side of the tablet is crudely carved in the form of a simple face with large fangs across the mouth (Figure 5.5). The circular eyes and fanged mouth of the carving exhibit features that point to the rain god Chahk as well as Tlaloc-like depiction, the Central Mexican rain deity in Postclassic period.”.

Other artifacts in the stela chamber included fragments of ceramic vessels with basal breaks and everted rims identified as Roaring Creek Red: Roaring Creek Variety (Vaca Falls Ceramic Group) of the Late facet, Terminal Classic, Spanish Lookout Complex in the Belize Valley (see Gifford 1976). Because all pottery in the Main Chamber dates to the Terminal Classic period, WBRCP suggested that ritual use of the cave was most intensive in the 9th century A.D (AD 800-900). During my summer research at ATM, I took a sample of charcoal for radiocarbon dating from a hearth in the Main Chamber (Table 5.1) that indicated the date AD 710-885 (calibrated). The date confirms the suggestion by Awe et al. (2015) on the period of most intensive utilization of the cave during the 9th century (Table 5.2).

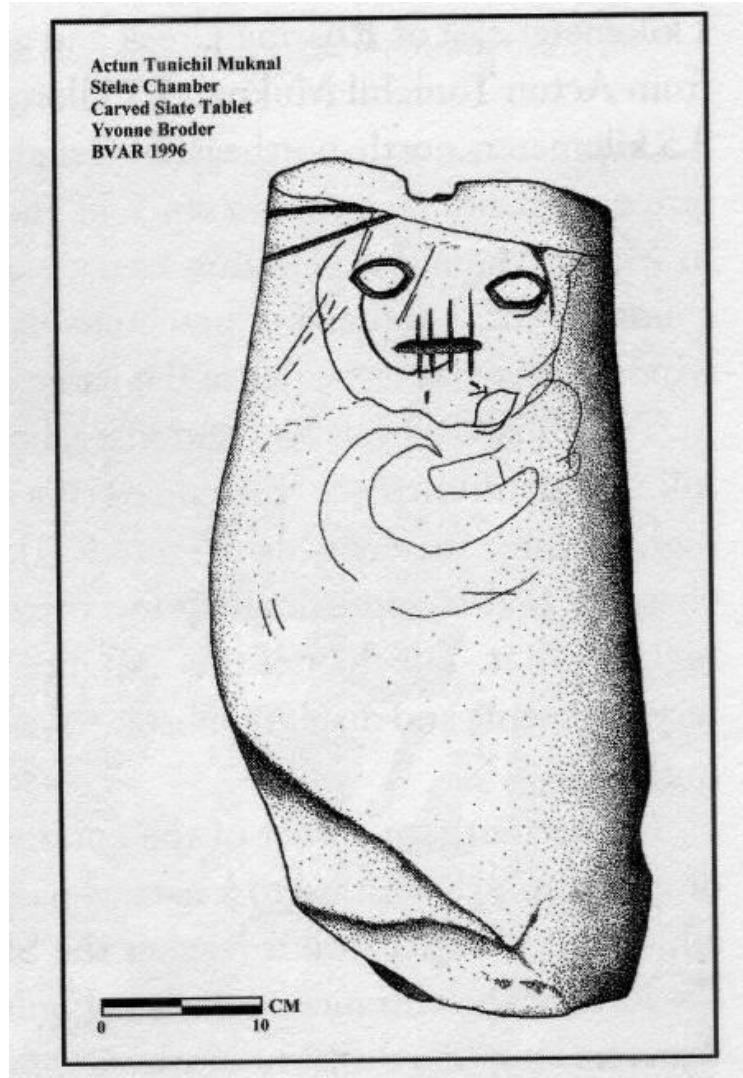


Figure 5.5: Carved slate tablet from ATM Stelae chamber. Face features on the stela recall the image of Tlaloc, Mexican rain deity. Drawn by Yvonne Broder. In Awe et al. 2005.

PSU AMS #	Sample ID	Description	Material	fraction Modern	±	D ¹⁴ C (‰)	±	¹⁴ C age (BP)	±	2s calibrated range
6750	ATM10	ATM Cave, BZ. Main chamber, hearth.	charcoal	0,8589	0,0018	-141,1	1,8	1220	20	AD 710-885
Radiocarbon concentrations are given as fractions of the Modern standard, D14C, and conventional radiocarbon age, following the conventions of Stuiver and Polach (Radiocarbon, v. 19, p.355, 1977).										
Sample preparation backgrounds have been subtracted based on measurements of 14C-free wood.										
All results have been corrected for isotopic fractionation according to the conventions of Stuiver and Polach (1977), with δ13C values measured on prepared graphite using the AMS. These can differ from δ13C of the original material, if fractionation occurred during sample graphitization of the AMS measurement, and are not shown.										

Table 5.1: Radiocarbon dating results of charcoal sample from ATM cave. The table represents the results of radiocarbon dating of charcoal sample taken from the hearth of ATM's Main Chamber. By Accelerator Mass Spectrometry Laboratory, Penn State. October 4, 2019.

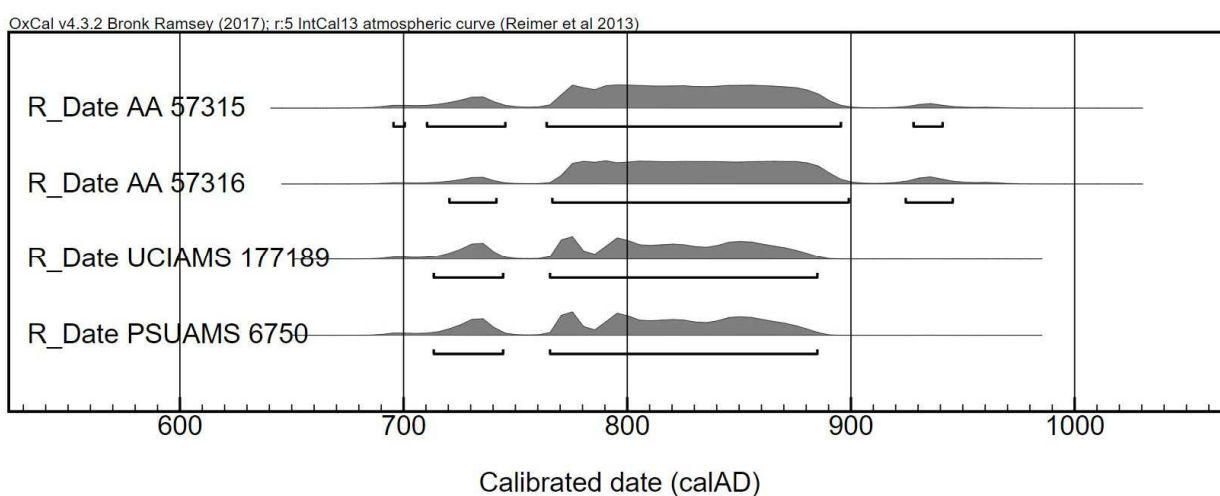


Table 5.2: Calibrated radiocarbon dates from ATM. Calibrations are at the 2-sigma level (95% probability). Table courtesy of Claire Ebert.

Overall, the analysis of skeletal remains in ATM noted that more than a half of the individuals found in ATM are represented by a subadult group, whose age did not exceed 7 years old at the time of death. Most of the children were deposited in pools, which suggests their connection to water. Furthermore, WBRCP researchers indicated that 51% of the total 1408 artifacts recovered were placed between rimstone dams in intermittent pools. Nearly all of the remains were lying in shallow depressions that fill with water during heavy rains, indicating that pools were the preferred location for placing the remains of both adults and infants in ATM. My own research conducted with Dr. Jaime Awe in the Main Chamber also suggested that water rites were salient features of cave ritual activity at this site. The association of remains with water compared with ethnohistoric evidence suggests a connection to rain or water deities inhabiting the cave. Since half of the remains were children, the practice might be tied to the one recorded during the Contact Period by Landa (also see Awe 1997, Awe et al. 2005 and Gibbs 1997, 1998). Based on the location of the remains of young individuals, the lack of grave goods and the possible evidence of trauma on some individuals, Gibbs (1997) had previously suggested that the Maya were likely performing human sacrifices (in association with agricultural rituals) in ATM. In order to evaluate this suggestion, evidence presented in other Maya caves must be further analyzed and compared.

5.3. Parallel Evidence on Child Sacrifice in Maya Lowland Caves

5.4.1. Naj Tunich Cave

One of the caves that contains children remains and is famous for its cave art is called Naj Tunich Cave. It is located in eastern Guatemala and was explored thoroughly by Brady (1989) and Brady and Stone (1986). These archaeologists noted that while Naj Tunich was difficult to reach as

the Maya altered the cave significantly through the use of architectural modifications. These modifications included the construction of steps, walls, and the infilling of the cave floor.

The cave contains substantial evidence of ancient Maya activity. The site has numerous human remains, evidence for ritual bloodletting, artwork and architecture (Brady and Stone 1986). Compelling evidence for elite usage also makes this cave relatively unique. The human remains within Naj Tunich include infants and juveniles (Brady 1989). Of the 20 individuals recorded, four are small children and four are juveniles. The best evidence for human sacrifice is provided by the remains of a child of five to six years of age. The child was placed in a shallow grave with no grave goods, and has three holes in the skull that show no signs of healing (Brady and Stone 1986). Brady and Stone suggested that this child was sacrificed to the rain god Chaac.

Two other children were found in small chambers surrounded by numerous ceremonial objects, including miniature vessels, incense burners and bone needles. The bone needles were probably used as bloodletters, and the incense burners were vital to help communicate with the gods during rituals (Brady and Stone 1986). The two children and the other infants showed no signs of trauma or other pathologies. Although archaeologists cannot conclusively determine that these children were sacrificed (on the basis of osteological evidence), the lack of grave goods along with the apparent ceremonial nature of the cave allows such a conclusion to be drawn. This cave was used ritually from the Late Preclassic to Late Classic times, but the most intensive use was during the Late Classic period.

5.4.2. Eduardo Quiroz Cave

Eduardo Quiroz Cave is located in the Cayo District of Belize. Like other lowland Maya caves, it contains an assemblage of artifacts that includes *manos* and *metates*, *adzes* (hachas), large ollas, and human skeletal material. The latter included the remains of six individuals. David Pendergast (1971)

believes some of the remains provide evidence for infant and juvenile sacrifice. One infant, one child three-five years and a ten-year-old juvenile were found in the cave. The infant (age estimated between six months and one year) was buried 52 cm under the surface without grave goods. The remains were covered with unshaped pieces of limestone, but only fragments of the infant's skeleton were preserved (Pendergast 1971). The three to five-year-old child was associated with the construction of a floor. There was no grave or pit in the floor, but there were five rectangular beads accompanying the child. The ten-year old child was found at a depth of 85 cm below the surface. The burial area is covered with rocks and again, there are no grave goods. The three-five-year-old had three unhealed holes in the skull that led Pendergast to suggest the child was sacrificed. The other skeletons provide no osteological evidence for identifying a cause of death, but the general absence of grave goods is strongly suggestive that these individuals were sacrificed.

5.4.3. *Gordon's Cave #3*

Gordon's Cave #3, one of the most unusual caves in the Maya lowlands, is located three kilometers north of the Maya city of Copan. This cave is one of four that were first explored by George Gordon between 1896-1898. Cave #3 is arguably the most interesting and unusual because it contains the remains of hundreds of individuals. The inner chamber is filled with human remains to a depth of nearly 40 cm. During investigations in 1989, Brady estimated that there were between 600 and 700 burials in the chamber, including children and adults (Brady 1995). On the basis of differential burial treatment, Brady believes the children in the cave were sacrificed. In over 68 burials, 46 were juvenile (68%), and 24 of these juveniles were less than one year of age. The adult burials were cremated, whereas the children under age six were not. Brady also raises the possibility that child sacrifice occurred at the death of an adult, as infant remains were often found under the remains of adults. Such massive number of individuals in a burial chamber support the theory of lineage ancestor burials in

caves. Although Brady does not discard the possibility that this cave was an ossuary for ancestor worship, he suggests that the cave was also used as a place to make offerings to Chahk for fertility and increased rainfall. Noting the discovery of corn cobs and the shaping of stalactites in the form of Chac, he suggests that rain and fertility rituals were most likely the main use of the cave (Brady 1995). The cave was primarily used during the Preclassic, making it the earliest used cave in this study. Given its uniqueness, it is possible that Gordon's Cave #3 was used for two purposes: as a burial ground for ancestors and for rituals directed to the gods of rain and fertility.

5.4.4. Petroglyph Cave

Petroglyph Cave, located in the Cayo District of Belize, also contains numerous infant and juvenile remains. Burial Chamber One is named for the fifteen human skeletons found inside. Seven of the skeletons are adults, and eight are infants or young children (Reents-Budet and MacLeod 1997). Of the eight infants or juveniles, two were found under two adults, three were in an area of breakdown (boulders fallen from the top of the cave), and two were associated with red-rimmed jars. All of these burials were found on the surface, and there was no skeletal evidence to suggest the cause of death of these children. By extrapolating ethnographic information, the authors argue that the infants had their hearts removed and that they were killed in the cave (Reents-Budet and MacLeod 1997). The infants were also found in pools of standing water, and the remains have been cemented in place by hundreds of years of water flow and the deposition of calcium carbonate. Infants were also placed into crevices in the cave walls. Both of these locations were indicated in Landa's ethnohistoric description of Maya cave sacrifice. Petroglyph Cave appears to have been used most intensively during the Late Classic, about the time of the fall of lowland Maya civilization. It is possible that during this time of crisis, the Maya may have intensified their invocation of Chac, ancestors, and earth spirits in an effort to ensure agricultural fertility.

5.4.5. Midnight Terror Cave

According to Prout and Brady (2018) Midnight Terror Cave (MTC) contains the largest amount of human remains ever found in a cave in the southern Maya lowlands. The cave, which is located approximately 10 km south of Belmopan, capital of Belize, was reported to the Belizean Institute of Archaeology (IoA) in 2006 after a looter was seriously injured in a fall. A three-year surface survey was conducted from 2008-2010 by California State University, Los Angeles (CSULA) working in collaboration with the Belize Valley Archaeological Reconnaissance directed by Dr. Jaime Awe. In two areas (or “Operations”) of the cave, large concentrations of bones were found, while most of the artifacts and features, such as ceramics and altars, were discovered by the entrance. This indicates that rituals including human sacrifice were conducted deeper in the cave (Prout and Brady 2018: 2), quarter of which belong to subadults.

One of the operations (V) has a number of constructed terraces near the entrance of the chamber that would have provided standing room for spectators to observe rituals performed on a platform constructed around a speleothem column. The altar is at the top of a gentle slope that is covered with human bones cemented in place by calcite, which were left in place and not included in the MTC inventory.

Prout and Brady (2018) interpreted the skeletal material as belonging to sacrificial victims based on a number of characteristics that have been noted as being associated with sacrifice. According to Berryman (2007:394) sacrifice lacks “investment in grave preparation”. Any grave “reverential posthumous treatment” is absent in MTC (Prout and Brady 2018). The researchers also indicated that the deposition of bodies on the surface of MTC represent a second characteristic of sacrifice, which is the “placement of bodies in highly visible public or ceremonial spaces” in comparison to the typical residential mortuary patterns for the region (Berryman 2007:394 in Prout

and Brady 2018).

Another of Berryman's traits associated with sacrifice is the lack of grave offerings. (Prout and Brady 2018:3). The two areas with heavy concentrations of bones, Operations V and VIII, are those with low densities of any other type of artifact. The final note by Prout and Brady (2018) includes that 28 cases of perimortem cut marks and trauma have been indeed recorded even though "signs of violence" are infrequent in the assemblage. The archaeologists note that the bone is covered in calcium carbonate, which undoubtedly masks many more examples. In sum, MTC matches four of Berryman's five characteristics of sacrifice. The areas with large quantities of bone, Operations V and VIII, are the only two areas in MTC that are truly in the dark zone, which was linked to sacrifice context (Prout and Brady 2018; Vogt and Stuart 2005). What is more, the authors suggested that remains found in wet areas, which also coincides with the data from ATM and some other caves, can be linked to Landa's accounts about most human sacrifice conducted as petitions for rain (Tozzer 1941).

Prout and Brady (2018) cataloged total of 8525 bones that by far represent the largest sample of human skeletal material recovered from a single Maya cave. 2191 of the bones belong to individuals under the age of seventeen at time of death. This is equivalent to 25.7% of the total cave assemblage. Kieffer (2017) provides a MNI for the entire MTC collection of 118 individuals, 46 of whom, about 39%, are subadults. The analysis of Prout and Brady (2018) recognized a MNI of 55 subadult individuals or 43% of the people represented in the cave. The researchers providing data on the age of higher mortality, argue that the age of children remains found in the cave could not be the result of natural death but rather the result of sacrifice. "The modal age range represented in the juvenile remains at MTC is 5 – 10 years old The disparity between the normal mortality curve and that found in MTC persuasively argues that the individuals did not die of natural causes" (Prout and Brady

2018:12). In a similar vein, According to the researchers, individuals did not die from catastrophic events, where all age categories would be represented evenly in the collection. Even though infant and subadult mortality was very high in prehistoric populations, according Cucina and Tiesler (2014:243) the general frequency of infants and juveniles found in caves, cenotes, and other natural underground places compared to adults is clearly distinct from the natural mortality profile, denoting in some cases a cultural pattern involved in the deposition of individuals in this age range. Prout and Brady (2018) further compared the data to the research of other caves along with the Cenote of Sacrifice at Chichen Itza where age range indicated the possibility of similar patterns of behavior.

Overall, the MTC research, being one of the largest Maya osteological assemblages attributed to sacrifice, suggests that half of all sacrificial victims may have been children. Taking into account such a large percentage of sub adults, the authors argue that children were much more important in Maya human sacrificial practices than generally recognized.

5.4.6. *Barton Creek Cave*

Barton Creek Cave also has a large percentage of juvenile skeletal remains that represent over 50% of the total assemblage recorded at the site. Three of the juveniles were under three years of age, nine - were under age 12, two were adolescents between 12 – 18 years, and the other 11 individuals were young to mid-age adults between 18–34. Overall, the remains of two dozen individuals were recorded in the cave, often in quite deep, inaccessible areas, and in rimstone depressions, crevasses, and alcoves (see also Gibbs 1997). Some of these human remains represent formal burials, while others appear to have been more hastily deposited. A general absence of grave goods in the burials, especially elite-class items, reinforces the notion that these individuals were commoners in ancient Maya society (Owen 2005:331). Some of the interments in Barton Creek Cave were associated with humanly modified cave formations, and often were found with ash and charcoal lenses. The latter

suggests that burning was a common feature associated with cave interments (Owen 2005:323).

The unnatural, contorted, or “bound” position of some adult individuals in the cave suggests that these individuals were sacrificial victims (Owen 2005:332). Children bones too were interpreted as sacrificial remains due to the relative distribution of children under 12 years of age that exceeds that expected from general population mortality rates (Owen 2005; Awe et al. 2005).

There are, however, other caves with human remains that have not been interpreted as sacrificial offerings. Uayazba Kab, a cave very close to Tunichil Muknal contains many burials, but the osteological and contextual evidence suggests these people were not sacrificed. They were buried in the cave entrance, within cists located below a plaster floor and generally contained grave goods. Uayazba Kab is actually a rockshelter rather than a cave and it is possible that these sites were more commonly used as ossuaries for ancestral lineages (Griffith 1998; Helmke and Awe 1998). In contrast to Uayazba Kab, in the other caves mentioned, the artifacts there do not appear to be associated with any particular individual. Awe (personal communication, notes 2019) believes that this practice possibly reflects the fact that these humans, like other cultural remains, were themselves offerings and, thus, should not be considered burials.

5.4.7. The Sacred Cenote, Chichen Itza

One of the places with a large collection of child remains , mentioned previously, is the Sacred Cenote at Chichen Itza. According to Cucina and Tiesler (2014), and Prout and Brady (2018), caves and cenotes can be paired in terms of ritual context, particularly because, from the perspective of cave archaeology, both fall under the Maya term *ch'een*, generally translated as “cave” (Brady 1997; Laughlin 1975).

Chichén's Sacred Cenote contained two skeletal collections. The first one was recovered at the onset of the twentieth century by Edward Thompson and is presently stored in the Peabody Museum of Archaeology and Ethnology at Harvard University. At the turn of the 20th century, Edward Thompson recovered a large assemblage of artifacts and human bone in the Cenote of Sacrifice. Thompson's dredging of the cenote appeared to corroborate Bishop Diego de Landa's 16th century account of offerings—such as human victims being thrown into the cenote. Although Thompson had made archaeologically significant research at the Cenote of Sacrifice, it propagated images of the sacrifice of “beautiful virgins” (Prout and Brady 2018:1). Recent studies (Anda 2007) of the skeletal remains recovered in the cenote, however, indicate that children and male victims represent the majority of human remains within the cenote.

The second collection of human remains from the cenote is located in The Instituto Nacional de Antropología e Historia (INAH), Mexico. A study of this assemblage noted that the distribution of age, sex, and body parts were similar with a high percentage of children and juveniles and predominance of males (Beck and Sievert 2005). Tiesler conducted an analysis of the skulls in the Mexican collection, focusing on artificial head shaping, and found percentages of age groups and sexual distribution that are similar to other cases reported at cave sites (Tiesler 1998, 2005). In addition, Beck and Sievert (2005) studied specifically the skeletal indications of *perimortem* violence, which is bone damage occurring at or near the time of death, and *posthumous* (after the death) body manipulations in the cenote samples from the Harvard collection. Two authors (Beck and Sievert 2005) documented different activities and anthropogenic marks that are likely to be related to human sacrifice as well as provide new information on the possible pathways that might have led to the formation of the context.

Hooten (1940) analyzed the cranial elements from Thompson's cenote collection and identified 21 adults and 21 children under the age of 18. Thus, half the victims were children. More recently, Lane Beck and April Sievert (2005 in Anda 2007) have reanalyzed the Peabody collection using all of the bones and have recognized 101 individuals, of which 51 are children. Guillermo de Anda's (2007) has conducted recently a much more thorough analysis of the Mexican collection and found that of the 121 individuals identified on the basis of crania, 78 or 64% were children less than 18 years of age

The age distributions are as follows: 37 belong to children between 4 and 12 years of age. According to Anda (2007) the minimum number of individuals (MNI) was determined from the left tibias, 127 of which were counted. Out of these tibias, 88 (69%) belonged to children or juveniles under the age of 18. One clavicle has been assigned to a 3-year-old individual and a skull fragment to a 2-year-old. Three are approximately 15 years of age and two others closer to 18. This age group is represented by almost all segments, including small bones.

According to de Anda's analysis (2007:194), at least three mandibles, all of which belong to children in the older age groups (9–12 years), show cut and stab marks. "The distribution of the marks strongly suggests that they were produced by defleshing, possibly accompanied by the mandible's separation from the skull. One individual aged around 10 years exhibits additional chop marks in the dorsal side of the chin and in the posterior area of the left ramus, probably produced by direct impact with an axe-like implement, reinforcing the idea of a combined defleshing and dismemberment process, the latter possibly produced during decapitation" (Anda 2007:194).

For example, three subadult clavicles (one left, two right) show signs of cultural modification. One of the youngest individuals in the sample has the marks of a fine slicing action over both the anterior and posterior clavicle face. The cut marks are numerous and shallow, they might have been

produced during a defleshing or flaying action (Anda 2007:193). Some of the child ribs also show some signs of *perimortem* violence. One piece shows “V” shaped slicing marks that surround a large impact cut mark, suggestive of a sharp instrument that forcefully penetrated the body below the rib (Anda 2007:193-194).

Moreover, according to the research some segments of long bones, vertebrae, and ribs appear to have been exposed to high heat between for short and long periods such as those obtained in an open fire (Botella et al., 2000; Medina 2006; White 1992). Some segments indicate exposure of fresh bone while others seem to have been treated when the bone was already dry (Medina 2006 in Anda 2007). It is worth highlighting that heat exposure is evident more in the subadults of the series than in the adults.

A variety of body treatments in the bones of these children are not mentioned in the chronicles. Most of the observed marks in the sample have been detected in infants or juvenile individuals. “In particular, the marks consistent with dismemberment, defleshing, flaying, *perimortem* violence, and heat exposure revealed either a complex or varied array of body treatments for the infants and subadults found in the cenote” (Anda 2007:201). A large number of the sacrificial victims must have entered the water as complete bodies. Anda (2007:195) even supposes the possibility of immersion of living individuals in the cenote. One of the particular interests of the investigation is the presence of marks suggestive of flaying in infant clavicles, since it would contradict the present notion of adult sacrifice to surround flaying.

Among the investigated cenotes that served as ritual human depositories or places of sacrifice, the Sacred Cenote, due to the abundant archaeological findings and the large amount of skeletal material found there, stands out as a major center of pilgrimage. Taking into account various age groups in the record, the chronicles mention predominantly “toddlers,” “boys,” “girls,” and male

“youngsters” (Anda 2007).

COLLECTION	TOTAL # OF INDIVIDUALS	TOTAL JUVENILE
Peabody Museum	101	51
INAH Mexico	121	76
TOTAL	222	127

Table 5.3: Distribution of age groups from the Sacred Cenote skeletal collections. The table represents the number of adult and subadult remains analyzed from two collections of Sacred Cenote of Chichen Itza. Table courtesy of Jaime Awe.

Overall, the demographic pattern in the Cenote of Sacrifice is acknowledged as being very non-normal (Table 5.3). Clearly, the ratio of subadults and adults present in sacrificial contexts is more equal than originally believed. A distribution of 6-12 age range confirms a biased disposal choice or, much more likely, the selection of certain age groups for ritual discard in this sacred cenote (Prout and Brady 2018:243). With the augmented subadult MNI provided by this study, it is clear that the composition of the Midnight Terror Cave assemblage is similar.

Evidence from the caves and Sacred Cenote in comparison demonstrate the distribution of age groups such as nearly half of the individuals identified were either infants (< 3 years) or children (3–12 years). It is also evidential to be an abnormal age distribution suggesting not unnatural death of individuals.

5.4.8. Other Archaeological Evidence of Child Sacrifice

Besides the cave and cenote sites, child deposits of non-funerary contexts are also recorded at archaeological surface sites including royal tombs. Of such a finding, were vessels from El Zotz burial of the early Classic Period with children remains inside. The site is located in the Petén area of Guatemala. According to the investigation conducted by Brown University led by Stephen Houston (2010) the remains belonged to six children aged between 1 and 5 years old, among which four were

toddlers. Scherer's (2013) bioarchaeological and contextual analyses of the remains indicated the thermal exposure of bodies enabled him to suggest that the deposits represented a sacrifice. Applying parallel evidence from Classic period imagery that depicts the burning of infants (see Chapter 4 for iconography), Scherer interprets the ritual within the Baby Jaguar narrative.

The site of Colha, located in northern Belize, potentially has evidence for child sacrifice as well. Massey and Steele (1997:73) identified the cranial remains of 20 adults and 10 young children in a skull pit and suggested that they represent the victims of religious sacrifice. They found deep cuts on the fragments of two children's cervical vertebrae, which they attribute to "unsuccessful efforts to decapitate the victim."

In conclusion, to consider only those skeletons that have signs of violent death as evidence for human sacrifice is too narrow a view and ignores the context (Brady 1989) in which they are discovered. The Sacred Cenote's role in human sacrifice is well accepted despite the fact that few, if any, of the bones contain clear signatures of the mode of death of the individual. It should not, therefore, be surprising if the same behaviors were occurring in caves. The patterns encountered in the Sacred Cenote are at least strongly suggestive of ritual behaviors such as the burning of segments in incense vessels as in case of El Zotz, which has been documented by many chronicles and by the pictorial record. By accepting the premise that large Lowland Maya cenotes are functionally similar to caves, acting as portals to the Underworld, the evidence for associated human sacrifice becomes more compelling (Coggins and Shane 1984; Hooten 1940).

In addition, I would like to emphasize that radiocarbon dates from my own research and caves in Roaring Creek, Barton Creek, and Macal Valleys of Belize indicated that the Maya lowland caves most intensive utilization period occurred during the end of the Late Classic (between AD 750-900). This period coincides with the decline of Maya civilization. The study done by Awe and colleagues

(2005; Moyes et al. 2009) indicates that during the Terminal Classic period there was a change in climate including the intensification of long-lasting droughts. The period is also characterized with intensification of rituals, including human sacrifice, evident in caves. Our research indicated that there was a clear increase in cave ritual activity, including human sacrifice, during the 9th century AD. Furthermore, as we could see high numbers of subadult remains in caves that do not correlate with age distributions of general populations, this lead to a conclusion that was suggested by some scholars (e.g., Owen 2005:333) that children were preferred for sacrifices for cave-dwelling deities. Further discussion will be presented in the following chapter.

5.4. Archaeological Evidence for Child Sacrifice across Mesoamerica

Archaeological investigations suggest that human sacrifice was practiced from the Preclassic period (1200 BC) to contact period times (AD 1500-1700) times. One of the earliest examples of this practice comes from the Tehuacan valley (MacNeish 1964). For the Formative period, there are examples from the Olmec site of El Manati (Ortiz and Rodriguez 2000) in the state of Veracruz. At El Manati, the bones of the newborn or unborn infants consisting of some whole skeletons as well as dismembered bones and skulls, were found in a pond along with several other offerings including wooden busts. These infant remains point to the possibility of human sacrifice, a ritual without direct evidence in the Olmec archaeological record.

Some other Preclassic examples of human sacrifice come from Chalcatzingo and Chalchuapa. The Chalchuapa site contained evidence for a mass sacrifice during the Late Preclassic Period. The skeletal remains of 33 individuals were found in construction fill at the site. These remains are interpreted as evidence for human sacrifice (Fowler 1984). Osteological analysis was performed with the skeletal materials in situ. The individuals whose sex could be determined were adult males (Fowler 1984).

Some of the best archaeological evidence for the practice of human sacrifice in Mesoamerica, comes from published reports on the Aztecs. Material evidence on Aztec human sacrifice was recovered from Tenochtitlan during the excavations of the Templo Mayor Project between 1978 and 2007 (Lopez Austin 2008:139). Among the discoveries made, numerous skeletal remains, sacrificial knives and the *téhcacatl*, or stone upon which sacrificial victims were stretched as they were ritually killed, provides the most solid evidence of human sacrifice. Two of these stones were discovered at the summit of one of the oldest phases of the Templo Mayor (López Austin and López Luján 2001). The remains of the victims totaled 126 individuals (Estrada Balmori 1979; Angula 1966; Román 1990; López Luján 2005).

Among these remains at the Great Pyramid of Tenochtitlan are those of 42 children who suffered serious medical conditions before their death, including anemia, parasitism, and gastrointestinal diseases. Bioarchaeological investigations indicate that some of the children had their throats slit in honor of the god of rain Tlaloc. A forty-third child was likely killed by removal of the heart and dedicated to Huitzilopochtli (Lopez Austin 2008). Pain according to ethnohistoric sources (Sahagun) seems to be significant for the offerings as Tlaloc required the tears of the young as part of the sacrifice. The priests made the children cry during their way to immolation: a good omen that Tlaloc would wet the earth in the rainy season.

These and other pieces of evidence corroborate the graphic and textual information contained in the documentary sources of the sixteenth century, such as Sahagun, which led to the conclusion that human sacrifice was a basic practice of the Aztec religion. At the same time, the numbers of sacrifices in the historical sources may be wildly exaggerated (Lopez Austin 2008).

According to Phil Arnold (1991: 219-232), Aztecs sacrificed children in the month of Atlcahualo (from February 2 to February 21) to the water deities. Children with two cowlicks in their

hair and who had been born under a favorable sign were offered by their own parents to the gods of rain to guarantee rains for the next season (Lopez 2008:145).

Evidence for the sacrifice of children in caves, with burial subsequently occurring there, also comes from Oaxaca, Central Mexico. Child offerings in caves appear to be common there; frequently, such practices were connected with worshiping the Rain God (Spores 1967:26; Zilbermann 1966:122). In Blade Cave, Oaxaca, Janet Fitzsimmons (2005:97-98) recovered pottery vessels, chert tools, bones of animals and the remains of children that were sacrificed in rain rituals.

Chapter 6 Discussion and Conclusions

The purpose of this research was to investigate whether child remains found in Actun Tunichil Muknal Cave were associated with human sacrifice; tradition occurring in Pre-Columbian times. If the remains represented sacrificial victims, I intended to explore the significance of child sacrifice in ancient Maya culture. The research demonstrates that human sacrifice in caves is very difficult to identify through the lens of archaeological evidence alone. The evidence from multiple sources applied during the course of my investigation, however, is suggestive that the remains of humans, children in particular, in caves was most likely the result of sacrifice. That this practice and tradition has a long history in Maya culture is particularly well-demonstrated in oral tradition, the epigraphic and iconographic record, as well as in ethnohistoric reports and ethnographic studies.

Ethnohistoric accounts and documents that mention caves, native mythology, beliefs, and symbolism help to build archaeological reconstructions. The use of ethnographic analogy meanwhile has enabled a better understanding of the range and type of religious activities associated with caves, and to identify many Pre-Columbian parallels (Brady and Prufer 2005:365–6).

The association of caves with rain ceremonies and the association of agricultural and fertility rituals with child sacrifice is clearly documented in various ethnohistoric and ethnographic accounts (Thompson 1975; Tozzer 1941; Sahagun 1981), as well as in iconographic depictions on polychrome ceramics (Justin Kerr Archive). While most ethnohistoric evidence regarding the practice of child sacrifice was recorded in central Mexico and the Yucatan region of the Maya area, iconographic evidence depicting child sacrifice primarily comes from the Maya lowlands of the Classic Period.

The archaeological evidence coming from the Maya lowland caves, including ATM, demonstrates that nearly all of the human remains were lying in shallow depressions that fill with water during heavy rains, indicating that pools were the preferred location for placing the remains of

both adults and infants in caves within the western Belize sub-region of the Maya lowlands. This practice clearly links human offerings and fertility ceremonies for the rain god during the contact period that was described by Bishop Landa during the 16th century in the Yucatan (Tozzer 1941). Furthermore, ethnographic records (Tozzer 1941, given by the Maya in Sotuta and Homun) continuously state that the average age of children sacrificed in rain rituals was around five or six (Brady 1989). This age is consistent with the remains of children found in ATM and other Maya cave sites including the Sacred Cenote in Chichen Itza. Furthermore, a burial interpretation of human deposits in caves, and of children in particular, does not find support with present archaeological evidence. Caves, in fact, provide little if any evidence for grave preparation. As I noted previously, cave contexts, placements of bodies on exposed cave surfaces and watery locations stand in contrast to graves at surface sites where bodies are buried and hidden from public view. These characteristics, in addition to the absence of grave goods accompanying human remains in caves are all strongly indicative of ritual activity such as human sacrifice.

Radiocarbon dates and ceramic artifacts in cave sites also reflect intensive utilization of cave sites during the end of the Late Classic (between AD 750-900), which is also the period associated with the decline of Classic Maya culture. This period is characterized by intense droughts that were reflected particularly in the increase in cave use and, consequently, resulting in more rituals conducted there. This data builds a connection between child sacrifice to the rain god and fertility rituals.

Ethnohistoric along with iconographic evidence enables us to understand the Maya perception regarding sacrifice. According to the Maya ideology, the ritual of human sacrifice celebrated a theme of sacrifice and rebirth. The creation story in the Popol Vuh recounts how the relationship between people and gods was symbiotic. If the gods provide humans with sustenance, humans needed to feed the gods and provide offerings for having a good bountiful crops and

sustenance. Human beings felt they were the beneficiaries of divine favors in their daily lives and at all important moments of their existence; they gratefully received rain, the fertility of the land, health, their own reproductive power, victory in war, et cetera. However, natural disasters, illnesses, wars could have resulted in beliefs in gods being dissatisfied and malevolent. Humans felt obligated to provide offerings and sacrifices to the gods to repay them for their gifts, to please them. They offered the gods the aroma of flowers, incense, tobacco smoke, the first fruits of harvests, and the blood and flesh of humans to sustain them. Human beings, thus, fulfilled an eternal exchange, preventing the disruption of the cycles, of the course of the Sun, of the passage of time, and of the succession of life and death. In this manner, they became participants in the proper functioning of the world. The story of the Hero Twins demonstrates the Maya beliefs in life and death cycles. Rebirth is possible through the sacrifice (the twins were reborn after sacrifice by both fire and decapitation), which served as a metaphor for life after death.

In order to interpret the symbolism of sacrificial rituals, this research integrated various lines of evidence including archaeological data, the ethnographic and ethnohistoric records, as well as epigraphic and iconographic sources. All these sources of information indicated that children sacrifices were an important tradition in the Maya area. Iconographic evidence demonstrates that the practice of child sacrifice was rooted in ancient mythology such as the idea of substitution and fertility symbolism. The ritual, thereby, can be interpreted within Classic period imagery of a narrative of “Baby Jaguar”. The event of Baby Jaguar birth/sacrifice takes place in a mythic watery environment iconographically alluding to a cave. Baby Jaguar’s association with a young Maize deity (Martin 2002:54-55; Taube 1994), may be symbolizing the birth of a new life that is only possible with a decayed material, such as a child body, and water, cave association, for a new life or maize sprout to germinate. Iconography ties the infanticide of the jaguar and the birth of maize. The scenes also might

symbolize the *k'ex* (substitution) sacrifice giving rise to the newborn Maize God, and resulting, consequently, in fertility and corn harvest. Furthermore, the association of Baby Jaguar and its adult version of the Jaguar God of the Underworld with the sun, exemplifies the analogy of a new life arising. The examples portrays the sun coming from night or darkness as associated with the cave, but also arising, and therefore symbolizes the life cycle. The remaining iconographic scenes depicting an infant as an offering to elite members might symbolize the political and ideological connotation of a child sacrifice narrative such as substitution for a new ruler ascending as suggested previously (Taube 1994; Scherer 2002). The idea of a sacrifice and “loss of precious” can be linked to the context of a hope for new life, resurrection and natural bounty. This idea manipulated by a ruling elite would sustain religious and secular authority. Some of the iconographic evidence where an infant is depicted in a flame (vase K3844) indicates that the burning and censing was apparently necessary to release the essence of the child as an offering for supernatural beings that can be paralleled to the archaeological evidence found in El Zotz.

Overall, iconographic scenes support the connection of children to caves and fertility symbolism, as well as archaeological evidence for the time of intense cave use, when the Maya had to please their god for rain during the lasting period of devastating droughts. The ancient Maya were trying to recreate new life, and petition gods for agricultural fertility through child sacrifices in the places fully associated with these symbols and concepts.

This research combining data from archaeological, iconographic, ethnographic, and epigraphic sources, has demonstrated that such an approach is very useful for understanding the cognitive meaning of caves as sacred landscapes among the ancient Maya, and for recording the nature and purpose of ancient and modern Maya rituals. The multidisciplinary data suggests that child sacrifice in caves, and human sacrifices in general, are associated with concepts of reciprocity (Awe

et al. 2005; J. Awe 2019, personal communication) or a regenerative contribution to the world. Humans being made of corn can feed the gods. Gods, in turn, would reciprocate and bring bountiful crops so that humans could eat. Children might symbolize dedication to holiness. Because of their young age (comparative to adults), in ancient Maya culture children were uniquely positioned to mediate between the spirit world of the gods and the mundane world of adults. Offerings of children may relate to the vitally important process of growth, including the germination and development of plants' and overall be associated with the idea of life cycles rooted in ancient narratives.

The multidisciplinary approach evidently helps to shed light on ancient Maya symbolism, particularly on symbolism of caves, various activities conducted within these sacred contexts and human sacrifice itself. Future research could look at the power of children in ancient Mesoamerica in detail, and especially their abilities to contact the divine. It would also allow a reappraisal of their role as sacrificial offerings. More research needs to be done on iconographic depictions, especially on polychrome vessels, as well as on epigraphic texts in an attempt to recover the whole narrative story.

References Cited

Borgia Group Codices: Codex Laud

<http://www.famsi.org/research/pohl/jpcodices/laud/index.html>

Online Etymology Dictionary

<https://www.etymonline.com/word/sacrifice>

The Maya Vase Database

<http://www.mayavase.com>

Anda, A. G.

- 2007 Sacrifice and ritual body mutilation in Postclassical Maya society: taphonomy of the human remains from Chichen Itza's Cenote Sagrado: 190-208 in Tiesler, V. and Cucina, A. (eds.), *New Perspectives on Human Sacrifice and Ritual Body Treatments in Ancient Maya Society*. Springer, New York.

Arden, Traci

- 2011 Empowered Children in Classic Maya Sacrificial Rites. *Childhood in the Past*, 4: 133-145. <https://doi.org/10.1179/cip.2011.4.1.133>.

Awe, Jaime J.

- 1998 The Western Belize Cave Project: Objectives, Context, and the Problem Orientation. Occasional Paper, University of New Hampshire.
- 1997 Caves, Maya Archaeology and Tourism Development: A preliminary guide to the Management of Subterranean Sites in Belize. Unpublished Manuscript in possession of the Department of Archaeology, Belmopan, Belize.

Awe, Jaime J., Cameron Griffith and Sherry A. Gibbs

- 2005 Cave Stelae and Megalithic Monuments in Western Belize. In, *The Maw of the Earth Monster: Mesoamerican Ritual Cave Use*: 223-249. Edited by James Brady and Keith Prufer. University of Texas Press, Austin.

Awe, Jaime J. and Christophe Helmke

- 2015 The Sword and the Olive Jar: Material Evidence of Seventeenth-Century Maya – European Interaction in Central Belize. *Ethnohistory* 62(2): 333–360.

Bassie-Sweet, Karen

- 1991 From the Mouth of the Dark Cave: Commemorative Sculpture of the Late Classic Maya. 1st edition. University of Oklahoma Press.
- 1996 At the Edge of the World: Caves and Late Classic Maya World View. University of Oklahoma Press.

Baxter, Jane E.

- 2008 The Archaeology of Childhood. *Annual Review of Anthropology*. V. 37:159-175.

Binford Lewis R.

- 1967 Smudge Pits and Hide Smoking: The Use of Analogy in Archaeological Reasoning. *American Antiquity* 32: 1-12.
- Blacker Irwin R., and Rosen, Harry M.
1962 Conquest: Dispatches of Cortes from the New World. 1st Edition. Grosset & Dunlap.
- Bourdieu, Pierre
1970 The Berber house or the world reversed. In *Information (International Social Science Council)* 9(2): 151-170.
- Brady, James
1989 An Investigation of Maya Ritual Cave Use with Special Reference to Naj Tunich, Peten, Guatemala. Ph.D. dissertation, University of California, Los Angeles.
- Brady, James E. and Andrea Stone
1986 Naj Tunich: Entrance to the Maya Underworld. *Archaeology* 39(6):18-25.
- Carrasco, David
1998 City of sacrifice: the Aztec empire and the role of violence in civilization. Beacon Press, Boston.
- Coe, Michael D.
1992 Breaking the Maya Code. Thames and Hudson, New York.
- Coe, Michael, and Houston Stephen
2015 The Maya. 9th Edition. Thames and Hudson, New York.
- Christenson, Allen J.
2007 Popol Vuh: The Sacred Book of the Maya: The Great Classic of Central American. Translated from the Original Maya Text [Allen J. Christenson]. University of Oklahoma Press.
- Edmonson, Munro S.
1982 The Ancient Future of the Itza: The book of Chilam Balam of Tizimin, Volume 1. University of Texas Press, Austin.
- Fabrega, Horacio, and Silver, Daniel B.
1973 Illness and Shamanistic Curing in Zinacantan: An Ethnomedical Analysis. Stanford University Press.
- Finamore, Daniel and Houston, Stephen
2010 The Fiery Pool: The Maya and the Mythic Sea. Yale University Press.
- Fitzsimmons, J. L.
2006 Classic Maya tomb re-entry. In P. R. Colas, G. LeFort, and B. Liljefors Persson (Eds.), *Jaws of the underworld: Life, death, and rebirth among the ancient Maya*: 35-42.

- Fitzsimmons, J. L., and Shimada, I.
2011 *Living with the Dead: Mortuary Ritual in Mesoamerica*. University of Arizona Press.
- Garrison, Thomas G., and Stephen Houston
2019 *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. University Press of Colorado.
- Geertz, Clifford
1974 From the Native's Point of View: On the Nature of Anthropological Understanding. In *Bulletin of the American Academy of Arts and Sciences* 28(1): 26-45.
- Gibbs, Sherryl A.
1999 *An Interpretation of the Significance of Human Remains from the Caves of the Southern Maya Lowlands*. Unpublished MA Thesis, Department of Anthropology, Trent University, Peterborough, Ontario, Canada.
- Graham, Elizabeth
2011 *Maya Christians and Their Churches in Sixteenth-Century Belize*. University Press of Florida, Gainesville, Florida.
- Guernsey, Julia
2010 A consideration of the quatrefoil motif in Preclassic Mesoamerica. *Res: Anthropology and aesthetics* 57-58 (Spring-Autumn 2010): 75-96.
- Hanks, William F.
1984 Sanctification, structure and experience in a Yucatec Maya ritual event. *Journal of American Folklore* 97(384): 131-166.
- Helmke, Christophe
2009 *Ancient Maya cave usage as attested in the glyphic corpus of the Maya Lowlands and the caves of the Roaring Creek Valley, Belize*. Ph.D. thesis. University College London, London.
- Heyden, Doris
1975 *An Interpretation of the Cave Underneath the Pyramid of the Sun in Teotihuacan, Mexico*. *American Antiquity* 40: 131-147.
- Hodder, Ian
1982 *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. British and American Playwrights, 1750-1920 *New Studies in Archaeology*. Cambridge University Press, Cambridge.
- Houston, Stephen, and Inomata, Takeshi
2009 *The Classic Maya*. Cambridge University Press, Cambridge.

Houston, S., Stuart, D., and Taube, K.

2006 *The Memory of Bones: Body, Being, and Experience among the Classic Maya*. University of Texas Press, Austin.

Hunt, Eva

1977 *The Transformation of the Humming bird: Cultural Roots of a Zinacantecan Mythical Poem*. Cornell University Press, Ithaca.

Ishihara, Reiko

2007 *Bridging the chasm between religion and politics: archaeological investigations of the grietas at the Late Classic Maya site of Aguateca, Peten, Guatemala*. PhD dissertation, Department of Anthropology, University of California, Riverside.

Kieffer, C. L.

2009 *Osteological report for the upper level of Actun Yaxteel Ahau*. In J.E. Brady (Ed.), *An archaeological survey of the upper passage of Actun Yaxteel Ahau, Belize: 2009 season report:55–70*. Report on file with the Belize Institute of Archaeology. Belmopan, Belize.

Koontz, Rex

2009 *Investiture and Violence at El Tajin and Cacaxtla In Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*. Institute of Archaeology Press. V.4

López Austin, Alfredo

1988 *Cuerpo humano en ideology: Concepts of the Ancient Nahuas*. Translated by Thelma Ortiz de Montellano and Bernardo Ortiz de Montellano. University of Utah Press, Salt Lake City.

Marcus, Joyce and Kent Flannery

1994 *Ancient Zapotec ritual and religion: an application of the direct historical approach*. In *The ancient mind: elements of cognitive archaeology*. Cambridge: Cambridge University Press: 55-74.

Martin, Simon

2002 *The Baby Jaguar: An Exploration of its Identity and Origins in Maya Art and Writing*. In *La organización social entre los mayas prehispánicos, coloniales y modernos. Memoria de la Tercera Mesa Redonda de Palenque, v. 1*, edited by Vera Tiesler Blos, Rafael Cobos, and Merle Greene Robertson: 49-78. Consejo Nacional para la Cultura y las Artes, Mexico.

MacLeod, B., and Puleston, D. E.

1978 *Pathways into darkness: The search for the road to Xibalbá*. In M. G. Robinson & D. C. Jeffers (Eds.), *Tercera Mesa Redonda de Palenque*. Vol. 4: 71–77. Herald Printers, Monterey.

McNatt, Logan

- 1996 Cave Archaeology of Belize. In *Journal of Cave and Karst studies* 58(2):81-99.
- Miller, Mary Ellen, and Karl A. Taube
 1993 The gods and symbols of ancient Mexico and the Maya: an illustrated dictionary of Mesoamerican religion. Thames and Hudson, New York.
- Monaghan, John
 1995 The Covenants With Earth and Rain: Exchange, Sacrifice, and Revelation in Mixtec Sociality. University of Oklahoma Press, Norman.
- Moyes, Holley
 2006 The sacred landscape as a political resource: a case study of ancient Maya cave use at Chechem Ha Cave, Belize, Central America. Ph.D. dissertation. State University of New York, Buffalo.
- Moyes, Holley and James E. Brady
 2012 Caves as Sacred Spaces in Mesoamerica In *Sacred Darkness: A Global Perspective on the Ritual Use of Caves*, Holley Moyes, 151-170. Boulder: University Press of Colorado.
- Nagao D.
 1989 Public Proclamation in the Art of Cacaxtla and Hochicalco. In *Mesoamerica after the Decline of Teotihuacan, A.D. 700-900*, pp.83-104. Dumbarton Oaks Research Library, Washington, D.C.
- Nash, June C.
 1984 [1970] *In the Eyes of the Ancestors: Belief and Behavior in a Maya Community*. New Haven, CT: Yale University Press.
- Owen, Vanessa A.
 2005 A question of sacrifice: Classic Maya cave mortuary practices at Barton Creek Cave, Belize. In *Stone Houses and Earth Lords: Maya Religion in the Cave Context* (eds K. M. Prufer and J. E. Brady). Boulder, CO: University Press of Colorado, pp. 323–40.
- Ortiz, Ponciano and Maria del Carmen Rodriguez
 1999 Olmec Ritual Behavior at El Manati: A Sacred Space. In *Social Patterns in Preclassic Mesoamerica*, edited by David Grove and Rosemary Joyce, pp. 225-254. Dumbarton Oaks Research Library, Washington, D.C.
- Pendergast, D. H.
 1971 Excavations at Eduardo Quiroz Cave, British Honduras (Belize). *Occasional Paper 21, Art and Archaeology*. Toronto: Royal Ontario Museum.
- Prout, Michael and Jim Brady
 2018 Paleodemographics of Child Sacrifice at Midnight Terror Cave: Reformulating the Emphasis of Maya Sacrificial Practices. *Archaeological Discovery* 6 (1):1-20.

Reents-Budet, D., and MacLeod, B.

1997 The archaeology of Petroglyph Cave, Cayo District, Belize. Unpublished manuscript. Copy on file at the Institute of Archaeology, Belmopan.

Roys, Ralph L.

1967 The Book of Chilam Balam of Chumayel. 2nd Revised edition. Norman: University Of Oklahoma Press.

Sahagún, Bernadino de.

1981 General History of the Things of New Spain: Florentine Codex, book 2: The Ceremonies. Translated by Arthur J. O. Anderson and Charles E. Dibble. 2nd ed. Salt Lake City: University of Utah Press.

Saturno, William A., Karl A. Taube, and David Stuart

2005 The Murals of San Bartolo, El Petén, Guatemala, Part 1: The North Wall. Ancient America No. 7. Barnardsville, N.C.: Center for Ancient American Studies.

Schele, Linda, and Mary Ellen Miller

1986 Blood of Kings: Dynasty and Ritual in Maya Art. New York: George Braziller.

Scherer, Andrew

2015 Mortuary landscapes of the Classic Maya. Rituals of Body and Soul. Austin: University of Texas Press.

Stahl, Ann

1993 Concepts of Time and Approaches to Analogical Reasoning in Historical Perspective. In American Antiquity 58 (2): 235-260

Stanzione, Vincent James, Paul Harbaugh, and Angelika Bauer

2003 Rituals of sacrifice: Walking the face of the earth on the sacred path of the sun: a journey through the Tz'utujil Maya world of Santiago Atitlán. Albuquerque: University of New Mexico Press.

Stuart, David

2014 Notes on a Sacrifice Scene. Electronic document, <https://mayadecipherment.com/2014/10/31/notes-on-a-sacrifice-scene/>, accessed March 12, 2020.

Taube, Karl A.

1993 Aztec and Maya myths. University of Texas Press, Austin.

Tedlock, Dennis

1985 Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings. Simon and Schuster, New York.

Thompson, John Eric Sidney

- 1959 The Role of Caves in Maya Culture. *Mitteilungen aus dem Museum für Völkerkunde in Hamburg*. Museum für Völkerkunde, Hamburg. No. 25:122–139.
- 1975 Introduction to *The Hill-Caves of Yucatan- A search for Evidence of Man's Antiquity in the Caverns of Central America* by Henry C. Mercer. *The Civilization of the American Indian Series*, V. 135. University of Oklahoma Press.
- Tiesler, Vera and Andrea Cucina
- 2006 Procedures in Human Heart Extraction and Ritual Meaning: A Taphonomic Assessment of Anthropogenic Marks in Classic Maya Skeleton. *Latin American Antiquity* 17(4): 493-510.
- Tokovinine Alexander
- 2019 Supernatural Gamekeepers And Animal Masters: A Crosscultural Perspective. Presentation. 84th Annual Meeting of the Society for American Archaeology, Albuquerque, NM, April 2019.
- Tozzer, Alfred M.
- 1907 Comparative Study of the Mayas and Lacandonas. Archaeological Institute of America/Macmillan, London.
- 1941 Landa's *Relación de las Cosas de Yucatan*: A Translation. Harvard University, Cambridge, MA.
- Vogt, Evon Z.
- 1970 Human Souls and Animal Spirits in Zinacantan. In *Echanges et communications: Mélanges offerts à Claude Lévi-Strauss à l'occasion de son 60ème anniversaire*, edited by J. Pouillon and P. Maranda, 1148–1167. Mouton, The Hague.
- 1969 *Zinacantan: A Maya Community in the Highlands of Chiapas*. Belnap, Cambridge, Mass.
- Vogt, Evon Z., and David Stuart
- 2005 Some Notes on Ritual Caves among the Ancient and Modern Maya. In *The Maw of the Earth Monster: Mesoamerican Ritual Cave Use*, edited by James E. Brady and Keith M. Prufer, 155–185. University of Texas Press, Austin.
- Gabriel Wrobel, Amy Michael, Jack Biggs, Christophe Helmke, Shawn Morton, and Christopher Andres
- 2017 Maya mortuary landscapes, Central Belize. *Antiquity Project Gallery* 91(358): <https://antiquity.ac.uk/projgall/wrobel35>