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## Keywords

human sacrifice, Belize, Maya, skeletal remains

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## Human Sacrifice Among the Maya: An Analysis of Patterns in Belize

Hope Kron

### *Introduction*

Human sacrifice in ancient Mesoamerica has been a topic of some debate in the anthropological literature, and has been commonly associated with the Aztec culture. However, the Aztecs were not the only Mesoamerican people thought to have performed human sacrifice. There has been some interest in the analysis of human sacrifice among the Maya in the literature (e.g. Schele 1984). Although researchers draw from artistic representation, ethnohistoric accounts, and historic documents when discussing sacrifice in Mesoamerica, little has been done to investigate the skeletal evidence of human sacrifice in this area.

In this paper I will examine the evidence of human sacrifice in skeletal remains from archaeological sites in the Maya area of Belize. I will begin by looking at published information on the general trends of human sacrifice among the Maya, from which I will provide an analysis of the kind of the evidence that can be expected in the archaeological record to identify these types of human sacrifice. I will then look at the archaeological evidence from Belize, using published excavation reports. I will summarize the general trends of human sacrifice in this area and provide an analysis of these trends through time. I will then discuss possible explanations for the patterns of human sacrifice that can be observed in Belize and provide suggestions for future research.

Before such an analysis can be done, the definition of human sacrifice must be considered. Previous authors (e.g. Schele and Miller 1986; Schele 1984) describe anything from bloodletting to mass murder as human sacrifice. However, the Maya appear to have a distinction in their ideology between different types of sacrificial rituals, which may not yet be fully understood. For the purposes of this paper, I will consider human sacrifice to be a ritual activity that entails the purposeful killing of one or more individuals.

### *Human Sacrifice Among the Maya*

Based on a variety of archaeological and other evidence, it can be postulated that in general human sacrifice among the Maya had its

roots in the Preclassic Period and prevailed until the time of Spanish contact, with some variations in style and intensity (Demarest 1984; Landa 1975; Saul and Saul 1991). Although skeletal evidence is rather sparse, support for the existence of human sacrifice, as well as information regarding the methods and reasons for the practice, can be drawn from artifacts, pictorial representations and historic and ethnohistoric accounts. Specifics of human sacrifice among the Maya appear to vary through time and by location, but certain general trends can be distinguished.

Maya human sacrifice appears to have been performed for different reasons, and there is some disagreement among the scholars on this subject. Furthermore, it is possible that different motivations acted at the same time to inspire human sacrifice in a particular location. Overall, it can be said that human sacrifice among the Maya was performed for reasons of societal need or misfortune, as part of a life event ritual among the elites, as part of a war victory ritual, or for political reasons (Freidel 1992; Landa 1975; Schele 1984).

Although the methods of sacrifice among the Maya also varied, the analysis of the archaeological, ethnohistoric and historic evidence in this case is more straight-forward and requires less interpretation. The types of sacrifice that may be expected in the Maya region include death by arrows or spears shot into the heart, removal of the heart, decapitation, or being cast into a well (Landa 1975; Robicsek and Hales 1984; Schele 1984). The victims may also show signs of disarticulation or defleshing, trauma from being thrown down a pyramid façade, or evidence of their hands being bound behind their back (Landa 1975; Robicsek and Hales 1984; Schele 1984).

### *Expected Evidence of Human Sacrifice*

Based on the information discussed above, osteological evidence of these events on the skeletal remains of the victims can be expected. In addition, there appears to be a distinct pattern for the disposal of remains of sacrificial victims, and it may be possible to recognize this based on the context of the burial. However, the poor preservation that is often common to Maya sites due to high acidity of the soil must be considered (Danforth 1994: 207). Poor preservation could obliterate evidence of trauma left by the act of sacrifice on the skeletal remains of the victims (Byers 2002). Alternatively, poor preservation could cause

complete obliteration of some skeletal elements (Byers 2002), giving a false appearance of secondary burials. We must also consider factors of excavation and burial bias, which may prevent the discovery of sacrificial victims. Therefore, the absence of osteological or contextual evidence need not necessarily be taken to be the absence of human sacrifice.

#### *Context*

Context can identify possible cases of human sacrifice in several ways. First, if burials are found within a ritual context, such as under or around a temple, this may be considered a possible case of sacrifice (Pendergast 1979, 1982, 1990; Robin 1989; Welsh 1988). In these cases, grave goods must also be considered to identify whether or not the person appears to have held a ritual role in the society and may have been buried in this context due to social status. Second, mass burials suggest the possibility of sacrifice, if the burial can be identified to be a single event. Other reasons for mass burial are possible, such as mass disaster, and the case of sacrifice must be made based on additional evidence. Burial reuse has been known among the Maya, and from the Belize area specifically (e.g. Healy et al. 1998), and this possibility must first be eliminated. Third, burials in unusual areas, such as within a well or refuse pit, could identify human sacrifice. This may indicate that the victims were thrown in, such as in the case of a well, or it may indicate cannibalism, where it can be expected that human remains will be disposed of in a similar fashion to that of food remains (see White 1992 for a discussion on recognizing cannibalism in the archaeological record). Finally, evidence of the deceased having been bound provides a strong argument for sacrifice. Since the binding material would likely not be preserved in the archaeological record, this can only be observed based on the position of the skeletal remains.

It must be kept in mind that the above evidence is circumstantial, and further information would be needed to support the argument for sacrifice. In addition to the above contexts, some authors have interpreted the presence of certain artifacts to be associated with sacrifice (e.g. Welsh 1988; Schele and Miller 1986; Schele 1984). However, since this paper aims to analyze the skeletal evidence of human sacrifice, and because of the general lack of context, including artifacts, for these burials (discussed below), such evidence will not be considered in this paper.

#### *Trauma*

Aside from contextual evidence, skeletal remains of victims would bear certain marks of the activities described above. All of the trauma described below would be perimortem; therefore, it is expected that there will be no signs of healing. There are standards that can be used to distinguish ancient trauma from excavation damage and taphonomic processes, as well as perimortem from antemortem trauma, which have been published elsewhere (e.g. Byers 2002) and will not be discussed here. Instead, I will concentrate on the specific markers that can be expected as a result of sacrifice. The information below is provided based on general knowledge of human osteology and affects of trauma on the bones. Based on the summary provided above, events that would leave trauma on skeletal material due to sacrifice may be: heart extraction, shooting of arrows or plunging of a spear into the heart, decapitation, defleshing and disarticulation, and being thrown into a well or off a pyramid façade.

Robicsek and Hales (1984) provide a discussion of possible techniques for heart extraction that the Maya may have employed. Cutting of a line across the whole chest around the 5<sup>th</sup> and 6<sup>th</sup> rib is the most likely possibility (Robicsek and Hales 1984). This process would create cutmarks along the ribs, most likely along the sternal portions, and/or the sternum. These processes may also cause complete or partial fracturing of the sternum and ribs.

The shooting of arrows or plunging a spear into the heart of the victim would also create cutmarks, punctures and/or fractures on the sternal portions of the ribs (this may be limited to left ribs and most likely to affect the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup>) and sternum. Other elements may be affected, depending on the accuracy of the executioner. Depending on the force of the projectiles, they may also penetrate the body, causing cutmarks, punctures and fractures to the posterior portions of the ribs and vertebrae. Furthermore, in some cases parts of the projectile point may remain in the victim's body and can then be found lodged in the bones or within the body cavity.

In cases of decapitation, cutmarks would be expected near the occipital condyles and in the nuchal region of the skull if it was removed at the atlas, and lack of cutmarks if it was removed with vertebrae attached (White 1992). It may also be possible to see cutmarks on the mandible. If the skull was removed with

some vertebrae attached, cutmarks and fractures could be seen on the vertebrae, usually atlas and axis or other top cervical vertebrae. In the absence of cutmarks, we can interpret decapitation if the skull is found displaced from the rest of the body with the mandible and vertebrae associated in anatomical position. Likewise, defleshing and disarticulation leave distinctive patterns of cutmarks on the skeletal remains.

Victims who are thrown into a well or down a pyramid façade could display fractures in any number of bones in their body. There is no general pattern that can be distinguished in this trauma, because it would vary with the fall of each individual, as well as the strength of their bones and the amount of flesh on their body. However, a pattern of a variety of perimortem fractures in different bones can be taken to be indicative of a fall and may possibly be representative of sacrifice; although, of course, it must be remembered that the individual may have simply fallen without having any association with sacrificial practices. Therefore, additional evidence is required in this case to support the argument.

In the case of war captives being chosen as sacrificial victims, we may also expect to see some trauma that is associated with warfare. This may be both perimortem and antemortem, resulting from previous battles. These types of trauma have also been described elsewhere (e.g. Byers 2002; Boylston 2000) and will not be discussed here. This evidence in itself, however, is not enough to indicate sacrifice, since many other explanations are possible, and can only be used in conjunction with other indicators.

It must be remembered that each one of these factors may have different explanations. In the cases of perimortem trauma, this indicates treatment of the body near the time of death (Byers 2002: 268), which could occur both shortly before and shortly after death. Therefore, it is possible that these marks indicate postmortem treatment of the remains that may not be associated with human sacrifice. The best evidence for sacrifice comes from the presence of a number of these factors together.

### *Methodology*

As mentioned above, for the purposes of this paper, I am considering human sacrifice to be only that which involves the actual killing of one or more persons. Therefore, I will only consider skeletal data to constitute evidence of sacrifice if it demonstrates that the individual in

question died as a result of this sacrifice. Based on this, burials of small body parts will not be considered as sacrificial, unless the death of the individual is necessary for the removal of those parts (such as in the case of skull burials), or if other evidence suggests sacrifice.

In this paper, I will be looking at five sites in Belize that show evidence of possible sacrifice. Detailed information on the context of burials is usually not available for these sites. The information that is available is the site where the burial is located, the age, sex and skeletal analysis of the individual, approximate date and type of location (i.e. ritual, domestic, public, etc.). The specific location of burials within the site is often not provided. Information on artifacts is provided in some cases, but usually not all artifacts are included and their location within the burial is not clearly described (which is especially important for burials with more than one individual). Because of these drawbacks, it is impossible to accurately analyze the context of burials. Therefore, for the purposes of this paper, only the site, time period, type of location and skeletal information will be considered.

To detect the evidence of possible human sacrifice I will look at four factors. First, I will look at the type of burial: primary versus secondary interment, and single versus mass burial. Second, I will look at the placement of the bones within the grave to see if they were arranged out of anatomical position in a deliberate fashion. Third, I will look at evidence of trauma or deliberate removal of skeletal or body parts. And fourth, I will look at the location of the burial: ritual, public or domestic setting. The last criterion will only be considered in conjunction with other evidence.

Disturbed burials will be eliminated from the analysis, since the original context is lost. Multiple-individual burials that show consecutive use will be eliminated (unless other evidence suggestive of sacrifice exists), since the custom of burial reuse is known among the Maya, as mentioned above, and is not associated with sacrifice. Since this study aims at the analysis of skeletal material for evidence of sacrifice, artifacts will not be considered except when in direct association with skeletal remains (such as in cases where an artifact substitutes for a skeletal part, or if the skeletal remains are placed within an artifact). Burials that cannot be dated will be excluded from the analysis.

Using the above parameters, my total sample will consist of 110 individuals from 5 sites: Mountain Cow, Baking Pot, San Jose,

Cuello and Altun Ha, although the majority of evidence comes from the latter two sites. In order to obtain a general understanding of human sacrifice practices in Belize, and because of each site's small sample size, these sites will be considered as a single group in my analysis. The data will be broken down into the Preclassic and Classic Periods.

In obtaining age and sex information, I will be using the following criteria. For Cuello, I will be taking the information provided by Robin (1989), as those skeletal remains were analyzed in a lab. Welsh (1988) does not indicate whether or not his data come from excavation notes or lab analysis. These data will be used, but it must be kept in mind that there is a possibility of inaccuracy here. Pendergast (1979, 1982, 1990) provides excavation notes on age and sex data, which are sometimes accompanied by lab analysis. In this case, the analyses of the remains in the field and in the lab often produce different results. Therefore, only lab data will be used in my analysis.

Individuals will be considered as male or female in cases where the sex determination is certain and probable. The rest will be considered as unknown. Due to the differences in the description of age categories between the authors, as well as the small size of the sample, I will consider only two categories of age: adult and subadult. Subadults will be considered in cases where the description indicates infant, child, juvenile, stages of infancy, or an age under 15. Adult status will be assigned if the individual is described as any stage of adult or with an age above 15. If no information is given, the individual will be listed as unknown. Age and sex trends for this sample will be considered in an overall analysis, as well as by time period.

### ***Skeletal Evidence from Belize***

Detailed reports of the burial data from these sites are published elsewhere (Robin 1989 for Cuello; Pendergast 1979, 1982, 1990 for Altun Ha; Welsh 1988 for Barton Ramie, Mountain Cow, Baking Pot and San Jose) and will not be recounted here. Instead, I will provide a summary of the types of evidence for human sacrifice that has been found at each of these sites (see Appendix 4 for data chart).

#### *Cuello*

Three types of burials at Cuello indicate possible evidence for human sacrifice: secondary disarticulated burials of single individuals or groups of two or three, burials without skulls or

skulls without bodies, and mass burials. All sacrificial burials at this site date to the Preclassic Period, with the exception of one: a burial of an individual skull of a subadult in the final platform construction of a pyramid. Because of its location, this burial may be a dedicatory sacrifice associated with the building of this pyramid (Robin 1989).

The most compelling evidence for human sacrifice at Cuello comes from two mass burials. The first mass burial contains 32 individuals, all adults. This mass burial contains primary and secondary burials, as well as two body bundles, one with a minimum of three individuals and the other with a minimum of nine. The second body bundle was placed in the laps of two primary individuals who were placed in the centre of the mass burial. The second mass burial contains 12 individuals, also all adults. This mass burial contains two primary interments, each with a body bundle containing a minimum of four individuals in their lap, and two secondary interments.

There are several secondary and disarticulated burials found within a household or ceremonial context. There are also some burials that include only the skull. One of the secondary burials located in a household context shows evidence of possible cutmarks on the mandible, although there is no mention regarding evidence of healing. Another secondary burial is found within a plaza floor and shows evidence of cutmarks on the humerus and cranial fragments that show no signs of healing. Both of these burials show evidence of possible disarticulation and defleshing of the sacrificial victim prior to interment.

#### *Altun Ha*

Human sacrifice at this site is identified by multiple burials, secondary burials accompanying a primary individual, burials of infants in vessels and disarticulated burials. Most burials here are within a ceremonial context or household shrines. One exception to this is a burial of an old adult individual in a plaza which contains only the skull, atlas and axis. This association suggests that the individual was decapitated. However, the possibility exists that this was a decapitation associated with ancestor veneration, especially considering the age of the individual, and may not be indicative of sacrifice; although the possibility of sacrifice also cannot be eliminated. Most of the possible sacrificial victims buried at this site date to the

Preclassic Period; however, four sacrificial burials are also known from the Classic Period.

There are a number of burials at Altun Ha that Pendergast describes as being sacrificial victims, which I do not consider here based on my criteria.

#### *Baking Pot*

Human sacrifice here is represented by three disarticulated burials found in a ceremonial context and one burial of a child in front of a temple altar. It is possible that the child burial represents an offering that did not involve sacrifice; however, its placement directly in front of an altar suggests the possibility of sacrifice. All of the burials indicating human sacrifice at this site date to the Classic Period. There is no information on the sex of the individuals here, and only two of the individuals have been aged. These burials will only be included in the analysis where applicable. No generalizations can be made about this site because of the small sample size.

#### *San Jose*

At this site, human sacrifice is suggested by two secondary burials in a ceremonial context and four individual skull burials in a temple. All of the individual skulls are found either on or underneath bowls or dishes. One of the individual skull burials at this site is identified as a subadult, and is interred in association with one of the adult skulls. All of these burials date to the Classic Period. As above, the small sample size prevents generalization of patterns.

#### *Mountain Cow*

Evidence of human sacrifice at this site is indicated by one secondary burial in a *chultun* near a plaza and one secondary burial within a household shrine. These burials date to the Late Preclassic Period. At this site, again, the small sample size does not allow for generalization.

#### *Analysis of Skeletal Evidence in Belize*

The majority of the evidence for human sacrifice in my sample comes from the Preclassic Period – 95 individuals compared to 15 from the Classic Period. Because of the small sample size from the Classic Period, these individuals will not be broken down into further time periods. Furthermore, within the Preclassic Period, the majority of burials that I suspect to be sacrificial date to the Late Preclassic Period. However, the sample size in this case is also not large enough

to warrant breaking the Preclassic Period into further sub-groups.

Evidence for human sacrifice in Belize in general can be broken down into three general types: dedicatory burials of individuals or skulls, secondary burials found in a ritual context, and mass burials. These categories, however, are not mutually exclusive and it is possible to see a combination of these types in the same context. The majority of human sacrifice in Belize is found within a ritual context. However, this context, as well as the categories, reflects mostly the burial treatment of sacrificial victims rather than the sacrifice process itself. Because there was virtually no information on trauma in these skeletal remains, little can be said about the different types of sacrifice carried out in Belize.

What can be concluded from this sparse evidence is that almost certainly decapitation was associated with human sacrifice in Belize during the Preclassic and Classic Periods; although it cannot be said if it was employed as a means of sacrifice or carried out after death. Human sacrifice in Belize involved single individuals, small groups, and large events – at least up to 32 people at one time. Disarticulation and defleshing appear to have been part of the sacrifice ritual sometimes, as evidenced by presence of cutmarks on some skeletal remains, the disarticulated nature of some burials, and the tightly packed context of some skeletal material suggestive of absence of flesh. Although, here again it cannot be determined if this was done during the sacrifice or postmortem. Sacrifice by throwing victims into a well may also be a possibility, suggested by the presence of secondary remains in a *chultun*; however, other explanations may also be possible for this context.

The choice of sacrificial victims appears to have been selective in Belize. The majority of sacrificial victims here are adults, and it appears that the majority are males. However, due to the large number of individuals whose sex could not be determined, it is possible that the proportion of males to females in this sample is skewed.

Aside from these general characteristics, some striking differences can be noted between the Preclassic and Classic Periods. However, it must be noted that the sample size for the Classic Period is very small and may not be representative of human sacrifice practices in Belize during that time. It is possible that this is due to diminished practices of human sacrifice during this period. However, this scenario is unlikely, and it is more plausible that

there was a change in the practice of human sacrifice associated with the transition to the Classic Period (discussed below).

In the Classic Period, no sex information is available for the possible sacrificial victims. The age distribution in the Classic Period of subadult to adult to unknown is 3:6:6 (see Appendix 1). Therefore, adult sacrificial victims in this time period are represented by twice as many individuals as subadults. However, due to the small sample size, this difference cannot be considered statistically significant. As for Belize in general, sacrificial burials during this period are found mostly within a ritual context (87% of the sample). The most common position of skeletal remains in this period is the burial of the skeleton with elements missing, usually the skull, or individual skull burials (73% of the sample – see Appendix 3).

Due to the larger sample size, more information is available for the Preclassic Period. The age distribution during this period of subadult to adult to unknown is 15:78:2 (see Appendix 1). As in the Classic Period, adults appear to be preferred as sacrificial victims. Male to female to unknown ratio for this period is 42:9:44 (see Appendix 2). If subadults, which are hard or impossible to assign a sex to, are eliminated from this comparison, then male to female to unknown ratio would be 42:9:29. Based on this, it appears that preference was given to males in the selection of sacrificial victims. However, due to the large number of unknowns in this sample, this interpretation may be inaccurate. As during the Classic Period, the most common context for burial of sacrificial victims is ritual (85% of the sample – see Appendix 3). The position of skeletal remains during the Preclassic Period does not show a preference for a certain type, as it does during the Classic Period. There is a range of variation that is roughly equal in different types of placement and treatment of skeletal remains during this time.

There are also some interesting differences between the two periods. Due to the small sample and the lack of information during the Classic Period, demographic characteristics between the two periods cannot be compared. However, a comparison of the burial context and skeletal position reveal some apparent changes through time. During the Classic Period, 7 sacrificial burials are located in a temple and 1 within a pyramid, while such context is not found at all during the Preclassic Period.

Conversely, during the Preclassic Period 5 sacrificial burials are found in a household platform and 8 in a residential plaza, while none are located in such context in the Classic Period. Also, the most common treatment of skeletal remains of sacrificial victims during the Classic Period involves removal of elements in 73% of the burials, as mentioned above. On the other hand, among the Preclassic burials, skeletal remains with missing elements or burials with single elements account for only 22% of the sample (if the two mass burials from Cuello are excluded). While these numbers appear to represent significant differences between the two time periods, additional data analysis would provide further support.

### *Discussion*

Several general trends can be identified for human sacrifice patterns in Belize during the Preclassic and Classic Periods. First, sacrificial burials in Belize appear to be located largely in a public or ritual context. This is in agreement with artistic, historic and ethnohistoric evidence discussed above. From this it can be concluded that human sacrifice in Belize during the Preclassic and Classic periods was a public affair, usually associated with ritual activity. In cases where human sacrifice appears to be indicated in household platforms and shrines, it may be considered to be dedicatory sacrifice associated with the construction or expansion of the structure (Pendergast 1979, 1982, 1990; Robin 1989; Welsh 1988). The possibility must then be considered that at least some families had the authority to make human sacrifices in association with building processes of their household structures. It is possible that this was restricted to higher status families within the community.

There are also some differences in this context between the Preclassic and the Classic Periods; namely, the presence of burials within a household context that is found only in the Preclassic Period and the presence of burials in temples or a pyramid that is found only in the Classic Period. The appearance of sacrificial burials in temples and pyramids during the Classic Period can be explained by the general expansion of architecture. More elaborate buildings were constructed and often used for ritual purposes, thus allowing for new locations where sacrificial victims may be buried. The absence of household burials containing sacrificial victims in the Classic Period, however, may have further implications and this



may be associated with the change from a relatively egalitarian society into a more stratified social system. Such a transition has been observed for Cuello (Hammond 1991), and could also have happened in other areas of Belize. It is possible that during the Preclassic Period residents of households, perhaps household elders, were allowed to conduct human sacrifice. This could be due to the lack of control of human sacrifice, and possibly ritual activity in general, by a centralized government. With the rise of the Classic Period and the transition into a more stratified state, the king would probably have control of human sacrifice. It is likely that, if such a change happened, household residents would not be permitted to make human sacrifices without the supervision of an official.

If such a transition did, in fact, take place in Belize, it may also account for the general lack of human sacrifice found in this area during the Classic Period. If human sacrifice was controlled by the king and a centralized government at this time, it may be possible that only certain locations were used for these sacrifices. In other words, along with a general shift from household to ritual context, there may have been a shift from local sacrifice to designated ritual sites. It is further possible that with the change in kingship the location of such sites was changed, resulting in lack of evidence for human sacrifice during some periods.

Another difference between the two time periods is that individuals with missing skeletal elements or skeletal elements alone are more common, in terms of percent of total sample, in the Classic than in the Preclassic Period. The majority of skeletal elements removed or buried singularly are skulls. This indicates that decapitation was more frequent during the Classic Period. The reasons for this are uncertain. It could be associated with increased construction of ritual structures, where skulls are used as dedicatory offerings, consequently leaving behind headless bodies. Alternatively, these skulls could represent trophies associated with warfare and possibly kingship, or they could represent ancestor veneration. It must be noted that all of these scenarios included the possibility of removal of the skull after death, and the practice, therefore, may not be associated with human sacrifice – especially in the case of ancestor veneration.

Another interesting factor about human sacrifice patterns in Belize is the apparent preference for adult males as sacrificial victims.

According to Landa's accounts, described above, victims were selected from slaves or children, who were offered as sacrifices by their parents. Given that Landa's account describes a different time period and a different location, it is likely that practices in Belize were not the same. However, if something similar was practiced in Belize, there is a possibility that children were less favoured for sacrifice because their parents were not often willing to offer them as victims, and because the community in general was concerned about their own reproductive success. Depending on population size, sacrificing a large number of children may put the population at risk. It may also be possible that the children were acquired from other communities, and may be relatively rare as sacrificial victims because they are harder to obtain. On the other hand, children's remains may have been preserved less often due to their smaller size, causing an artificial inflation in the adult sample.

The apparent selection of males for sacrificial victims in Preclassic Belize may represent the ideology of gender differentiation among the Maya during that time. It is possible that males were believed to have a more public role and women a more domestic role. If this was the case, males may be preferentially selected for sacrifice over women because this was a public event. However, there is little information on gender roles during the Preclassic Period, which may have been able to lend support to this theory. It must also be noted that the large number of individuals of unknown sex in my sample brings into question whether or not males were actually preferred over females, since it is possible that a portion of those unknowns could have been women.

### *Conclusion and Future Research*

A final point that deserves attention in this analysis is the overall lack of conclusive skeletal evidence for the presence of human sacrifice in Belize. While in many cases, human sacrifice seems a probable scenario, there is no skeletal data that proves this point beyond reasonable doubt, with the exception of the two mass burials at Cuello. The data that I analyzed can be interpreted in different ways if the definition of human sacrifice is changed, and depending on how lenient the analysis of the evidence is. Therefore, what is needed to provide a better picture of human sacrifice in Belize, and among the Maya in general, is more skeletal and burial data.

Given the data that are currently available, human sacrifice in Belize appears to be prevalent during the Preclassic Period and continues, but to a much lesser extent, into the Classic Period. Human sacrifice here is represented by secondary and disarticulated burials, dedicatory burials of individuals or skeletal elements, and mass burials. Little can be discerned about the methods employed in sacrifice, but it can be concluded that decapitation, defleshing and disarticulation were often a part of the sacrificial ritual. Adult males appear to be preferentially selected for human sacrifice in Belize. Human sacrifice in this area appears to be largely restricted to the ritual context, although a shift from some occurrences of household contexts to virtually none can be seen from the Preclassic into the Classic Period. This shift may be due to the changes in social structure associated with the transition into the Classic Period.

Small sample sizes and lack of osteological information and general burial data prevent a more thorough analysis of the patterns of human sacrifice in Belize. While I can make speculations about the ideology and social context that might be implied by the patterns of human sacrifice in Belize, these theories cannot be adequately supported without additional data. I believe that if we want to learn about human sacrifice in Belize, and among the Maya as a whole, more burial data and detailed osteological analysis need to be acquired before any conclusion can be made. When more data are acquired, I think there are several avenues of future research that can be taken to provide a better understanding of human sacrifice in Belize and its implications and meanings within the social context.

First, an analysis of the pattern of non-sacrificial burials must be conducted for Belize, to provide comparative data for identifying sacrificial victims. These data can be used to compare the population of Belize as a whole to sacrificial victims in this area to see if any differences can be identified. Second, if more detailed information on trauma can be obtained from sacrificial victims, an analysis of this must be done to determine the types of processes involved in the sacrificial ritual itself. Third, a better understanding of building functions in Belize must be acquired to properly interpret the context of sacrificial, as well as non-sacrificial, burials. Fourth, a more detailed analysis of the possible changes in social structure from the Preclassic to the Classic Period in Belize should

be done to see if changes in human sacrifice patterns correspond to these trends. And finally, a comparison with human sacrifice patterns in other regions within the Maya area should be done, both to provide a sense of the general trends of human sacrifice among the Maya and to detect and attempt to explain any regional differences or similarities.

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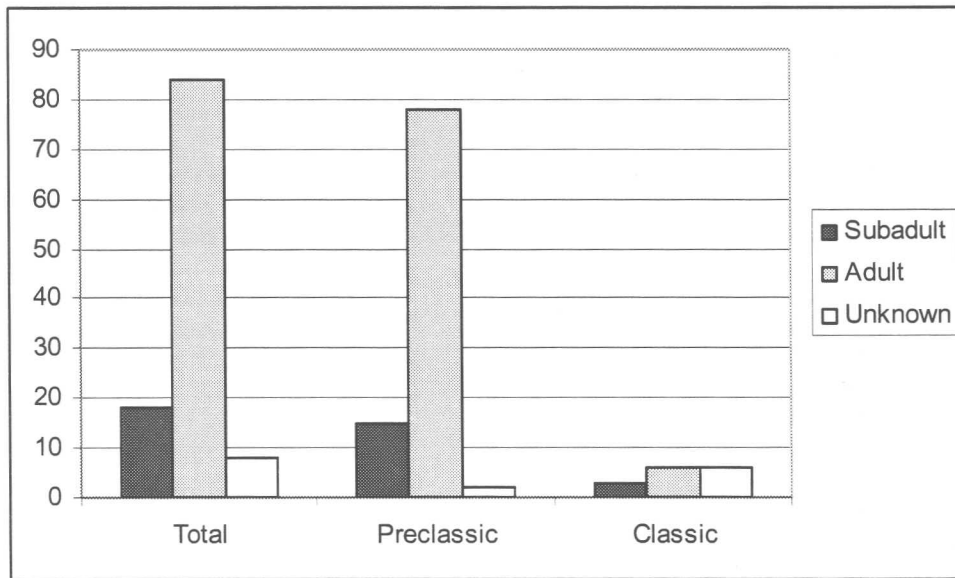
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*Appendix 1*

Sacrificial burials in Belize divided by age and time period.

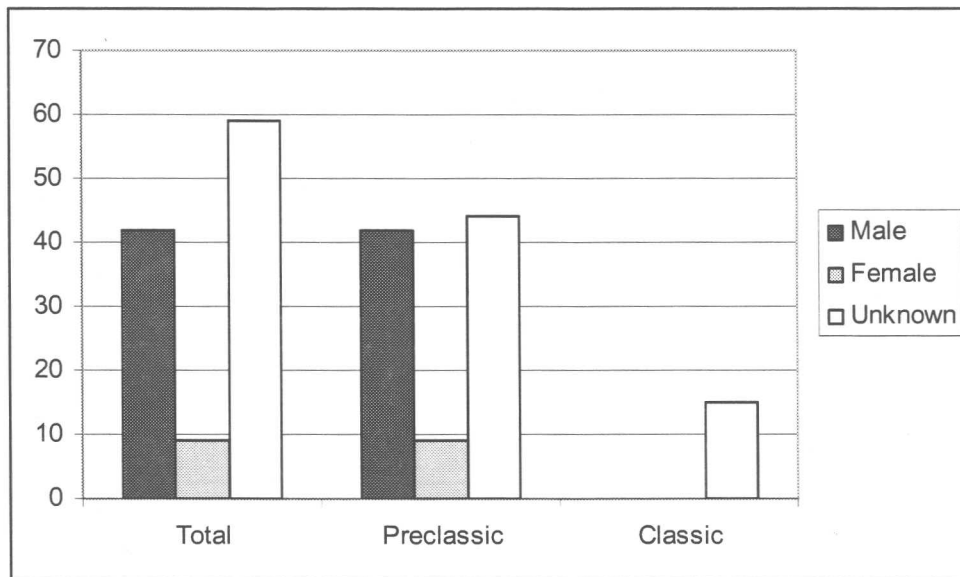
	Total	Preclassic	Classic
Subadult	18	15	3
Adult	84	78	6
Unknown	8	2	6
Total	110	95	15



*Appendix 2*

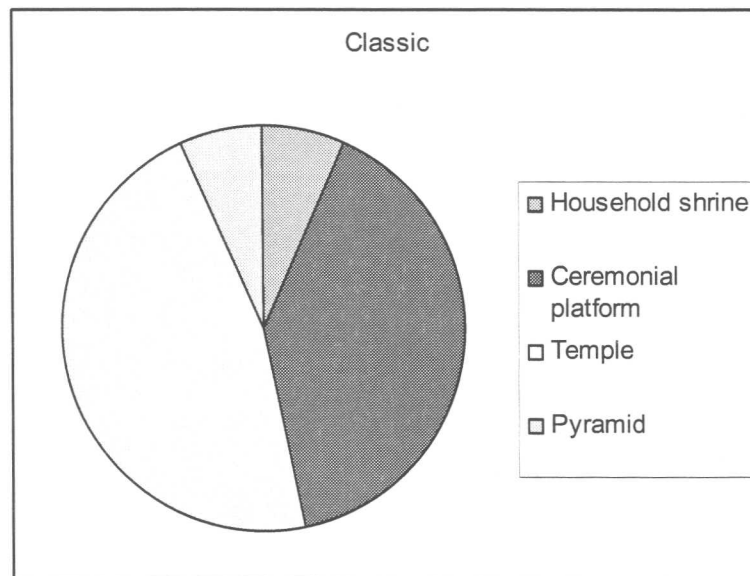
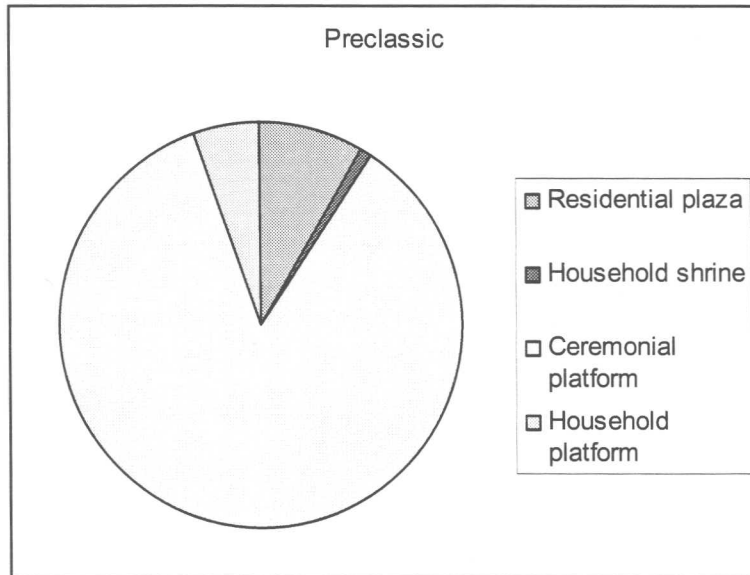
Sacrificial burials in Belize divided by sex and time period.

	Total	Preclassic	Classic
Male	42	42	0
Female	9	9	0
Unknown	61	46	15
Total	112	97	15



*Appendix 3*

Percentage of burials in different context.



*Appendix 4*

Data used for this study. Taken from Robin 1989, Pendergast 1979, 1982, 1990 and Welsh 1988.

## Cuello

#	Date	Age	Sex	Context	Type
1	Preclassic	adult	?	household platform	simple, secondary
2	Preclassic	adult	F	household platform	simple, secondary
9	Preclassic	adult	M	household patio	simple
12	Preclassic	adult	F	plaza floor	simple
13	Classic	subadult	?	pyramid	simple
27	Preclassic	adult	?	ceremonial platform	crypt, secondary
29	Preclassic	adult	M	ceremonial platform	mass burial 1
30	Preclassic	adult	F	ceremonial platform	mass burial 1
31	Preclassic	adult	M	ceremonial platform	mass burial 1
32	Preclassic	adult	M	ceremonial platform	mass burial 1
33	Preclassic	adult	M	ceremonial platform	mass burial 1
34	Preclassic	adult	M	ceremonial platform	mass burial 1
35	Preclassic	adult	?	ceremonial platform	mass burial 1
36	Preclassic	adult	?	ceremonial platform	mass burial 1
37	Preclassic	adult	?	ceremonial platform	mass burial 1
38	Preclassic	adult	M	ceremonial platform	mass burial 1
39	Preclassic	adult	M	ceremonial platform	mass burial 1
40	Preclassic	adult	M	ceremonial platform	mass burial 1
41-44	Preclassic	4 adults	2M/2?	ceremonial platform	mass burial 1, body bundle
45	Preclassic	adult	M	ceremonial platform	mass burial 1
46	Preclassic	adult	M	ceremonial platform	mass burial 1
47-49	Preclassic	3 adults	3M	ceremonial platform	mass burial 1, body bundle
50	Preclassic	adult	M	ceremonial platform	mass burial 1
51	Preclassic	adult	M	ceremonial platform	mass burial 1
52-60	Preclassic	9 adult	9M	ceremonial platform	mass burial 1, body bundle
68	Preclassic	adult	M	ceremonial platform	mass burial 2
69	Preclassic	adult	M	ceremonial platform	mass burial 2
70	Preclassic	adult	M	ceremonial platform	mass burial 2
71-74	Preclassic	4 adults	4?	ceremonial platform	mass burial 2, body bundle
75-78	Preclassic	4 adults	3M/1?	ceremonial platform	mass burial 2, body bundle
79	Preclassic	adult	M	ceremonial platform	mass burial 2
87	Preclassic	subadult	?	household platform	simple
96	Preclassic	subadult	?	household platform	simple
109	Preclassic	adult	M	plaza floor	simple, secondary
121	Preclassic	adult	M	plaza floor	simple, secondary
122	Preclassic	adult	?	plaza floor	simple, secondary
125	Preclassic	adult	M	plaza floor	simple, secondary
126	Preclassic	subadult	?	plaza floor	simple, secondary
127	Preclassic	subadult	?	plaza floor	simple, secondary
#	Trauma			Other Features	
1				teeth under a block of chert, with no skull	
2	disarticulated; postmortem damage on both tibias			skull in centre, long bones extending from it	
9	possible cut marks on mandible				
12	skull removed from anatomical position			primary burial and secondary burial of teeth only	
13	skull only			final platform of pyramid	
27				ribs and upper vertebrae scattered where skull should be; skull placed upright on top of right humerus	
29					

30		associated with 31; 4 teeth were also found that may belong to either individual associated with 30; bones look more weathered, possibly left out before burial
31	long bones only	
32	disarticulated left hand and skull	
33		
34	healed misaligned parry fractures of left radius and ulna	
35		
36		
37		
38		
39		associated with 40
40		associated with 39
41-44		
45		associated with 46
46		associated with 45
47-49		at the feet of 50 and 51
50		associated with 51; central individuals in mass burial
51		associated with 50; central individuals in mass burial
52-60	one broken toe phalanx; possible spondylolisthesis on one lumbar vertebra; a hole punched in the skull observed in the field, but not in lab due to use of PVA for preservation	
68	partially disarticulated	associated with 69
69	disarticulated	associated with 68
70		contains body bundle 71-74 in his lap
71-74		tightly packed – defleshed when interred
75-78		tightly packed – defleshed when interred
79		contains body bundle 75-79 in his lap; dagger in lap
87	skull only	
96	skull only	skull placed upright
109	cutmarks on humerus and cranium, no healing	possible exarnate, as all long bones broken
121	possible malaligned fracture with callus on left distal femur	associated with 122
122		associated with 121
125	disarticulated	
126	partially disarticulated	associated with 127
127	partially disarticulated	associated with 126; skull replaced by jar

**Altun Ha**

#	Date	Age	Sex	Context	Type
C-13/5a	Preclassic	subadult	?	household platform	simple
C-13/5b	Preclassic	adult	?	household platform	simple
C-13/5c	Preclassic	adult	M	household patio	simple, secondary
C-13/5d	Preclassic	adult	F	plaza floor	simple, secondary
C-13/5e	Preclassic	adult	?	pyramid	simple, secondary
C-13/5f	Preclassic	adult	M	ceremonial platform	simple, secondary
C-13/5g	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/7	Preclassic	adult	M	ceremonial platform	uncapped cist, secondary



C-13/8a	Preclassic	adult	F	ceremonial platform	partial cist, secondary
C-13/8b	Preclassic	adult	F	ceremonial platform	partial cist
C-13/9a	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/9b	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/10a	Preclassic	adult	F	ceremonial platform	simple
C-13/10b	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/10c	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/11a	Preclassic	adult	F	ceremonial platform	simple, secondary
C-13/11b	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/11c	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/11d	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/11e	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/13a	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/13b	Preclassic	adult	?	ceremonial platform	simple, secondary
C-13/18	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/19a	Preclassic	subadult	?	ceremonial platform	simple
C-13/19b	Preclassic	adult	?	ceremonial platform	simple
C-13/1	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/2	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/3	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/4	Preclassic	subadult	?	ceremonial platform	simple, secondary
C-13/6a	Preclassic	adult	M	ceremonial platform	simple, secondary
C-13/6b	Preclassic	adult	M	ceremonial platform	simple, secondary
C-13/6c	Preclassic	adult	?	household platform	simple, secondary
C-13/6d	Preclassic	adult	?	household platform	simple, secondary
C-13/22a	Preclassic	adult	?	plaza floor	uncapped cist, secondary
C-13/22b	Preclassic	adult	?	plaza floor	uncapped , secondary cist
C-13/23	Preclassic	adult	F	plaza floor	simple, secondary
C-13/34	Classic	adult	?	plaza floor	simple
C-13/35	Classic	adult	?	plaza floor	simple
A-8/7	Classic	?	?	plaza floor	simple, secondary
C-6/3	Classic	?	?		simple

#	Trauma	Other Features
C-13/5a	disarticulated	skeletal elements from pelvis down missing, do not appear to be mixed in with other remains
C-13/5b	disarticulated	skeletal elements from pelvis down and cranium missing

C-13/5c	disarticulated	skull associated with mandible
C-13/5d	disarticulated	skull associated with mandible
C-13/5e	disarticulated	skull associated with mandible
C-13/5f	disarticulated	skull associated with mandible
C-13/5g	disarticulated	skull associated with mandible
C-13/7	skull and lower legs missing	found in association with child's tooth
C-13/8a		
C-13/8b		
C-13/9a		
C-13/9b		
C-13/10a		
C-13/10b		
C-13/10c		
C-13/11a	disarticulated	
C-13/11b	disarticulated	cranium missing
C-13/11c	disarticulated	cranium missing
C-13/11d	disarticulated	cranium missing
C-13/11e	disarticulated	cranium missing
C-13/13a		
C-13/13b		
C-13/18	disarticulated	
C-13/19a		
C-13/19b	skull only	
C-13/1		
C-13/2		
C-13/3		
C-13/4		
C-13/6a		
C-13/6b		
C-13/6c		
C-13/6d		
C-13/22a		
C-13/22b		
C-13/23		
C-13/34	skull, atlas and axis only	
C-13/35	calvarium only	
A-8/7	disarticulated	cranium inside a vessel
C-6/3	skull only	

**Baking Pot**

#	Date	Age	Context	Type	Trauma
R4	Classic	?	ceremonial platform	simple	skull missing
R5	Classic	?	ceremonial platform	simple	skull missing

B3	Classic	subadult	temple altar	simple crypt	
B7	Classic	adult	temple	simple, secondary in urn	skull and leg bones only

**San Jose**

#	Date	Age	Context	Type	Trauma	Other Features
D2	Classic		ceremonial platform	simple, secondary		in urn
D1	Classic		ceremonial platform	simple, secondary		
A5a	Classic	adult	temple	simple	skull only	dish over A5 a and b
A5b	Classic	subadult	temple	simple	skull only	dish over A5 a and b
A6	Classic	adult	temple	simple	skull only	dish over skull
A8	Classic	adult	temple	simple	skull only	skull in two bowls, covered by third bowl

**Mountain Cow**

#	Date	Context	Type
2	Preclassic	plaza	<i>chultun</i> , secondary
9	Preclassic	household shrine	uncapped cist, secondary
9	Preclassic	household shrine	uncapped cist, secondary