

**Burial Practices of the Tiwanaku: A Comparative Analysis of Skeletal Remains  
from Cochabamba, Bolivia**

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## **Abstract**

During the summer of 2007, The University of Wisconsin -La Crosse conducted an archaeological field school at the site of Pirque Alto near Cochabamba, Bolivia. Among the many discoveries was the uncovering of a skeleton showing possible evidence of Tiwanaku influence. The burial contained the remains of a young child in conjunction with a ceramic vessel thought to be an offering; however, the age and cultural influences associated with the burial are unknown. These intriguing remains brought forth many questions; who was this person, how long ago did they live, and what was their life like? I attempt to answer these questions while further investigating the Pirque Alto burial and the Tiwanaku culture through literary review, including past archaeological reports, and analysis of the skeletal remains via photographs and field notes. This research will contribute to the studies and debates of Tiwanaku influence in Cochabamba as well as supplement information known about Tiwanaku burials.

## **Introduction**

One comes across a desolate scene in nature: a smoldering fire, trash scattered upon the ground, a pile of fish bones absent of meat and the slight sounds of waves beyond the foliage. Patterns of footprints, both large and small, weave a tale of mystery and intrigue. What happened here? People come across the remnants of the past every day, whether from ancient times or recent history. The refuse left behind tells us what may have occurred. Similar to the previous scene, burials offer a unique insight into the past. They have allowed researchers to trace our lineages back far before anyone imagined and each new skeleton has told us a little more about the people that lived prior to our time. One such burial found was found in Cochabamba, Bolivia during the summer of 2007. Pirque Alto, the site at which it was found, has shown extensive evidence of Tiwanaku influence in the area. By determining the age of the burial and comparing it to Tiwanaku burials in the area, I assess if the Tiwanaku also influenced mortuary practices in the locale of Pirque Alto. A critical question concerning the culture of the Tiwanaku has been the relationship of the core region to periphery sites in the valleys and inlands of Bolivia. One of the key areas where Tiwanaku presence and influence is up for debate is Cochabamba, Bolivia. Therefore, this research will contribute greatly to current studies. A few important questions will be answered in order to determine such influence: how old are the human remains found at Pirque Alto? What are the general characteristics of Tiwanaku mortuary styles as compared to other cultures during this time period? What are the similarities and differences of the burial from Pirque Alto and Tiwanaku burials? Does the burial found at Pirque Alto display cultural influence of the Tiwanaku in Cochabamba, Bolivia? This paper asserts that the Pirque Alto burial is similar to Tiwanaku burials based upon time period, burial type, skeletal position, burial direction, and grave goods.

## **Background**

### *Past Research*

The Tiwanaku culture has been a source of mystery and fascination in Andean archaeology throughout research of the area. Archaeological interest in Tiwanaku sparked in the 19<sup>th</sup> century when explorers from around the world began to investigate the monumental site of Tiwanaku at its core. The first formal plans, or sketch drawings, of the site were done by Ephraim Squier who thought the site was a sparsely populated religious center. Another scholar, Max Uhle, first visited the site in 1894 and began to describe and illustrate Tiwanaku's monuments (Janusek 2008). Adolf Bandelier, Uhle's contemporary, broke current ideas of the time and suggested Tiwanaku had been a city as well as a ceremonial center. Wendell Bennett then conducted the first excavations of Tiwanaku and developed a chronology in the 1930's. Based on his ten excavation units and 14,500 sherds, he identified twenty different design elements, formalizing a stylistic distinction in Tiwanaku ceramic art. Between 1930 and 1958 archaeological research flourished at Tiwanaku and in nearby sites and by 1950 scholars had outlined Tiwanaku's place in Andean history. Ponce Sangines institutionalized Bolivian archaeology in 1957-1958 and he and his colleagues dominated Tiwanaku research until the 1980s (Janusek 2008). Ponce constructed the most often-cited chronology for the site, composed of five periods referred to as Tiwanaku I-V. Recent research has been conducted by archaeologists such as Alan Kolata, Marc Bermann, and John Janusek, centering on the rise of complex society and agriculture.

Alongside the questions of the rise of the Tiwanaku society, there has been a great deal of debate concerning influence in its periphery areas with significant assemblages of Tiwanaku style artifacts, like Cochabamba. Some researchers, like John Janusek and Alan Kolata (Janusek

2008, Kolata 1993), believe Cochabamba was colonized by the Tiwanaku for use of their natural productivity areas, while others, like David Browman (Korpisaari 2006), believe the relationship between the two areas only involved trade.

Some research on burial characteristics have been used to supplement these studies however, according to Korpisaari (2006), very little has been published concerning burials and their analysis, creating a need for such a study. Mortuary archaeology is a distinctive method of social analysis that can go beyond characterizing the normative death rituals of a culture to shed light on many aspects of its political and social organization (Goldstein 2005). Thus, burial treatment can represent the life of an individual while also having much to do with the lives of the survivors. We do know that Tiwanaku burials tend to be rather simple, especially considering their complex culture. Simple pit burials, stone-collared tombs, and sacrificial burials appear frequently and small amounts of grave goods are often present. Although the burials are *often* simple, evidence of social stratification can be seen in Tiwanaku burials with treatment of remains and grave goods present. Most researchers agree that rank will be expressed by the degree of community investment, and such that the richer and more elaborate a burial is the higher the status of the individual. Burials in Cochabamba are thought to differ from Tiwanaku quite extensively (Korpisaari 2006), but research in the area needs to be continued before conclusions can be made. Once again, my research questions revolve around common trends seen in Tiwanaku burials. I examine both elite and non-elite burials, focusing on non-elite burials. Common burials are focused on because they occur more frequently and they will serve as a better comparison because the burial from the site of Pirque Alto is quite conclusively non-elite. Burials containing unique and elaborate grave goods, especially precious metals or other uncommon artifacts will be included on a small scale, but separated from common burials. As

previously stated, very little has been published on this topic. So, I will be looking at past literature and site reports to pull out information and descriptions of burials.



Figure 1: Map of Bolivia showing the Lake Titicaca Basin and Cochabamba

### *The Tiwanaku*

The Tiwanaku were situated in the southern Lake Titicaca Basin in the South Central Andes (see Figure 1). It is considered to be one of the most important pre-Inca civilizations known today. The Late Formative period lasted from 100 B.C. – A.D. 500. This is related to Tiwanaku I-III, a time period sometimes thought to be pre-Tiwanaku. Classic Tiwanaku occurred during A.D. 500-1150 (see Figure 2). This is related to Tiwanaku IV-V (Kolata 1993). It is believed the building of the Tiwanaku city's monumental religious and administrative core (see Figure 3) began around A.D. 300-500 (Janusek 2008) and the Tiwanaku polity then dominated the south central Andes between ca. A.D. 500-1150 (Janusek 2004).

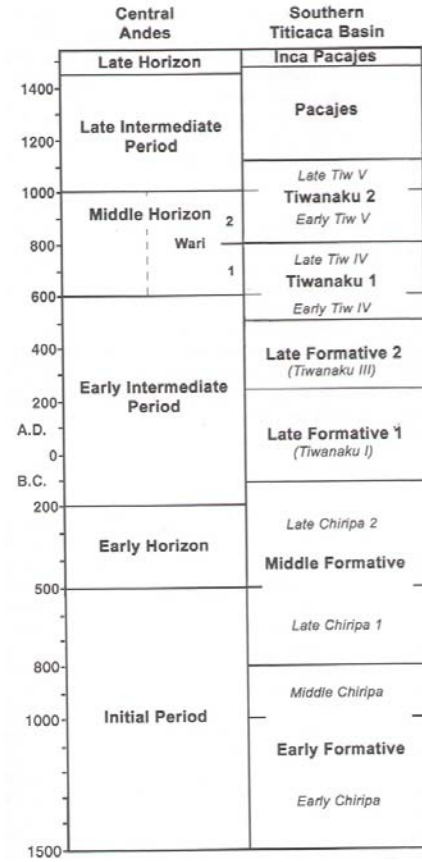


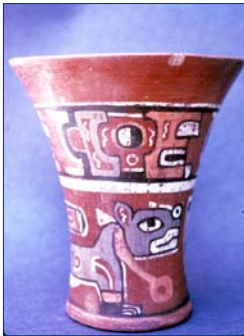
Figure 2 : Chronological Chart for the Andes (Janusek 2008: 1.7)



Figure 3: Tiwanaku's monumental core

The political economy was based on local production- raised-field agriculture, rain-fed agriculture, camelid pastoralism, commodity production, lake exploitation- and external mechanisms, including the creation of extensive exchange and colonial relationships throughout

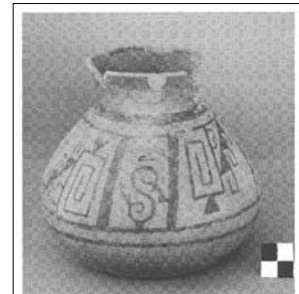
the south central Andes (Stanish 2003). The Tiwanaku had a distinct material culture shown through their unique ceramics, artwork, and monuments among other things. Their architecture often utilized large stones in rectangular blocks. They also developed carved images and stepped platforms. Subterranean temples were also quite common. Tiwanaku ceramics slightly varied throughout time periods and outlying villages, but the typical Tiwanaku (Tiwanaku IV/V) ceramics include keros (see Figure 4), tazons (see Figure 5), vasijas (see Figure 6), ollas, and tinajas. These are the most common ceramics found in burials.



*Figure 4: Kero (Janusek 2008:142)*



*Figure 5: Tazon*

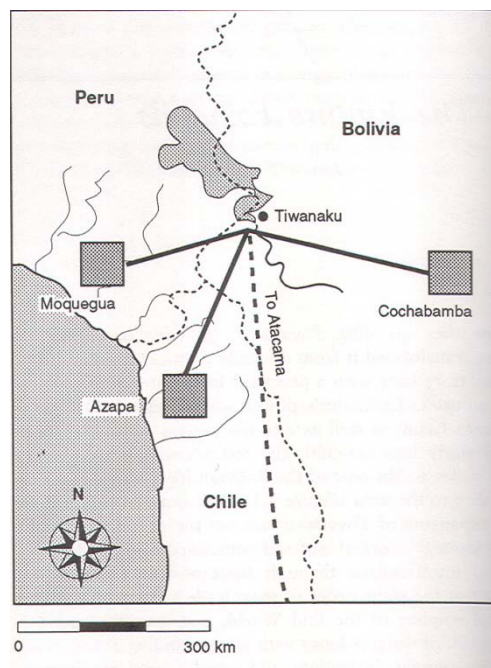


*Figure 6: Vasija (Korpisaari 2006)*

Less commonly, the vessel types escudillas, incensarios, and sahumadores are found. The great majority of decorated vessels are red-slipped, with black, white, and orange being the most common decoration colors (Korpisaari 2006). The vessels motifs often depict felines, condors, steps, etc. Some ceramics in areas of lower status are not as complex, but overall Tiwanaku ceramics are high quality, suggesting specialized groups of potters.

Beginning around A.D. 700, Tiwanaku influence began to spread throughout the Titicaca Basin, as well as into regions at lower altitudes, (see Figure 7) particularly into agriculturally fertile areas such as the Cochabamba Valley to the east and the Moquegua Valley to the west (Kolata 1993). Tiwanaku presence beyond the core was quite complex. It ranged from periodic interaction and local diasporic movement to state political hegemony, forming an intricate polity (Janusek 2008). This influence is seen archaeologically through uncovering material remains,

specifically ceramics, with similar styles to the unique Tiwanaku. Unfortunately, beyond the realm of ceramics we have little primary evidence to reconstruct the history of Tiwanaku in these areas, such as Cochabamba. In fact, some researchers say of the areas with major Tiwanaku influence, the Cochabamba region is the least well known archaeologically (Korpisaari 2006).



*Figure 7 : Map showing the spread of the Tiwanaku culture (Kolata 1993: Fig 7.1)*

*Pirque Alto*

*Figure 8: Site of Pirque Alto (Adapted from McAndrews 2006)*

The site of Pirque Alto (see Figure 8) is located southwest of Cochabamba's central valley on a bluff overlooking the Rio Tapacari. Importantly, it lies in a natural travel corridor leading to the Altiplano and the Titicaca Basin (see Figure 9). The Altiplano, or high plain, of South America is a geographical area of extensive plateaus. Lake Titicaca is its most known geographical feature. This location allows researches to indirectly infer some type of interaction between the Cochabamba region and the Altiplano populations. Archaeological work first began at Pirque Alto in 2005 by Drs. Timothy McAndrews and Claudia Rivera along with several students from the University of Wisconsin-La Crosse. Through a complete surface survey they were able to uncover thousands of diagnostic and un-diagnostic ceramics that underwent detailed analysis. Early results suggest that Pirque Alto is a multi-component site from the Formative Period through the Late Horizon (McAndrews 2006).

Drs. McAndrews and Rivera returned to the site in 2007, along with University of Wisconsin- La Crosse 2007 Field School students. During this time actual excavation and digging of the site took place. This excavation is the basis of this current study. Units were

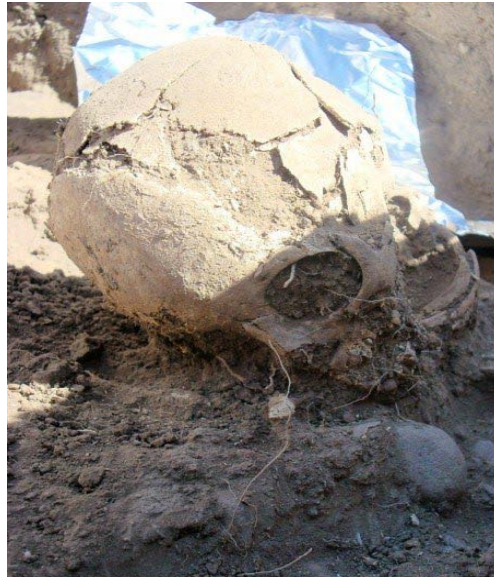


The first method employed involved a great amount of background research to complete my project. I read relevant materials on the Tiwanaku culture in order to learn about their culture and their spread of ideas throughout the Andes. My research also included different theories regarding Tiwanaku expansion and influence from its core to periphery areas. Then, the material surrounding Tiwanaku burial practices, as well as burial patterns of other cultures throughout the area, was researched. Specifically, I have reviewed archaeological reports and past literature describing burials found in the vicinity of Tiwanaku and Cochabamba. The next step was to sort this data in order to compare the burials systematically. Compiled burials were put into an Excel

spreadsheet recording type of burial, position, direction, grave goods, age, and sex. These were recorded with the same wording and descriptions as provided by the reference for that particular burial. This resulted in some variation in terms, especially in ceramic types, but I attempted to overcome these differences in the analysis. In addition, because the burial information is coming from different references and sometimes secondary sources not every burial description included all the information I wished to record, so various burials include only some of the above information. Lastly, not all the burials were divided up individually in my references but described them in groups. For the purpose of this project I have divided up burials individually as often as possible. The dataset was divided into common and elite burials solely through the use of grave goods. Burials with unique artifacts, such as precious metals, and/or more than 5 ceramics were characterized as elite. The dataset was then organized by time period, as provided information allowed. Infant burials and male and female burials were also separated to look for patterns. Then, I have compared the characteristics of all compiled burials to the burial found at Pirque Alto.

In addition, I radiocarbon dated a charcoal sample found in conjunction with the uncovered burial. The sample was carefully packaged according to guidelines and sent to Beta Analytic in Florida. The sample went through Accelerator Mass Spectrometry (AMS) dating. This technique was most beneficial for the small charcoal sample that was recovered.

## Data and Analysis



*Figure 10: Pirque Alto Burial, Feature 4D*

The burial at Pirque Alto was found at a provenience of N303E321, Feature 4D (see Figures 10, 11, and 12). It was excavated carefully in 1-3cm increments. A charcoal sample was taken near the cranium. The sample was dated by Beta Analytic Radiocarbon Dating Laboratory located in Miami, Florida. It was found to have a 2 sigma calibrated date, with 95% probability, of A.D. 1230-1300. Although this date post dates the Tiwanaku who collapsed in A.D. 1150, Tiwanaku *influence* is the focus of this paper and is still evident. This issue will be discussed in the analysis section. The skeleton was deteriorated, but appeared to be a young child around 2 years of age or younger. The skeleton was in a flexed, seated position with its head facing east. It was found in a simple pit (see Figure 13). The burial had only one grave good; a small vasija with a handle (see Figure 14).

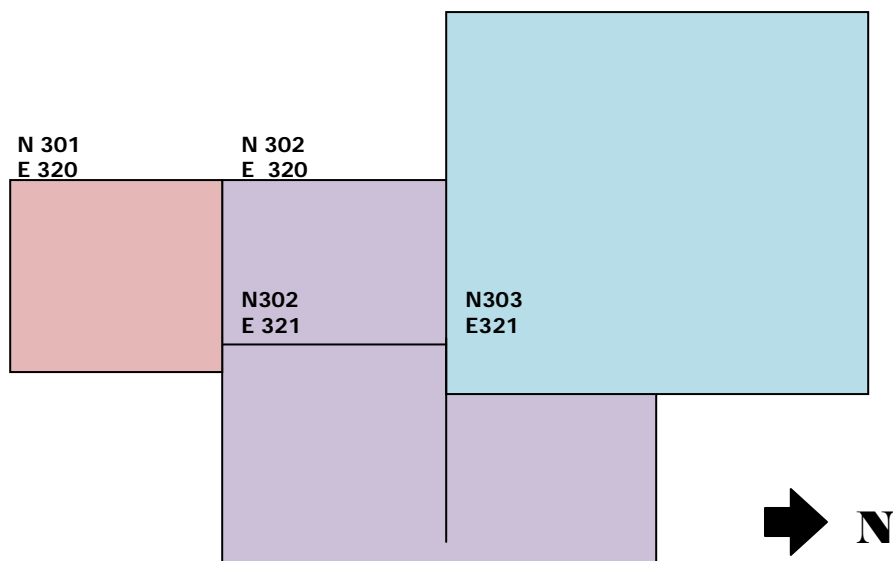


Figure 11: Location of N303 E321 unit at Pirque Alto (Céspedes 2007)

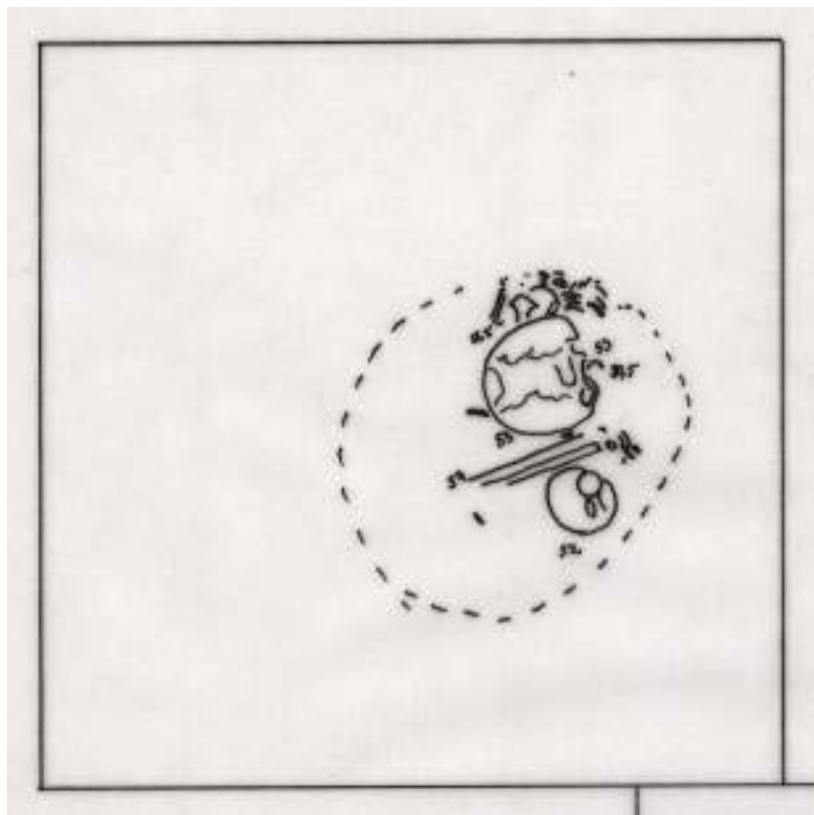


Figure 12: Drawing of Feature 4D. Top of skull and vasija are pictured (Céspedes 2007)



*Figure 13: Pirque Alto Burial*



*Figure 14: Grave good from Feature 4D Pirque Alto. A vasija with a handle.*

### *Tiwanaku Burial Dataset*

Two hundred and ninety total common burials and 25 elite burials were compiled to form a dataset of various Tiwanaku burials. The common burials were also organized by time period, as known. Age (specifically infants) and sex were also focused upon to look for patterns. There were 26 total infant burials. As previously mentioned, tomb construction, skeletal position, burial

direction, and grave goods were all recorded, as possible, for each of these burials. These burials came from sites surrounding the Lake Titicaca Basin and in areas proven to be locations of Tiwanaku influence. This dataset can be found in Appendix 1. Resources deemed these burials to conclusively be Tiwanaku in every case. A few sources, although not all primary, have contributed to my research (Goldstein 1989, Janusek 2004, Korpisaari 2006, Ryden 1947, Ryden 1957).

### *Tomb Construction*

Excavations indicate three main types of Tiwanaku tombs. These types can be seen in the following illustration (Figure 15);

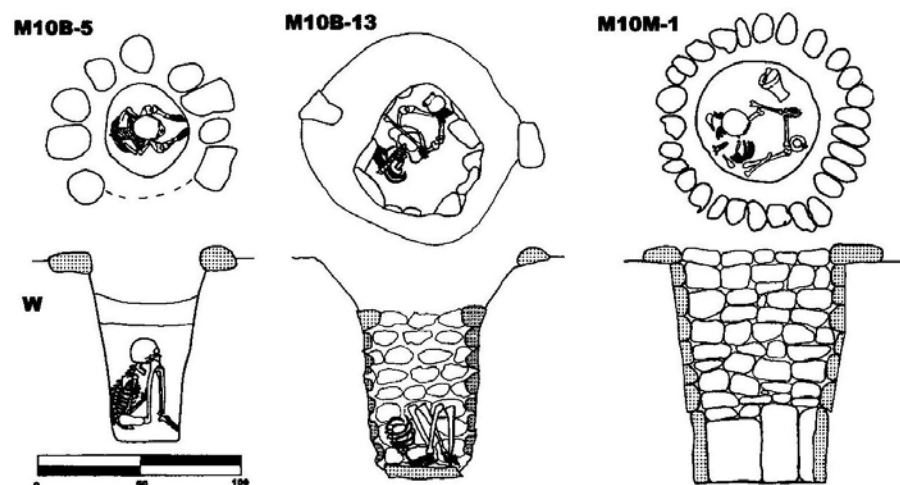


Figure 15: Tomb Types (Goldstein 2005: Fig 6.19)

The simplest tomb type is the *fosa* or simple pit. Foshas have no surface indications and may be discerned on the surface only as depressions of looser fill. Consequently, they are probably underrepresented. According to Goldstein (2005), foshas represent 28.5 percent of a sample of 4,291 tombs in the nine cemeteries examined by Vargas at Chen Chen, an important Moquegua

site displaying Tiwanaku influence. Out of the burials that included tomb construction in the Tiwanaku dataset, 20.5% were simple, unlined pits. 7% of the burials were simple pits with a surface ring (see Figure 16). These pits were easier to find, but are unique because often these surface rings would be disturbed or removed from the archaeological record. Twenty- five elite burials were compiled. Fifty- five percent of these burials were simple pits (see Figure 17). Patterns did not drastically change when looked at by time period (see Figure 18). With infants, only 7.7% were simple pit, keeping in mind a small sample size (see Figure 19). Twenty-three percent of the infant burials were simple pits with a surface ring that was evident. This makes simple pit burials the second most common infant burial type. It is once again important to note that simple pit burials are often harder to find, and even more so when the size is drastically reduced with an infant burial. When looking at male vs. female in the data it was found that 15.4% of males and 21.7% of females were found in simple pits (see Figure 20). Fifteen percent of males and 13% of females were found in a simple pit with a surface ring. These results are similar and there does not seem to be a distinction with sex in this case.

The majority of Tiwanaku tombs are *cistas* or cists, roughly cylindrical tombs with some kind of stone lining. For example, at Chen Chen 70.6 percent of the total sample were cists, though the frequency varied considerably from cemetery to cemetery. Of the compiled Tiwanaku burials 44.3% were stone lined cists, making up an obvious majority (see Figure 16). Out of the elite burials, 40% were stone lined cists (see Figure 17). Once again, patterns did not change with time period (see Figure 18). In the infant burial assemblage stone lined cists were again the most common burial type with 50% of the burials found in such a cist (see Figure 19). Roughly 42% of males and 22% of females were found in a stone-lined cist (see Figure 20). There does seem to be a difference in treatment in this case, especially because stone-lined cists were not the

most common type for female burials. The most elaborate variant of the cist is the slab cist. These tombs have large, flat-sided stone slabs that were carefully fitted to line the base of the tomb with rows of smaller cobbles for the upper layers. These made up only 12 percent of those at Chen Chen (Goldstein 2005). Slab cists made up 24.5% of the compiled burials (see Figure 16). No slab cist tombs were found in the elite burial assemblage. When divided by time period, the appearance of slab cists occurs more frequently. This is because they are recognized abundantly during the Post Classic time period. It is important to note that these burials all came from the same site, and while it is imperative to recognize this data I do not believe an overall shift to slab cists occurred as a general trend during Post Classic Tiwanaku. Infant burials coincided with the general trend of common burials and only displayed 15.4% as slab lined tombs (see figure 19). When the common burials were divided by sex it was seen that around 15% of males and 35% of females were found in slab lined cists (see Figure 20). As previously stated, a distinction is seen in this case. This could be due to the fact that stone-lined and slab-lined cists could be interchanged and hard to tell apart during excavation. Some researchers do not even use the term slab-lined cist at all but rather describe all of these tombs as stone-lined cists. This difference could also be attributed to an actual distinction between male and female burials, however reasoning behind this behavior can not be conclusively described at this time.

Shaft burials also occur in Tiwanaku culture, but rarely. These tombs are deeper and require more stone work to complete. Interestingly, the dataset had revealed these are not restricted to the elite. Shaft burials made up only 4% of the common burials, 2% of the elite, and 4% of the infant burials. Eleven percent of male burials and 8 % of females were found in shaft burials but these percentages are still a minority in the dataset. Overall, there does not seem to be class distinction in regards to tomb construction and the same general types were used

throughout time. Some distinction may have occurred however with males and females. All of the following graphs were compiled from the dataset found in Appendix 1.

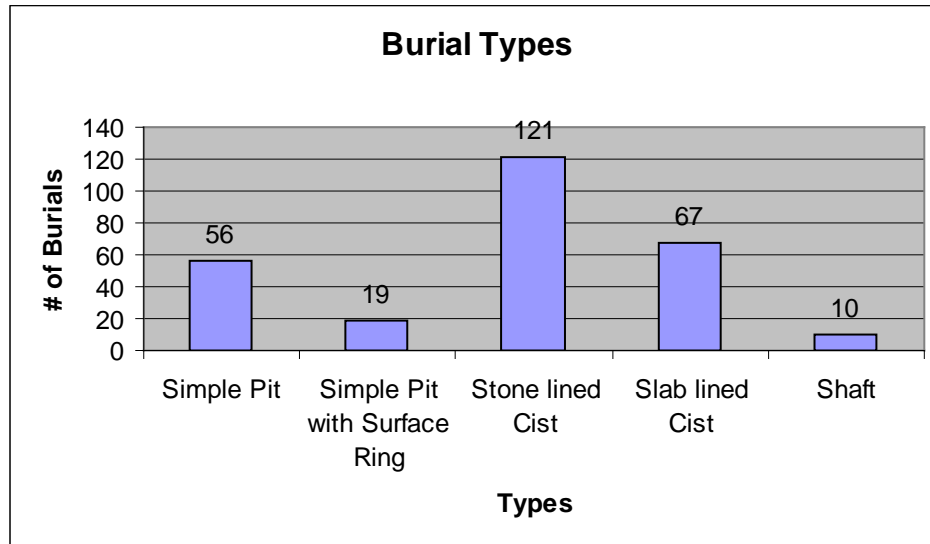


Figure 16: Graph of burial types

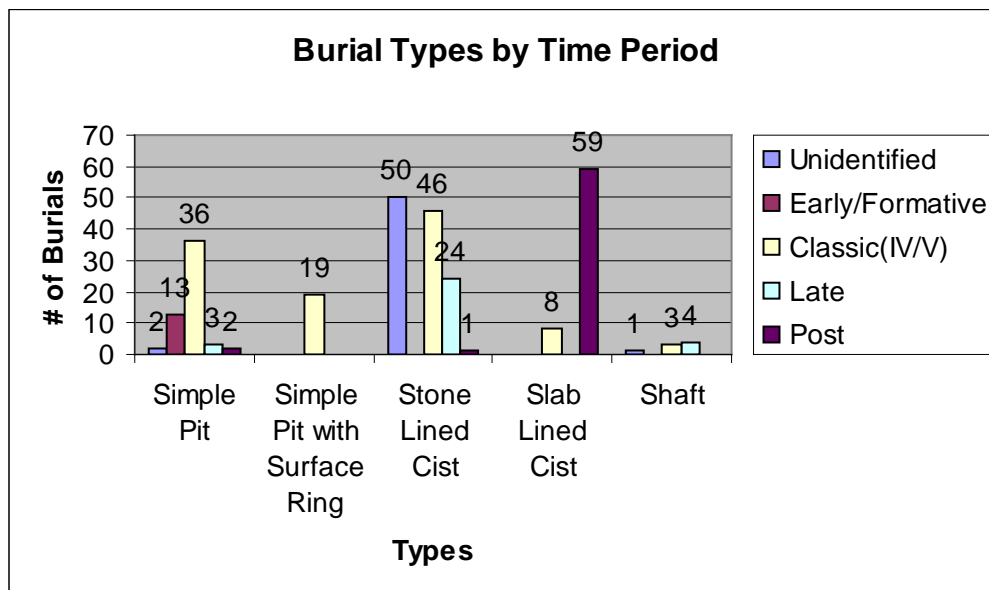


Figure 17: Graph of burial types with respect to time period

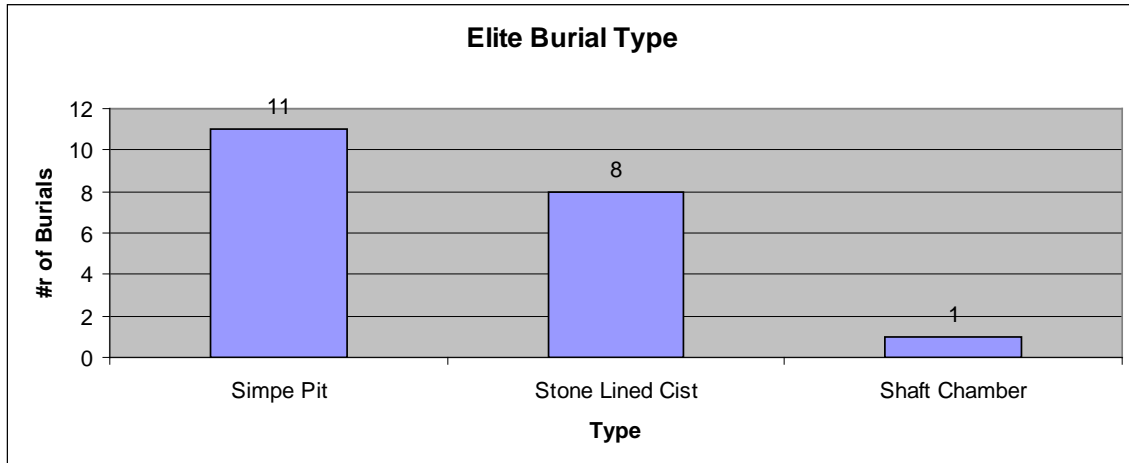


Figure 18: Graph of elite burial types

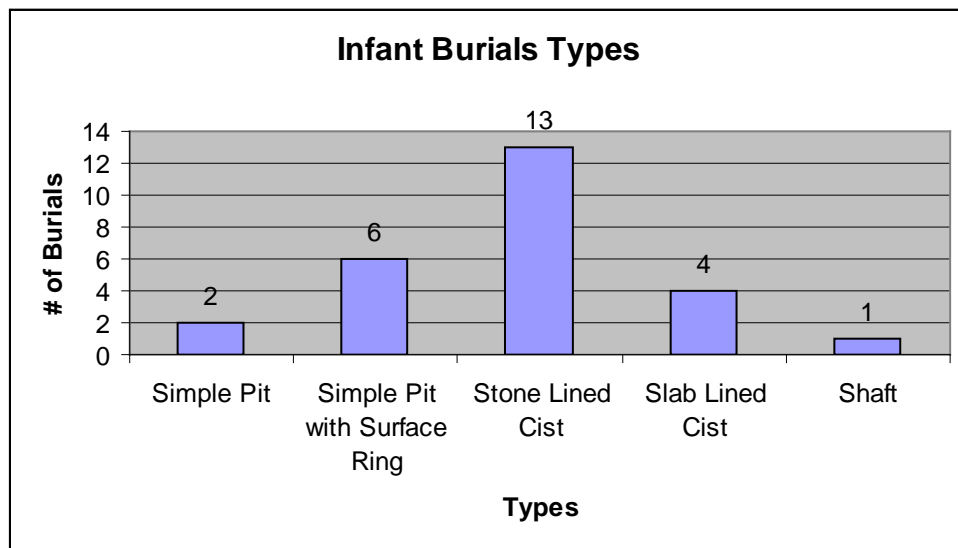


Figure 19: Graph of infant burial types

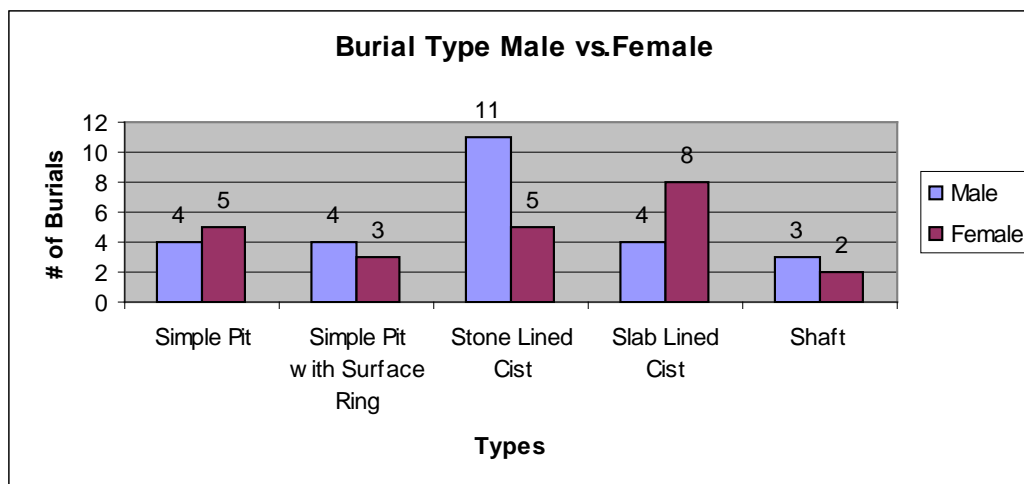


Figure 20: Graph of burial type comparing male and female burials

### *Skeletal Characteristics*

First of all, most Tiwanaku skeletons are found at shallow depths, seldom exceeding 120 cm. Tiwanaku individuals were commonly buried in a seated, flexed position facing east. Where body orientation could be determined, the bodies at Omo, a Moquegua site showing Tiwanaku influence, faced east in all but one burial, and Vargas reports east facing orientation for most burials at Chen Chen (Goldstein 2005). The compilation of common burials showed that 47.8% of the skeletons were facing east (see Figure 21). Making up the next majority, 24.5% of these burials faced south. When divided by time period, the majority of the skeletons still faced east, and then south (see Figure 22). Seventy-seven percent of the elite burials actually faced north, which is a drastic difference from the common burials (see Figure 23). This could actually be on purpose and a trend for elite burials, but it is more likely that this difference occurred because only a small number of elite burials distinguished direction, so it took only 7 burials facing north to reach this majority. 75% of the infant burials were found facing east (see Figure 24). Not many of the burials distinguishing male and female also distinguished burial direction, so more variation occurs. Around 38% of males and 75% of females faced east (see Figure 25). When

looking at males especially, there is obviously more variation in direction. When looking at the data, there does not seem to be a trend or explanation for the burials facing directions other than east. However, it is important to note more variation in directions occurred with male burials (see Figure 25). Interestingly, all 6 skeletons that were found face down faced either west or southwest. Burying a body face down in the ground shows obvious distaste for that individual so perhaps a west or southwest burial was disrespectful. This leads one to believe facing burials in directions other than east could have been related to status, but more research needs to be done before this can be concluded.

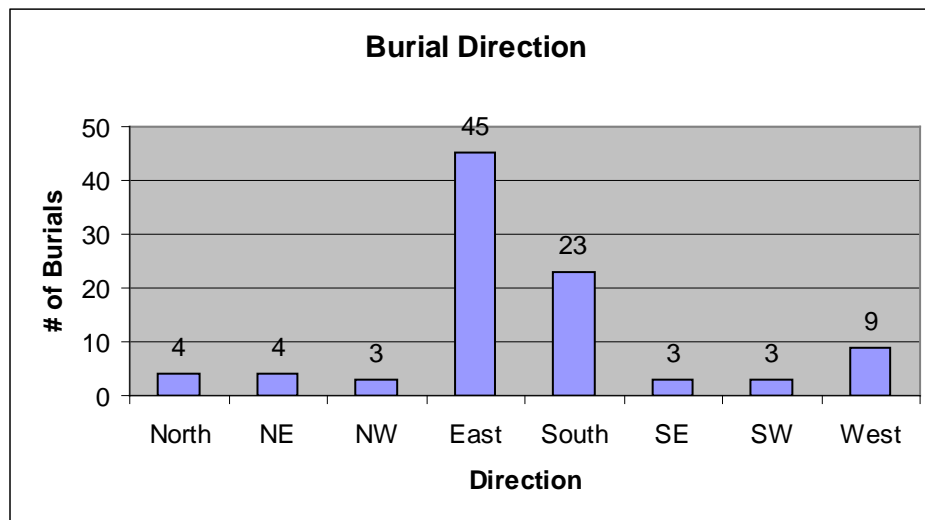


Figure 21: Graph of burial direction

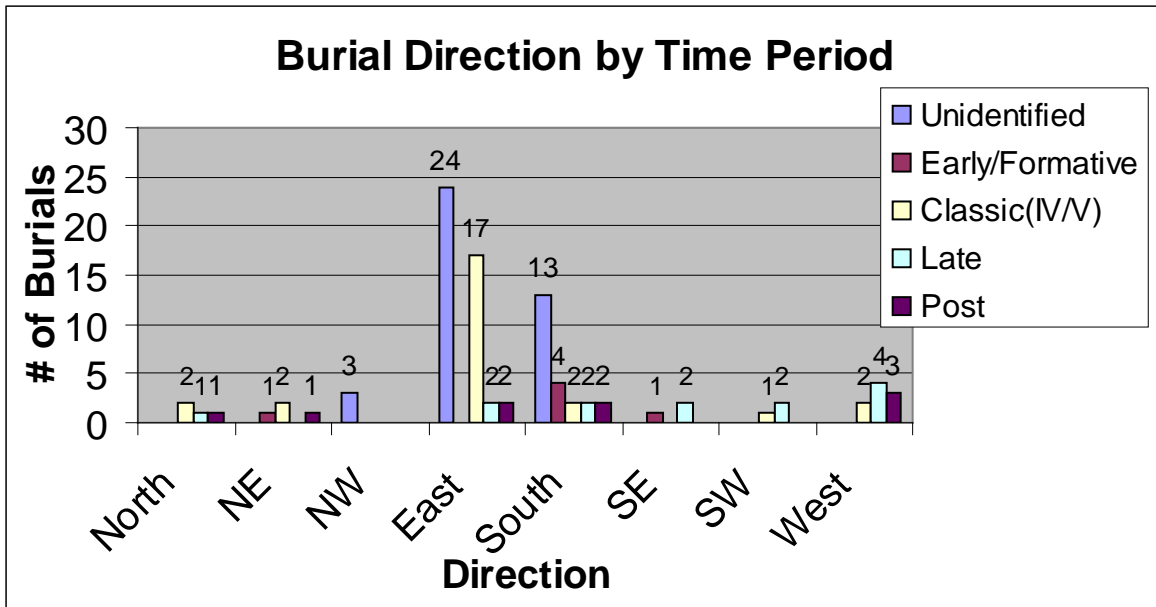


Figure 22: Graph of burial direction with respect to time period

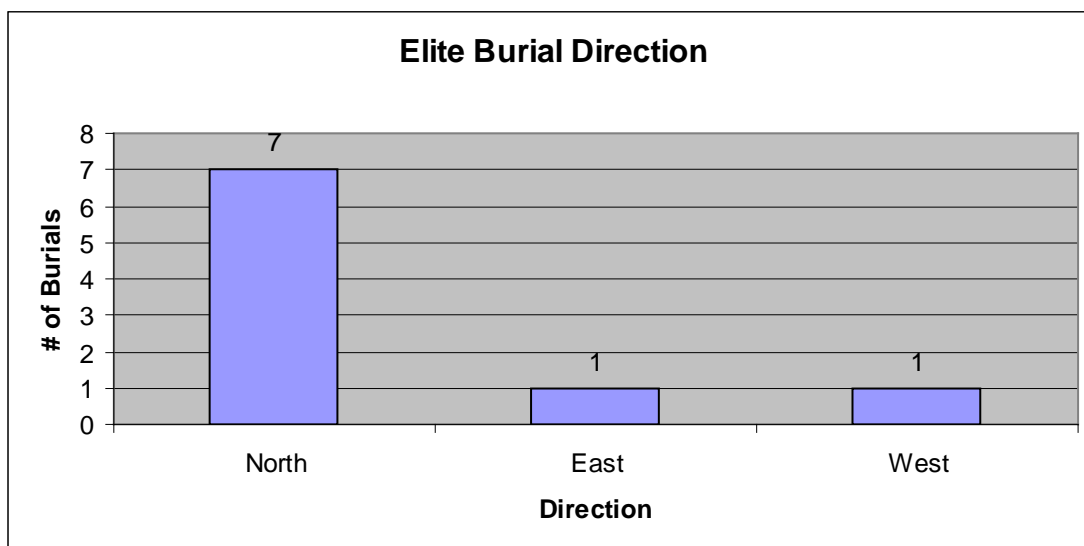


Figure 23: Graph of elite burial directions

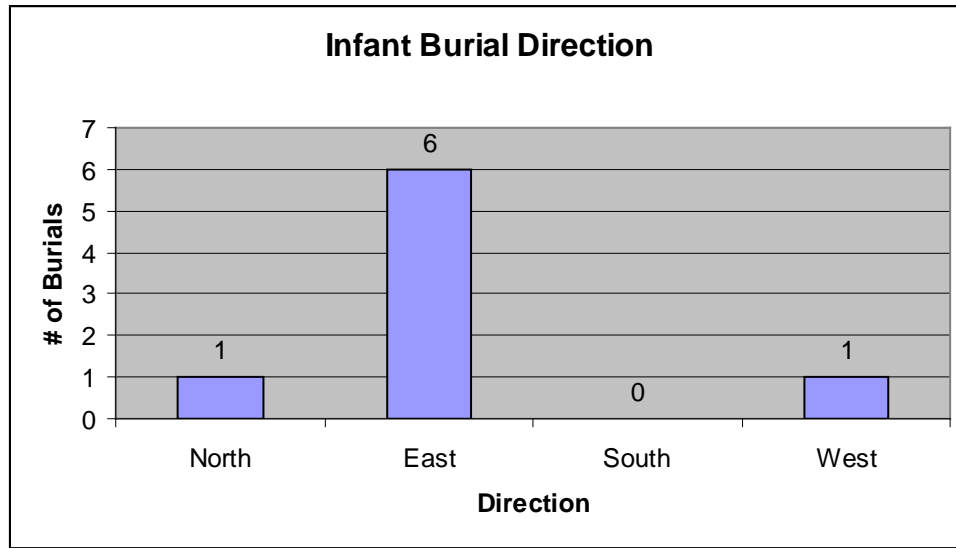


Figure 24: Graph of infant burial directions

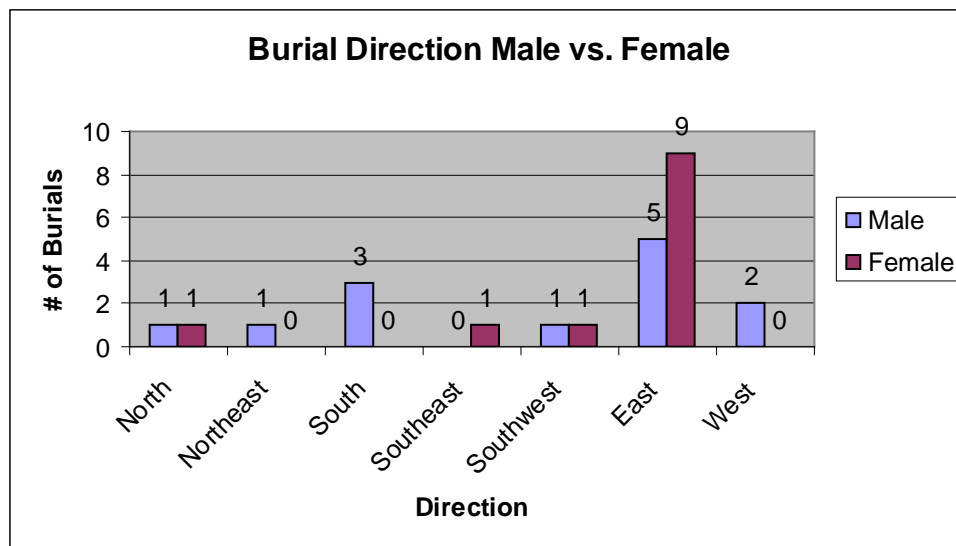
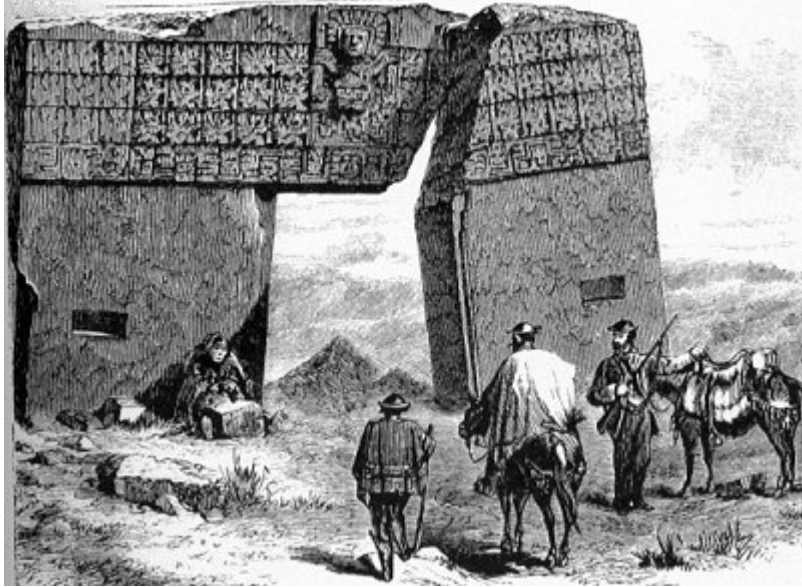


Figure 25: Graph showing burial direction comparing male and female burials

It makes sense that the Tiwanaku would orient their dead towards the east. The sun was an important aspect of the Tiwanaku culture and religion. In fact one of the most recognized Tiwanaku structures is called “The Gateway of the Sun” (see Figure 26). East orientation of the body would allow the skeleton to face the rising sun.



*Figure 26: Gateway of the Sun (Janusek 2004)*

An overwhelming majority of Tiwanaku skeletons were found in a flexed, seated position. Approximately 92% of the skeletons in the common burial assemblage (see Figure 27) were found in this position and 55.5% of the elite were found in this position (see Figure 29). One hundred percent of the infant burials that were able to distinguish position were flexed and seated. Ninety- two percent of males and 85% of females were found flexed and seated (see Figure 30).

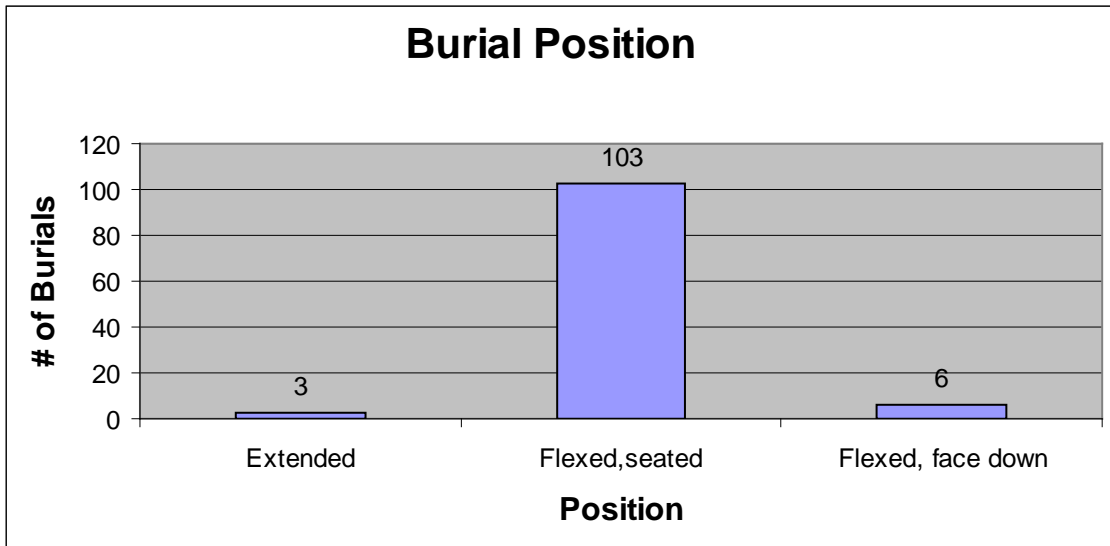


Figure 27: Graph of burial position

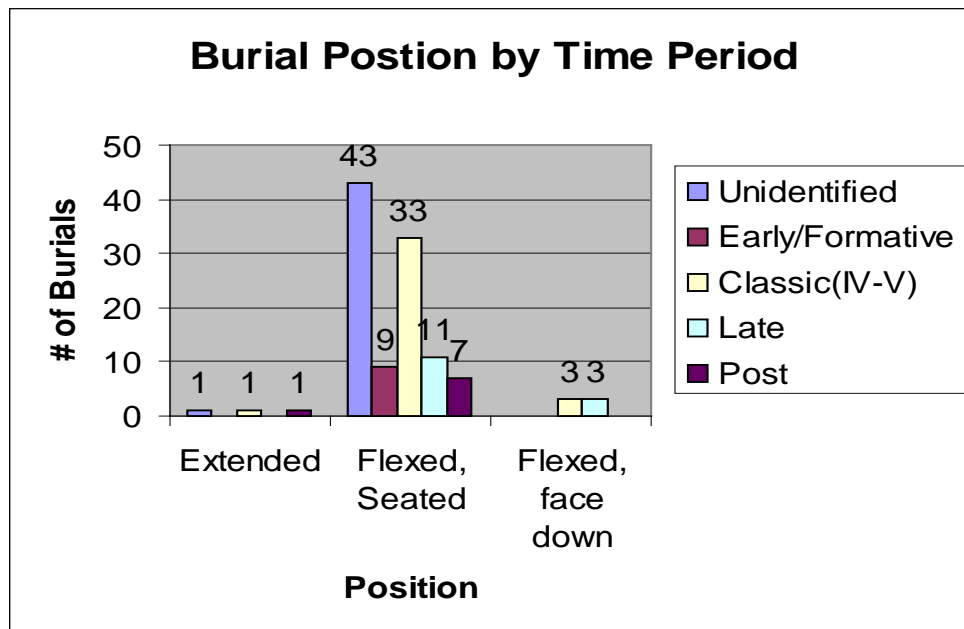


Figure 28: Graph of burial position with respect to time period

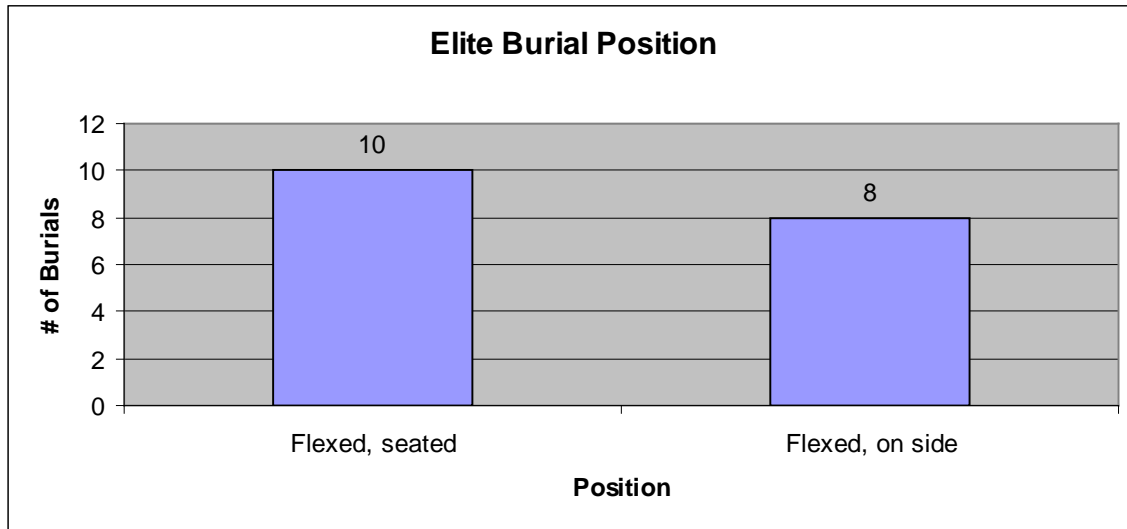


Figure 29: Graph of elite burial positions

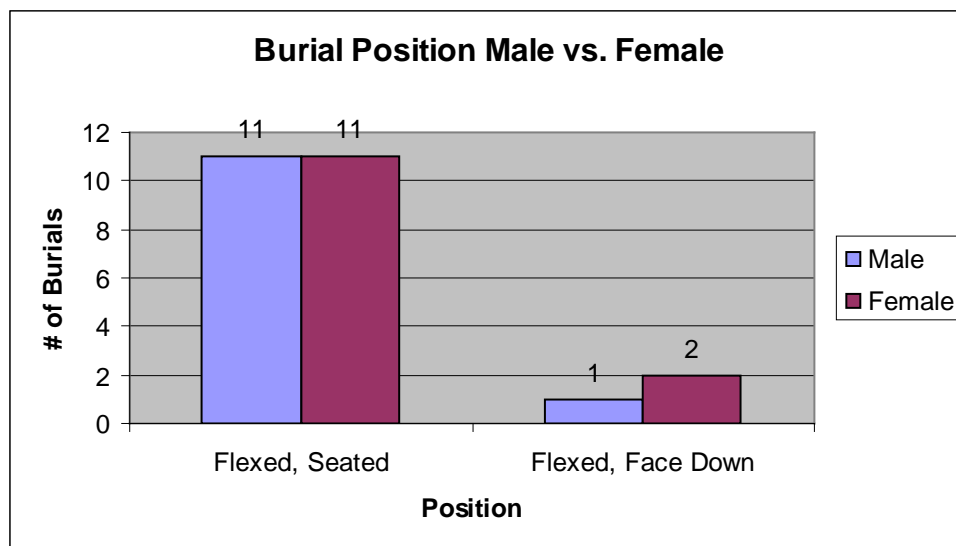


Figure 30: Graph of burial position of burial position comparing male and female burials

### Grave Goods

As previously mentioned, the typical Tiwanaku (Tiwanaku IV/V) grave goods include keros, tazons, vasijas, and tinajas. Less commonly, escudillas, incensarios, sahumadores, and ollas are found. Ceramics are the most common grave good found in a Tiwanaku burial. John

Janusek (2008) provided straightforward definitions of each of these ceramic types. These vessel types can be seen in Figure 31. A kero is a ceramic drinking goblet used in both ceremonial feasts and quotidian meals. A tazon is a flaring bowl most likely used to consume soups and stews. A tinaja is a large ceramic vessel used commonly to store liquids and ferment alcoholic drinks. They were typically decorated with designs representing the liquid they contained. A vasija is also used to store liquid. An escudilla is an elegantly crafted flaring rim bowl that was largely limited to ceremonial activities. An incensario is a ceremonial incense burner employed in Tiwanaku ceremonial and mortuary contexts, and frequently modeled in the form of a feline or llama. Sahumadores are less elaborate incense burners employed in domestic contexts. An olla is simply a ceramic cooking vessel.

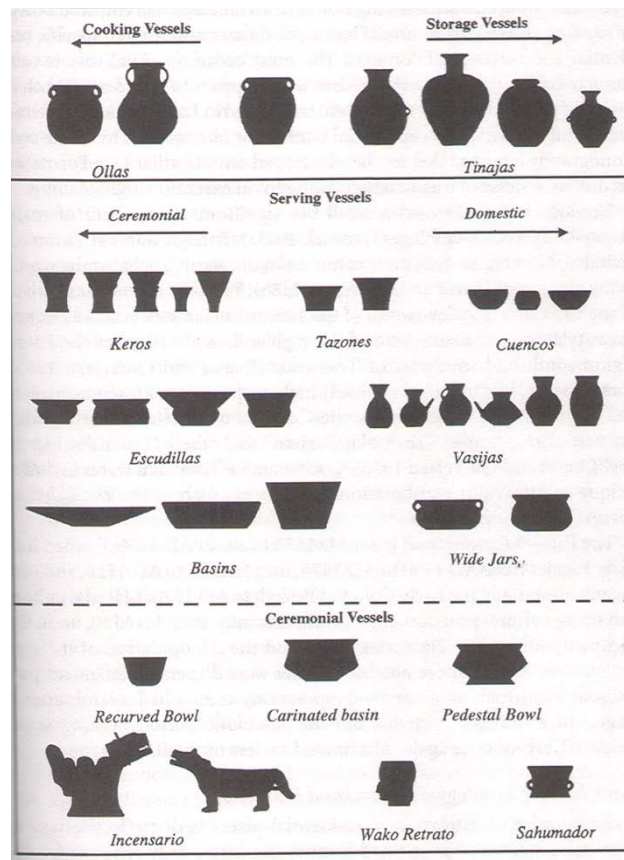


Figure 31 : Tiwanaku vessel types (Janusek 2004:3.2)

From the common burial assemblage, the greatest majority of burials had tazons. About 17% had at least one tazon, 16.8% had a kero, 12% had an olla, and 10% had a vasija (see Figure 32). Textiles were also quite common in this dataset, found in 9.1% of the burials. When divided by time period ceramics could still be seen as the most common overall. However, a few of the grave goods can be seen to have come from particular time periods or sites (see Figures 33, 34, and 35). Ollas, for example, are mostly represented during the Post Classic phase. Textiles, blankets, and basket fragments were only found during Classic Tiwanaku. This discovery is believed to be evident because these artifacts were all from the same site, which must have had better conditions for preservation of such artifacts. Elite burials were obviously different in this case, being this was the attribute I used to distinguish the common and elite burials. Twenty-eight percent of the burials had some kind of metal artifacts (see Figure 36). Another majority of the elite burials, 28%, had sodalite beads. Ceramics were not as common, but did make up part of the elite grave goods. According to this dataset, it does not seem certain types of ceramics were favored for the elite. I expected to see a distinct pattern with specific grave goods for infant burials. However, this was not the case. Infant burials displayed much of the same grave goods as the overall common burials (see Figure 37). Textiles were the most the most common as 22.7% of the burials had a textile fragment. Keros and tazons were also common, each making up 18.2%. Only one vasija was found associated with an infant burial. Interestingly, it was a common trend for infant burials to have only one artifact, especially when dealing with ceramics. Only 2 out of the 26 infant burials were found with more than one ceramic artifact, and only an additional 4 had more than one artifact other than a ceramic vessel. The same general common burial trends were found when looking at males vs. females. Around 19% of males and 10% of

females had a kero, 7% of males and 16% of females had a tazón, 5% of males and 4% of females had a vasija, and 16% of males and 19% of females had a textile (see Figure 38). A few artifacts, such as the spindle whorl, cuenco (a type of bowl), and spoons, were found more often with females. This is important because tasks involving these artifacts were most likely completed by females, showing a possible distinction in work roles.

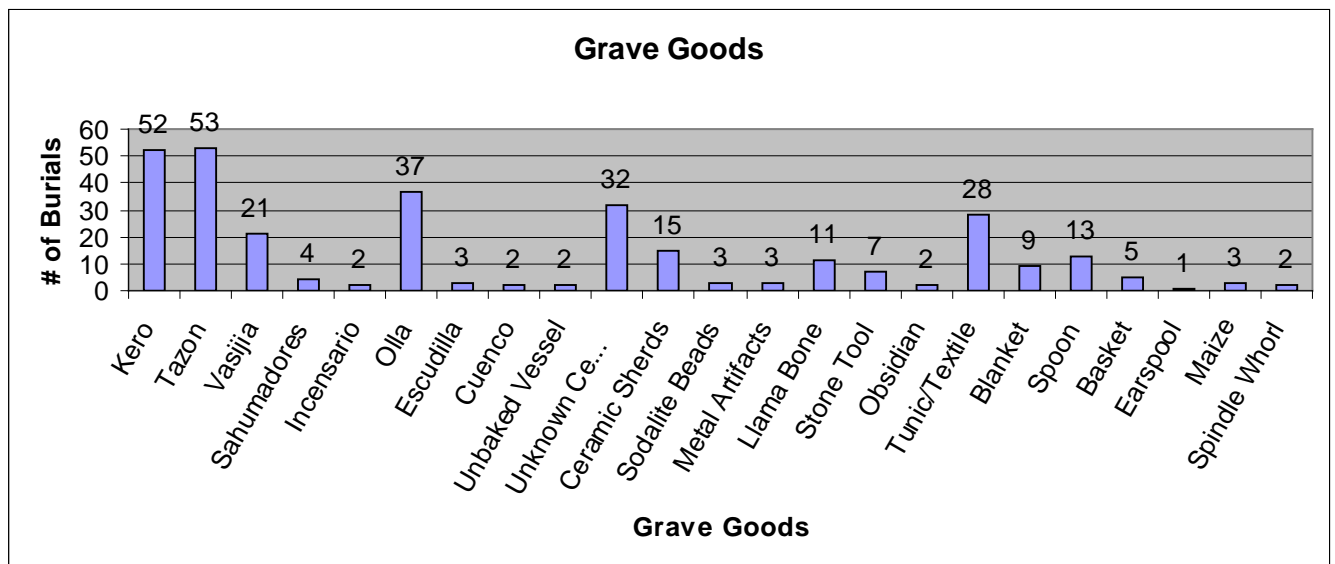


Figure 32: Graph of grave goods

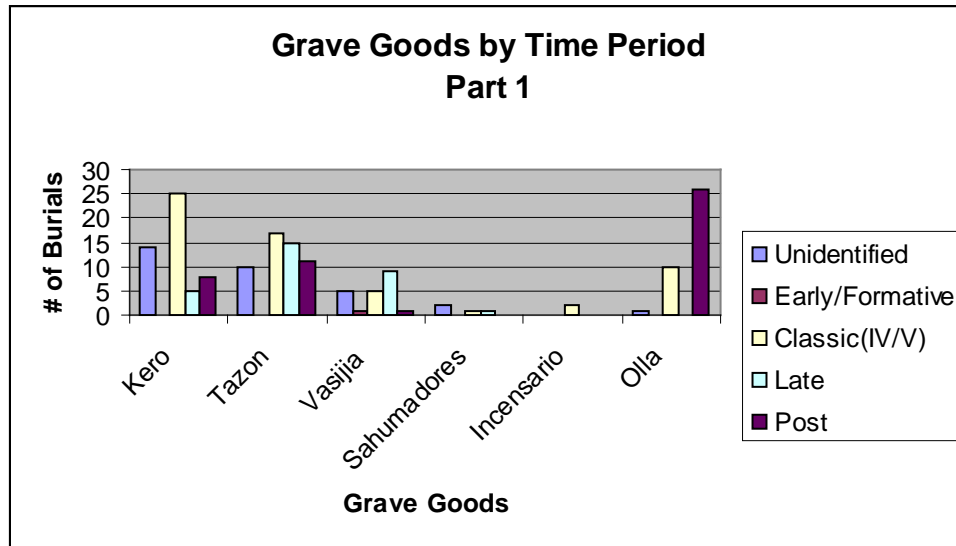


Figure 33: Graph of grave goods with respect to time period

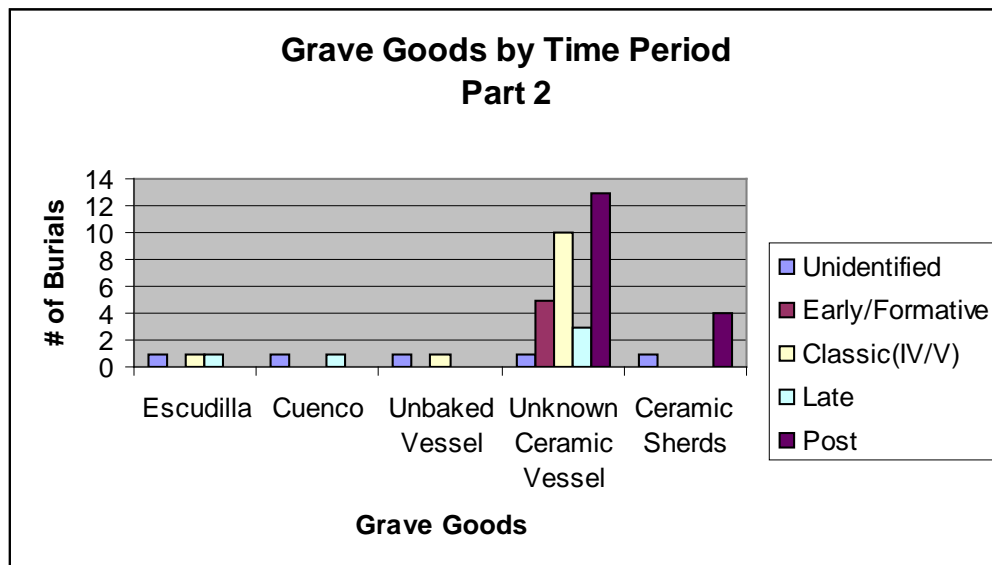


Figure 34: Graph of grave goods with respect to time period part 2

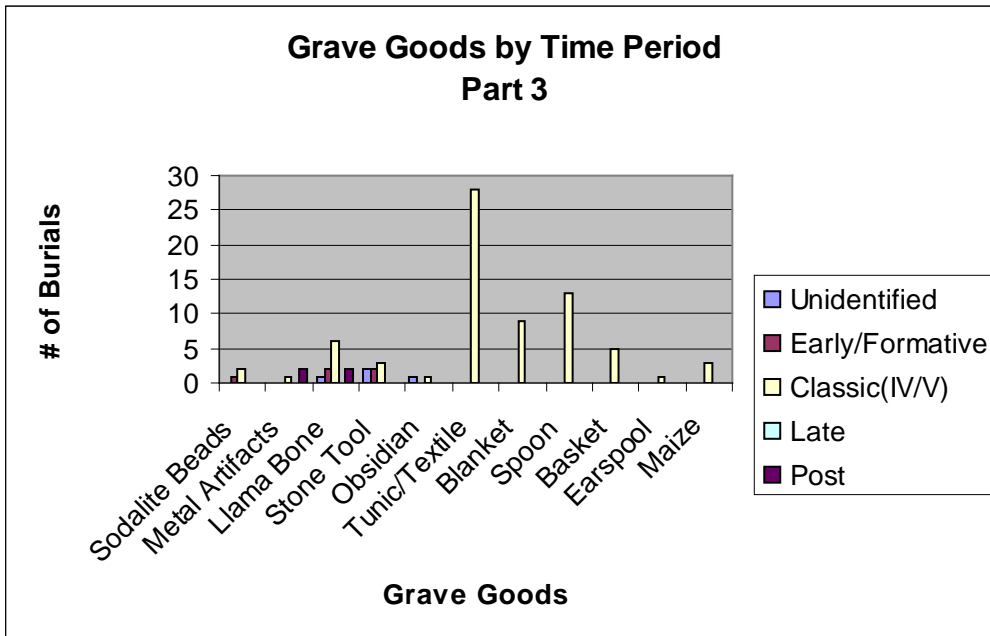


Figure 35: Graph of grave goods with respect to time period part 3



Figure 36: Graph of elite grave goods

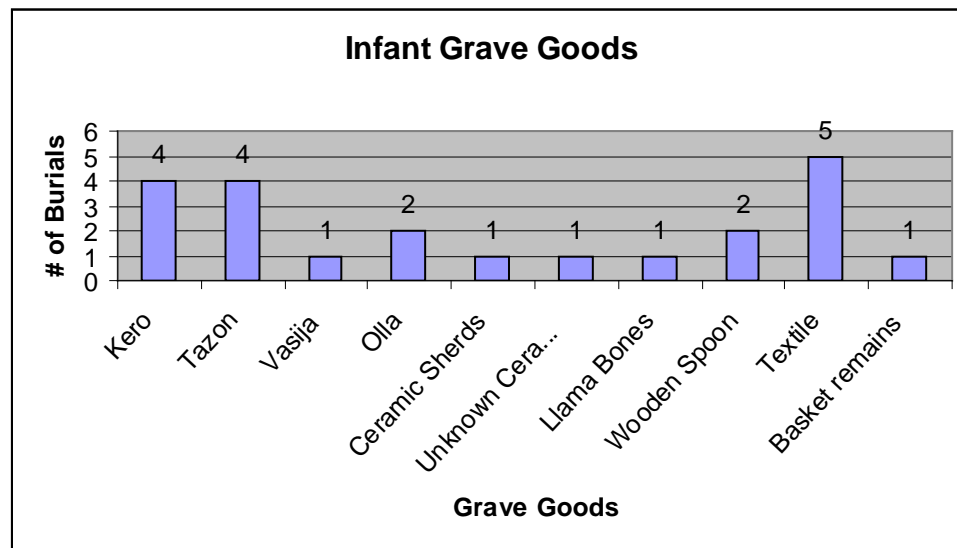


Figure 37: Graph of infant grave goods

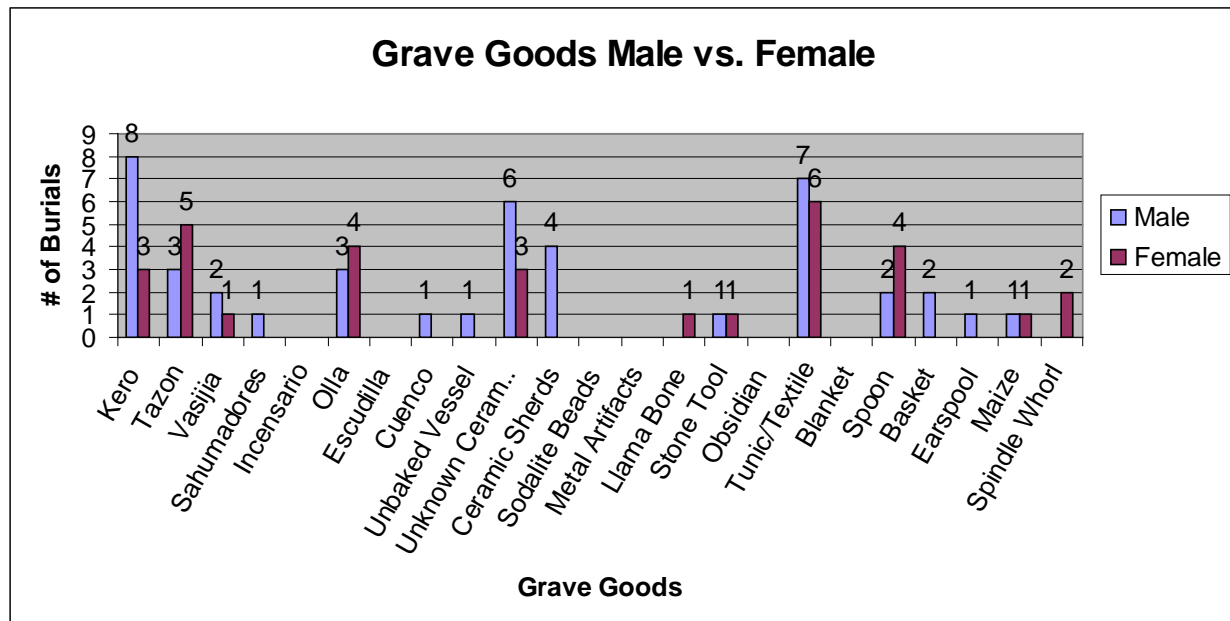


Figure 38: Graph of grave goods comparing male and female burials

### Surrounding Culture Areas

It is also imperative to look at a culture other than the Tiwanaku for comparison. The Wari (or *Huari*) were a Middle Horizon civilization that flourished in the Andes in the south-

central coastal area of modern-day Peru, from about A.D. 500 to 900. They were contemporaries of the Tiwanaku polity to the south and it is believed they shared certain stylistic traits. W.H Isbell (2004) is one of the few scholars to discuss Wari mortuary practices. He identifies various types of burials that strongly influence social status and hierarchy. Burial type 1 is a modest small pit with a single burial and few grave goods. Type 2 is similar to type 1 but it contains more than one body. Type 3 is a cylindrical cist that is stone lined. Type 4 is a bedrock cavity tomb located under floors in residential areas. These were covered with bench-like stones probably used for offerings. Type 5 is an elaborate underground complex. Some of these were associated with gold artifacts. Type 6 is a wall internment and type 7 is a mass grave burial. He states that cremation was also quite common. From Wari coastal locations, multi-wrapped mummy bundles are also evident, wrapped in either textiles or rope. Wari art and ceramics often consisted of abstract designs and elaborate anthropomorphic icons. Blackware was most commonly used. Along with ceramics, stone beads, shell, turquoise fragments, and ear spools were also common grave goods. Although some similarities occur between the Wari and the Tiwanaku, one can see that obvious differences do occur and the burial from Pirque Alto does not compare overall to a Wari burial.

## **Conclusions**

The goal of this study has been to find a common trend within Tiwanaku burial styles and then to compare that trend to the burial found at the site of Pirque Alto. By determining the similarities and differences of this burial type and the Pirque Alto burial the presence of Tiwanaku influence in Cochabamba can be determined. Although Tiwanaku burials do vary and an all encompassing burial typology can not be created, commonalities can be found. There does

not seem to be distinctive change in these burials throughout the reign of the Tiwanaku, nor does there seem to be changes in style, other than grave goods, for different classes ranging from elite to a common infant burial. Slight differences were seen when comparing male and female burials. These treatment differences were found with the type of tomb, skeletal direction, and grave goods. For the type of tomb, stone lined cists were the most common for males while slab lined were the most common for female. Although facing east was the most common, there was more variation in direction with males than females. The only differences in grave goods were a few items, such as spindle whorls, that were only found with females; suggesting a separation of specific tasks. Burials were most commonly individual burials. A number of Tiwanaku burial types were seen archaeologically. These were the simple pit, simple pit with a surface ring, a stone lined cist, a slab lined cist, and a shaft burial. The most common burial type was the stone lined cist, followed by the slab lined cist, and then simple pit. It is my opinion that stone and slab lined cists could have easily been interchanged in the dataset, depending on the source. Simple pits and simple pits with a surface ring could also be interchanged because surface rings do not always survive the archaeological record. Being that simple pit burials would be the hardest to locate at a site from the surface, I conclude that both stone lined pits and simple pit burials are the most common Tiwanaku burial types. The dataset overwhelmingly showed that skeletons facing east in a seated, flexed position were the most common. Grave goods did vary considerably. Ceramic vessels were the most common grave good, with keros, tazons, ollas, and vasijas making up the majority. Even though we know the common uses of these vessels, use in the afterlife is completely unknown. Infant burials were found to follow these common burial trends, but often only had one grave good. Although I do not attempt to create an all encompassing Tiwanaku burial typology, the common Tiwanaku grave would consist of a single

individual in a stone lined or simple pit with the skeleton in a flexed, seated position facing east. Common Tiwanaku ceramic vessels, such as the kero, tazon, olla, or vasija are also expected to be found with the burial.

The Pirque Alto burial from Feature 4D was dated during the time period that would be Post Classic Tiwanaku (A.D. 1230-1300). The individual infant skeleton was found in simple pit in a flexed, seated position facing east. It was buried with one undecorated ceramic vessel that has been determined to be a vasija vessel type with a handle. This burial fits the above Tiwanaku burial typology exactly. It fits the trend for common burials and also for infant burials being that it was found with only one ceramic vessel. The burial does post-date the Tiwanaku, but Tiwanaku influence is still quite evident. Those who inhabited Pirque Alto may have been direct immigrants of the Titicaca Basin or they may have traded with those from the Titicaca basin, both during the reign of the Tiwanaku and after, allowing them to learn a great deal of their culture. Based solely on the Pirque Alto burial from Feature 4D, Tiwanaku influence can conclusively be determined at Pirque Alto, and thus in Cochabamba. More research and compilation of burials, along with more extensive research on the spread of the Tiwanaku's culture and ideas in this region is necessary to validate this point.

## **Acknowledgments**

First of all, I would like to thank Dr. Timothy McAndrews. It was on his field school in Bolivia that I learned firsthand about the culture in the Andes and became introduced to the interesting site of Pirque Alto. He has helped me throughout the entire process of this project. I would also like to thank Dr. Jim Theler. His guidance and suggestions throughout senior thesis has been a huge help to me all through writing this paper and preparing for presentations. Connie Arzigian's research methods prepared me for this project and set me off in the right direction. I would also like to thank the UW-L Undergraduate Research and Creativity Center for funding some of my research, specifically giving me the ability to get a sample radiocarbon dated.

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# Appendix 1

Elite Burials									
<b>Site and Excavator</b>	<b>Source</b>	<b>Time Period</b>	<b>Burial</b>	<b>Description</b>	<b>Depth</b>	<b>Position</b>	<b>Direction</b>	<b>Grave Goods</b>	<b>Age</b>
<b>Tiwanaku Kalassaya -</b>	Korpisaari, 2006	Tiwanaku I	9 burials	Simple pit tombs, Primary		varied		Sodalite beads in 5 tombs, ceramic vessels in 3, rich jewelry and metal with young female, 5	8 adults, 1 infant
<b>Ch'iji Jawira-Rivera 1990</b>	Korpisaari, 2006	Late Formative Tiwanaku	Burial 1	simple pit	80cm	flexed, seated	West	llama bones, an undecorated jar, small gold plaque with an embossed human face	adult
<b>Akapana-Manzanilla 1988-89</b>	Korpisaari, 2006		8 burials and 20 sacrificial victims	5 burials in a row facing another. 1 separate burial near neonate remains		flexed, seated	5 burials facing male to the north. Male faced north. Separate body faced east	"elite" male holding puma shaped incensario, ceramic vessel, bone spoon. Separate burial included ceramic mask, copper fragment, stone projectile point, and a bone spoon. Neonate found with vegetal remains. Sacrificial- remains and camelids and/or intentionally broken ceramics	Burials- 7 adults, 1 neonate Sacrifice- mostly adult males and children
<b>Capillu Pata-1993</b>	Korpisaari, 2006	Tiwanaku IV	Burial 3					10 complete and some semi-complete vessels- Kero were most common, some vasijas and sahumadores	
<b>Lukurmata-Bermann 1980's</b>	Korpisaari, 2006	Tiwanaku IV	Burials 13-20	rectangular pits lined with stone. Grinding stone caps		flexed, on side		Burial 13- bone carved with zoomorphic designs, large metal pin, 29 small sections of sodality (necklace?). Burial 14- metal (copper?) pendant with a circular sodalite inlay	adults
<b>Qeya Kuntu-Janusek and Kolata 2003</b>	Janusek 2004	Classic Tiwanaku	Burial 3	simple pit (not specified, just stated there were no stones)	140-160cm			23 miniature gold vessels, 7 incised bone paint tubes, small beads, fragments of green, red, white, and blue paint, no ceramics	
				remains associated with Late Formative foundation wall- 2 forearms from different people and partial skeleton					partial skeleton is a child
<b>Tiwanaku Putuni Complex - Kolata 1993</b>	Kolata 1993	Tiwanaku IV	Burial 1	shaft chamber		flexed, seated	North	necklace of sodalite, bone, shell, and stone beads, copper bracelet, small gold "mask", bone awls, andesite scraper, two copper pins, a ceramic jar, a copper disk	adult female
25 total elite burials									
Common Burials									
<b>Churijahuira - Lazarte 1957</b>	Korpisaari, 2006		Burial 1	intact cist lined with stones joined with mud mortar	85 cm	flexed, seated		a kero, tazon, and 2 unbaked vessels containing burnt organic matter.	adult male

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
			Burial 2	intact simple pit burial		extended, resting on left side		2 vasijas placed at the feet, olla, large escudilla, and a stone mortar.	adult
			Burial 3	looted cist				small vasija, obsidian fragment, and a deer antler tool.	
			Burial 4	looted cist				prosopomorphic kero	
<b>Guaqui-Albarracin-Jordan 1996</b>	Korpisaari, 2006		5 burials	stone lined cists					
<b>Ikotomani-Ryden 1947</b>	Ryden, 1947		Burial 1	stone lined cist - rectangular		flexed, seated		a kero and a broken tazon	adult
<b>Katilani Jawira-Arancibia 1991</b>	Korpisaari, 2006		40 un-looted burials	cists		flexed, seated	58.3% faced east, 33.3% faced south and 8.3% faced northwest	20 contained ceramic vessels (16 had a single vessel)- 9 keros, 6 tazons, 3 vasijas, 2 sahumadores, 1 cuenco, and 1 vessel with a spherical body and a handle ending in an ornithomorphic head	11 small children, 29 adults
<b>Khonko Wankane-Ryden 1938</b>	Ryden, 1947		Burial 1	stone burial chamber	1.5m	flexed, seated		a kero, tazon, and a coarse one-handled bowl	adult
			Burial 2	simple pit	2m			a kero, tazon, and a rectangular bone object (spindle whorl?)	adult
			Burial 2	disturbed stone lined cist- circular				ceramic fragments, llama bone, and stone implement fragments - seemed to originally contain a tazon and possibly a kero.	
<b>Lukurmata-Bermann 1980's</b>	Korpisaari, 2006	Early Tiwanaku	Burials 1-5	simple pit		4 flexed, seated	4 faced south, one southeast	older male- 4 sodalite beads, 2 sandstone cones, camelid scapula, and the broken base of a ceramic vessel.	3 adults, a juvenile, and an infant
		Early Tiwanaku	Burials 6-8	simple pit		flexed, seated		1 Tiwanaku I style vessel each	adults- 2 male. 1 unidentified
		Early Tiwanaku	Burial 9	simple pit		flexed, seated		none	7-10 yr old child
<b>Kirawi-Janusek and Kolata 2003</b>	Janusek, 2004	Formative Tiwanaku	Burial 1	simple pit				undecorated vasija	child
		Formative Tiwanaku	Burial 2	simple pit				slate hoe	adult female
		Formative Tiwanaku	Burial 3	simple pit				slate hoe	adolescent male

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
<b>Lukurmata-Bermann 1980's</b>	Korpisaari, 2006	Tiwanaku III	Burial 10	simple pit, originally capped		flexed, seated	northeast	A broken Tiwanaku III style bottle and a cut section of a camelid rib.	adult
<b>Tiwanaku-Bennett 1932</b>	Korpisaari, 2006	Classic Tiwanaku	Pit 1	simple pit	2.3 m	Extended	North to South-head toward North	3 ceramic vessels- tazon, kero, and Vasija	
<b>Tiwanaku-Ryden 1938</b>	Ryden, 1947	Classic Tiwanaku	Pit 4	shaft grave	1.75m				Fetus
<b>Kirawi-Janusek and Kolata 2003</b>	Janusek, 2004	Classic Tiwanaku	11 burials	simple pit		flexed, seated		female- grinding stone and vasija. Another had a vasija and a third had a vasija modeled as a duck.	1 female, 10 unspecified
<b>Chirpa-Bennett 1934</b>	Korpisaari, 2006	Classic Tiwanaku	28 burials- 8 dated to Tiwanaku	Stone covered and grass lined pits	deepest- 40-55 cm, most- 10-15 cm			CH-2B- a kero, a tazon,a sahumador,a wide jar, and the base of a broken olla. 4 burials- 2 vessels, 2 burials- 1 vessel, 1 burial- only ceramic shards	
<b>Omo M10 - Goldstein 1984</b>	Goldstein, 1989	Classic Tiwanaku	Burial 1(A-7)	simple pit				rim sherd of a kero	adult female
		Classic Tiwanaku	Burial 2(B-3)	simple pit				kero fragments	adult male
		Classic Tiwanaku	Burial 3(B-5)	simple pit + surface ring		flexed, seated	East		adult female
		Classic Tiwanaku	Burial 4(B-7)	cist		flexed, seated	South	stemmed point, one kero, ceramic sherds, llama bone	child 7-9 years
		Classic Tiwanaku	Burial 5(B-9)	simple pit					infant 7-16 months
		Classic Tiwanaku	Burial 6(B-10)	simple pit + surface ring		flexed, seated	East	two handled olla	infant 1-3 years
		Classic Tiwanaku	Burial 7(B-11)	stone lined cist		flexed, seated	East		infant 18-20 months
		Classic Tiwanaku	Burial 8(B-12)	slab cist		fragmented			child 12-14 years
		Classic Tiwanaku	Burial 9(B-13)	stone lined cist		flexed, seated	East	plain weave natural color tunic, thick blanket, one olla, flat headed spoon, kero fragments	adult female
		Classic Tiwanaku	Burial 10(M-1)	slab cist		flexed, seated	East	two tazons, globular jar with feline head, wooden spoon, plain tunic, coiled basket	adult male
		Classic Tiwanaku	Burial 11(M-2)	stone lined cist		flexed, seated	East	one olla, wooden spoon, one tazon, plain weave textile	adult female
		Classic Tiwanaku	Burial 12(M-3)	stone lined cist- empty					
		Classic Tiwanaku	Burial 13(M-4)	simple pit + surface ring		flexed, seated	West	coiled basket, one kero, striped tunic	adult male

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Classic Tiwanaku	Burial 14(M-5)	simple pit + surface ring		flexed, seated	East	unknown vessel	adult female
		Classic Tiwanaku	Burial 15(M-6)	slab cist				one tazon	child 3-5 years
		Classic Tiwanaku	Burial 16(M-7)	simple pit + surface ring		flexed, seated	East	tunic fragment, thick blanket, "omo" type point, llama bone, ceramic sherds, earspool	adult male
		Classic Tiwanaku	Burial 17(M-8)	stone lined cist-empty					
		Classic Tiwanaku	Burial 18(M-9)	simple pit + surface ring - empty					
		Classic Tiwanaku	Burial 19(M-10)	slab cist				one tazon, one kero, kero fragments, textile fragment	
		Classic Tiwanaku	Burial 20(M-11)	stone lined cist- empty					
		Classic Tiwanaku	Burial 21(M-12)	stone lined cist- empty					
		Classic Tiwanaku	Burial 22(M-13)	stone lined cist		fragmented		textile fragment	child 2-4 years
		Classic Tiwanaku	Burial 23(M-16)	simple pit		fragmented		llama profile spoon	adult
		Classic Tiwanaku	Burial 24(M-17)	disturbed		fragmented		basket fragments	
		Classic Tiwanaku	Burial 25(M-20)	disturbed		fragmented		kero rim fragments	adult male
		Classic Tiwanaku	Burial 26(M-21)	disturbed		fragmented		one kero	adult
		Classic Tiwanaku	Burial 27(M-23)	disturbed		fragmented		wooden spoon	child 6-7 years
		Classic Tiwanaku	Burial 28(M-24)	disturbed		fragmented		one kero	infant 16-18 months
		Classic Tiwanaku	Burial 29(N-1)	stone lined cist- empty					
		Classic Tiwanaku	Burial 30(N-2)	simple pit + surface ring		fragmented		one kero, two textiles	child 5-7 years
		Classic Tiwanaku	Burial 31(N-3)	stone lined cist		fragmented		four textile fragments, turquoise bead	old male
		Classic Tiwanaku	Burial 32(N-4)	simple pit + surface ring		flexed, seated	North	wooden spoon	infant 0.5-2 years
		Classic Tiwanaku	Burial 33(N-5)	simple pit + surface ring		fragmented		one kero, tunic fragment	adult male
		Classic Tiwanaku	Burial 34(N-6)	stone lined cist		fragmented		tunic fragment	child?
		Classic Tiwanaku	Burial 35(N-7)	simple pit + surface ring		fragmented			
		Classic Tiwanaku	Burial 36(N-8)	stone lined cist		fragmented		textile fragments, ceramic fragments	child 6-10 years
		Classic Tiwanaku	Burial 37(N-9)	simple pit + surface ring		flexed, seated	East	wooden spoon, one tazon, one handled pitcher, llama bones	adult female

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Classic Tiwanaku	Burial 38(N-10)	stone lined cist		fragmented			
		Classic Tiwanaku	Burial 39(N-11)	simple pit + surface ring and adobe bricks		fragmented		llama bones, ceramic sherds	infant 1-2.5 years
		Classic Tiwanaku	Burial 40(P-7)	simple pit + surface ring		flexed, seated	East	tazon sherds	child 2-4 years
		Classic Tiwanaku	Burial 41(P-8)	stone lined cist- empty					
		Classic Tiwanaku	Burial 42(Q-1)	simple pit		fragmented		plain tunic	adult
		Classic Tiwanaku	Burial 43(Q-2)	simple pit		flexed, face down		textile fragments, coarse blanket	
		Classic Tiwanaku	Burial 44(Q-3)	simple pit		flexed, face down		patterned tunic, coarse blanket	adult female and a fetus
		Classic Tiwanaku	Burial 45(Q-4)	stone lined cist		flexed, face down	Southwest	textile fragments, coarse blanket	child 10-13 years
		Classic Tiwanaku	Burial 46(Q-5)	stone lined cist		flexed, seated	Northeast	coarse blanket, cane mat	adult male
		Classic Tiwanaku	Burial 47(R-1)	simple pit + surface ring and adobe bricks		fragmented		incensario rim sherd, one tazon, basketry fragment	adult
		Classic Tiwanaku	Burial 48(R-2)	stone lined cist		fragmented		ceramic vessel with monkey head, mussel shell, textile fragment	adult male
		Classic Tiwanaku	Burial 49(R-3)	slab cist				tunic fragment	child 6-8 years
		Classic Tiwanaku	Burial 50(R-4)	stone lined cist		flexed, seated	East	wooden spoon, basket fragment	child 3-6 years
		Classic Tiwanaku	Burial 51(R-5)	simple pit + surface ring - empty					
		Classic Tiwanaku	Burial 52(R-6)	stone lined cist				textile fragment	child 3.25-5 years
		Classic Tiwanaku	Burial 53(R-7)	slab cist				wooden spoon	child 11-14 years
		Classic Tiwanaku	Burial 54(R-8)	slab floor + surface ring		flexed, seated	East	textile fragments, unknown ceramic vessel, wooden spoon, spindle whorl	adult female
		Classic Tiwanaku	Burial 55(R-9)	slab floor + surface ring					infant 0.5-1.5 years
		Classic Tiwanaku	Burial 56(S-1)	simple pit + surface ring		flexed, seated	East	one kero	child 6-9 years
		Classic Tiwanaku	Burial 57(S-2)	stone lined cist		flexed, seated	East	ceramic fragments	male 17-23 years
		Classic Tiwanaku	Burial 58(S-3)	simple pit + surface ring		fragmented			infant 10-16 months

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Classic Tiwanaku	Burial 59(S-4)	stone base + surface ring		fragmented		striped tunic fragment	adult female
		Classic Tiwanaku	Burial 60(S-6)	simple pit + surface ring		flexed, seated	East	maize cob	adult male
		Classic Tiwanaku	Burial 61(S-7)	stone lined cist		fragmented		blanket fragment, tunic fragment, ceramic sherds	adult male
		Classic Tiwanaku	Burial 62(S-8)	simple pit			East	llama bone, maize cob, textile fragment	adult female
		Classic Tiwanaku	Burial 63(T-1)	simple pit + surface ring				reconstructed cup, wooden spoon, two striped tunics	child 8-11 years
		Classic Tiwanaku	Burial 64(T-2)	stone lined cist		fragmented		kero sherd, textile fragments, basket, gourd dipper, spindle whorl, wooden spoon, thick blanket	adult female
		Classic Tiwanaku	Burial 65(T-3)	stone lined cist		flexed, seated	South	ceramic sherds, maize cob, textile fragments, plainware jar	adult male
		Classic Tiwanaku	Burial 66(T-4)	simple pit		flexed, seated	East	kero fragment, textile fragments	child 3-5 years
		Classic Tiwanaku	Burial 67(T-5)	stone base		fragmented		textile fragment	infant 5.5-10 months
		Classic Tiwanaku	Burial 68(T-6)	stone lined cist		fragmented		cane fragments, wooden spoon, textile fragments	adult male
		Classic Tiwanaku	Burial 69(T-7)	stone base		fragmented			infant 1-2.5 years
<b>Capillu Pata-1993</b>	Korpisaari, 2006	Tiwanaku IV	Burial 1	Cemetery- Burials covered by stones covered in reddish clay				Copper <i>topo</i> featuring textile impressions	
		Tiwanaku IV	Burial 2					Tiwanaku ceramic shards	
		Tiwanaku IV	Burial 4					3 ceramic vessels	
<b>Lukurmata-Bermann 1980's</b>	Korpisaari, 2006	Tiwanaku IV/V	Burials 11-12	double chamber stone cists- partially above ground	45cm			above chamber contained bodies, lower chamber had grave goods. Burial 11- upright llama incensario filled with burned vegetables and 2 large stone cones	adults
<b>Chirpa- Blom 1992-96</b>	Korpisaari, 2006	Tiwanaku IV/V	13 burials, 16 bodies	5 stone lined, 6 simple pit burials, 2 capped with grinding stones.		flexed, either resting on left side or seated		2 burials contained vegetal remains = use of mats or textiles to wrap body. 6 had ceramics with keros, tazones, ollas and one broken incensario. 1 had beads	9 adults, 7 sub-adults
<b>Island of the Sun (Wakuyo)-Perrin 1957</b>	Korpisaari, 2006	Tiwanaku V	Burial 1	stone lined cist	65-75 cm			blackware kero	adult
		Tiwanaku V	Burial 2	stone lined cist	65-75 cm			2 keros- one blackware, one with geometric decoration in black and orange on red. Lump of unfired clay	

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Tiwanaku V	Burial 3	stone lined cist	65-75 cm			a kero and the base of an escudilla	adult
		Tiwanaku V	Burial 4	stone lined cist	65-75 cm			none	adult
		Tiwanaku V	Burial 5	stone lined cist	65-75 cm			none	
		Tiwanaku V	Burial 6	stone lined cist	65-75 cm			none	
		Tiwanaku V	Burial 7	stone lined cist	65-75 cm			small coarse "cup"	
		Tiwanaku V	Burial 8	stone lined cist	65-75 cm			none	
<b>Akapana East-Janusek 1994</b>	Janusek, 2004	Tiwanaku V	Burial 1	simple pit	60 cm	flexed, seated	West	one vasija, camelid long bones, an obsidian flake, small lumb of powdered red pigment	adult
<b>Qeya Kuntu-Janusek and Kolata 2003</b>	Janusek, 2004	Tiwanaku V	4 burials	stone lined cist				2 each had a tazon, may have been looted	3 adults, 1 child
<b>Tiraska-Korpisaari 2006</b>	Korpisaari, 2006	Late Tiwanaku	Burial 1	stone lined cist	50 cm	flexed, seated	South	one vasija, one tazon	10-15 years
		Late Tiwanaku	Burial 2	stone lined cist		flexed, seated		one vasija, one tazon	30-45 years
		Late Tiwanaku	Burial 3	stone lined cist	60 cm	flexed, seated	South	one kero, one sahumador	male 30-35 years
		Late Tiwanaku	Burial 4	3 skeletons, disturbed				one kero, 2 tazones, and fragments of one vasija	adults
		Late Tiwanaku	Burial 5	stone lined cist					20-30 years
		Late Tiwanaku	Burial 6	chamber tomb	92-105 cm			one vasija	male 30-40 years
		Late Tiwanaku	Burial 7	stone lined cist				one kero, one tazon	
		Late Tiwanaku	Burial 8	stone lined cist				one kero	
		Late Tiwanaku	Burial 9	stone lined cist	30-40cm			one kero, one tazon	
		Late Tiwanaku	Burial 10	stone lined cist	40-45cm			one escudilla	adult
		Late Tiwanaku	Burial 11	stone lined cist	40-55cm	flexed, seated	East	one tazon	female 4-6years
		Late Tiwanaku	Burial 12	stone lined cist	60cm			one vasija, one tazon	young
		Late Tiwanaku	Burial 13	stone lined cist	60cm	flexed, seated	Southeast	one tazon	female 30-45 years
		Late Tiwanaku	Burial 14	stone lined cist	30-40cm			one vasija, one "plate"	4-8 years
		Late Tiwanaku	Burial 15	stone lined cist	40-65cm				12-15 years

## Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Late Tiwanaku	Burial 16	simple pit		flexed, face down	Southwest	possible bone weaving tool	male 25-30 years
		Late Tiwanaku	Burial 17	chamber tomb	60-70cm			one vasija, one "cup"	male 45 years
		Late Tiwanaku	Burial 18	simple pit		flexed, face down	West		6-7 years
		Late Tiwanaku	Burial 19	simple pit		flexed, face down	Southwest		female adult
		Late Tiwanaku	Burial 20	stone lined cist	45-60cm	flexed, seated	Southeast	one challador, one tazon	10-11 years
		Late Tiwanaku	Burial 21	stone lined cist	25-45cm			one kero, one tazon	9 months
		Late Tiwanaku	Burial 22	chamber tomb	50-65cm	flexed, seated	East	one vasija	female 25-30 years
		Late Tiwanaku	Burial 23	stone lined cist	35cm			one "plate"	male 23-30 years
		Late Tiwanaku	Burial 24	stone lined cist	40-50cm	flexed, seated	West	one vasija	20 years
		Late Tiwanaku	Burial 25	stone lined cist	22-30cm				baby
		Late Tiwanaku	Burial 26	stone lined cist	20-30cm				6-12 months
		Late Tiwanaku	Burial 27	stone lined cist	18-20cm				
		Late Tiwanaku	Burial 28	stone lined cist	45-57cm	flexed, seated	North	one tazon	female 40-45 years
		Late Tiwanaku	Burial 29	stone lined cist	65-70cm	flexed, seated	West	one tazon	male 30-35 years
		Late Tiwanaku	Burial 30	chamber tomb	70cm			one cuenco	male 30-25 years
		Late Tiwanaku	Burial 31	stone lined cist	35-40cm	flexed, seated	West		4 years
		Late Tiwanaku	Burial 32	stone lined cist	40-55cm			one vasija, one tazon	
<b>Markopata-Ryden 1951</b>	Ryden, 1957	Post Classic Tiwanaku	Burial 1	slab cist	40cm	flexed, seated	East	Flaring side bowl, vessel, and a drinking tube - said to be copies of vessels from Tiwanaku	adult female
		Post Classic Tiwanaku	Burial 2	slab cist		fragmented		Two kero shaped vessels with drinking tubes, flaring side bowl	15? Year old
		Post Classic Tiwanaku	Burial 3	stone lined cist	30cm	fragmented		neck fragment of an Inca aryballus, olla sherds, complete bowl - vessels not thought to be from original burial	adult
		Post Classic Tiwanaku	Burial 4	slab cist	30 cm	fragmented		olla sherds, one bowl sherd, olla vessel, topu - olla vessel indicates Tiwanaku influence	
		Post Classic Tiwanaku	Burial 5	slab cist	10 cm	fragmented		olla sherds, flaring sided Tiwanaku bowl	adult
		Post Classic Tiwanaku	Burial 6	slab cist	25cm	fragmented		olla	

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Post Classic Tiwanaku	Burial 7	slab cist	10cm	fragmented		flaring side bowl, a kero with a drinking tube-both showing Tiwanaku influence	
		Not seen as Tiwanaku	Burial 8						
		Post Classic Tiwanaku	Burial 9	slab cist	10cm	fragmented		olla sherds and a topu pin	
		Post Classic Tiwanaku	Burial 10	slab cist		fragmented		flaring sided bowl showing Tiwanaku influence	
		Post Classic Tiwanaku	Burial 11	slab cist		fragmented		round bottomed bowl, two large ollas	
		Inca	Burial 12						
		Post Classic Tiwanaku	Burial 13	slab cist		flexed, seated	South	none	adult
		Post Classic Tiwanaku	Burial 14	slab cist		fragmented		llama bones, ceramic sherds, rim sherd, Tiwanaku influenced bowl fragment	adult
		Inca	Burial 15						
		Not seen as Tiwanaku	Burial 16						
		Post Classic Tiwanaku	Burial 17	slab cist	10cm	fragmented		olla sherds	
		Inca	Burial 18						
		varying occupations	Burial 19	slab cist	3 different layers of artifacts	fragmented		54 ceramic vessels - bottom and middle levels consist of keros and flaring side bowls showing Tiwanaku influence, other level had later ceramics	
		Post Classic Tiwanaku	Burial 20	slab cist	20cm	fragmented		olla sherds, grinding stone	infant
		Post Classic Tiwanaku	Burial 21	slab cist		fragmented		small olla, bowl rim fragmented	adult
		Post Classic Tiwanaku	Burial 22	slab cist		fragmented		bowl, bulbous vessel, flaring sided bowl, two olla vessels - flaring side bowl was distinctly Tiwanaku	adolescent
		Post Classic Tiwanaku	Burial 23	slab cist	40cm	fragmented		olla sherds, 2 flaring sided bowls, unidentified bowl, single eared bulbous vessel, 2 ollas	
		Inca	Burial 24						
		Post Classic Tiwanaku	Burial 25	slab cist	40cm	flexed, seated		2 ollas	
		Post Classic Tiwanaku	Burial 26			fragmented			
		Post Classic Tiwanaku	Burial 27	slab cist	40cm	fragmented		olla sherds, rim fragment	
		Not seen as Tiwanaku	Burial 28						
		Post Classic Tiwanaku	Burial 29	slab cist	20cm	fragmented		olla vessel, 2 kero vessels, unidentified bowl, single eared bulbous vessel	adult male

# Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Post Classic Tiwanaku	Burial 30	slab cist	35cm	fragmented		unidentified bowl, semi-spherical bowl	adult female
		Post Classic Tiwanaku	Burial 31	simple pit		fragmented		none	adult
		Post Classic Tiwanaku	Burial 32	slab cist		fragmented		one olla, one drinking tube, one kero	adult female
		Post Classic Tiwanaku	Burial 33	slab cist		fragmented		one olla, flaring sided bowl, drinking tube, two unidentified bowls	
		Post Classic Tiwanaku	Burial 34	slab cist		fragmented		eight unidentified bowls	
		Inca	Burial 35	slab cist		fragmented		aryballus sherds, bronze tumi	
		Post Classic Tiwanaku	Burial 36	slab cist		fragmented		unidentified vessel	
		Post Classic Tiwanaku	Burial 37	slab cist	35cm	150 bone fragments		400 olla sherds, showing Tiwanaku influence	
		Inca	Burial 38						
		Post Classic Tiwanaku	Burial 39	slab cist		fragmented	Cranium West	2 identified bowls, 1 olla	adult
		Post Classic Tiwanaku	Burial 40	slab cist		lying horizontally	West	none	adult
		Post Classic Tiwanaku	Burial 41	slab cist		fragmented		unidentified bowl, flaring side bowl	adult
<b>Chulapani-Ryden 1951</b>	Ryden, 1957	Post Classic Tiwanaku	Burial 1	slab cist		fragmented		llama bones, unidentified bowl with Tiwanaku decoration	
		Post Classic Tiwanaku	Burial 2	slab cist		fragmented		ten olla sherds, kero sherd, flaring side bowl	
		Post Classic Tiwanaku	Burial 3	simple pit		flexed, seated	East	kero sherds, olla sherds	adult male
<b>Kellikani-Ryden 1951</b>	Ryden, 1957	Post Classic Tiwanaku	Burial 1	slab cist		fragmented		one olla,	adult
		Post Classic Tiwanaku	Burial 2	slab cist	1m	fragmented		cup shaped vessel with drinking tube with Tiwanaku decoration	
		Post Classic Tiwanaku	Burial 3	slab cist		fragmented		flaring sided bowl	
		Post Classic Tiwanaku	Burial 4	slab cist		fragmented		silver topu	
		Post Classic Tiwanaku	Burial 5	slab cist		fragmented		olla sherds	
		Post Classic Tiwanaku	Burial 6	slab cist		flexed, seated		one olla	adult
<b>Jutaraya-Ryden 1951</b>	Ryden, 1957	Post Classic Tiwanaku	Burial 1	slab cist		fragmented		aryballus sherds	adult
		Post Classic Tiwanaku	Burial 2	slab cist		fragmented		single eared vessel with Tiwanaku decoration	

## Appendix 1

Site and Excavator	Source	Time Period	Burial	Description	Depth	Position	Direction	Grave Goods	Age
		Post Classic Tiwanaku	Burial 3	slab cist		fragmented			
		Post Classic Tiwanaku	Burial 4	slab cist		fragmented			infant
		Post Classic Tiwanaku	Burial 5	slab cist		fragmented	West	vessel with drinking tube	
		Post Classic Tiwanaku	Burial 6	slab cist		fragmented		kero sherds, olla sherds	adult
		Post Classic Tiwanaku	Burial 7	slab cist		flexed, seated	Northeast	none	adult
		Post Classic Tiwanaku	Burial 8	slab cist	35cm	fragmented		animal bone fragments	adult female
		Post Classic Tiwanaku	Burial 9	slab cist		fragmented			
		Post Classic Tiwanaku	Burial 10	slab cist	35cm	fragmented		one olla	adult female
		Post Classic Tiwanaku	Burial 11	slab cist		fragmented			
		Post Classic Tiwanaku	Burial 12	slab cist		fragmented	South	none	adult male
		Post Classic Tiwanaku	Burial 13	slab cist		fragmented			
		Post Classic Tiwanaku	Burial 14	slab cist		flexed, seated			adult female
		Post Classic Tiwanaku	Burial 15	slab cist		fragmented	North	olla sherds, rim sherds of a bowl	adult male
		Post Classic Tiwanaku	Burial 16	slab cist		femur fragment			adult
		Post Classic Tiwanaku	Burial 17	slab cist		fragmented		one olla	
		Post Classic Tiwanaku	Burial 18	slab cist		fragmented		one olla, topu	adult
		Post Classic Tiwanaku	Burial 19	slab cist		fragmented			adult
		Post Classic Tiwanaku	Burial 20	slab cist		fragmented			
		Post Classic Tiwanaku	Burial 21	slab cist		fragmented		one kero, bowl sherds	adult
		Post Classic Tiwanaku	Burial 22	slab cist		fragmented		rim sherd, olla sherd, bowl sherd	adult
		Inca	Burial 23						

290 total common