

ANALYSIS AND COMPARISON OF EARLY NASCA POTTERY FROM
THE SITE OF LA TIZA

by

Mary Frances Noell, BA

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Committee Members:

Christina Conlee, Chair

James Garber

Kevin Vaughn

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CHAPTER I

Introduction

The Nasca were an agriculturally based society dependent on rivers for irrigation agriculture (Schreiber and Lancho 2003; Silverman 1993:1). The advent of irrigation agriculture on the desert coast created an environment conducive to the formation of a complex society in which specialization and social hierarchies were cultivated. The focus of this thesis is the Early Nasca (AD 1-400) which had settlements that were comprised of semi-autonomous villages and larger towns which came together for pilgrimages and ritual activities at large ceremonial centers, such as Cahuachi (Reindel 2009; Vaughn 2009:3). Early Nasca villages on the south coast were self-sufficient except for the production of polychrome pottery. It is hypothesized that polychrome pottery was acquired upon pilgrimage to Cahuachi and was used in a domestic context (Vaughn 2005:124). It is my hypothesis that the ceramic assemblage at La Tiza, an Early Nasca site, will reflect a community with high polychrome pottery consumption that participated in pilgrimage to Cahuachi. The ritual architecture at La Tiza, its extensive size, as well as its close proximity to Cahuachi lead me to hypothesize that La Tiza will have a higher rate of polychrome pottery consumption when compared to other Early Nasca domestic sites.

Table 1. Timeline of Nasca phases (Proulx 2006:26).

| Dates | Dawson | Sawyer (1961) |
|--------|--------|---------------|
| 900 AD | 9 | Nasca-Wari |
| 800 AD | | |
| 700 AD | | |
| 600 AD | 8 | Late Nasca |
| 500 AD | 7 | |
| 400 AD | 6 | Middle Nasca |
| 300 AD | 5 | Early Nasca |
| 200 AD | 4 | |
| 100 AD | 3 | |
| 100 BC | 2 | |
| 200 BC | 1 | Proto-Nasca |

The Nasca people occupied the Atacama Desert on the south coast of Peru (Figure 1). Nasca influence stretched from the Acarí Valley to the Pisco Valley (Vaughn 2009:41). The heartland of Nasca culture was the Rio Grande de Nasca drainage and it encompasses 10,750 square kilometers (Vaughn 2009). The tributaries of the Rio Grande de Nasca extend into the foothills of the Andes Mountains and the coastal desert. These rivers consist of the *Santa Cruz, Grande, Palpa, Viscas, Ingenio, Aja, Tierras Blancas, Taruga* and *Las Trancas*. They have a high infiltration rate, causing a decrease in their volume as they near the coast. The rivers in this valley are “influent streams” and frequently flow above and below the ground surface (Schreiber and Lancho 1995:231).

The river valleys create an environment that is conducive to habitation in a hyper-arid region that would otherwise be uninhabitable. The output of these rivers is not reliable, and may only contain water seasonally or be dry for years at a time (Beresford-Jones et. al 2008). Drainage from precipitation and snowmelt in the Andes Mountains provide the water in the river valleys along the coast of Peru (Goldstein and Magilligan 2010: 157). Rivers form valleys through erosion of the Andes Mountain bedrock at their headwaters, resulting in riverine terraces along the coast. (Steffan et al. 2009). The Humboldt Current controls the climate on the coast of southern Peru, which prohibits austral summer from December to February. Humidity from the Atlantic is carried by easterly winds to the highlands and Amazon basin, and the dry westerly winds cause there to be no precipitation from the Altiplano or “high plateau” to the coast of Peru (Steffen et al. 2009). The annual precipitation rate of the south coast is only 0.3 mm (Beresford-Jones et al. 2008:234).

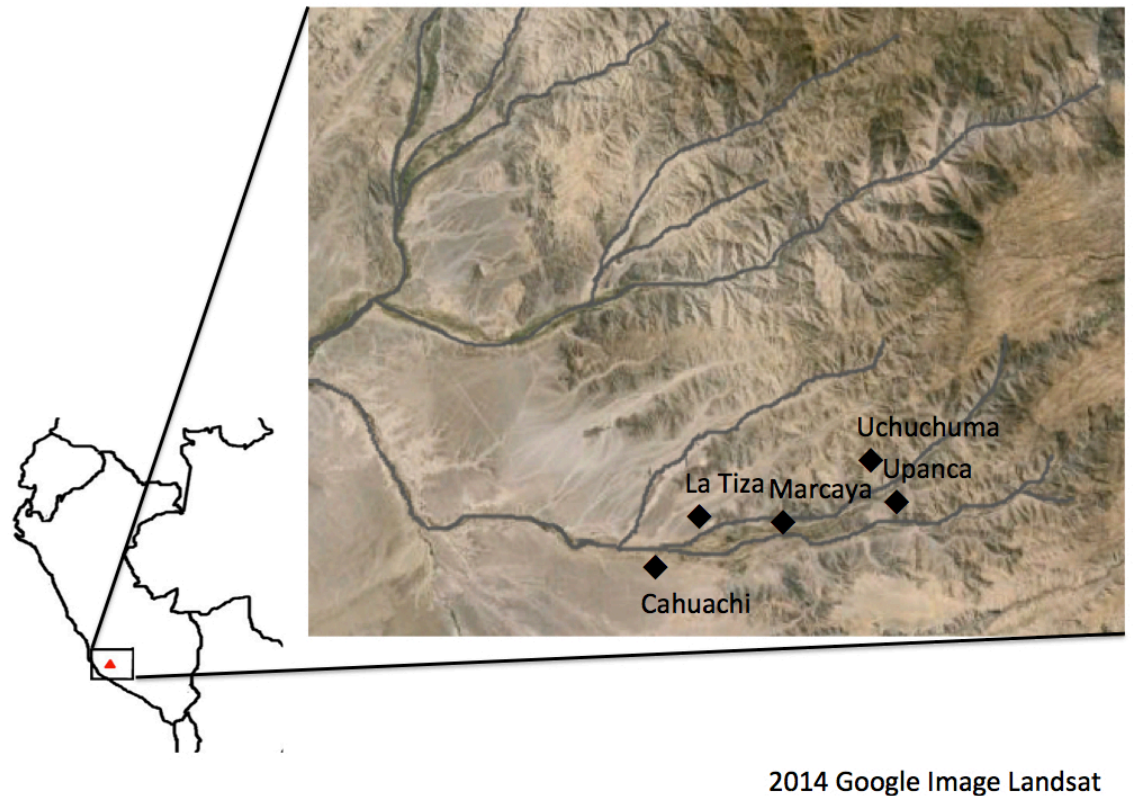


Figure 1. Map of the Nasca Valley and the sites discussed in this study.

Occupation of the Nasca Region

The occupation of the Nasca region dates back to the archaic from 3000-10000 BC (Table 2). The population in the archaic consisted of hunter-gatherers that produced lithic tools. The first sedentary group to settle the Nasca region were the Paracas people. The majority of the data from the Paracas periods comes from their fine cemetery goods. The Paracas are also known for their elaborate textiles and the production of polychrome pottery. The Paracas culture was divided into 10 phases by John Rowe and persisted on the south coast from 800 to 200 BC (Reindel 2009:445). The Paracas culture originated in the north in the Pisco and Ica valleys. In the

northern Nasca drainage, population grew by Middle Paracas when there were more sites with characteristic pottery and mudbrick architecture (Reindel 2009:447). The population in the later phases of the Paracas period increased in the Palpa region when the first geoglyphs were constructed. In the southern Nasca drainage there were small populations until late in the period, around 400 BC (Schreiber and Lancho 2003; Van Gijseghem 2004). The preceding Initial Nasca culture showed a transition in settlement pattern and a change in ceramic technologies (Reindel 2009).

Table 2. Timeline representing the occupation of the Nasca region (Vaughn 2009:50).

| Nasca Region Timeline | | |
|----------------------------------|--------------|---------------|
| Late Horizon | Inca | AD 1476-1532 |
| Late Intermediate Period | Tiza | AD 1000- 1476 |
| Middle Horizon | Wari | AD 650 - 1000 |
| Early Intermediate Period | Late Nasca | AD 550-650 |
| | Middle Nasca | AD 450-550 |
| | Early Nasca | AD 1-450 |
| Early Horizon | Proto Nasca | 100 BC - AD 1 |
| | Paracas | 800-100 BC |
| Initial Period | - | 1800-800 BC |
| Archaic | - | 3000-10000 BC |

In the Initial Nasca period (120 BC – 90 AD), or Nasca 1 and 2, the motifs on the ceramics and textiles are similar to Paracas. The transition from post-fired organic pigment to pre-fired mineral pigment took place during this phase. Vessels were decorated with naturalistic motifs that were

then outlined with incised lines. Some of the vessels in this phase were reduced-fired which is uncharacteristic of Nasca pottery and reflects ties to the early Paracas phases. There is not evidence of large structures or monumental architecture in the Initial Nasca phase (Reindel 2009). An increase in population is shown at the site of Estaquería, which is located near Cahuachi. Although there is a population increase, there is no evidence of social stratification (Reindel 2009:451).

Early Nasca is characterized by the elaboration of cultural developments, population increase, and the beginnings of the development of social complexity (Reindel 2009:451). There is evidence for the intensification of irrigation agriculture in this phase. The peak of the construction of the Nasca lines is in Early Nasca. The Nasca lines were likely used for processions on the *pampa* or desert plain (Aveni 2000). Offerings have been found on or near the lines and are often associated with small platforms located near the lines (Reindel 2009:452).

It is hypothesized that the Nasca participated in elaborate fertility rituals that involved pilgrimage to Cahuachi as well as the taking of trophy heads. These trophy heads are sometimes interpreted to be the product of warfare but the lack of evidence of warfare in the archaeological record may indicate that these trophy heads were taken in a ritual context (Conlee 2014; Vaughn 2009; Proulx 2006). Trophy heads are ubiquitous in Nasca iconography and are depicted on Nasca pottery, textiles and even the Nasca

lines. Trophy heads are linked to fertility in the iconography because of their common association with agricultural products or the growth of plants from the actual trophy heads (Proulx 2009).

There is some variation among Early Nasca sites. They can range from hamlets to large town sites with planned layouts (Reindel 2009). Some examples of sites with larger adobe brick architecture are Los Molinos, Puentes Gentil, La Ventilla, Catayoq, Jumana, and Tambo Viejo (Reindel 2009: 452). The largest of these Early Nasca sites is Cahuachi, which contains monumental architecture. Cahuachi is thought to be a pilgrimage center where the Nasca people congregated to perform rituals (Proulx 2006; Silverman 2002). Isla and Reindel (2006:378), hypothesize that Early Nasca represents the beginning of a regional state with a center at Cahuachi.

In the Middle Nasca (325-440 AD) phase, Cahuachi was abandoned and site density shifts to the middle valley where water resources are more accessible (Reindel 2009). Middle Nasca sites have more evidence of differential treatment of burials in terms of goods and burial architecture. This may be an indication of an increase in complexity and the division of labor (Reindel 2009:455). The roles of agriculturalists, craft specialists and religious specialists were materialized in burial and architectural features in Nasca 5 (Reindel 2009).

The area of the confluence of the Grande, Viscas and Palpa rivers was abandoned in the Late Nasca phase (440-620 AD). The Nasca population

became even more concentrated around accessible water resources. *Puquios*, which function as wells, are more common in the later Nasca periods because of the increasingly drier climate. *Puquios* are dug down into the groundwater and made accessible with ramps that spiral around the large excavation. Ritual activities were more common on the Nasca lines in this period, with little evidence of ritual activities at large ceremonial centers like Cahuachi (Reindel 2009).

Nasca Social Complexity

There are some differences in the manifestation of Nasca sites when comparing the northern Nasca drainage and the southern. Vaughn (2009) argues that there is only a small degree of social differentiation between and within sites in the southern Nasca region. These sites were united by their pilgrimage to Cahuachi. Reindel (2009), on the other hand, hypothesizes that Nasca sites in the northern Nasca region have a high degree of social stratification. This stratification is evident at the site of Cahuachi, where there is a discrepancy in the size of domestic architecture and burial goods (Silverman 1993).

Helaine Silverman argues that Nasca society is a religious interaction sphere made up of “a flexible confederacy of independent societies on a chiefdom level of sociopolitical complexity” (Silverman 1993:320). The Nasca have been hypothesized to be a state, a religious interaction sphere, and a chiefdom or confederacy of independent societies (Vaughn 2009).

According to Schreiber and Lancho (2003), Early Nasca was comprised of a chiefdom with only small degrees of social differentiation. After the collapse of Cahuachi at the end of the Early Nasca period, villages became more autonomous. There is evidence of violence in the Late Nasca period, which is associated with control of increasingly limited water resources (Schreiber and Lancho 2003). Orefici (2011:35) argues that Early Nasca represents a theocracy in which the elites are priests or religious specialists that obtain and control influence through religion. Where modern research in the Nasca region concerns social complexity, past research was focused on the development of a chronology.

Early Nasca Investigations

The initial investigations of Nasca were concerned with cemeteries and establishing a chronology with their elaborate polychrome pottery. Max Uhle was attracted to the elaborate Nasca polychrome pottery at the Museum fur Volkerkunde in Berlin in 1888 and so became the first to work in the Nasca region when he excavated 32 Nasca tombs (Silverman 1993). Julio C. Tello excavated Nasca sites from Tierras Blancas to Monte Grande including Majoro, Ocongalla, Estaqueria, Las Salinas, Las Cañas and Tunga in 1915. Farabee followed the Nasca River for 30 miles and excavated at any place with the “promise of result” (Silverman 1993).

Alfred Kroeber led the second Marshall Field Expedition in order to examine grave contents and add to the chronology being established for

Nasca ceramics by him and Anna Gayton (1927). This chronology was later adjusted by Kroeber (1956) and consisted of A, AB, B, and Y (Table 3). Nasca A corresponds to both the Proto-Nasca and Early Nasca phases in the current phase chronology established by Alan Sawyer (1961). Nasca AB, B and Y are consistent with Sawyer's Middle, Late and Nasca-Huari phases, respectively (Proulx 2006). Tello excavated 537 tombs in the Rio Grande de Nasca between January and September of 1927, 80 of which were "Nasca clasico" and 176 late Nasca. Heinrich Ubbelohde Doering was a German archaeologist who worked in the Nasca region with the goal of discerning types of grave goods associated with ceramics as well as textiles. William Duncan Strong excavated in the Nasca region in 1952 to determine the difference between Paracas and Nasca settlement patterns. Strong performed the first settlement pattern analysis and stratigraphic excavations were carried out previously on the south coast (Silverman 1993).

Table 3. Chronologies of the Nasca (Proulx 2006:26).

| Dates | Dawson | Sawyer (1961) | Kroeber (1956) | |
|--------|-------------------------------------------|---------------|----------------|--|
| 900 AD | 9 8 7 6 5 4 3 2 1 | Nasca-Huari | Y | |
| 800 AD | | Late Nasca | B | |
| 700 AD | | | | |
| 600 AD | | Middle Nasca | AB | |
| 500 AD | | | | |
| 400 AD | | Early Nasca | A | |
| 300 AD | | | | |
| 200 AD | | | | |
| 100 AD | | Proto-Nasca | | |
| 100 BC | | | | |
| 200 BC | | | | |

Modern researchers in the Nasca region have become more concerned with the documentation of domestic sites as opposed to solely ritual architecture and burials. These recent excavations have given insight into Nasca culture at the domestic level and some of these excavations are summarized below (Vaughn 2009; Conlee 2014; Vaughn and Grados 2006)

Cahuachi

The ceremonial center of Cahuachi is 500 km south of Lima and 18 km west of Nasca. Cahuachi is 365 meters above sea level on the south side of the Nasca River on riverine terraces. The Pampa de San Jose and the Pampa de Atarco, the location of the famous Nasca lines, are situated to the north and

south of Cahuachi, respectively. Cahuachi is interpreted by many scholars to be a large pilgrimage center where individuals traveled in order to participate in ceremonies and obtain polychrome pottery (Silverman 1993; Vaughn 2005; Proulx 2006). Cahuachi has long been the focus of Nasca scholars because of its apparent significance in Nasca society. Alfred Kroeber was the first to map a large portion of Cahuachi . He noted that here were some Nasca A and B sherds on the surface as well as Y in grave contexts. He noted the modified natural hills and river terraces that form the mounds at Cahuachi. Helaine Silverman was the next to perform extensive investigations at Cahuachi where she mapped and excavated in order to determine the function of the site. Giuseppe Orefici is an Italian archaeologist who began investigation at Cahuachi from 1983 and has continued to present (Orefici 2011).

According to Silverman's estimations, the site encompasses 150 hectares in total with 25 hectares constituting mounds or ceremonial areas. The Great Temple at Cahuachi is an artificial mound built on a natural hill (Silverman 1993). There are many hypotheses as to the uses of Cahuachi. Silverman (1993) states that the lack of evidence for an extensive domestic occupation indicates that Cahuachi was utilized as an empty ceremonial center. There are up to 40 mounds at Cahuachi and Silverman and Proulx (2002) argue that they were constructed and used by semi-autonomous groups that congregated at the site. Orefici (2011) has found evidence of ceremonial activities at the site such as caches of hundreds of panpipes in the

Great Temple and 60 sacrificed camelids. Archaeological excavations have also uncovered areas suggesting polychrome ceramic production consisting of pigment caches and fine-haired brushes (Orefici 2011; Vaughn 2009:46).

A survey of the southern Nasca region has shown that the sources of clay used for fine ware pottery were central to sources near Cahuachi (Vaughn et al. 2006:686). Pigment analyses done in the region indicate continuity through the Nasca region in terms of ceramic pigment production; this will be discussed further in the following chapter (Vaughn et al. 2005). Evidence for a kiln used for pottery production has also been uncovered at the site (Orefici 2011:193). The pampas around the Cahuachi do not contain much archaeological evidence for ceremonial or specialized use and was presumably used primarily for agriculture (Silverman 1993:3). Cahuachi was previously thought to be an empty ceremonial center but new evidence for permanent elite residences has been reported (Orefici 2011; Vaughn 2009:46; Bachir Bacha 2007). Cahuachi was abandoned as a ceremonial center after the Early Nasca Period and thereafter used primarily as a cemetery (Silverman 1993).

Pilgrimage to Cahuachi

Nasca with a center at Cahuachi has been hypothesized to be a state, a religious interaction sphere, and a chiefdom or confederacy of independent societies. Pilgrimage and feasting provided an opportunity for the Nasca social classes to congregate, creating a period of pseudo-equality. According

to Kantner and Vaughn (2012:66), a pilgrimage can be defined as “a journey to a special place in which both the journey and the destination have spiritual significance for the journeyer.” Pilgrimages can serve many social purposes, which include the emphasis of social differences, the challenging of status or as a mechanism for solidarity (Kantner and Vaughn 2012). There are multiple agendas at the pilgrimage site that include religious and political advancement. According to Kantner and Vaughn (2012), costly signals for religious affiliation are hard to fake and demonstrate the investment of the individual or group. The building of Cahuachi is a “signal” of power because it demonstrates the ability to gather and manipulate large groups of people. The participation in these events presumably benefits those involved. Obtaining polychrome pottery at Cahuachi and social prestige that come with it are most likely the benefits of pilgrimage to Cahuachi.

The act of pilgrimage is also costly to the pilgrim, in that they must travel and invest resources such as camelids or polychrome pottery for consumption at the pilgrimage site. Because pilgrimages are temporary affairs, it is necessary to have a physical reminder of the pilgrimage and the ideology and religion that it symbolized. This is achieved with polychrome pottery being acquired at Cahuachi upon pilgrimage to the site (Kantner and Vaughn 2012). Differential consumption of certain vessels at domestic sites indicates that there are “special” or elite vessels that were obtained at Cahuachi. Leaders of semi-autonomous villages reinforced social

stratification by taking different roles upon pilgrimage to the site and they were likely the recipients of these elite vessels.

The unpredictability of the environment in the Nasca region produced a kind of ‘opiate of the masses’ effect, which added to the import of ritual, especially if that ritual guaranteed fertility in times of drought. The seemingly mystical emergence of the Nasca River near the site of Cahuachi contributes to the ritual significance of the site. Religion at Cahuachi is characterized by some as a center for competing cults from various regions that were incorporated as people migrated to the Nasca region. There is evidence of ritual sacrifice of camelids and guinea pigs at Cahuachi as well as recent evidence of costumes that are thought to have been worn by religious practitioners (Orefici 2011).

In order to contribute to the research already performed in the Nasca region, I compared the results of my analysis at La Tiza to four other sites in the Nasca region. These sites are La Tiza, Upanca, Uchuchuma, Marcaya, and Cahuachi. All of these sites have domestic components in which polychrome pottery is ubiquitous. The following sections are brief background descriptions of the sites in this study.

La Tiza

The site of La Tiza is a substantial town located at the conjunction of the Aja and Tierras Blancas rivers. La Tiza was first recorded by Katharina Schreiber on survey and then excavated by Christina Conlee between 2004-

2009. It is a multicomponent site that dates back to the Archaic. The site encompasses 30 hectares and is located in the middle valley at 700 meters above sea level. The site is near the Aja River and surrounded by land suitable for agriculture. There is no indication of occupation in the Initial Period. Occupation in the Early Horizon and Initial Nasca Period consisted of farmers. During Early Nasca (AD 80-450) the site spanned approximately 8 hectares with habitation areas as well as cemeteries and ritual areas. Architecture at La Tiza utilized field and cut stone and had a variety of layouts and sizes (Conlee 2014). There are numerous burials at the site, including Nasca burials and aboveground Wari tombs. There are two intact Nasca burials at La Tiza, a child burial dating to Early Nasca and a headless burial dating to Middle Nasca. The child burial contains an individual that was nine to ten years of age in a seated flexed position with a large ceramic sherd placed on the cranium. The other intact burial is a stone-lined tomb containing a headless individual that is approximately 22 to 29 years of age (Conlee 2007). The tomb also contains a Nasca 5 head jar that depicts a modeled head with a seemingly mythological tree growing from it. There is another stone lined burial that was similar but is not intact. Conlee (2014) hypothesizes that this was possibly another headless burial. These two burials are built into an artificial terrace with a ramp for access. This is hypothesized to be a ritually significant part of the site and contains two very large globular shaped plain ware vessels that are interpreted to be offerings (Conlee 2014). There are also 2 plazas in Sector I that are associated with

Nasca 5 pottery. Although there were no excavations in these plazas, Conlee (2014) observed ash and organics eroding out of looter's pits. There are additional Nasca tombs below these two plazas that are also associated with Nasca 5 pottery. Unfortunately these tombs are looted and were not excavated.

Farming was important to the economy in Early Nasca society and this is made evident by maize, lima beans, peanuts, pacay, yucca, guava, sweet potato, squash, huarango, cotton and gourds found at La Tiza. The water table at La Tiza is relatively high, making the construction of irrigation canals and *puquios* possible. The *puquio* of Orcona and two other possible *puquios* are in close proximity to La Tiza. There is evidence for domesticated animals at La Tiza, camelids and guinea pigs being the most common. Cerro Blanco, a white sand mountain that is considered to be sacred, is located across the river valley from La Tiza. An INAA (Instrumental Neutron Activation Analysis) compositional analysis was done on the Early Nasca pottery at La Tiza, which revealed that all of the polychrome pottery came from Group 1, or the source located near Cahuachi (Conlee 2014). This indicates that the fine ware ceramics at La Tiza were not locally produced. La Tiza is one of the largest Early Nasca sites in the southern Nasca region and contains evidence of social differentiations in the form of differential distribution of elite Nasca vessel forms discussed in the following chapters. There is also evidence of ritual activities like the offerings and architecture associated with the headless burials in Sector II that are not commonly found

at small Early Nasca village sites. For these reasons, Conlee (2014) hypothesizes that La Tiza is a representation of more complexity in the southern Nasca region than was previously thought.

Marcaya

Marcaya is an Early Nasca village that encompasses one hectare in the foothills of the Andes Mountains at an elevation of 1,000 meters. The small village is near the Tierras Blancas River and was initially documented by Katharina Schreiber in 1989 as an Early Nasca domestic site (Vaughn 2009:65). It was subsequently excavated by Kevin Vaughn. The Tierras Blancas valley is suitable for irrigation agriculture. The architecture at the site is described as “opportunistic” (Vaughn 2009). The buildings consist of round houses and patios of variable size built up to 1.5 meters tall from fieldstone and an upper portion of the wall built from perishable materials. The houses contain evidence of food storage, cooking and consumption. There is no evidence of pottery production at the site of Marcaya (Vaughn 2009:67). The people that occupied Marcaya were agropastoralists that made up an “economically self-sufficient community with the exception of polychrome pottery production and possibly obsidian acquisition” (Vaughn and Grados 2006:597).

Upanca

Upanca is primarily a domestic site located at 1600 masl between the

highlands and coast of southern Peru in the Tambo Quemado Valley. It was originally recorded by Schrieber and Isla Cuadrado in the Southern Nasca Region Survey and subsequently excavated by Vaughn and Grados (2006). The site is situated at the top of a hill near the northern margin of the Tambo Quemado Valley and contains five hectares of domestic component with simple round structures and patios, as well as 50 hectares of agricultural terracing. The site has a permanent water supply and occupation of the site dates back to the Archaic. Upanca was principally an Early Nasca site with high polychrome consumption. The site assemblage consists of sixty percent fine ware with limited elite vessels and evidence for potter's plates. Vaughn and Grados (2006) hypothesize that the intermediate location of the site makes it an important trading site that served as a conduit between the highlands and the coast. The polychrome pottery from Upanca is of the same INAA signature as the clay source located near Cahuachi although these sites are 60km apart. Like Marcaya, Upanca appears to have been a self-sufficient, agropastoralist Early Nasca site. Obsidian from the highlands in Archaic and Nasca contexts indicates that trade at this site was long-term and long-distance.

Uchuchuma

Uchuchuma is a domestic site 1200 masl in the southern margin of the Aja Valley, 50 km from Cahuachi. The architecture at the site is well preserved because of limited access to the site. Most of the ceramics date to Early Nasca, although there are Formative and Late Intermediate Period

pottery also found at the site. Polychrome bowls and vases make up the majority of the Early Nasca ceramics and there are several cup bowls and two head jar fragments (Vaughn 2004). Vaughn (2004) hypothesized that the heterogeneity of the domestic structures represents high and low status houses. Although polychrome pottery is widespread at this site, cup bowls and head jars appear to have differential distribution. These vessels are associated with what Vaughn designates as elite architecture (Vaughn 2004:126).

CHAPTER II

Nasca Ceramics

The Nasca have some of the finest ancient pottery in the New World with 14 colors in their mineral pigment palette Early Nasca is a continuation of the earlier Paracas pottery style (Reindel 2009; Proulx 2006; Silverman and Proulx 2002). This is indicated by continuity in the vessel forms and iconography of these two cultures. The Nasca chronology is divided into nine ceramic phases, Early Nasca comprised of phases 2 through 4. Common themes in the iconography are naturalistic, which include fish, birds, and other animals; there are few examples of mythical anthropomorphic figures in Nasca 2 (Proulx 2006). Mythological figures are more common in this preceding phase as well as the depiction of occupations such as warriors, musicians and farmers. The majority of Nasca 2 iconography is simple rather than elaborate (Hecht 2010).

Phase 3 is one of the longest and most prominent of the phases (Proulx 2006). There is an increase in the number of vessel forms, improvement in manufacturing techniques, as well as an increase in the number of mythological figures. These figures are depicted on gum-drop shaped double spout vessels which are considered items of prestige.

Phase 4 is contemporary with the collapse of Cahuachi and is the shortest phase. There is more variability in vessel forms and iconography,

presumably because production of ceramics was decentralized. The iconography shifts from naturalistic to proliferous or mythological in nature at the end of Nasca 4 (Proulx 2006).

Phase 5 is considered to be a transitional phase when the iconography shifts from naturalistic to “proliferous” (Proulx 2006). This phase is characterized by social change as well as change in iconography. Aqueducts were developed in this phase to compensate for the droughts that were prevalent in this time period (Schrieber and Lancho 2003). The innovation of aqueducts led to a more condensed population as the people gathered around the aqueducts for access to water. It is hypothesized that control of the aqueducts led to social stratification, which is reflected in burial patterns (Proulx 2006). This is also the peak period for geoglyph construction, which would have required an organized society due to the monumental nature of the geoglyphs. There is also a significant increase in the number of trophy head jars, a style common in Nasca culture (Proulx 2006). Depiction of farmers, identified by conical hats, become more prevalent in the iconography in phase 5, due to the dependence on crops to feed the dense population.

Recent research has indicated that Nasca 5 may be a burial or ceremonial style because of its frequent association with burial contexts (Conlee 2014). Nasca 5 pottery at La Tiza is found in two plaza areas and in burial contexts. Both of these contexts are ritually charged and add support to the hypothesis that Nasca 5 was a burial style. A recent OSL (Optically

Stimulated Luminescence) study was conducted by Vaughn et al. (n.d.) on 50 sherds from 32 Nasca sites. There was more overlap in the Dawson chronology than was previously thought. The resulting dates showed that there were multiple phase styles being used simultaneously. This is supported by the evidence of the concurrent use of Nasca 3 and 4 pottery at Marcaya and the overlap of Nasca 4 and 5 in the Palpa region to the north. According to Vaughn et al. (n.d.), Proto Nasca and Nasca 1 and 2 date from 250-50 BC. Vaughn et al. (n.d.) hypothesize that this was a time when there were multiple groups in the Southern Nasca Region (SNR) that were in competition. Nasca 1, 2 and 3 sherds date from 50 BC-AD 50. Nasca 4, 5, 6, and 7 date from AD 300 to 500 (Vaughn et al. n.d.). This dates to the time after the fall of Cahuachi, when there is more variability in regional sites and a shift in power (Vaughn et al. n.d.).

There is relative cultural stability in phase 6 with slight variation on styles prevalent in phase 5. Phase 7 is a period of rapid change and exchange of ideas. Nasca influence was at its highest, stretching 1,000 kilometers along the coast and 220 kilometers inland (Proulx 2006). There is obvious influence from the contemporary north coast Moche culture in terms of iconography, such as the use of motion being depicted through the illustration of running individuals. Phases 8 and 9 consist of the breakdown of Nasca motifs and classic Nasca elements, which is the result of the incorporation of Nasca into Wari culture in AD 750 (Proulx 2006).

In general, Nasca iconography is dominated by fertility themes including agricultural products such as beans, corn, and peppers. Farmers are

also depicted in the iconography carrying the “fruits of their labor” in their hands and are marked by their conical hats. Anthropomorphic mythical beings (AMBs) depict ritual specialists or “ritual performers” that hold trophy heads in the same way as the farmers. As stated above, trophy heads are depicted with plants growing from them and are thought to be associated with fertility (Silverman 1993:322).

Production Methods

The ideal environment and social context of Nasca polychrome pottery resulted in some of the finest ceramics in the New World. The production methods of Nasca potters indicate a high level of skill that only increased with time. Nasca ceramics were made using coiling, drawing and shaping methods, shaping being the least common (Carmichael 1998). After the initial formation of the vessels, the vessels were then smoothed with a polished sherd or a smooth river cobble (Figure 2). Nasca potters likely used a plate for molding vessels that allowed for efficient manipulation of clay. There were no molds used in Nasca ceramic production (Carmichael 1998:218). After a vessel was formed, it was allowed to dry before painting. Nasca ceramic painting procedure is unique in that the outline of the design is painted after the main coloring of the vessel.

After pigment was applied, the vessels were burnished. Burnishing has many benefits which include compacting mineral paints, providing a high gloss, improvement in the strength of the surface of the vessel as well as reduction in the likelihood of scratches (Carmichael 1998:221). The process

of firing alters the color of the pigments, which is indicative of a high level of skill for potters who presumably predicted the color change and produced uniform pigments. There is little evidence of pottery production or kilns Early Nasca domestic sites. It is clear that there was more vegetation that could be used for fuel before modern changes to landscape lowered the water table. These include but are not limited to irrigation-agriculture, which has lowered the water table (Carmichael 1998: 217). The majority of the evidence for production has been found at Cahuachi, which includes pigment caches, paintbrushes and kilns at Cahuachi (Silverman 1993; Orefici 2011).



Figure 2. Unsmoothed coils found in Unit 6.

Vessel Forms

Bowls are the most common vessel form at Nasca sites. There is a substantial amount of variation in this category including flaring bowls, straight bowls, incurving bowls, cup bowls, very deep bottom bowls, straight-sided bowls, round bottom bowls, and conical bottom bowls. These subcategories are distinguished according to degree of wall flaring. Flaring bowls are further subdivided into flaring bowl 1, which have a subtle curve at the rim of the vessel and flaring bowl 2 have a higher degree of curvature. Bowls are generally slipped and painted on the exterior. Dishes are similar to bowls but they are usually painted on the interior of the vessel as opposed to the outside walls (Vaughn 2009).

Vases are “tall cylinder-shaped jars whose height is greater than the mouth diameter” (Proulx 1968:13). The most common form of the vase is a bulbous vase, which is painted on the exterior. Jars are similar to vases in that they have a restricted rim diameter and height greater than the maximum diameter. Unlike vases, there are both plain ware and fine ware jars. There are also straight-sided jars that are cylindrical with a flat bottom and straight vertical walls. Collared jars have a spherical body and sometimes have clay legs. Incurving vessels are similar to collared jars in that they are globular with convex walls but are lacking a rim and instead have an incurving rim. Only a few of these vessel forms are found at La Tiza (Figure 3).

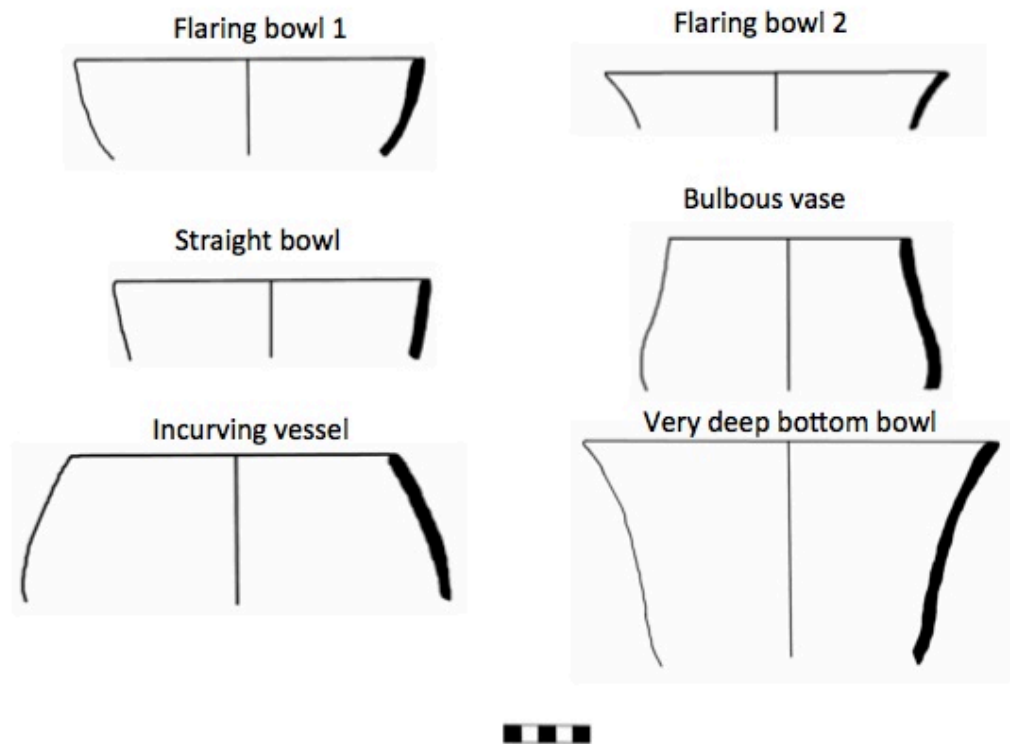


Figure 3. Vessel forms present at La Tiza

Headjars are similar in shape to bulbous vases but are distinguished by a painted human head with modeled nose and ears (Figure 4). These vessels depict males with headdresses and facial markings. Those that are depicted with closed eyes and spines piercing their lips are trophy heads. These vessel forms are common in burial contexts and are thought to replace heads in headless burials (Conlee 2007).



Figure 4. Early Nasca head jar (Proulx 2006: Figure 5.138).

Effigy pots are also present in Nasca material culture (Figure 5). They can represent human forms, fisherman bottles, animals or plants. The fisherman bottle is a closed vessel with one spout that is connected to the head by a bridge. The fisherman is depicted sitting on an inflated animal skin used for flotation. A net is also depicted along with the fisherman and it sometimes contains fish.



Figure 5. Nasca fisherman effigy bottle (left) and human effigy (right) (Proulx 2006: Plates 32 and 19).

Double-spout-and-bridge bottles are closed vessels with two spouts (Figure 6). They are globular in shape and commonly decorated by a mythical being (Proulx 1968). Double-spout-and-bridge bottles were probably used for pouring and storing sacred liquid (Proulx 2006). This vessel form along with cup bowls are sparse at Nasca domestic sites and associated with high status. Vaughn (2005) suggests that these vessels were common in ceremonial contexts and burial goods.



Figure 6. Nasca stirrup spout vessel (Proulx 2006: Plate 5).

Although uncommon, miniatures are also found in Nasca contexts.

Miniatures are simply smaller versions of Nasca vessel forms (Figure 7). Small rim diameters are characteristic of these vessels. Silverman (1993) hypothesizes that these vessels were traditionally placed in adolescent burials.

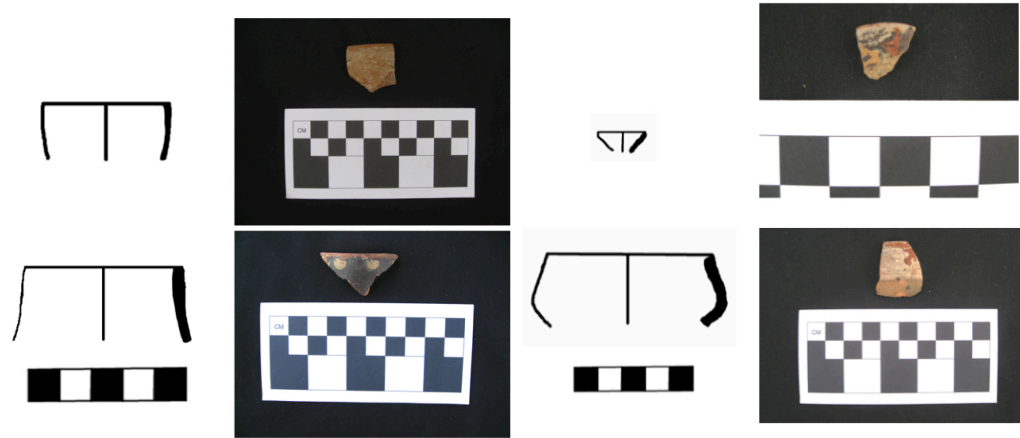


Figure 7. Miniatures found at La Tiza. All are miniature bowls with the exception of the one in the lower left corner, which is a miniature bulbous vase.

Cántaros represent an anomaly in Nasca vessel classification. They are unslipped polychrome vessels of coarse paste that have been interpreted as storage jars (Vaughn 2000:289). The decoration on these vessels consists of thick wavy dark lines that are depicted on a white background with a black outline. In past excavations, these vessel forms are referred to as “3-handled vessels” and are assumed to be used for storage of liquids because of their globular shape and decoration reminiscent of water (Vaughn 2009). In addition, *cántaros* were analyzed by Vaughn and Neff (2000) and were consistent with Group 1, which has a clay source near Cahuachi.

There are only two plain ware vessel forms: ollas and jars. Plain ware is characterized by coarse temper and used for storage and food preparation. Ollas are globular vessels that can be necked or neckless. All ollas have strap handles. Jars are similar to ollas in that they are globular but are distinguished by short collars (Vaughn 2009). Ollas and jars are generally hard to distinguish and are lumped together for this study.

Compositional Analyses

A survey of the southern Nasca region has shown that the clay used for fine ware pottery was centralized to sources near Cahuachi (Vaughn and Neff 2004). Clay samples were taken along river valleys every two kilometers and from clay sources associated with archaeological sites. The samples were tested using INAA. The majority (84%) of the fine ware ceramics used for comparison in this study fit into INAA Group 1, which is composed of ceramics from 15 domestic sites. Nasca is an ideal environment for pottery production; this is made evident by the copious amount of clay sources found in the survey as well as knowledge of local modern potters. The INAA tests revealed that there is quite a bit of variability in the clay sources in the Nasca region. Although there is variability, the majority of the sources used in INAA Group 1 are from those found near the site of Cahuachi (Vaughn and Neff 2004). This coincides with the hypothesis that Cahuachi, a religious pilgrimage center, was the production center for Early Nasca ceramics and the reason for the homogeneity in iconography and production methods.

Another INAA study done by Vaughn and Neff in 2000 yielded similar results. This study was limited to the small village site of Marcaya. Pastes were divided into three types. Type A is a coarse reddish brown paste with relatively large inclusions and it is usually found in plain ware vessels called *ollas* and jars. Type B is a coarse, pinkish gray paste similar to type A. Type C is a reddish very fine paste with very little to no inclusions; it was used to make fine ware ceramics and panpipes. Like the survey study, the majority of

the fine ware ceramics tested were from INAA Macro Group 1. This study revealed that overall there is much more homogeneity in the pastes of fine ware and more variability in the plain ware ceramics. These patterns suggest that plain ware was made locally while fine ware or polychrome pottery was centrally produced. Yet another INAA study by Vaughn et al. (2006) showed that polychrome pottery has a unique and consistent chemical signature while plain ware has variable chemical signatures.

Pigment analyses done in the region show that there is uniformity in pigment composition and colors used through time. This indicates continuity throughout the Nasca region in terms of ceramic production (Vaughn et al. 2005). This study was done using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) and focused on the changing “recipe” of black, white and maroon pigments. The pigment samples for this study were from 16 different sites and amounted to 130 painted ceramic sherds. The uniformity in change ascertained from this study shows that the production of pottery remained centralized (Vaughn et al. 2005). There is also recent evidence for a kiln used for pottery production at the site of Cahuachi (Orefici 2011).

Another LA-ICP-MS study was done by Vaughn et al. (2011) on an assemblage of ceramics from the southern Nasca region collected by Alfred Kroeber in the 1920's. This study included ceramics from the Early Horizon, Early Nasca and Late Intermediate Period. All of the time periods had similar compositions, but Early Nasca had the least variability. Possible explanations for this homogeneity are a widely

used clay source or the standardization of a clay mixture used for ceramic production created in Early Nasca and then used for an extended time (Vaughn et al. 2011:3566).

Early Nasca Pottery and Ideology

Nasca material culture is unique in that there is an unusually high number of polychrome or fine ware pottery found at all Nasca sites. Typically the majority of ceramic sherds at an archaeological site are plain ware sherds. It has been proposed that fine ware pottery was culturally significant to the Nasca people in that it was a medium for religion and ideology. This process is attributed to the excess production of fine ware ceramics in Nasca society (Vaughn 2005). Pottery production at the ceremonial center of Cahuachi was conducive to elite manipulation of ideology. There are four categories of materialization of ideology: ceremonial events, symbolic objects, public monuments and writing systems. Nasca polychrome pottery falls into the symbolic category (Vaughn 2005:114). The spread of Nasca ideology through ceramic vessels was effective because of the portable nature of the vessels.

Although all members of Nasca society had access to fine ware ceramics, certain vessels like the double-spout-and-bridge vessel were restricted to high status individuals. The unusually high number of polychrome vessels can be attributed to high demand and the lack of differential access to these goods (Vaughn 2004). Vaughn (2005) argues that pottery is the medium for the spread of social ideology because of its portability, utilitarian function, and relative ease of production.

Upon pilgrimage to the ceremonial center, Cahuachi, individuals presumably participated in ceremonies and feasting that involved polychrome pottery. They then took the vessels home where it became a constant reminder of their religion and ideology, as well as providing an opportunity for ritual at the household level to ensure continued fertility (Vaughn 2005). A modeled scene attributed to the Nasca culture was described by Julio C. Tello and depicts a family on pilgrimage to Cahuachi. They are clad in fine clothing and carrying multiple panpipes and a double-bridge-and-spout bottle (Silverman 1993).

Elite Polychrome Pottery

Elite households in the Nasca region are characterized by higher quality architecture and increased variability in polychrome vessels (Vaughn 2005:120). Indicators of high status are larger residences with more complex layouts, high value goods, and evidence of more consumption than production (Vaughn 2004:65). A household is defined as self-sufficient “productive, consumptive, and exchange units” by Vaughn (2004:65). Although Nasca was not a highly stratified society, status is evident in differential treatment of burials and household construction.

According to Silverman (1993), there are 25 shape classes as well as a miscellaneous category in Nasca pottery. The shapes vary according to the phase in which they were produced. The polychrome pottery vessel forms found at Cahuachi include double-spout-and-bridge bottles, decorated bowls, dishes, cup bowls, vases, modeled jars and jars. Double-spout-and-bridge

bottles, cup bowls, miniature vessels, head jars and paired vessels are considered items of prestige because the access to these vessels was limited. Only one-third of the Nasca population had access to double-spout-and-bridge bottles. These vessels are usually decorated with mythological beings and they become increasingly rare through time until they stop being produced in phase 8. Although they are considered items of prestige, the presence of these vessels is not always correlated with a large amount of burial goods (Silverman 1993).

Excavations at the small village site of Marcaya reveal two high status patio groups. These patio groups were larger than most of the other domestic structures at the site and cup bowls and head jars were unique to this area of the site (Vaughn 2004:76). Vaughn (2006:126) hypothesizes that elite vessels were used in order to perform rituals comparable to those performed at Cahuachi, but on a smaller scale.

The most common polychrome vessel in Nasca phases 3 and 4 is the decorated bowl. They are generally slip painted with a design painted on the outside of the bowl. Miniature and paired vessels are also associated with prestige because of the rarity in the archaeological record and association with other vessels that are considered prestigious (Vaughn 2009).

Given these findings, elite vessels of the Nasca Culture are considered to hold ritual significance. The distribution of these vessels at La Tiza may reveal an elite presence at the site. And a concentration of these vessels in one part of the site could point to an area of the site dedicated to ritual activities.

CHAPTER III

Methods

The pottery analyzed in this study was excavated by Proyecto La Tiza, directed by Dr. Christina Conlee, during the field seasons of 2004, 2005, 2006 and 2009. The majority of the Nasca sherds were excavated in the summer of 2009 when a concentrated effort was made to investigate burial and ritual areas of this time period. The pottery comes from 15 units, 6 tombs, and 3 Nasca burials located in several sectors of the settlements.

The materials used in this study are stored at El Museo Regional de Ica located in the city of Ica, which is the capital of the department of Ica. La Tiza is located near the modern town of Nasca that is in the department of Ica. The Ica museum is the official depository of the Peruvian Ministry of Culture in the region and is where materials from most archaeological projects in the department are stored. During the summer of 2013 boxes from Proyecto La Tiza were taken out of storage with the aid of Susana Arce the museum director and her staff. The materials were analyzed in a lab adjacent to the museum in July of 2013.

Analysis

The sherds from La Tiza were categorized as fine ware or plain ware. Fine ware is defined in this study as painted and burnished pottery with homogeneous iconography and paste/temper with fine to no inclusions. Plain ware is defined as unslipped and unpainted vessels with coarse paste/temper and thick walls (Vaughn 2000:289).

Pigments, temper, paste, firing method, vessel form, rim diameter, and the maximum and minimum width of the sherds were recorded for a sample of 569 of the 3,626 analyzed. Pigments were identified and recorded for each sherd in an attempt to identify certain colors that are associated with Nasca time periods. The temper was logged in order to determine differences between fine ware and plain ware and any variability within these categories. The fine ware temper in previous studies has been homogenous while the plain ware temper is not (Hecht 2010).

Paste, Temper and Firing Methods

Paste and temper color and consistency were recorded in this study to assess the homogeneity of the paste and temper used at La Tiza. Hecht (2010: 131) defines temper as non-plastic material added to clay to reduce drying shrinkage of a vessel. The temper was categorized into very fine, fine, coarse and very coarse, classifications that are comparable to those used in Dr. Kevin Vaughn's 2000 dissertation on Marcaya. The colors of the pastes were described with a range of Munsell colors. The temper and paste classifications were photographed using a Dino-lite USB microscope. Generally, Nasca fine ware pastes are very fine with little to no inclusions or temper (Proulx 1968:23). Variations in the pastes and tempers used in the vessels at La Tiza will reveal insights into the resources used for pottery production. The categories for temper were none, organic, mica and a white temper that may be calcium carbonate.

There were two categories for firing method in my analysis: reduced and oxidized. The firing method was recorded in order to recognize any patterns in the

distribution of these firing methods. The majority of Nasca pottery is fired in an oxidized atmosphere, with the exception of some Initial Nasca pottery (Hecht 2010).

All 1,521 of the Nasca sherds were counted and vessel forms were identified when possible. The sherds were photographed for the documentation of the iconography on the vessels. Diagnostic rim sherds were drawn for documentation of the variation in the vessel form types. Wall orientation, rim diameter and orientation, base shape and angle, and general shape of vessel were observed in order to classify vessels.

MNI

A minimum number of vessels or minimum number of individuals (MNI) was calculated according to quantification of rim sherds. The refitted rim sherds or those with similar characteristics were counted as one vessel. The MNI was calculated so that the sample of sherds from La Tiza could be made comparable to other previously excavated Early Nasca sites in terms of ceramic sherds (Vaughn 2009; Silverman 1993; Vaughn and Grados 2006; Vaughn 2004). Calculating an MNI for La Tiza provides a way for the vessels to be quantified in terms of whole vessels as opposed to only sherds, which may give a biased representation of the ratio of actual vessels.

The overall weight of diagnostic and non-diagnostic sherds was compared for statistical analysis of the ratio of fine ware and plain ware at La Tiza. Observable variation and features were also recorded such as repair holes and degraded surfaces. The non-diagnostic sherds were sorted through and classified as fire-sooted and not fire-sooted to reveal their possible function.

Plain Ware Estimates

As previously mentioned, La Tiza is a multicomponent site and has been extensively looted. This has resulted in many mixed units that contain artifacts that are not contemporaneous. The mixing of the not contemporaneous sherds may have skewed the number of plain ware vessels in the Nasca assemblage. Plain ware stays relatively consistent throughout the pottery producing cultures that occupied La Tiza, which makes it difficult to differentiate the plain ware from the separate time periods.

In an attempt to avoid this bias, I incorporated nondiagnostic sherds (unpainted body sherds) in units that contained only sherds diagnostic to the Nasca period. This portion of my analysis showed that there were only a few fine ware sherds with evidence of fire sooting. The majority of the sherds with extensive fire sooting were classified as plain ware. This is in line with the previous hypotheses that fine ware was not used for cooking by the Nasca.

Vessel Forms

Vessel forms of Nasca pottery have been established by previous researchers and consist of bowls, vases or neckless jars, necked jars, bottles and variations of these shapes (Proulx 1968; Hecht 2010:61). Specifically the vessel form typology from Proulx (1968) was used for the identification of forms at La Tiza. The distribution of vessel forms at La Tiza was analyzed to show status distribution in domestic and burial contexts. The quantification of vessel forms was then compared to the sites of Marcaya, Cahuachi, Uchuchuma, and Upanca to evaluate the distribution of high and low status vessels at the sites and thus, the social

differentiation at these sites. In addition, the number of total vessels at these sites may reveal a pattern in the distribution of polychrome vessel distribution.

Iconography

The fine ware ceramic sherds at La Tiza were quantified according to the themes, components and features on the vessels defined by Hecht (2010). According to Hecht (2010), Nasca iconography can be divided into geometric, naturalistic and mythological themes. Geometric themes consist of geometric shapes like triangles, dots and circles. Naturalistic themes are composed of components like birds, fish, and humans. Mythological themes are more abstract and consist of mythical beings that become more stylistic in later Nasca phases (Hecht 2010). The commonalities or differences among motifs between this and other sites will reveal information on the centralization of the pottery production, if the motifs are standardized. If common motifs among sites are variable, stylistic differences among sites may suggest regionally produced pottery.

The Dawson seriation is, according to Hecht, the most thorough seriation of Nasca iconographic sequence, and although it is not published, many Nasca researchers use this seriation. Dawson classifies iconography into themes, components and features. Features are the smallest identifiable units. They are often associated with larger components and can allow for chronological analysis through iconographic themes associated with Nasca phases (Hecht 2010). Diagnostic iconographic themes and vessel forms, as well as radiocarbon dates were used to identify temporal context of vessels at La Tiza.

CHAPTER IV

Results

There are a total of 3,626 sherds analyzed from La Tiza in this study. The following details the results of the analysis of Nasca pottery at La Tiza including the paste, temper, iconographic trends, as well as vessel forms and their distribution. The vast majority of the ceramic artifacts at La Tiza are fragmented and this limits the analyses of the iconography and determination of the vessel forms. The final section describes the results from the comparison to the other Early Nasca sites in this study.

Paste and Temper

The most common paste colors are red-brown, light red-orange and red-orange (Table 4). The majority of the sherds analyzed were oxidized, the small amount of reduced sherds are likely attributed to mistakes in pottery manufacture common among potters that use pit fire kilns.

Table 4. Paste colors at La Tiza.

| Paste Colors | Munsell | # |
|---------------------|----------------|----------|
| Red brown | 2.5 YR 5/6 | 158 |
| Light red orange | 2.5 YR 7/8 | 129 |
| Red orange | 2.5 YR 6/8 | 123 |
| Red gray | 2.5 YR 6/4 | 43 |
| Gray | 2.5 YR 6/2 | 22 |
| Light brown | 10 YR 5/3 | 16 |
| Brown | 2.5 YR 5/4 | 14 |
| Dark brown | 5 YR 4/2 | 9 |

The paste of the Nasca vessels at La Tiza were relatively consistent in that the fine ware vessels had fine to very fine paste containing small-grained sand inclusions

and the plain ware vessel paste was coarse to very coarse with larger sand inclusions (Table 5 and Figure 8). In addition to sand temper, organic temper, and mica temper, calcium carbonate inclusions were observed in the sample (Table 6). White tempers are the most common of these additional tempers. The majority of the sample had no visible additional temper.

Table 5. Paste types at La Tiza

| Paste Type | # |
|--------------|------------|
| Fine | 222 |
| Very fine | 219 |
| Coarse | 110 |
| Very coarse | 17 |
| Total | 568 |

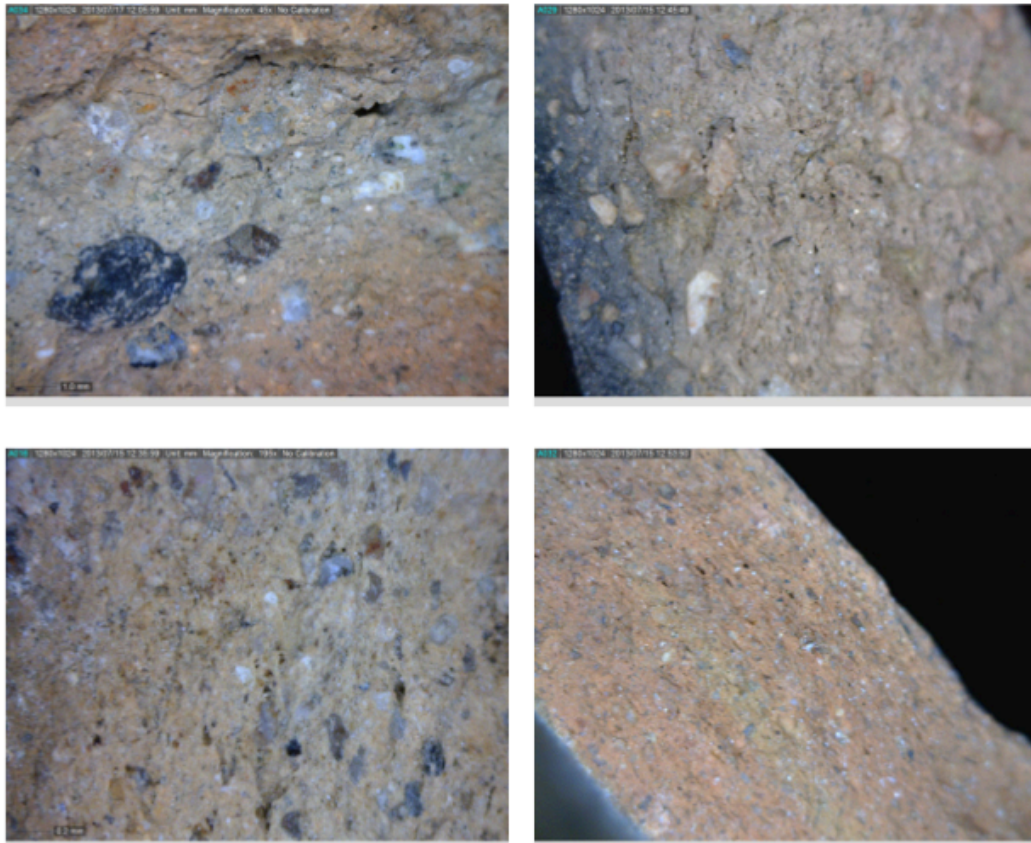


Figure 8. Dino-lite USB microscope picture of paste types at La Tiza: very coarse (top left), coarse (top right), fine (bottom left), and very fine (bottom right).

Table 6. Temper types at La Tiza.

| Temper | Fine ware | | Plain ware | |
|---------------------------------------|------------------|------------|-------------------|------------|
| | # | % | # | % |
| No visible temper | 345 | 77.01 | 103 | 85.12 |
| White temper | 45 | 10.04 | 3 | 2.48 |
| Mica temper | 8 | 1.79 | 11 | 9.09 |
| Organic temper | 42 | 9.38 | 3 | 2.48 |
| Mica and white temper | 3 | 0.67 | 0 | 0.00 |
| White and organic temper | 3 | 0.67 | 0 | 0.00 |
| Organic and mica temper | 1 | 0.22 | 1 | 0.83 |
| White, organic and mica temper | 1 | 0.22 | 0 | 0.00 |
| Totals | 448 | 100 | 121 | 100 |
| *all PW with sand grained temper also | | | | |

Fine Ware Vessels

The polychrome fine ware vessel forms at La Tiza consist of flaring bowls (type 1 and 2), straight bowls, bulbous vases, incurving vessels, Nasca 1 bowls, cup bowls, dishes, face jars, miniature vessels, very deep bottom bowls, and stirrup spouts in order of occurrence. Most of the vessels were found in Sector II at the site where Nasca burials were situated. All of the head jars were located in Unit 58 in and near a headless burial (Figure 9).

Table 7. Quantity of vessel forms at La Tiza.

| Fine Ware Totals | # |
|-------------------------|------------|
| Flaring bowl 1 | 183 |
| Flaring bowl 2 | 93 |
| Straight bowl | 18 |
| Bulbous vase | 18 |
| Incurving vessel | 14 |
| Dish | 10 |
| Early Nasca bowl | 9 |
| Cup bowl | 6 |
| Miniatures | 4 |
| Very deep bottom bowl | 4 |
| Stirrup spout | 4 |
| Headjar | 2 |
| Total | 365 |



Figure 9. Head jars at La Tiza.

Plain Ware Vessels

The plain ware assemblage consists of necked ollas and neckless ollas. There are also plain ware vessels that are painted with red, black and white pigment in a

stylized wave that is thought to represent water. Vaughn (2009) hypothesized that these are water storage vessels. These vessels have been dubbed *cántaros* and are found in units 6,8,54, 55, 58, 59, T4, T5 T34 and T41. There were not any whole *cántaros* or *cántaros* with attached rims so they are not included in the site MNI. These *cántaros* were identified by their characteristic design mentioned in the Nasca ceramics chapter (Figure 24). *Cántaros* in general had finer pastes than plain ware and were often self slipped. There were 39 sherds with this design in total and the units with the highest number of these sherds were 55 (6 *cántaros* fragments) and 58 (5 *cántaros* fragments).

Table 8. Plain ware distribution at La Tiza.

| Units | Neckless olla | Necked olla |
|---------------|--------------------------|------------------------|
| 4 | - | - |
| 6 | - | - |
| 8 | - | 3 |
| 21 | - | 7 |
| 22 | - | 3 |
| 28 | - | 14 |
| 41 | 5 | 2 |
| 46 | - | - |
| 49 | 1 | - |
| 51 | 4 | 2 |
| 54 | - | 9 |
| 55 | 1 | 18 |
| 57 | - | 1 |
| 58 | 3 | 20 |
| 59 | 5 | 32 |
| T25 | - | - |
| T34 | - | 4 |
| T41 | 1 | 4 |
| T42 | - | 4 |
| T4 | 1 | - |
| T5 | - | 3 |
| Totals | 21 | 126 |

Anomalies

There are some fragments of pottery that do not fit into the categories defined by Proulx (1968). There are two possible effigies or modeled clay fragments from Unit 59 and Tomb 4. The fragment in Unit 59 has a white slip and red and black pigment, and resembles the lower torso of a human. The other possible effigy from Tomb 4 is similar in shape but does not appear to be painted or slipped and is coarser than the example from Unit 59 (Figure 10). A cylindrical fragment of fired clay was also found at the site. This fragment appears to have been broken and may have been attached to a vessel in the form of a handle. This fragment does not resemble any Nasca vessel forms.

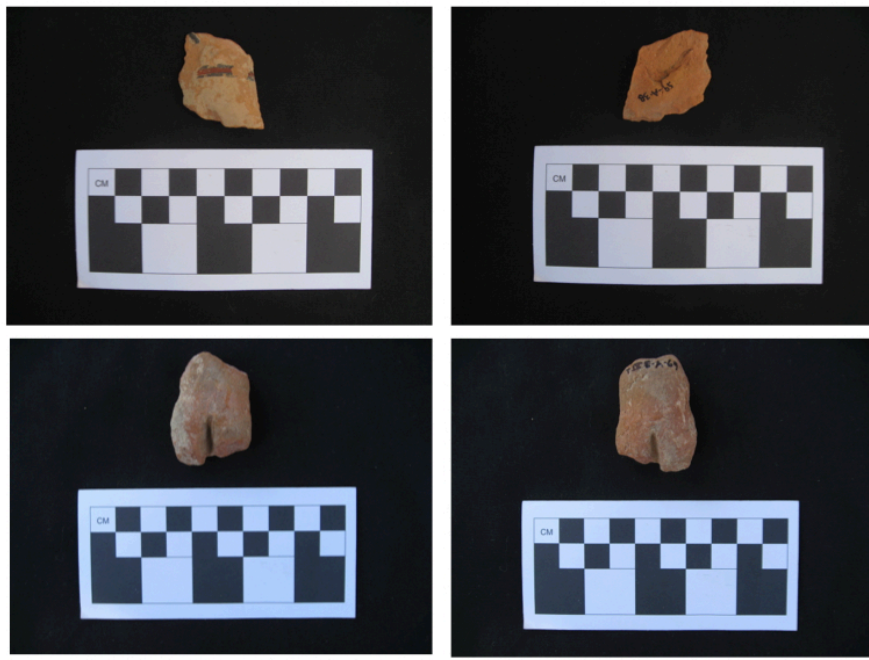


Figure 10. Modeled vessels from Unit 59 and Tomb 4.

Secondary Uses of Ceramics

There are some examples of polished sherds that were probably used for smoothing coils in ceramic production (Figure 11). There are a total of 4 sherds with

a polished edge. They are all in Sector II where the majority of Nasca sherds, as well as the headless burial, are situated. Polished sherds were found in units 6, 8, 58, and 59. Sherds were also recycled and used as spindle whorls for spinning cotton or wool yarns.

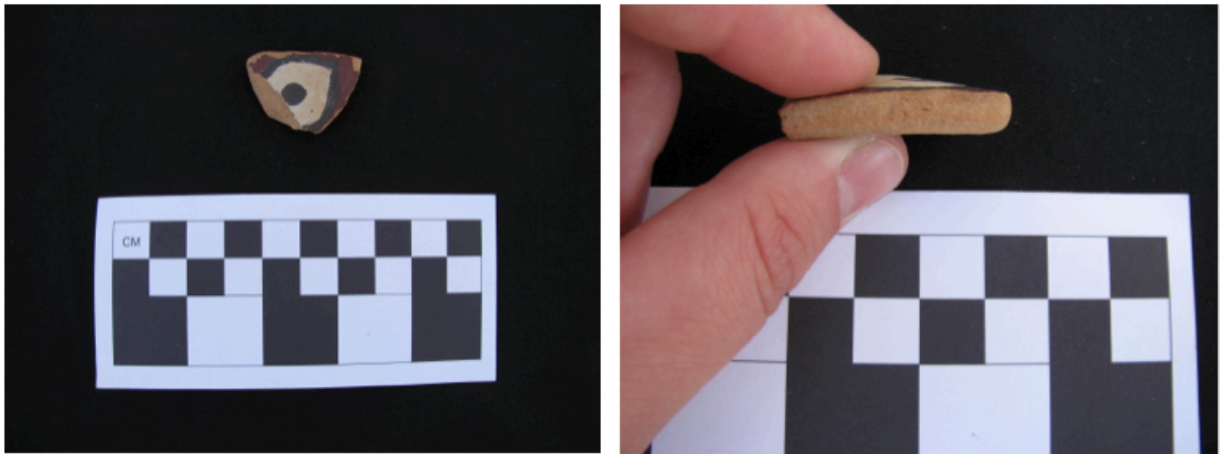


Figure 11. Polished or shaped ceramic sherd with mythological eye.

Elite Vessels

Elite vessels at La Tiza consist of cup bowls, miniature vessels, double spout and bridge bottles, and head jars. Unit 58, in an area that contains Nasca burials and architecture, contains the most elite vessels. There are three head jars and one cup bowl in this unit. The fourth head jar is located in the headless burial found at the site. Other units containing elite Nasca vessels are 8, 58, T34, T41, 6, 28, 46, 51, 54, and 57 in order of occurrence. In total, there are 14 elite vessels at La Tiza.

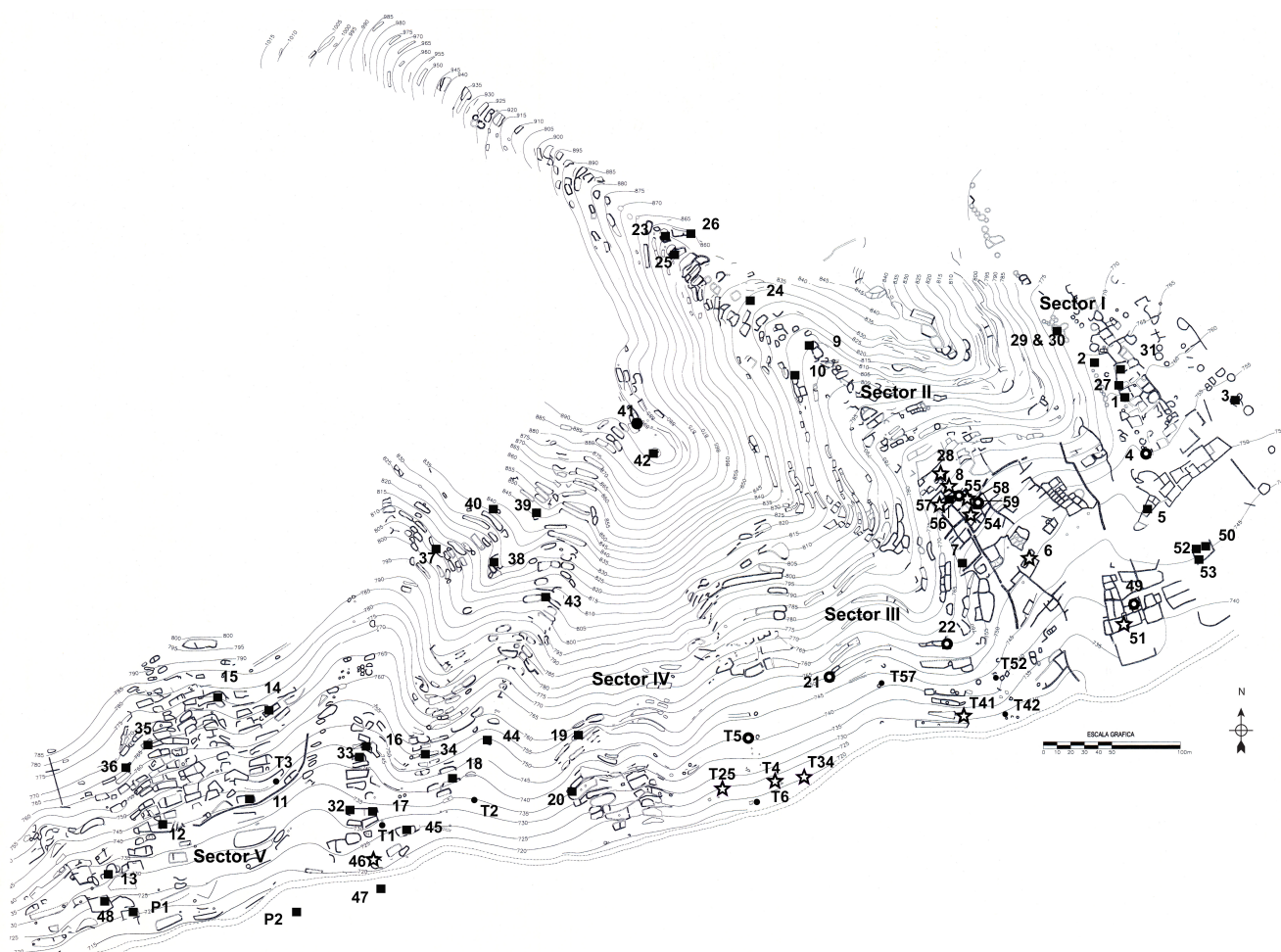


Figure 12. Distribution of all Nasca vessels. Units marked with empty circles contain Nasca vessels and units marked with stars contain elite vessels.

Table 9. Distribution of Elite Vessels at Cahuachi.

| Elite Vessels | | | | | |
|---------------|----------|-----------|------------------|----------|----------------|
| Units | cup bowl | miniature | stirrup spout | face jar | Total Elite |
| 6 | 1 | | | | 1 |
| 8 | 2 | | | 1 | 3 |
| 28 | | | | 1 | 1 |
| 46 | | | | | 0 |
| 51 | | 1 | | | 1 |
| 54 | | | | | 0 |
| 57 | | 1 | | | 1 |
| 58 | 1 | | | 2 | 3 |
| T04 | | 1 | 1 | | 2 |
| T34 | | 1 | | | 1 |
| T41 | 1 | | | | 1 |
| Total | 5 | 4 | 1 | 4 | 14 |

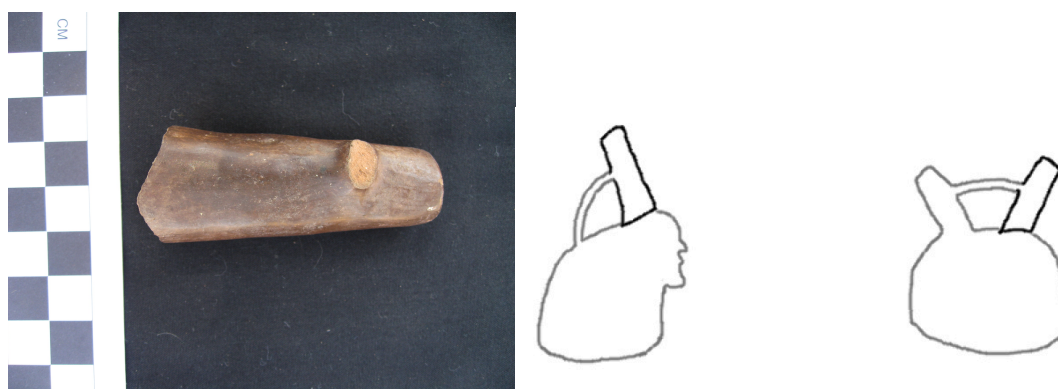


Figure 13. Fragment of double-spout and bridge bottle or bridge and spout bottle.

There are a total of four miniature polychrome painted vessels. Small rim diameters that range from two to seven centimeters are characteristic of these polychrome vessels. There are a total of three rim sherds at La Tiza, but in my analysis, I came across fragments of a total of six different miniature vessels. All three of the vessels from the MNI are bowls and the other vessel forms could not be discerned because of their fragmentary nature. There is a very small bowl in Unit 57 with a diameter of two centimeters along with fragments of another miniature vessel. There is an additional miniature bowl with a diameter of seven centimeters in Tomb 34 along with a fragment of a miniature bowl that was rather thick for a Nasca vessel and was not a rim sherd. Unit 57 and 51 contain Nasca architecture and Tomb 34 contains an above ground Middle Horizon tomb. Middle Horizon occupation occurred after the Nasca occupation at La Tiza. The construction of the Middle Horizon tombs was in an area that was previously occupied by Nasca, which

resulted in the mixing of the sherds from time periods that were not contemporaneous.

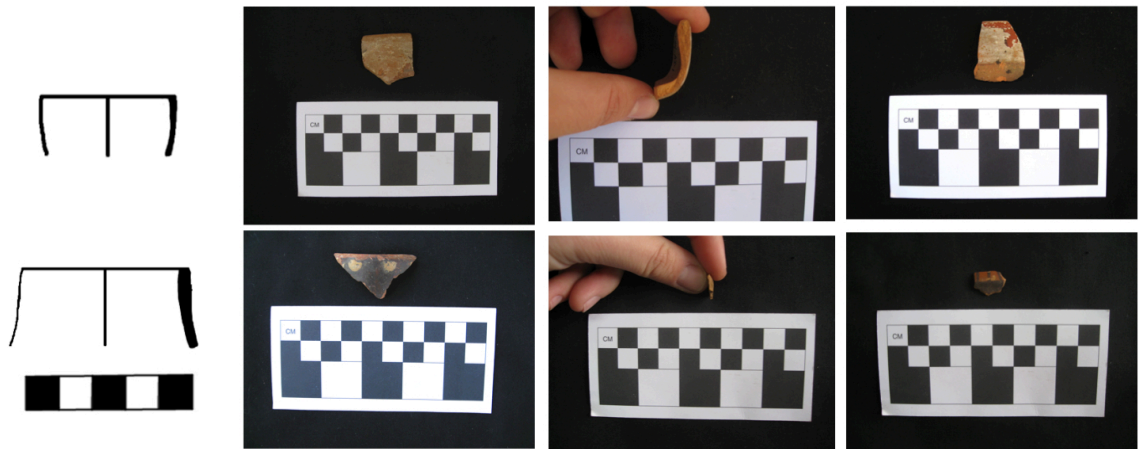


Figure 14. Miniature vessels at La Tiza.

Iconographic Trends

The majority (60%) of the iconographic themes at La Tiza are geometric. Naturalistic themes are second in order of occurrence (28%) followed by mythological themes (12%). Unit 54 contains the most mythological themes and Unit 58 contains the most naturalistic themes, the most common of which are depictions of chili peppers (*aji*). Geometric and mythological themes were difficult to identify in terms of a specific theme such as the Spotted Cat. The mythological themes tend to be painted with more skill than the naturalistic and geometric sherds, which suggests standardization of vessels with mythological themes.



Figure 15. Skillfully painted mythological themes (top), naturalistic frog theme (bottom left) and geometric zigzag theme (bottom right).

Nasca Phases

The Nasca sherds at La Tiza were phased by Dr. Kevin Vaughn and they range from Nasca phases 2 through 7 (Figure 16). The majority (82%) of the sherds are diagnostic to Early Nasca, phases 3 and 4. Nasca 5 iconography was the second most common in occurrence (14%), although there is some speculation that this iconographic phase is not a phase but a style for ceramics in burial contexts (Conlee 2014). The Nasca 2 and 6/7 sherds consist of one and two percent of the diagnosable sherds in the sample.

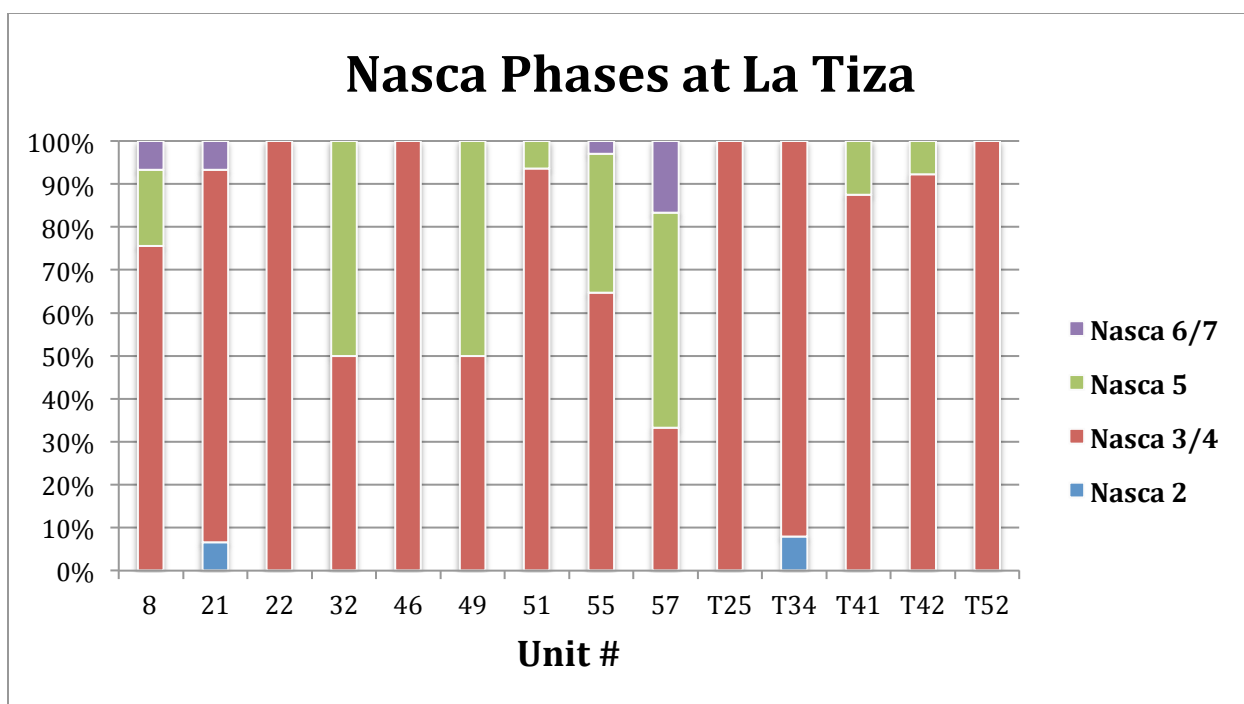


Figure 16. Graph that shows the distribution of Nasca phases at La Tiza.

Comparison with other Early Nasca sites

Various aspects of the pottery at La Tiza can be compared with other Early Nasca sites in the region. These include MNI of plain ware versus fine ware, vessel forms, and iconography. The comparison of the MNI of plain ware and fine ware from the sites of La Tiza, Marcaya, Cahuachi, Upanca and Uchuchuma revealed Early Nasca sites with high polychrome consumption (Table 10). The site of Cahuachi has the highest ratio of fine ware, followed by Upanca, Uchuchuma, and Marcaya, while La Tiza has the lowest. This is contrary to my hypothesis that La Tiza would have a higher ratio of fine ware among the domestic sites because of its close proximity to Cahuachi. On the other hand, the sites that are furthest from Cahuachi have the highest ratio of fine ware. The variation in the amount of fine ware is not significant enough to make further hypotheses. The ratio of fine ware to plain ware shows that

there was relatively homogenous distribution of polychrome fine ware pottery among these four domestic sites.

Table 10. MNI of fine ware and plain ware at La Tiza, Marcaya, Cahuachi, Upanca, and Uchuchuma (Vaughn 2005:124).

| | La Tiza MNI / % | Marcaya MNI / % | Cahuachi MNI / % | Upanca MNI / % | Uchuchuma MNI / % |
|------------------------|---------------------------|---------------------------|----------------------------|--------------------------|-----------------------------|
| Plain Ware rims | 367 / 46 | 170 / 44 | 140 / 29 | 203 / 40 | 136 / 41 |
| Fine Ware rims | 422 / 54 | 217 / 56 | 339 / 71 | 306 / 60 | 194 / 59 |

The vessel assemblage at La Tiza was also compared to those at Cahuachi and Marcaya in terms of vessel forms present. Bowls are generally the dominant vessel form in the Nasca assemblage. This generality applies to the Nasca ceramics at La Tiza. The next most common vessel form at Cahuachi is a bulbous vase. This trend is also at Marcaya, although there is a higher majority. The plain ware MNI for Cahuachi was not available but all sites have plain ware that consists of necked and neckless ollas. It is notable that Marcaya has a higher ratio of head jars than the other two sites. The ratio of elite vessels at these sites is altered because cup bowls and miniatures are not in Silverman's calculations but are lumped into the other category.

Table 11. Percentages of vessel forms present at Cahuachi, Marcaya (Vaughn 2009:Table 6.1) and La Tiza.

| | La Tiza | Cahuachi | Marcaya |
|-----------------------------|----------------|-----------------|----------------|
| Bowls | 70% | 68% | 55% |
| Dishes | 2% | 9% | 9% |
| Vases | 8% | 6% | 27% |
| Headjars | 2% | 0% | 3% |
| Collared Jars | 0% | 0% | 3% |
| Modeled Vessels | 1% | 9% | 0% |
| Double Spout Bottles | 1% | 4% | 0% |
| Other | 17% | 3% | 3% |
| Total | 100% | 100% | 100% |

Iconographic Themes

Data for iconographic themes in terms of percentages was only available for the sites of Marcaya, La Tiza and Cahuachi. The iconography at La Tiza and Marcaya are dominated by geometric themes (Figure 17). Marcaya has the smallest portion of mythological themes, possibly suggesting that it is the site with the smallest ritual or religious component.

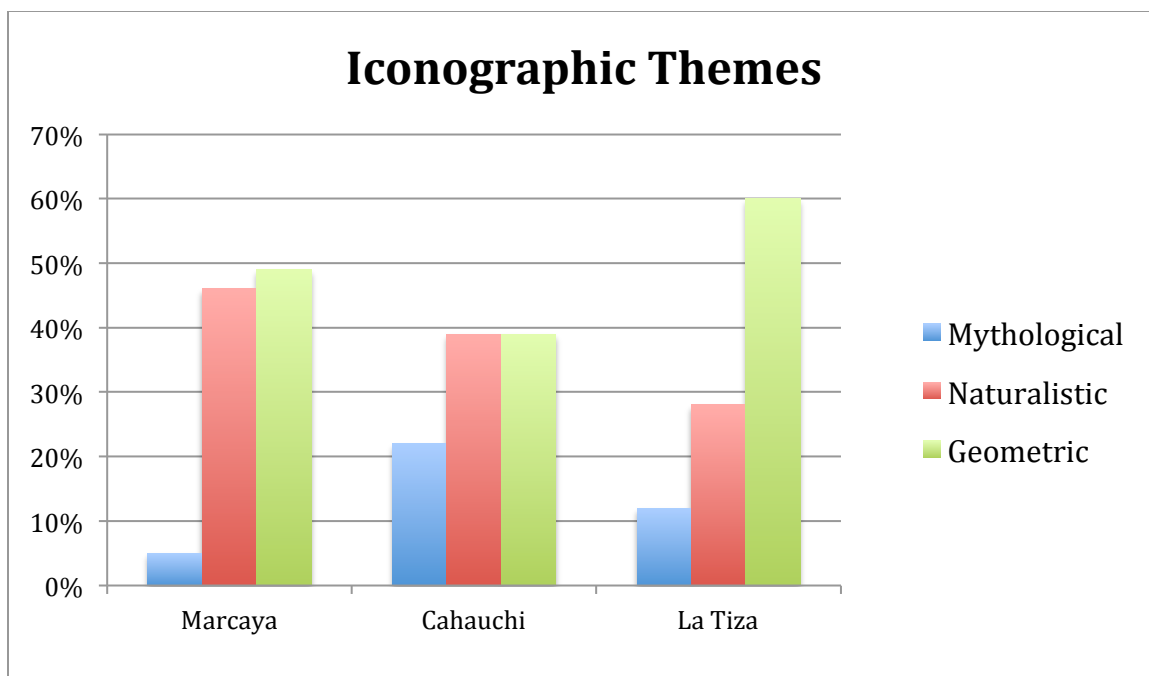


Figure 17. Iconographic themes at Marcaya, Cahuachi and La Tiza.

CHAPTER V

Discussion and Conclusion

Aspects of Early Nasca culture can be evaluated through the analysis of the pottery from La Tiza and comparison with other sites in the region. The Nasca vessel assemblage at La Tiza consists primarily of bowls. This is consistent with the findings at the other Nasca domestic sites and Cahuachi (Vaughn 2004). There are more elite vessels at La Tiza than Marcaya, Upanca and Uchuchuma. In addition, there is evidence for miniature vessels at La Tiza that are not found at the other domestic sites.

The majority of the Nasca sherds at La Tiza are diagnostic to the Early Nasca phase although there are two plazas in Sector I that date to Nasca 5 (Conlee 2014). There are a few Nasca 1 bowls at the site including a black ware bowl that dates to the Late Formative (Figure 19 and 20). There is also one incised Paracas vessel in the lower level of Unit 59 (Figure 21). Although these vessels are sparse, they indicate continuous occupation from the Late Formative to the Early Intermediate Period.

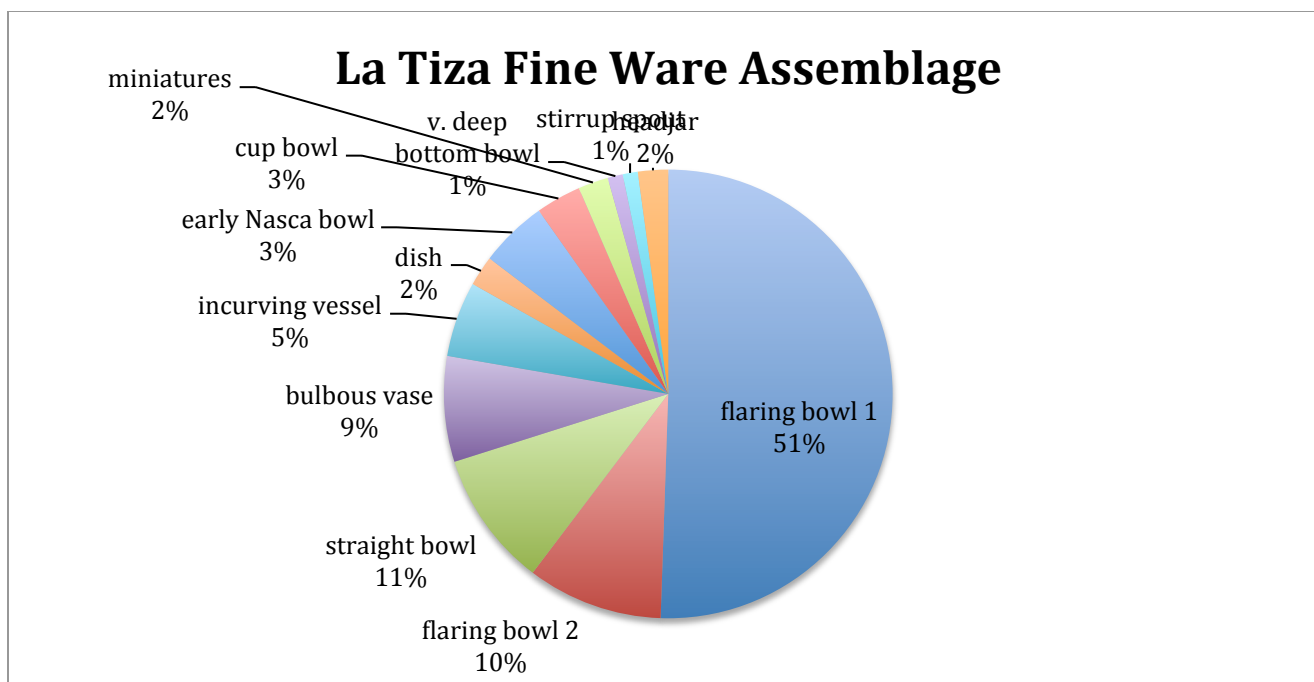


Figure 18. Nasca fine ware assemblage at La Tiza.



Figure 19. Nasca 1 blackware bowl found in Unit 32.

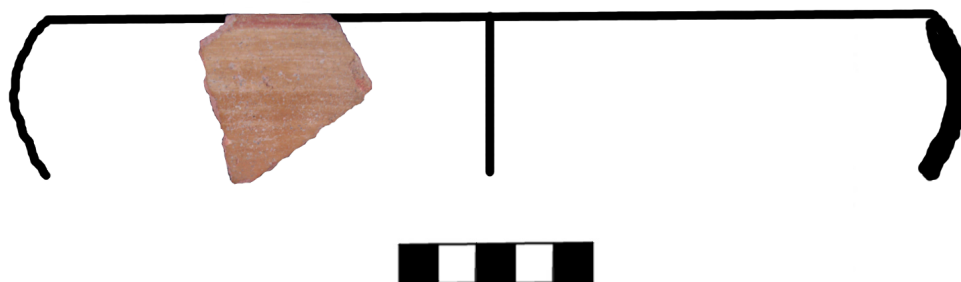


Figure 20. Nasca 1 bowl found in Unit 8.



Figure 21. Incised Paracas vessel (top left corner).

Elite Vessels

There is a notable distinction in the distribution of head jars. All four head jars are located in Sector II, where the majority of the elite vessels at the site are situated. The only evidence of a stirrup spout vessel at the site is in the unit associated with the above ground Middle Horizon Tomb 4. This unit also contains one miniature vessel.

Only one very deep bottom bowl, not usually considered to be an elite vessel, was located in Unit 46, where it was placed over the head of a 9 to 10 year old individual discussed in the site background of La Tiza (Figure 22). This burial was located at a lower elevation than the area with the majority of the Nasca pottery at La Tiza. This sherd may have been included because of the mythological iconography painted on this vessel.

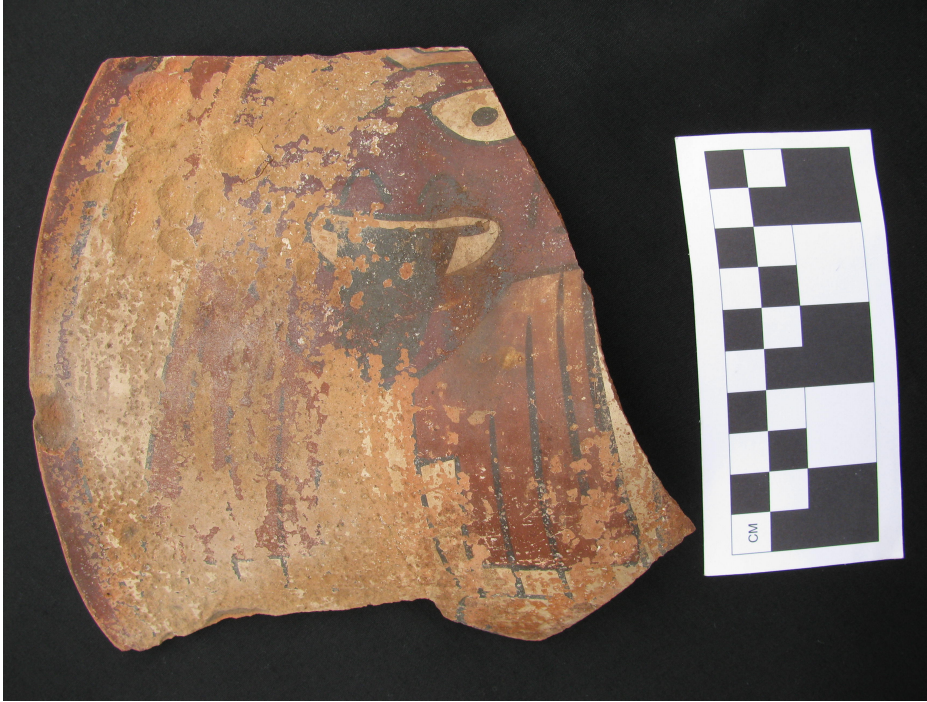


Figure 22. Large fragment of a deep bottom bowl associated with the child burial in Unit 46.

The miniature vessels at La Tiza were found in the cluster of Nasca units in Sector II as well as in the Unit to the southwest associated with Middle Horizon Tomb 4. There is additional evidence of miniature vessels in Unit 49 and the Unit associated with Middle Horizon Tomb 34. These vessels were not included in the MNI because they are body fragments.

There are two well-made miniature vessels that were found in Unit 57 (Figure 23). The walls of these vessels are thin and well painted. There is another pair of miniatures in the unit associated with Tomb 34. These vessels have thicker walls and are not as skillfully painted. This leads me to believe that they are not Nasca vessels, but may be Middle Horizon vessels.

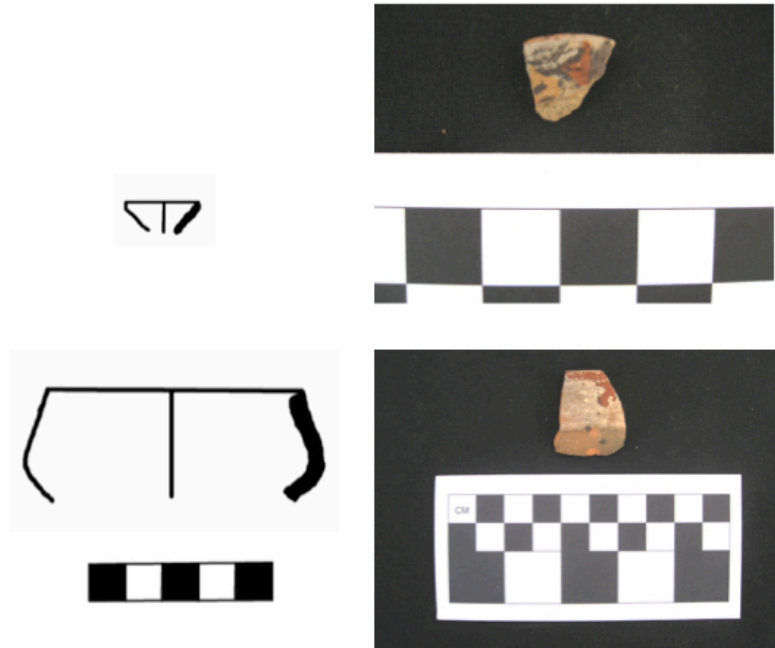


Figure 23. Miniature vessel from Unit 57 (top) and from Tomb 4 (bottom).

There are a few anomalies at La Tiza that were described in the previous chapter. The possible effigies at the site could point to more class distinctions but this is inconclusive because these sherds are too fragmentary to be diagnostic.

Cántaro Distribution

Plain ware vessels were found in the vast majority of the Nasca units. The plain ware assemblage consisted of necked and neckless ollas. The small sample size and lack of *cántaros* rim sherds limits the conclusions that can be drawn about their use and distribution at La Tiza. Vaughn (2009) hypothesizes that *cántaros* were used for water storage.

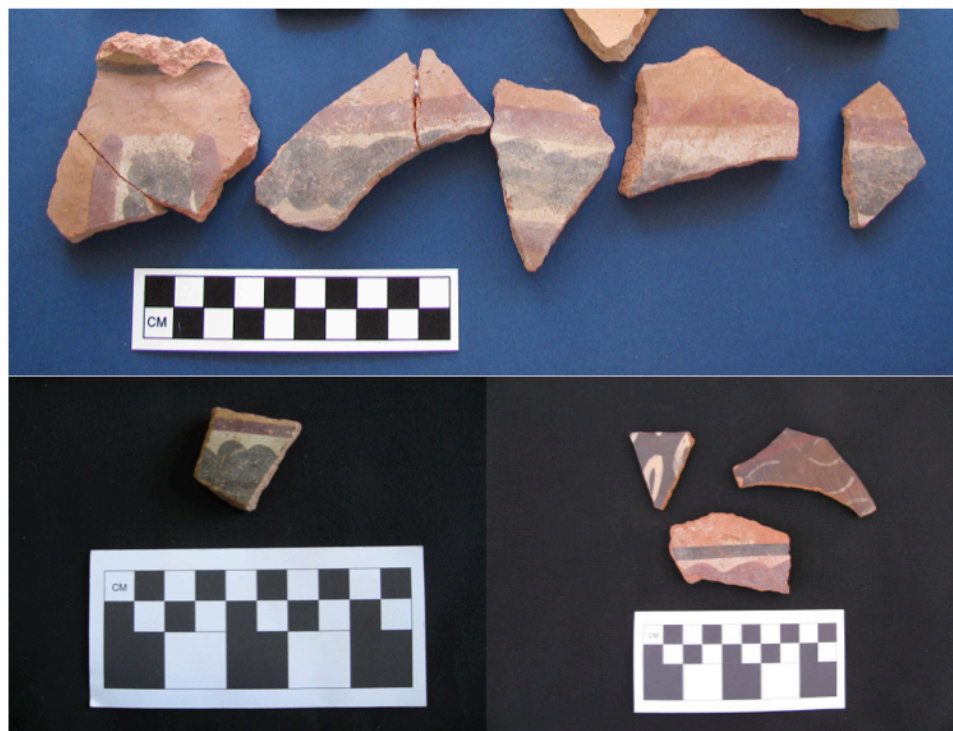


Figure 24. Cántaro designs found at La Tiza.

Plain Ware Estimates

As previously mentioned, La Tiza is a multicomponent site and has been extensively looted. This has resulted in many mixed units that contain artifacts that are not contemporaneous. The mixing of the not contemporaneous sherds may have skewed the number of plain ware vessels in the Nasca assemblage. Plain ware stays relatively consistent throughout the pottery producing cultures that occupied La Tiza, which makes it difficult to differentiate the plain ware from the separate time periods.

In an attempt to avoid this bias, I incorporated nondiagnostic sherds (unpainted body sherds) in units that contained only sherds diagnostic to the Nasca period. This portion of my analysis showed that there were only a few fine ware sherds with evidence of fire sooting. The majority of the sherds with extensive fire

sooting were classified as plain ware. This is in line with the previous hypotheses that fine ware was not used for cooking by the Nasca.

Paste and Temper

The fine ware vessels at La Tiza have the characteristic fine pastes of Nasca ceramics. Although the majority of the fine ware vessels had no visible temper, there were a significant number of fine ware sherds with a white, chalky temper (Figure 25). This white temper could possibly be related to the “La Tiza” calcrete layer that the site is named for. My initial hypothesis was that this was evidence for fine ware pottery production at La Tiza made evident by the use of local resources. This is contrary to the previously mentioned INAA data that places the source for the polychrome fine ware pottery at La Tiza into Macro Group 1 or a source near the site of Cahuachi (Conlee 2014). When the INAA data is considered, it is not likely that fine ware was being produced at the site. Although calcium carbonate takes an extended time to form on buried artifacts, it is possible that it developed on the ceramic sherds in the time between their discard and excavation (Bersford-Jones 2011).

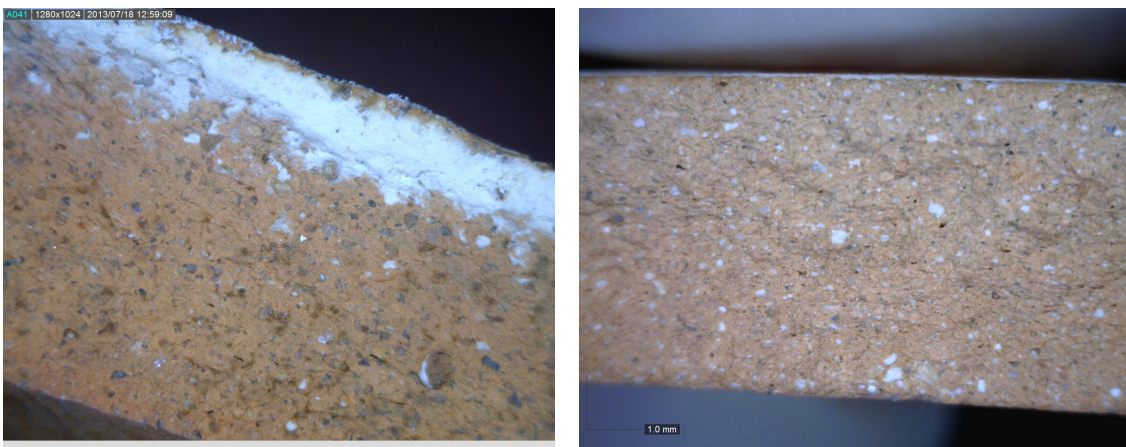


Figure 25. White temper or calcium carbonate growth found at La Tiza.

Organic and mica tempers were also observed in the sample. The organic temper was the second most common and was made evident by voids in the paste of a sherd (Figure 26). Mica is the least represented temper type and is more common in plain ware. There were also examples of the mixing of two or more of these tempers in one vessel.



Figure 26. Evidence of organic temper at La Tiza.

Iconography

The comparison of the Nasca iconography from La Tiza, Marcaya and Cahuachi indicate that Cahuachi has the highest portion of mythological iconography as well as the highest portion of fine ware pottery. This surplus adds to the hypothesis that Cahuachi is the ceremonial center in the Early Nasca period. In addition, during my analysis I observed that the mythological themes at La Tiza were produced with a higher degree of skill and standardization than the geometric or naturalistic themes.

La Tiza has the second highest portion of mythological themes in the iconography next to Cahuachi. This can be interpreted to mean that there was more

religious or ceremonial significance at the site of La Tiza. The presence of ritual architecture like the terrace, ramps and offerings associated with the headless burial at the site sets La Tiza apart from other Early Nasca domestic sites. This, in conjunction with the close proximity of La Tiza to Cerro Blanco, a large and sacred sand dune, indicate that La Tiza has evidence for more non-domestic activity than other Early Nasca sites in southern Nasca (Conlee 2014).

There is also the possibility that the Nasca 5 burials and plazas were intrusive to the site and not associated with the domestic component of the site (Conlee 2014). This would indicate that La Tiza was used as a domestic site and then subsequently used for ceremonial purposes in Nasca 5 or Middle Nasca. There was a radiocarbon sample associated with Nasca 3 and 4 pottery in Unit 21 that dates to AD 410-550, during the established time period for Middle Nasca (Conlee 2014).

Ceramic Production

The presences of four polished sherds at La Tiza are indicative of ceramic production. These polished sherds were used for smoothing the surface of the vessel when using the coiling method. The lack of other evidence for ceramic production, like pigment caches or brushes at La Tiza, may indicate that plain ware was being produced locally and fine ware was acquired elsewhere.

Conclusion

All of the sites used in this study have a majority of fine ware ceramics. My original hypothesis was incorrect and there was no significant change in the access to fine ware at the Nasca domestic sites in this study. This is indicative of homogenous distribution of polychrome fine ware pottery at Nasca domestic sites.

The elite fine ware at La Tiza sets it apart from the other Early Nasca domestic sites. Although there are elite vessels at the other sites, there are more elite vessels at La Tiza in terms of quantity and variety. The higher ratio of elite vessels at La Tiza may indicate an elite presence at the site. This presence is manifested in Sector II where there is a cluster of Nasca units as well as what seems to be ritual architecture. Rituals may have been performed by the elite with the elite vessels that were acquired at Cahuachi in order to reinforce the ideology represented on the vessels. Vaughn (2009) hypothesizes that the elite residences and vessel forms were used for this same purpose at Marcaya. These rituals may have been performed on a larger scale at La Tiza near the site of the burial of the headless individual in Unit 8 or in the Nasca 5 plazas in Sector I.

Evidence of multiple phases of Nasca pottery at La Tiza may indicate separate occupations or multiple uses of the site during one occupation. In either case, the uncommon architecture and the variability in elite vessel forms show that La Tiza may have housed more complexity in the SNR than was previously thought (Conlee 2014). The recurring pilgrimage to Cahuachi reinforces the religious ideology of those who participated. But Cahuachi was not the only place where rituals were performed and offerings were made. The evidence at La Tiza shows that the Nasca practiced their religion in other ritually charged places.

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