CARAL AND THE RISE TO CIVILIZATION IN THE NORTE CHICO PERU

by

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The site of Caral, Peru has undergone much archaeological excavations under the direction of Dr. Ruth Shady over the course of the years following 1994. Caral has been radiocarbon dated to over five thousand years ago. It has been proposed by some scholars, Dr. Shady included, that the site of Caral and the surrounding sites in the Supe Valley represent a state level society. However, there is a general consensus in the literature holding that Caral does not represent a highly stratified society such as a state. In order to gain a better understanding of what Caral really represents, this thesis compares Caral to two known state level societies, the Moche and Tiwanaku states. The comparison is based on a number of key factors seen in state levels societies namely, site size and distribution, monumental architecture, craft specialization, iconography and burial stratification.

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INTRODUCTION

For the general public, societies such as those found in Ancient Egypt, Greece and Rome are not foreign to the ear, but most people would not be able to say how these societies evolved. Most people could assume that societies evolve from simply organized smaller groups to larger more complex societies; however, even in scholarly circles, the specifics of this process are widely debated. There are multiple theories explaining the rise of complex society, or what has been termed by some as "civilization". Many explanations have been given as to why people gave up their individual freedom to band together, and there is even controversy over the definition of civilization itself.

It has been proposed that various factors have contributed to the rise of civilization including warfare and conflict, population growth, ideology, and trade, to name a few (Wenke 1984). There are several regions throughout the world in which the rise to highly complex society occurred, namely: the Near East, the Indus River Basin, Mesoamerica, the Huang Ho Basin, and the Andes in South America (Wenke 1984). The archaeological sites found within these regions show signs that different regions may have diverse contributing factors which aided the rise of civilization, due to the unique pressures and influences of each region, such as topography and climate (Wenke 1984).

Four main categories of society have been defined by Elman Service (1975); bands, tribes, chiefdoms, and states, discussed in further detail in the background section. Chiefdom and state level societies will be primarily addressed and discussed throughout this paper as they represent more complex societies.

This paper will discuss and explore the characteristics of two of the earliest known state societies in Latin America: Tiwanaku, and Moche. Against this backdrop a third society will be examined, characterized by the site of Caral, the Supe Valley settlement system, and the Norte Chico, an emergent complex society near the coast of Peru dating to the Preceramic (3000-1800 B.C.) and Initial Periods (1800-800 B. C.), (Richardson 1994) much earlier than either the Moche or Tiwanaku states. It is hotly debated whether or not this early society constitutes a state or some simpler form of sociocultural organization e.g. tribe or chiefdom. Even if Caral (Figure 1) was not a state level society, it along with associated sites in the Supe Valley region is important in understanding the rise to complex society in the Andes due to its very early date.

Figure 1: Monumental complex at Caral (Adapted from Dasatariq 2010).

Excavations at and around the site of Caral, progressing under Dr. Ruth Shady of the University of San Marcos, Peru since 1994, have focused on monumental architecture and the nature and extent of large domestic occupations.

Jonathan Haas of the University of Chicago, has also been conducting research in the area and outlying sites near the Supe, Patavilca, and Fortaleza Valleys, the region called the Norte Chico, in the broader area focusing on the rise of complexity in the region. These scholars (Shady and Haas) believe that the material remains at Caral and other sites in the region reflect a degree of social stratification and political centralization consistent with state level society. With radiocarbon dates going back nearly five thousand years, this would make Caral the capitol of one of the oldest state level civilizations in the New World. (Solis et al. 2001).

Shady and Haas are the main authorities on the area, and believe Caral represents a state level society; however, they have differing conclusions as to how Caral reached this level of complexity. Shady argues that Caral arose as an offshoot of the coastal fishing industry which then expanded communities inland and started an agricultural subsistence base (Miller 2005). Haas on the other hand believes that complex society in Peru arose the same way it did in other regions throughout the world, by means of agriculture, which gave rise to complex society and then spread out toward the coast (Miller 2005).

Alternatively, Charles Stanish, an Andean scholar at the University of California Las Angeles, views Caral and the Supe valley settlement system as an emergent ranked society, but not as the epicenter of state level development in the Andes (Stanish 2001). Stanish points out that the general consensus in the literature discusses that state level society did not emerge in the Andes until much later—with the Moche and Tiwanaku civilizations, closer to the first millennium (Stanish 2001). Therefore, according to Stanish, Caral does not represent state level society. Similarly, Michael Moseley argues that the sites in the Preceramic period represent complex pre-state societies, in which hierarchy existed without 'hereditary rank', which is considered a primary factor to state level societies (Stanish 2001).

This paper explores what constitutes a complex state-level society, using Tiwanaku and Moche as models of that form of socio-political organization in the Andes, and compares and contrasts the society centered at Caral to evaluate whether it and the surrounding region were characterized by a similar state-level organization or whether Caral and the surrounding region were organized in a fundamentally different way. Therefore, this paper will contribute to the knowledge of Caral, its interaction with other sites in the region and what role Caral played in that region, as well as whether it is a pre-state or state level society based on scholarly definitions of the state. At the very least, as an early complex society in the New World, Caral and the surrounding sites hold potential for lending much insight into the motives that brought people together to create early complex society, whether or not that society was at the state level.

METHODS

The focus of this study is to examine the site of Caral the Supe Valley settlement system and the Norte Chico of the Preceramic and Initial Periods, and to critically evaluate Shady's and Haas' contention that it constitutes the center of highly complex state level society. In order to do this, I compare Caral and the Norte Chico to two formally recognized, true state formations: the Moche and Tiwanaku states. I specifically explore key factors including: 1) sociopolitical and economic organization and hierarchy, as reflected in settlement hierarchy and burials; 2) monumental architecture and the amount of labor that was needed for its construction; 3) the aerial extent of the Caral corporate style and the distribution of trade goods in order to evaluate the influential 'reach' of Caral, and 4) the nature of craft production as states often have formal centralized industries of craft production that are evident in the concentration of craft production in centralized, restricted locations, often associated with elites in state level societies.

A society's socio-political organization includes their system of social stratification, class systems, and social mobility. Population and site size have to be examined to show evidence of a society's size. Evidence of social stratification can be seen in the archaeological record through levels of settlement hierarchy; two, three or more tiered societies. A three tiered settlement hierarchy, for example, is typically characterized by a primary large political center as the first tier, then secondary smaller towns and villages surrounding the political seat, with tertiary outlying hamlets on the fringe constituting the third tier.

Burials and grave goods are also indicative of social stratification and differential distribution of wealth. State level societies tend to have elaborate graves for elites, distinguishable from graves of the common citizen. Graves found within the same society containing different quantities of grave items, some more elaborate and expensive, others more common and less intricate, or the non-existence of grave goods are indicative of different levels of class stratification and social status. Social stratification is especially evident when grave goods are found buried with infants and children, indicating that the social status is ascribed rather than achieved.

Monumental architecture is an indicator of political hegemony. Without some form of centralized political control, it would be impossible to mobilize the amount of labor necessary to build grand monuments. The size and scale of monumental architecture has been assessed and cross culturally examined. Extremely large monuments of course take more political organization to plan and build than smaller projects. Where possible I looked at military organization and what role military played in the rise to state level society. Evidence of warfare in the archaeological record takes the form of fortified structures and embankments.

Craft specialization was a fundamental aspect of state level society and was also observed through the archaeological record. Specialized crafts can consist of metallurgy, pottery, textiles, and numerous other forms. State level societies generally have specialized areas or workshops appropriated for craftsmen located near elite housing. These workshops are distinguishable from residential buildings in the archaeological record by means of their layout as well as artifacts found in and around them.

Each society has a specific set of iconographic symbols expressed in their material culture, or a corporate art style. State level societies typically have a highly standardized corporate art style that covers a very large area, the area over which the state maintains both direct political and hegemonic control, and indirect trade relationships and influence. Large state level societies will have a more expansive territory within which a corporate style is common, whereas the corporate art style of less complex societies is limited in its aerial distribution. The extent to which styles associated with Caral are seen distributed throughout the Supe Valley and surrounding region, compared with Moche and Tiwanaku art style give a comparison of the scale of these respective societies.

Thus, population, site size and distribution, burials, monumental architecture, craft specialization, and corporate art style distribution are examined and cross culturally compared between the Moche, and Tiwanaku which are state level societies, and the site of Caral and the Norte Chico, in order to gain a better understanding of what kind of society is represented at Caral.

BACKGROUND

Anthropologists have used the following typology to categorize human societies around the world: band, tribe, chiefdom and state. Elman R. Service (1975) defined these four classifications in his book *Origins of State and Civilization: The Process of Cultural Evolution*. In order to better understand the rise of complex society, this section will briefly define Service's classification system, allowing a comparison to be made between Caral, and societies such as Tiwanaku and Moche, which scholars generally agree were characterized by state level organization (Moseley 2001).

Bands and Tribes

Band level society is the most basic form of human organization. Bands are kinship based and generally patrilocal (Service 1975). Kinship refers to the way in which people define their relatedness to each other. Thus social and economic status, and residential patterns are entirely centered on the idea of kinship (Service 1975). The most common fundamental unit in a band level society is the nuclear family, consisting primarily of children and parents (Service 1975). Band level subsistence is focused on hunting and gathering (Service 1975). Accordingly, they are smaller in size, typically comprising of fewer than one hundred people, and are as a result fairly mobile.

Tribes are larger groups comprising of approximately one thousand to fifteen hundred people, and have more social, economic and political complexity (Service 1975). In addition to hunting and gathering, they introduced more elements of agriculture in their subsistence base

(Service 1975). They are still egalitarian in nature, with no real hierarchy or authority figure controlling power over other members of the tribe. Tribes and bands are not static societies and fluctuations do occur but they are overwhelmingly tradition-oriented.

Chiefdom

Chiefdoms, as opposed to band or tribal level societies, are non-egalitarian (Service 1975). Chiefdoms have a large population generally comprised of two to five thousand individuals, and consequently are sedentary with an agricultural based subsistence (Service 1975). The population increase brings rise to dominant political control, which safeguards resources in case of famine, war, or natural disaster. Therefore, political leadership is centralized in these societies, and is typically hereditary.

Chiefdoms generally incorporate new territory through military expansion, although given the endemic warfare characteristic among competing chiefdoms, the aerial extent of any one chiefdom remains relatively limited as compared to the vast territories controlled by states. Ecological diversity is thought to have played a major role in economic and "religious" specialization. Where bands and tribes moved through ecological zones for hunting and gathering, chiefdoms used trade to facilitate gain of goods from other groups occupying these zones (Service 1975). This reciprocal exchange of goods from diverse ecological zones aided in trade networks and in the groups economic and religious specialization (Service 1975). The chief, in control of the redistribution of wealth, supported these specializations, and set aside facilities for craft specialization near the political centers where these specialists worked and lived (Service 1975).

State

There is much debate as to what constitutes a state level society. Many scholars define their own picture of a state, depending on their research goal. For example, Elman Service's (1975) initial description of state level society defined states as having political leaders in control of socially approved power through legal use of force.

State level societies are very large, comprised of hundreds of thousands of people, and have been categorized into two different types by Bruce Trigger: "city-states" and "territorial states". City states are very large urban centers with governmental power focused in and around the city, unlike territorial states which have extensive power reaching sometimes hundreds of miles away from the territorial capital (Smith 2006). Political classes in states are formalized with set social stratification, and typically have more levels within the settlement hierarchy (three or four tiers) relative to chiefdoms which have fewer hierarchical levels (two or three). States are characterized by monumental architecture and use agriculture as the primary food source. States have a wide range of technological systems, with specific roles for individuals, either as producers of subsistence, distributors, or consumers (Service 1975).

State level societies are generally characterized by a minimum of three levels or more within a settlement and regional bureaucratic hierarchy. They are centralized with rulers able to mobilize huge labor forces for impressive construction projects, and they engage in pan-regional trade. They are united which lead to widespread distribution of material culture and symbols of the state ideology. For example, the Gateway God is seen depicted throughout the Tiwanaku state and the Moche have wide depiction of the Sacrifice Ceremony. States also conduct grand scale centralized craft production, regulated throughout state territory.

STATE LEVEL SOCIETIES

The Moche

The Moche was the first archaic state in the northern Andes on the coast of Peru (Bawden 1999). It sprang up in the Casma drainage by the uniting of small kin based fiefdoms in the Early Intermediate Period (200B.C. – A.D 600) and lasted approximately seven hundred years (Moseley 2001:173). Valley size was an important factor for consolidation, at first bringing unity in small valleys and then incorporating and spreading out to larger valleys (Moseley 2001:174). As the drought waned in A.D. 200, the Moche arose out of the Cerro Blanco and gained control over the Rio Moche and then larger Chicama drainage (Figure 2) (Moseley 2001:174).

The Arising Moche State

We see evidence of warfare from warring chiefdoms and fiefdoms through *pukaras* which are defensible citadels located on the tops of mountain ridges (Moseley 2001:175). The warring fiefdoms became the Gallinazo people. During the late Gallinazo era (200 B.C. – A.D. 300) there was much political transformation and it was at this point in time that the Moche truly arose as the first archaic state (Moseley 2001:176). The transition happened when the population at the site of Cerro Blanco gained control over the Rio Moche Valley and afterwards the larger Chicama drainage (Richardson III 1994:102). This integration was most likely due to marriage and kin-based ties among the local *kurakas* (elite groups which claimed descent from the gods to back their claim to rule) rather than conflict (Moseley 2001:178).

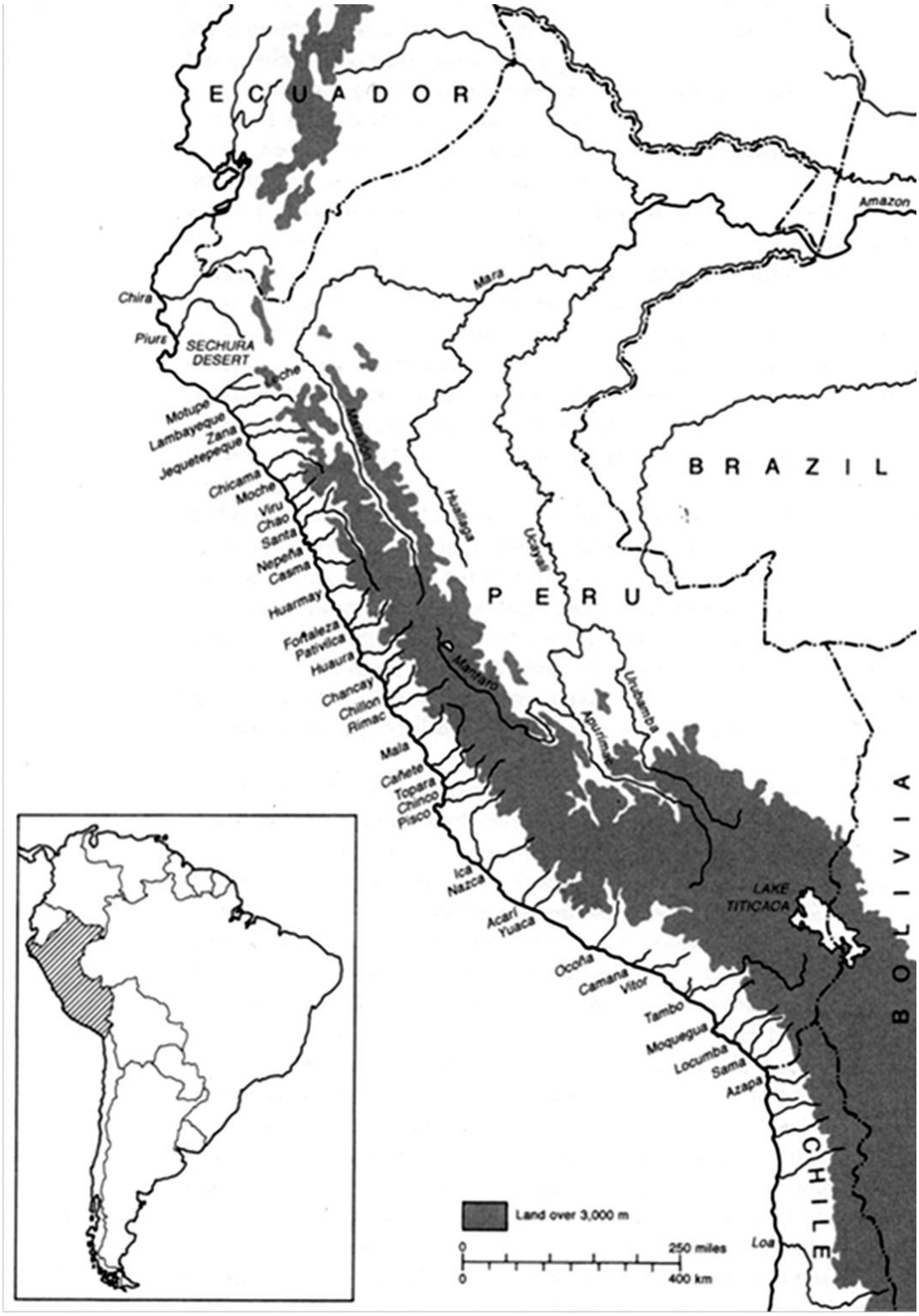

Figure 2: Coastal rivers of South America (Moseley 2001, Figure 5).

Population, Site Size and Distribution

During the peak of the Moche State, three hundred seventy-three miles (six hundred kilometers) of coastline was under its control from the Huarmey Valley northward to the Piura Valley (Richardson III 1994:104). The Moche state was configured and characterized by having contiguous control of the region under its dominion, as opposed to an archipelago model characterized by the Tiwanaku state, discussed in more detail below. The Moche state was a highly stratified society, characterized by a large political center in the Moche Valley, with secondary political centers in the valleys to the north and south with subsidiary residential sites and agricultural sites as extensions of these (Bawden 1999:227). This makes the Moche state a three tiered hierarchy at minimum.

The Viru Valley located directly to the south of the Moche Valley housed one main political center at Castillo de Huancaco, a large Moche complex with a large five-stage platform mound (Bawden 1999:229). Surrounding the main platform at Castillo de Huancaco was a large adobe brick wall, indicating that the Moche expansion into the Viru was most likely done through military force (Bawden 1999). Subsidiary to Castillo de Huancaco were other mound sites in the valley (Bawden 1999). Adjacent valleys to the south had similar configuration to the Viru Valley, with political control stretching from the Moche capital one hundred and fifty miles south to the Huarmey Valley (Bawden 1999:227).

To the north of the Moche Valley, territory stretched up to the Piura Valley (Bawden 1999). Sites located in these northern valleys have much evidence of social stratification and Moche state power shown through political and ceremonial centers (Bawden 1999). The Lambayeque Valley is resident to the most prestigious burial found dating to the Moche state (Moseley 2001:191).

Monumental Architecture

The capital of the Moche state located at Cerro Blanco in the Moche Valley (three and a half miles from the coast, or six kilometers) (Figure 3) (Richardson III 1994) has evidence of consolidated political power, which can be seen by the two massive platform mounds on the site (Moseley 2001). Many mounds were built throughout the Moche state at political centers, however, in this paper I focus on the monumental architecture at Cerro Blanco, though the presence of Moche pyramid mounds throughout the Moche realm is an indication that Moche's reach was not only extensive, but also powerful. The site itself covers up to three hundred hectares, with the Huaca de la Luna, Temple of the Moon, and the Huaca del Sol, Temple of the Sun, lying five hundred meters apart are the most prominent features of the site (Richardson III 1994:104). Between the two great mounds lie many large buildings, residences, and walled compounds, with conservative estimates of population as few as five thousand inhabitants (Chapdelaine 2002) and liberal estimates up to ten thousand (von Hogen and Morris 1998).

The Huaca del Sol is the largest adobe structure ever built in the Andes and one of the three biggest mounds constructed on the continent (Moseley 2001). The Huaca del Sol platform mound stands over forty meters high, three hundred forty-five meters long and one hundred sixty meters wide, with four distinct sections or "tiers" (von Hagen and Morris 1998). It is estimated that approximately one hundred forty-three million adobe bricks were used in its construction (von Hagen and Morris 1998). Drawing on the form of its remains, Huaca del Sol most likely formed a cross shape and housed the heads of state (Moseley 2001).

The first level of the Huaca del Sol faces north and had a ramp leading to the top (Moseley 2001). The second section gave the mound its cross shape and was much higher and wider than the first (Moseley 2001). The third was likely the most important, judging by the

large caverns the Spanish dug into it, looking for treasure. What little colonial documentation exists asserts that treasure was found, although not on a large scale (Moseley 2001). This data suggests that Huaca del Sol was most likely the imperial palace and mausoleum for elites or Moche rulers (Moseley 2001).

Using known Incan corporate labor practices as a model, it has been hypothesized that construction of Huaca del Sol (Figure 4) was done in segments with workers supplied by the community in a form of "*mita*" labor (Moseley 2001). *Mita* labor was a tax form of labor in which kin or community clans would work for a certain period of the year for the state (Moseley 2001). This form of labor directly illustrates the high level of organization which is necessary in order for uniting such a vast labor force, giving evidence that the Moche was a state level society. The Moche did not have a written language but over one hundred maker's marks (specific symbols) were found on bricks from the Huaca del Sol, delineating sections of the platform. These marks led archaeologists to believe at least one hundred different communities contributed to the building of the mound (Moseley 2001).

Huaca de la Luna was contemporary with Huaca del Sol and originally comprised of three platforms interconnected by adobe walls covered in intricate polychrome murals. The adobe structure measured two hundred ninety meters from north to south, two hundred ten meters from east to west, and not quite as tall as the Huaca del Sol, measuring thirty-two meters in height (von Hagen and Morris 1998). Used throughout the structure were an estimated fifty million adobe bricks (von Hagen and Morris 1998). The largest of the three platforms was located furthest to the north and almost entirely destroyed by looters. The middle platform and second largest has seen the most archaeological excavations and investigations along with the smallest mound on the south side (Moseley 2001).

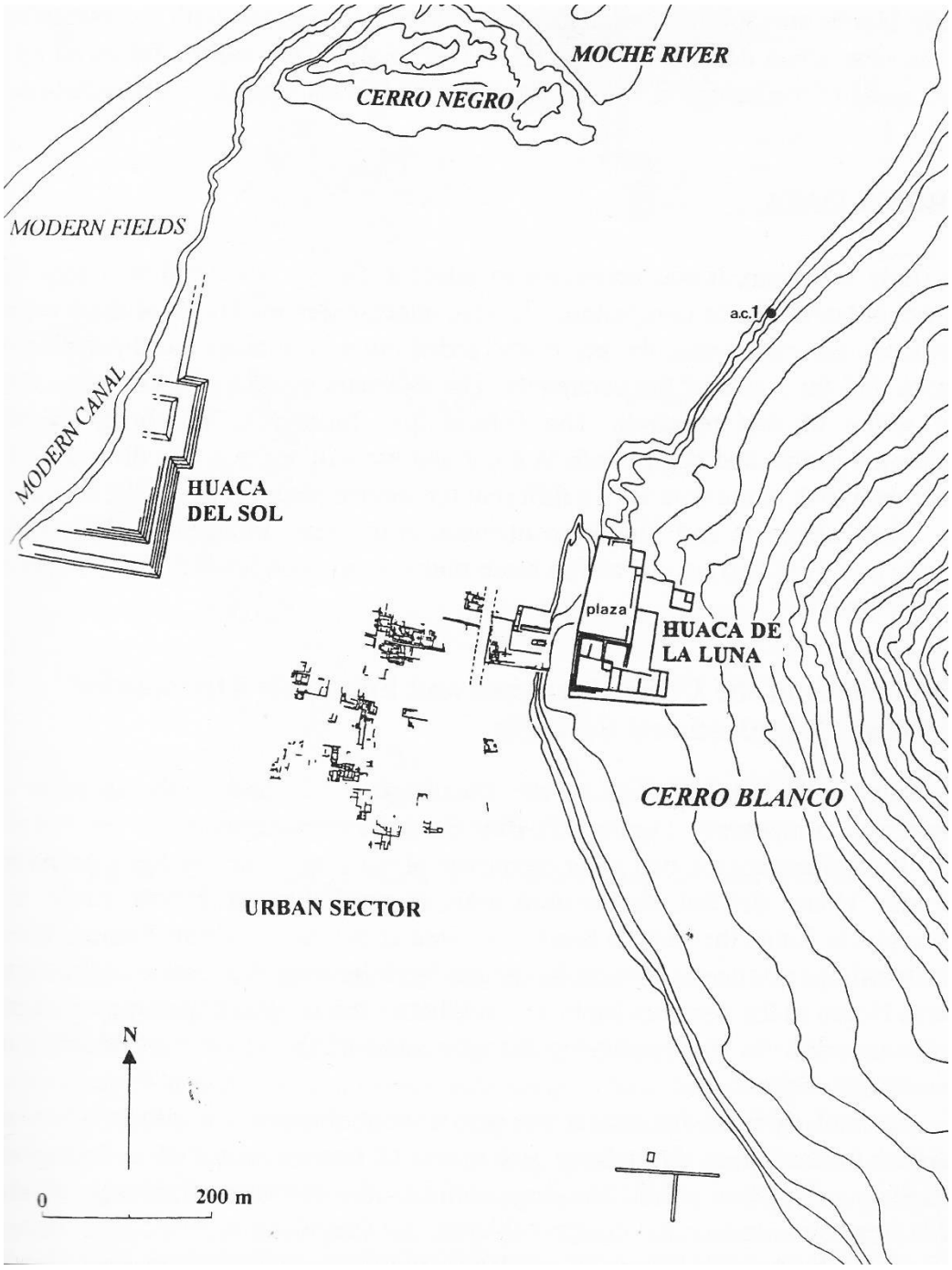

Figure 3: Cerro Blanco site (Chapdelaine 2002, Figure 3.1).

Figure 4: Huaca del Sol (Adapted from Miércoles 2010).

The central mound was built through stages, some initiated after El Niño rains damaged the structure. The mound was decorated with polychrome murals of anthropomorphic beings and captive warriors parading to their death (von Hagen and Morris 1998).

The rulers and elite invested much labor into expanding agricultural production near the imperial city. The agricultural land that remains and is open for archaeological investigation shows signs of corporate land management with fields divided into standardized rectangular plots (Moseley 2001). There are even small adobe structures in some fields indicating supervision of agriculture. It is assumed that the labor used in these fields was produced by local peasants in a form of *mita* labor, from the great evidence of there being two distinct classes, the *karakas* and the commoners (Moseley 2001).

Craft Specialization and the Moche Corporate Art Style

Fine arts of the Moche state expressed a rich iconography depicted through ceramics and stirrup-spout vessels (Figure 5). The iconography rationalized the *karakas* rule and was highly standardized throughout the Moche state (Moseley 2001). This regulation of iconography was achieved through standardized designs and molds sent throughout the state (Moseley 2001). The stirrup-spout vessels had five main forms and thus divided Moche art into five different phases that progressed sequentially, in two primary categories (Moseley 2001). The first consisted of animal shapes, people, and merging human and animal forms in three dimensional, sometimes very naturalistic, figures (Moseley 2001). The second category included pottery painted in red and white clay slips along with black and white line paintings (Moseley 2001).

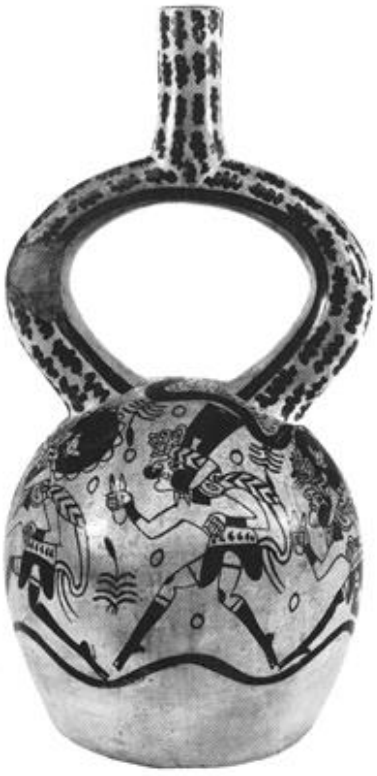

Figure 5: Moche stirrup spout vessel with fine line drawing (Moseley 2001, Figure 59).

Moche art had much mortuary iconography associated with it. The iconography was a means of communicating the Moche ideology and had a limited number of themes (Moseley 2001). These ideological themes included explanations of human origin, together with stories for morals and the like. Characters enacting these stories included animals, humans and supernatural beings. One-on-one armed conflict was commonly depicted as well. Scenes such as this were depicted on the Huaca de la Luna where defeated warriors were stripped of their armor and marched nude to the summit to be sacrificed (Moseley 2001). Ritual combat is shown with Moche elites fighting other Moche elites, with the loser being sacrificed.

Metallurgy was used throughout the Moche state but was particularly well known and developed in the Lambayeque region in the north (von Hagen and Morris 1998). Characteristic of the Moche metallurgical tradition was gold-covered copper objects, thought to be available to middle class citizens (Chapdelaine 2002). Few large gold objects have been found, leading to the understanding that gold was an elite item, reserved only for the highest members of the governing class (Chapdelaine 2002).

Burials

Moche iconography has been seen to correspond to real life situations. The "Warrior Priest" burial found in Huaca Sipán in the Lambayeque drainage shows funerary dress directly depicted in Moche iconography (Moseley 2001). The burial of the Warrior Priest is the most opulent of all the un-looted tombs discovered on the continent. The individual was entombed with a goblet and uniform headgear, as well as a small dog, as seen in the iconography (Moseley 2001). The tomb of the Warrior of Sipán (Figure 6), with its close correlation with iconography shows definite signs of a leading *karakas* class and a peasant class (Moseley 2001). This allows us to assume that the ranks of religious, political and social hierarchy were depicting the actual social

roles of the Moche. Considering that the site of Sipán was not a capital city and not greatly important to the ruling elite, it seems plausible to say that the burials of the elite such as the "king" would be even more lavish than that of the "Warrior Priest".

Burials found at Cerro Blanco also contribute evidence towards extreme class stratification and social position. Fourteen burials excavated in the urban sector reveal several different types of burials; low, moderate and high status (Chapdelaine 2002). There is no direct relationship found between status in these burials in connection with age or sex (Chapdelaine 2002).

Figure 6: Warrior of Sipán (Moseley 2001, Figure 63).

For example, one burial excavated, was a middle aged man in conjunction with no funerary offerings except half of a ceramic jar over his head (Chapdelaine 2002). Compared to surrounding burials at the site, this is an example of a low status individual, considering the lack of funerary offerings. Another burial of a teenage individual of unknown sex shows signs of a more moderate status. This individual was interred with two painted ceramic vessels near the feet, with one copper fish hook in the mouth, and another painted vessel placed near the head (Chapdelaine 2002). High status burials on site contain either more funerary offerings and or items of high value. Three copper-gold artifacts were found in a burial of a woman thought to be of the middle class (Chapdelaine 2002). She was interred with the bones of an elderly man, which is a Moche mortuary behavior (Chapdelaine 2002). What made this burial particularly interesting was the ceremonial knife in the woman's left hand and spindle whorl near her knee, along with a circular disk on her face (Chapdelaine 2002).

Discussion

While this iconography backs up the idea of social hierarchy, there were no depictions of everyday life activities, such as a member of the peasant class would be performing, showing that this was likely iconography of the ruling elite (Moseley 2001). This reinforced the *karakas'* claim to rule, by monopolizing and depicting their descent from the gods as justification of their high status and the commoners lowly rank (Moseley 2001).

The iconography and symbolisms depicted above is seen time and again throughout the Moche state and is evidence of a codified state ideological symbolism. Symbolism this extensive is only seen in state level societies and can only happen with centralized government creating and promoting the state iconography and symbols.

For the purpose of this paper, the Moche realm was centered at Cerro Blanco and stretched from the Rio Chicama South to Rio Huarmey, but this was only through phase III and IV. Directly before A.D. 600 there was much upheaval in the Moche state, due to a massive drought (Moseley 2001). This entirely restructured the Moche political system and forced them to move their capital and lose much of their lands (Moseley 2001).

Tiwanaku

Tiwanaku domination of the south central Andes occurred from A.D. 500 to A.D. 1000 (Goldstein 2005). The epicenter of Tiwanaku urban life lay fifteen kilometers south-east of Lake Titicaca (Moseley 2001). Tiwanaku started development in the core area close to A.D. 200 with expansion into regional territory around A.D. 650 (Stanish 2002). Tiwanaku has been categorized by Carlos Ponce Sangines into a five phase occupation. Other Tiwanaku scholars have characterized Tiwanaku into two phases. Here I will be using the five phase approach.

Tiwanaku was an agropastoral based society with much monumental architecture, state craft, united art style and regional hegemony (Moseley 2001). Phase three commenced the large scale carved stone architecture, (circa A.D. 100-375), which grew even more in Phase four, the Classic Tiwanaku era (circa A.D. 375-600/700) (Moseley 2001). It was during the classic Tiwanaku era in which Tiwanaku was at its peak. Phase five saw regional expansion connected through regional political centers and colonies traversed by caravan, until an impending drought caused the society to collapse around A.D. 1100 (Moseley 2001). For the purpose of my thesis, I will focus on the classic Tiwanaku phase.

Population, Site Size and Distribution

The Tiwanaku state covered a large regional territory of approximately six hundred thousand square kilometers (Stanish 2002). It has been noted that some states in the Andes are characterized by a specific regional model by Goldstein (2005).

> According to this model, a core population, usually with its demographic center in the highlands, would establish colonial settlements in a variety of ecological and productive zones. Murra (1972) described such systems as "archipelagos" of colonies because they tended to consist of dispersed "islands;' of settlements rather than being contiguous territories. [Goldstein 2002:39]

The Tiwanaku state is an example of this archipelago model, with the core region focused in the highlands surrounding Lake Titicaca, with regional outposts or "islands" under Tiwanaku control, dispersed throughout different ecological zones. Archipelago models can be seen in the archaeological record through four different features:

> …(1) permanent or long-term residence in complementary resource zones, (2) explicit manifestation of a maintained identity with the homeland nucleus, (3) structural reproduction of the social structure of the homeland, and (4) multiethnicity—the distribution of immigrant colonies interspersed with colonies of other ethnic groups. [Goldstein 2005:42]

The Tiwanaku core region was located near the south-central shores of Lake Titicaca. The center of the Tiwanaku state was the site of Tiwanaku, three thousand eight hundred meters above sea-level, and consequently the highest ancient urban center in the world (Goldstein 2005). Goldstein points out that there have been many surveys estimating the population and expanse covered by Tiwanaku. Some surveys estimated Tiwanaku's site occupation to cover four km^2 with a population of 25,000-40,000, with other estimates suggesting the site covered eight to nine km^2 with a population greater than 40,000. Along with monumental architecture devoted to ceremonial and administrative purposes, there was also four km^2 of residential architecture and enclosures, which appear to be non-elite housing (Goldstein 2005).

Domestic and temple structures are also prominently featured at secondary centers such as Lukurmata, Pajchiri, Khonko Wankani, Chiripa and Iwawe with cut stone architecture (Goldstein 2005).

There have been multiple models for the characterization of the Tiwanaku state. One model categorized Tiwanaku into a four tiered hierarchy in a rather pyramidal fashion (Goldstein 2005). These settlement systems were divided into four-part administrative groups corresponding to state agricultural investment and administrative production functions (Goldstein 2005). Other scholars suggest that Tiwanaku stratification was based off of ethnohistoric constructions of Andean sociopolitical structure, into a "nested hierarchy". This model suggests that communities were rather politically autonomous with cultural and ceremonial ties to the capital. The communities during phase four were unified even though the core region at this time encompassed a sundry of diverse groups and the central political authority is controversial.

Tiwanaku settlements in the distant Moquegua Valley, on the western slopes of the Andes, occupied over one hundred fourteen hectares (Figure 7) (Goldstein 2005). The Moquegua Valley was settled by Tiwanaku from the *altiplano* for its arable land, productive for warm crops such as maize. The Moquegua Valley is relatively arid with dry desert, however, near the river and in the flood plain lies very productive farmland. During the Tiwanaku phase of occupation in the Middle Moquegua Valley, the *Omo* site group was the largest Tiwanaku site group found outside of the main *altiplano* core region. *Omo* the settlement is located on top of a bluff that had control over a wide portion of the valley below, near the valley's most productive natural springs. *Omo* is comprised of five different principal settlements within a two and a half kilometer section, the east side of the flood plain. Settlements are located somewhat removed

from the valley bottom, but primarily centered by the natural springs, which is the best source of ground water in Moquegua.

Monumental Architecture

Monumental architecture found throughout the Tiwanaku state showed evidence of highly political control, showing a very distinctive architecture style, with little variation from site to site (Stanish 2002). Sites such as *Omo*, located in the Moquegua valley show similar qualities only on a smaller scale, as the monuments found at the Tiwanaku core. Architecture described below is focused on the capital site of Tiwanaku.

Three main features dominated the ancient Tiwanaku landscape at the capital; the Akapana mound, the Sunken Temple and Kalasasaya platform (Janusek 2008). The largest mound on site at Tiwanaku is the Akapana, a flat topped mound with seven terraces, rising from the earth over fifteen meters with the main staircase going up the West side (Moseley 2001). Michael Moseley (2001) believes the platform was erected to portray the site of a great mountain with water channels cascading down from the sunken-court on the top of the mound.

The Akapana (Figure 8) was built in Early Tiwanaku stage I and refurbished circa A.D. 800 (Janusek 2008). It was intricately constructed with terraces consisting of pilasters between stone fitted walls made of beveled andesite blocks (Janusek 2008). The mound was supported by chambers filled with stones and earth (Janusek 2008). Evidence of much human ceremony and feasting was found on the bottoms of small chambers, consisting of numerous smashed ceremonial vessels once containing food, indicating, that the Akapana was a public ritual facility.

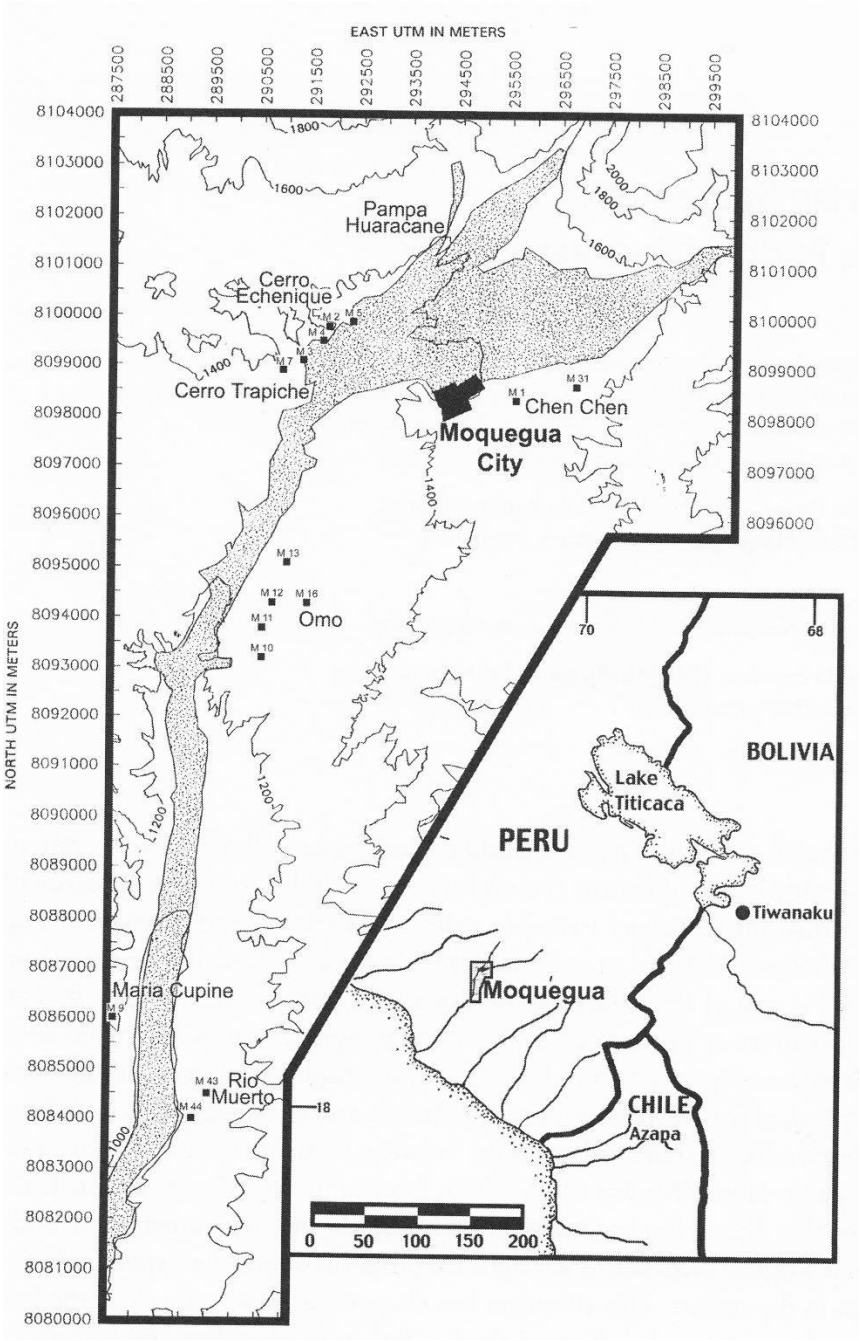

Figure 7: Tiwanaku and Moquegua region (Goldstein 2005, Figure 5.1).

The refurbishing that was done in A.D. 800 centered on the upper terraces and was accompanied by much feasting and shows of wealth with each new ruler (Janusek 2008). Also, accompanying large events were both llama and human sacrifices, with many bones showing signs of violence and chemical analysis indicating these people were not originally from Tiwanaku (Janusek 2008).

The Akapana is surrounded by court complexes and buildings. To the north of the great mound stands a smaller mound, the Kalasasaya, flanked by a rectangular sunken court (Janusek 2008). The Kalasasaya was built in the Late Formative II, on top of a residential complex (Jausek 2008). A large rectangular sunken court directly to the west of Akapana housed many carved stelae and was the first large construction on site (Janusek 2008).

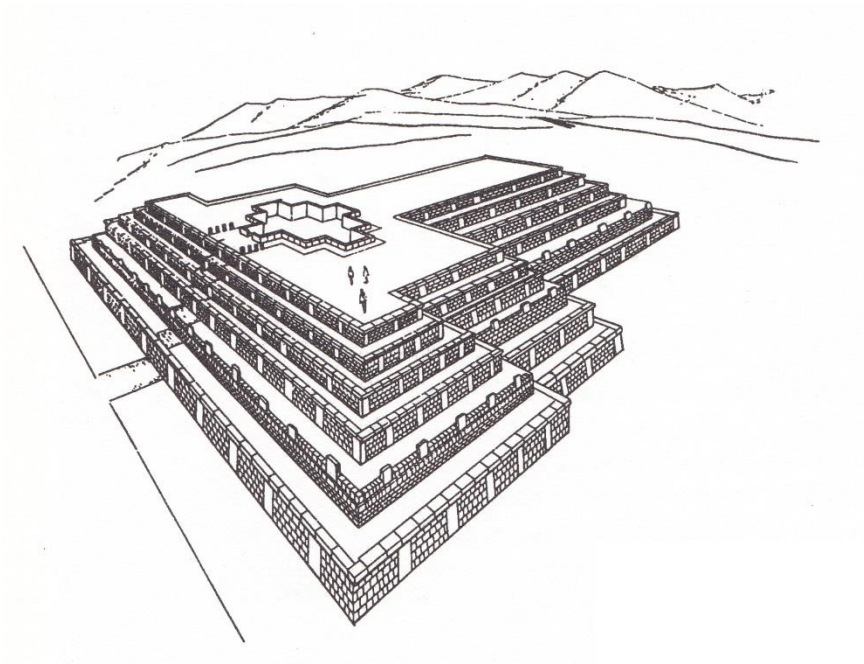

Figure 8: Artistic reconstruction of the Akapana (Moseley 2001, Figure 100).

Craft Specialization and the Tiwanaku Corporate Art Style

Religious art and iconography were prominently featured on stone monuments, for which Tiwanaku is particularly famous (Goldstein 2005). The religious art commonly depicted humanlike deities and mythical themes (Moseley 2001). The very large human-like stone carvings at Tiwanaku, feature the largest sculptures ever carved in pre-Columbian America, and were located at Tiwanaku's religious center (Goldstein 2005). These carved figures are elaborately dressed, and carved to fit the shape of the stones themselves.

The Kantatayita doorway was another depiction of religious art, and features two opposing groups of mythical creatures with birdlike beaks and elaborate headdresses (Moseley 2001). The Sun Portal is likely the most well-known depiction of the Tiwanaku religion (Figure 9). However, tapestry textiles were the most noteworthy form of delineating social identity and religious symbols in ancient Tiwanaku. Although, the wet climate in the region was not conducive to textile preservation, fragments found show significant similarities to iconography found on carvings (Moseley 2001).

Ceramic vessels were another important form of showing wealth and prestige of religious and state culture (Janusek 2008). Tiwanaku had a state pottery style, with regional sites portraying this style and not developing their own distinctive styles during Tiwanaku domination (Stanish 2002). The durable nature of ceramics allows them to be seen in the archaeological record. Tiwanaku corporate ceramic style coincided with phase IV and the monumental development (Goldstein 2005). This style was diffused throughout Tiwanaku core region and satellite sites rapidly after its creation (Goldstein 2005). Serving and ceremonial vessels show stylistic changes throughout time.

Prominently featured by the corporate style was red slip serving wares and drinking *keros*—flared drinking goblets (Goldstein 2005), and *escudillo* bowls—shallow bowls with a flared rim (Janusek 2008). Depictions on these vessels showed geometric shapes and figures which were later replaced by stylized animal figures and, later still, incorporated human figures (Moseley 2001). Disembodied animal designs such as heads and wings emerged around A.D. 900 (Moseley 2001). The frontal face of the Sun Portal was very commonly featured on vessels in different variations (Moseley 2001).

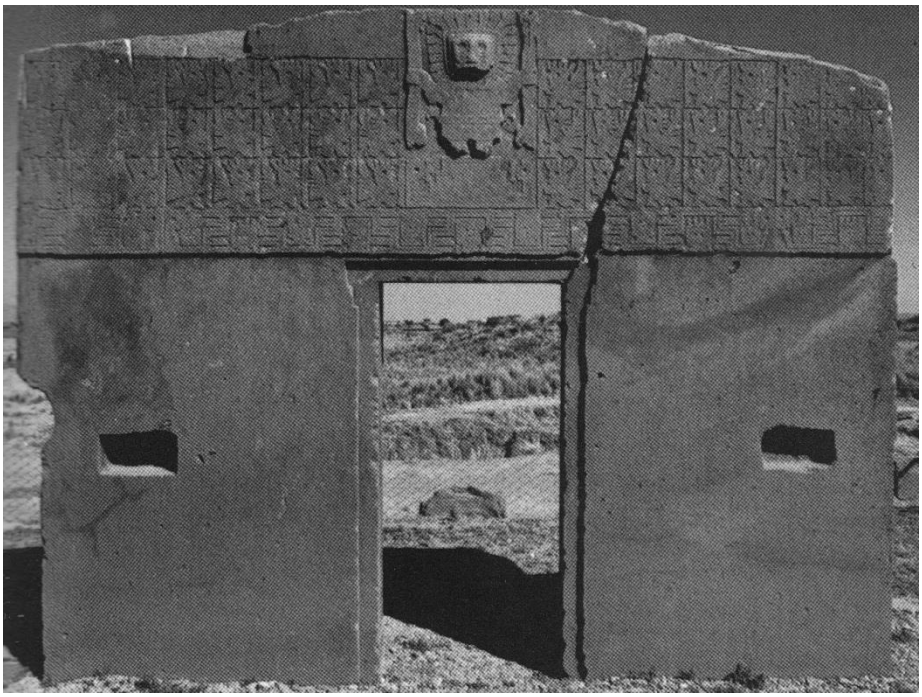

Figure 9: Sun Portal (Moseley 2001, Figure 82).

Metallurgy was used throughout the Tiwanaku state at core sites such as Tiwanaku and Lukurmata, and was primarily reserved for elite use (Goldstein 2005). These metal workers were highly skilled and utilized materials such as gold, silver, copper, as well as bronze alloys of copper-arsenic-nickel, copper-tin, and copper arsenic (Goldstein 2005).

Jewelry and elite items such as headdresses, and ornamental articles were made of gold, with bronze reserved for less intricate items such as pins and needles (Goldstein 2005). Bronze and gold were also used to decorate buildings, showing the importance of such structures for elite use (Goldstein 2005).

Burials

Burials located at the site of Tiwanaku are varied showing signs of differential treatment and status. The burials discussed below were taken from two different ritual complexes, Akapana and Akapana East. These burials were thus in two distinct contexts, Akapana being a place of public ritual, and Akapana East less public and more "intimate".

Human remains found at Akapana were more in the form of offerings or sacrifice rather than actual burials. Partial, as well as articulated bodies of human and camelid were found on the south-eastern corner foundations of Akapana, along with offerings of pottery (Blom and Janusek 2004). Upon examination, these bones had cut marks and signs of carnivore activity suggesting they were left out in the open after death (Blom and Janusek 2004). One deposit contained two male spines and pelvic area along with one foot and forearm (Blom and Janusek 2004). Two polychrome *keros*, a partial obsidian projectile point, bead, and incense burner were also in this deposit (Blom and Janusek 2004). Blom and Janusek (2004) believe from the ritual context and items, these undertakings are signs of elite ritual activity.

Human remains at the site of Akapana East upon examination show signs of being curated ancestors prepared by de-fleshing and placed in bundles (Blom and Janusek 2004). Five human bodies were found buried in the low mound however, it is unclear whether they were placed in the niches in the wall or on the floor (Blom and Janusek 2004). Two of these bodies were of an infant and young adult, with no signs of physical manipulation in preparation for

interment (Blom and Janusek 2004). The other adult bodies appear to have been deposited in a seated position. Another deposit nearby, contained bones of a young adult with cut marks seen on bones that were de-fleshed in preparation for interment (Blom and Janusek 2004).

These two complexes show human interment in two very different forms of ritual activity. Based on the human remains and the accompanying archaeological data from the structure, Blom and Janusek believe Akapana East to contain inhumations of local groups that were carefully curated for ancestor veneration, a common theme throughout the Andes. The offerings of camelid, pottery, humans and crafts indicate to Blom and Janusek (2004) that this complex was a public sacrificial site.

CARAL AND THE NORTE CHICO

The site of Caral is located approximately twenty-three kilometers inland from the Pacific Coast in the Supe Valley, Peru (Shady 2008:34). Radio carbon dates place Caral within a 600-year span between 2627 and 2020 calibrated B.C (Solis et al. 2001:725). Caral is one of eighteen Preceramic sites in the Supe Valley with residential units and public architecture (Shady 2008:30), and one of thirty sites located in the region called the Norte Chico (Figure 10), which encompasses the Fortaleza, Pativilca, Supe, and Huaura River Valleys (Solis et al. 2001; Hass and Creamer 2006:745).

Site Size and Distribution

The majority of the eighteen Preceramic sites in the Supe Valley are concentrated in the lower central portion of the valley, with nine sites on either side of the river (Shady 2008:30). Shady has categorized the sites according to size; three sites included in the fifty-five to eighty hectare

range, (Pando, Caral, and Pueblo Nuevo), four sites in the thirty to forty-five range (Miraya, Luirihuasai, Piedra Parada, and Chupacigarro), three in the fifteen to twenty-five range (Allpacoto, Penico, and Áspero), and three sites in the five to ten range (Huacache, El Molino, and Jaiva), with five sites smaller than five hectares (Pando, Cerro Colorado, Cerro Blanco, Limán and Capilla) (Shady 2008:31-32). Forty-seven percent of all construction in the valley is concentrated in three sites, Caral, Era de Pando, and Pueblo Nuevo (Shady 2008:32).

Table 1: Supe Valley sites listed by size in hectares (Shady 2008, Table 2.1).

Archaeological Sites	Hectares
Era de Pando	79.74
Caral	66.00
Pueblo Nuevo	55.01
Lurihuasi	37.80
Miraya	36.00
Piedra Parada	33.50
Chupacigarro	31.30
Allpacoto	23.10
Peñico	22.05
Áspero	18.80
Huacache	7.59
El Molino	6.96
Jaiva	4.20
Pando	1.95
Cerro Colorado	0.98
Cerro Blanco	0.80
Limán	0.48
Capilla	0.16

The lower central valley houses the largest and most complex of the sites. This seven kilometer square area is believed by Shady to be the "capital zone" of the valley, containing Pueblo Nuevo, Cerro Colorado Allpacoto, Lurihuasi, Miraya, Chupacigarro, and Caral (Shady 2008:33).

Shady believes Caral was a preplanned site, based on the lay-out of the structures (Shady 2008:36). The site appears to be designed with social organization—hierarchical social stratification in mind and thus is represented in halves, an upper and lower, and right and left half (Shady 2008:29). The upper half of the site (Figure 11) contains the most impressive structures, while the lower half holds smaller public structures with exception of one mound and sunken court complex (Shady 2008:36). The upper half of the site includes the six large pyramid mounds along with one circular court, and residential groupings in relation to particular mounds (Shady 2008:36).

Monumental Architecture

Caral and the Norte Chico are unique for their expansive sites, ranging from ten to more than 100 hectares, and large monuments at such an early time period (Haas and Creamer 2004:1021). The grand scale of architecture at such an early date is not seen anywhere else in the Andes. The central zone of Caral, housing monumental residential and nonresidential architecture encompasses roughly sixty-six hectares (Shady 2008:34). Out of the thirty-two structures on site, six main temple mounds and two sunken courts with various smaller mounds and residential architecture are found at the center of the site (Moseley 2001; Shady 2008:34). The Pirámide Mayor, the largest mound on site stands over eighteen meters high and measures one hundred sixty meters by one hundred fifty meters at the base (Solis et al. 2001:723). Archaeological evidence shows the Pirámide Mayor was built in two main phases along with the remaining five mounds on site (Solis et al. 2001:723).

Figure 10: The Norte Chico (Haas and Creamer 2004, Figure 1).

This contrasts with the fact that the major architectural achievements at Moche and Tiwanaku centers were achieved in a single, brief construction episode. All mounds were constructed with outer stone faced walls filled with rubble and river stones, transported by *shicra*, which are woven reed bags (Solis et al. 2001:723). "Chupacigarro", a mound and sunken court complex lies approximately three hundred meters southwest of the central site area (Solis et al. 2001:723).

Residential architecture varies in size and complexity throughout the site. The six large mounds contain domestic trash indicative of formal residential complexes, with large room complexes measuring between four hundred fifty to eight hundred square meters (Solis et al.

2001:723). The building material of these complexes was comprised of stone faced walls finished with layers of plaster (Solis et al. 2001:723). Another form of residential architecture on site is indicative of lower status residences, comprised of wattle and daub—cane, wooden poles, and mud (Solis et al. 2001:723). These residences are much smaller in size and are found throughout the site, lending evidence to there being at least two socioeconomic classes.

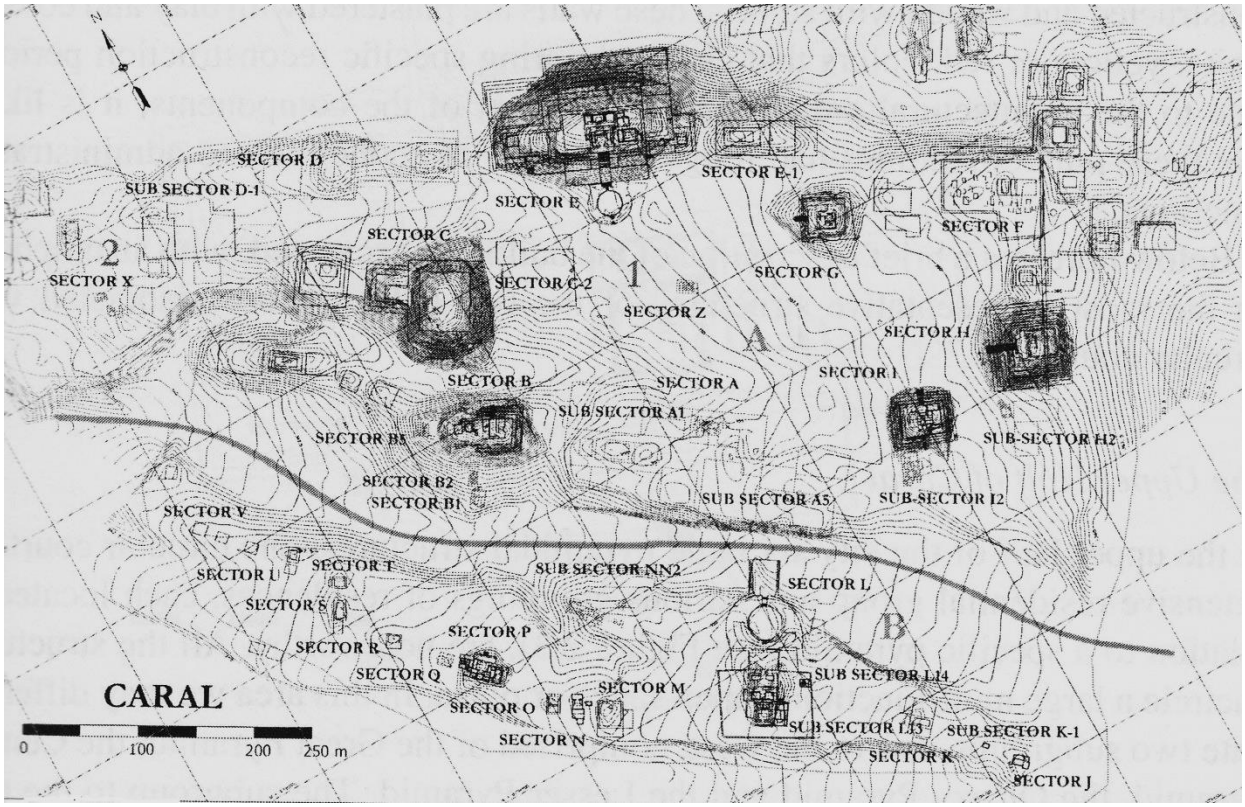

Figure 11: Site map of Caral with upper half (A) and lower half (B) and the central zone (1) (Shady 2008, Figure 2.3).

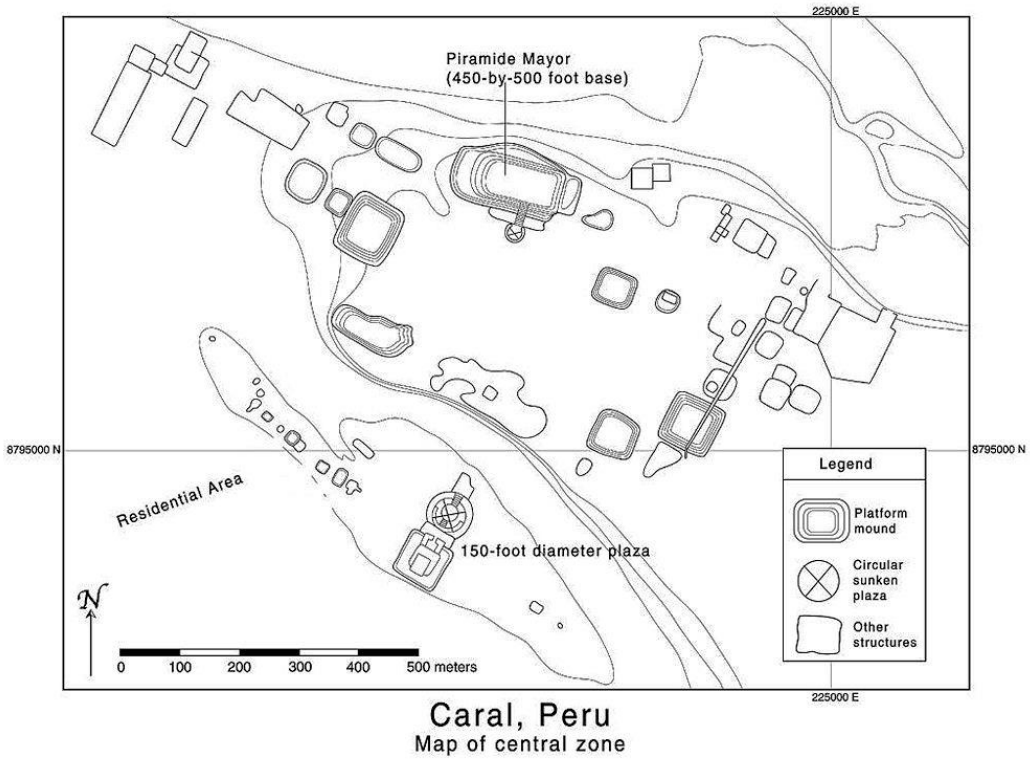

Figure 12: Central zone of Caral (Solis et al. 2001, Figure 3).

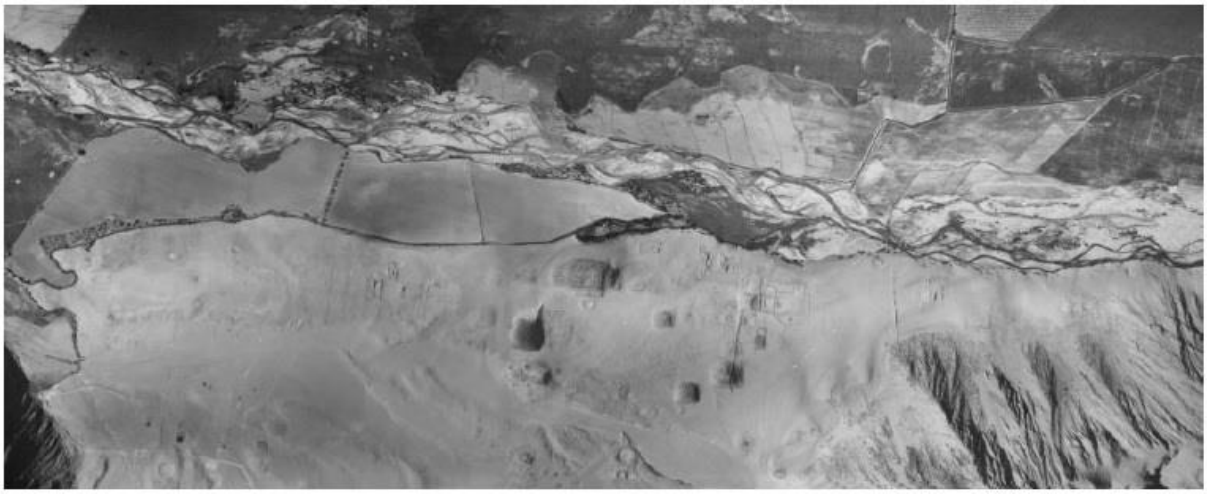

Figure 12: Caral aerial photograph (Solis et al. 2001, Figure 2).

The two circular sunken plazas onsite as well as the one found at Chupacigarro, are the characteristic features indicative of ceremonial activity (Solis et al. 2001:724). These plazas are found throughout this region, with fifteen alone found in the Supe Valley (Solis et al. 2001:724). The sparse number of artifacts associated with these courts point to non-residential use. The large mounds had central hearths in which, it is thought offerings were burned. The site shows similarity to contemporary sites in the region, and even though there was no written language, Shady believes the ancient inhabitants of Caral were an advanced people with knowledge of geometry, arithmetic and astronomy (Shady 2008:36).

Haas' and Creamer's surveys throughout the Norte Chico uncovered over thirty sites, with 127 radio carbon dates, the majority of which place these sites contemporaneous to Caral, (the Late Archaic 3000-1800 B.C.) (Haas and Creamer 2004:1021). The architecture and site characteristics found at these sites in the Fortaleza, and Pativilca Valleys are similar to those found at Caral, comprised of temple mounds made of *shicra* and stone architecture, with sunken courts, as well as residential architecture, and a lack of ceramics (Haas and Creamer 2004:1021). Due to the relativity of the radiocarbon dates, as well as common architectural characteristics of Caral and the rest of the Norte Chico sites, it would seem that these sites were connected, either in the same chiefdom or state.

Labor Investment

Shady calculated labor investment among sites distributed throughout the Supe valley based on the bulk of structure from each site, and categorized them into groups (Table 2). The following represents the indicated assemblages: a) Pueblo Nuevo (28.99%) and Caral (27.31%), b) Miraya (12.85%), Era de Pando (8.54%) and Lurihuasi (7.04%), c) Allpacoto (3.76%), Penico (3.12%) and El Molino (2.99%), d) Piedra Parada (1.67%) and Aspero (1.64%), e) Chupacigarro (0.87%)

and Huacache (0.57%), f) Cerro Blanco (0.30%), Cerro Calorado (0.12%), Jaiva (0.10%), Pando (0.07%), Liman (0.05%) and Capilla (0.001%) (Shady 2008:32). The two large sites in the valley, Caral and Pueblo Nuevo comprise 56.3% of all labor investment, with 28.43% of labor invested in another three sites, Miraya, Era de Pando and Lurihuasi (Shady 2008:33). The last group of sites only represents 2.08% of labor investment although comprised of eight sites (Shady 2008:33). This shows that the bulk of labor invested in sites was concentrated at Caral, and Pueblo Nuevo, which were located fairly close together (Shady 2008:31).

Table 2: Labor investment in terms of percent of total for each site (Shady 2008, Table 2.2)

Archaeological Sites	Percentage
Pueblo Nuevo	28.99
Caral	27.306
Miraya	12.853
Era de Pando	8.538
Lurihuasi	7.038
Allpacoto	3.761
Peñico	3.123
El Molino	2.987
Piedra Parada	1.67
Áspero	1.654
Chupacigarro	0.873
Huacache	0.565
Cerro Blanco	0.303
Cerro Colorado	0.123
Jaiva	0.103
Pando	0.066
Limán	0.046
Capilla	0.001

Craft Specialization and Corporate Art Style

The people of Caral participated in a variety of activities from farming to jewelry making. Craft specialization was seen at Caral in the form of beads, lithic tools, textiles and flutes, recovered from "workshops" and burials. There were several workshops located throughout the site. One in the eastern part (which can be seen as 'J' in Figure 11) of the lower half measured 10.20 ×

14.97 meters with a clay covered floor (Shady 2008:47). Nooks beneath the layer of clay revealed beads made of crisacola, milky quartz, rock crystal, Spondylus and opercles (Shady 2008:47). Stone and bone tools were also recovered from this particular building, and it is thought that this facility produced specialty items for elites (Shady 2008:47).

Residential buildings revealed an array of stone, bone, and wood work, along with textile fragments and plant matter (Shady 2008:47). Agricultural tools in the form of digging sticks, large axes, perforated stone tools thought to be used for breaking up clods of dirt were recovered from residences (Shady 2008:52). Projectile points and bolas for hunting, along with other stone tools such as cores, hammer stones, retouched flakes, metates, manos, and perforators were also recovered (Shady 2008:52).

Fragments of cotton textiles, woven in different designs were prevalent throughout the site (Shady 2008:52). The designs were made with the natural fiber color and were for domestic and ritual use, as well as social differentiation (Shady 2008:55). Burials containing textiles showed a variation in design, which are thought to be indicative of social hierarchy by Shady (2008:55). One of the few full textiles recovered was a woman's dress (Shady 2008:55). Wooden and bone needles were also recovered, perhaps used for production of textiles (Shady 2008:55).

An assemblage of thirty-two flutes made of pelican and condor bones, decorated with designs of monkeys, serpents, condors, eagles, and humans were recovered from a temple and sunken court complex (Figure 14) (Shady 2008:58). These items were consequently used for ritual purposes, adding another dimension to the society of Caral. Bugles were also found in elite and ritual structures (Shady 2008:58). There were also approximately one hundred unfired human clay figurines found in ceremonial and residential structures on site (Figure 13) (Shady

2008:58). The majority of these are broken with missing pieces; however they contribute to the knowledge of dress and hair style (Shady 2008:58). It is thought that these figurines were used in ritual context, perhaps as symbols of fertility (Shady 2008:58 2008).

Surveys done throughout the rest of the Norte Chico region have not been in-depth, with little intensive excavation on sites other than Caral. Therefore, evidence of craft specialization and art style is very limited, compared with what has been uncovered at Caral itself. Based on what little artifacts have been uncovered by excavations, it is impossible at this time to make a final comprehensive comparison of the extent and areal distribution of craft specialization in the Norte Chico.

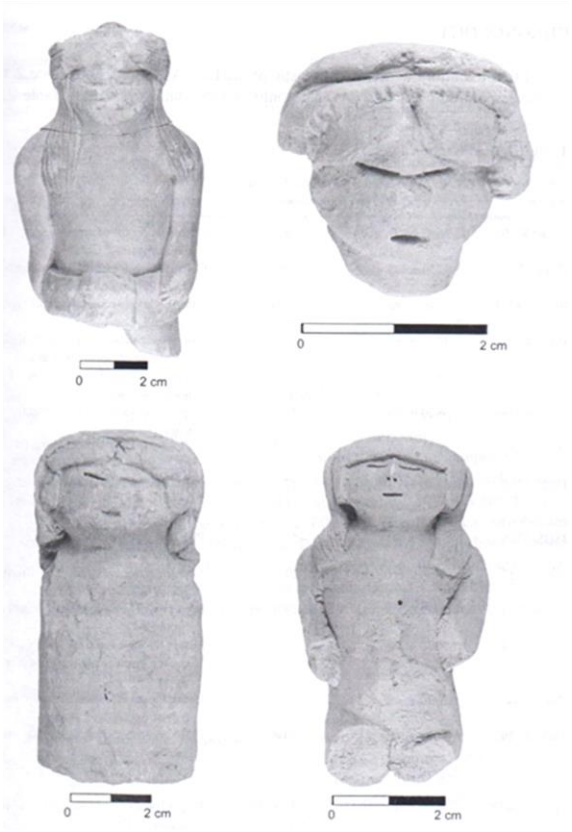

Figure 13: Clay figurines (Shady 2008, Figure 2.11).

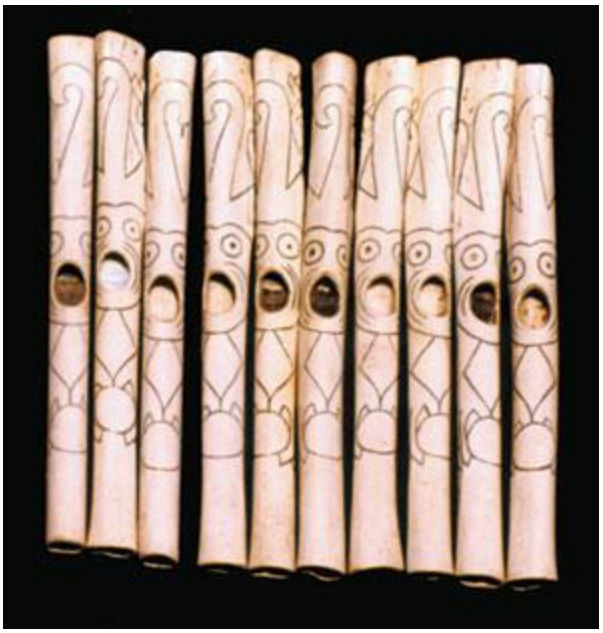

Figure 14: Bone Flutes (Civallero and Plaza 2010).

Burials

Burials at Caral were found with and without grave goods (Shady 2008:58). Some grave items were trade goods such as Spondylus, which would have been more difficult to obtain because it came from the distant coast of Ecuador, indicating differential access to goods, and thus social stratification (Shady 2008:52). Burials of children and small infants were found entombed with grave goods, also indicating ascribed status rather than achieved (Shady 2008:58). Some burials were found in context with textiles with specific designs, thought to be another indicator of hierarchy among the ancient people of Caral (Shady 20087:58).

There has been speculation as to whether human sacrifice took place at Caral, due to several burials associated with specific rituals, many of whom were children (Shady 2008:58). A body of a man approximately twenty years old was found buried without any clothing or funerary items except carefully arranged hair (Shady 2008:58). This individual died of two

blows to the head and was deposited on the floor of an atrium in preparation for building a new building (Shady 2008:58).

Multiple graves of young children were found in similar contexts, beneath walls or floors, thought to be offerings to the long life of the building (Shady 2008:58). Shady remarks that a similar practice persists today in the Andes; however human sacrifice has been replaced by animals (Shady 2008:58). There were no high elite burials or tombs encountered that compare to the level of status reflected in the Moche burials at Sipán.

The limited excavations at sites in the Norte Chico, has also made a comprehensive comparison of graves throughout the region impossible at this time. The site of Caral has seen the most extensive excavations throughout the region, and is the primary source of grave data from the Norte Chico.

Discussion

Based on the ethnobotanical remains found onsite and remnants of irrigation canals, Caral used an irrigation agriculture subsistence pattern (Shady 2008:50). Main domesticated crops consisted of squash, beans, guava, pacay, camote, and cotton (Solis et al. 2001:725). Marine resources were also prominently featured in the diet based on the mussel, anchovy, and sardine remains recovered on site (Shady 2008:48). The marine resources on site are indicative of trade between Caral and sites on the coast. Marine resources were almost wholly the only animal products incorporated into the diet based on the minimal amount of animal remains found on site (Solis et al. 2001:725).

The larger sites throughout the Norte Chico were all located near short irrigation canals (Haas and Creamer 2006:754). Fish and marine resources were also prominently featured in the subsistence of these sites (Haas and Creamer 2006:754). These factors indicate that the region at

large had similar subsistence patterns to those seen at Caral. This subsistence pattern included a variety of domesticated plants, along with marine resources.

ANALYSIS

Moche Site Size and Distribution

The Moche state was fairly large, especially considering that it was the first widely recognized state level society in South America. At its peak, Moche iconography was found from the Piuria Valley South to the Huarmey Valley, a distance of three hundred seventy-three miles or six hundred kilometers. This was an extensive contiguous territory, centered at Cerro Blanco, in the Moche Valley, with three distinctive tiers of settlement hierarchy.

Tiwanaku Site Size and Distribution

The Tiwanaku state also expanded over a large portion of the Andes, creating an archipelago which spanned across different ecological zones over hundreds of miles on the eastern and western slopes of the Andes, taking advantage of resources found within each region. It is estimated that Tiwanaku state control covered over six hundred thousand square kilometers. Archaeological data suggests it was a four tiered settlement hierarchy, with the center located at Tiwanaku, near the shores of Lake Titicaca. Tiwanaku had an inland capital city, located high in the altiplano, the Andean plateau, unlike the Moche or Caral, which had capital cities located within coastal river valleys. The capital city of Tiwanaku expanded from four to nine square kilometers, accommodating between twenty-five to upwards of forty thousand people.

Caral Site Size and Distribution

Caral is one of the largest of eighteen Preceramic sites in the Supe Valley. The site itself encompasses sixty-six hectares with six large temple mounds and two sunken courts. Caral is thought to be the capital of this region, according to Shady. This would potentially place Caral as a two tiered settlement hierarchy. Haas on the other hand, drawing from survey data from the Norte Chico, is led to believe the region was definitely part of an early civilization, but is not convinced that it was centered at Caral.

Moche Monumental Architecture

Moche architecture was rather extensive, with platform mounds found not only at Cerro Blanco, but also at regional sites throughout the state. Moche monuments were primarily built utilizing adobe bricks, which were a unique building material from either the *shicra* used at Caral or cut andesite used at Tiwanaku. The Huaca del Sol at Cerro Blanco was extremely large, containing approximately one hundred forty-three million adobe bricks. This massive project would have taken much organization to accomplish and as stated previously, over one hundred "maker's marks" were found on bricks indicative of *mita* labor. This form of labor is seen in context with highly stratified sociopolitical systems.

Tiwanaku Monumental Architecture

Tiwanaku large scale architecture was made of carved andesite, and extremely hard volcanic stone material, much of which was obtained non-locally. Variations in style of platform mounds found at Tiwanaku were seen throughout the Tiwanaku state. The Akapana at the central city core is the largest platform on site. It was a public ritual facility standing fifteen meters high.

Regional centers throughout the state contained similar architecture to that found at the site of Tiwanaku. The *Omo* colony located in the Moquegua Valley had distinctly Tiwanaku style architecture. In fact, *Omo* is one of only a few other Tiwanaku colonies to have a sunken court with cut stone heads, similar to the Kalasasaya located at Tiwanaku (Goldstein 2005).

Caral Monumental Architecture

The temple mounds at Caral and other sites throughout the Norte Chico are made of *shicra*, which is only seen at early sites, having been replaced later with the adobe brick and carved stone technologies of the Moche and Tiwanaku. Unlike Moche or Tiwanaku, Caral and the Norte Chico did not have extensive sites in far outlying areas. Caral style *shicra* architecture was only found primarily in the Norte Chico, which only encompasses four small river valleys. The largest mound on the site of Caral, the "Pirámide Mayor", measures eighteen meters high, one hundred sixty meters long by one hundred fifty meters at the base. This structure was built in two main phases, while the monumental constructions at Tiwanaku and Moche sites were accomplished in a relatively short period of time, involving a single episode of construction. Even so, the multiple construction episodes at Caral would have required a significant degree of organized labor. In fact, the Pirámide Mayor is comparable in height to those found at Tiwanaku, being taller than the Akapana.

Moche Craft Specialization

The Moche people were very prolific in craft production. The site of Cerro Blanco had specific lapidary, metallurgy, and pottery workshops near the center of the city that produced these items on a large scale. The stirrup spout vessels and portrait pots are two of the most well-known Moche items, and show the intricate detail and time put towards crafts. This sort of

specialization is indicative of stratified societies in which elites employ full-time craftsmen. Moche metallurgy could be compared with the craftsmanship of their fine pottery. The intricately designed items found entombed with the Warrior Priest of Sipán, were formed of gold and set with precious stones. Craft production was regulated throughout the Moche state, to the point where molds of vessel styles were sent to distant parts of the state, in order to achieve uniformity.

Tiwanaku Craft Specialization

Tiwanaku also had multiple forms of specialized craft production. Ceramics were prevalent at this time period as was metallurgy, and textiles. Gold, bronze, and copper/tin were all utilized in the production of personal ornaments and elite items. There is even evidence to suggest that gold and bronze were used to trim certain public buildings at Tiwanaku. Tiwanaku had clearly laid out workshops for craft production, similar to those seen at Cerro Blanco. These facilities would have produced items on a grand scale, and could only have been the result of a highly stratified society. The stratification of classes allowed time for activities other than food production and gathering. The elites buying these goods would have been the main supporters of this industry.

Caral Craft Specialization

Because of its early date, Caral is lacking crafts in the form of ceramics. However, they did utilize stone, bone, and shell materials for the purpose of specialized items. Beads were found on site, made of stone and Spondylus, which was a trade item acquired from the coast of Ecuador. Caral also utilized cotton in the form of textiles. Flutes made of condor and pelican were found on site in ritual context. Craft specialization here was not nearly as extensive as

anything found either at Cerro Blanco or Tiwanaku. Shady describes in detail only one workshop, which contained debitage from stone tools, and beads (Shady 2008:47). In fact, most of the items found on site were utilitarian tools related to agricultural activities, such as digging sticks, manos and metates (Shady 2008:52).

Moche Iconography

Moche iconography went through five phases, and incorporated many different themes, from humans, animals, to anthropomorphic beings. The sacrifice ceremony depicting ritual sacrifice was a regional theme seen throughout the Moche state. Moche iconography and crafts were highly standardized and pointed to a stratified society, due to the lack of depiction of everyday activities. The prevalent depiction of elite activities performed the job of rationalizing the *karakas*' rule, through continual reinforcement of their status as descendants from the gods.

Tiwanaku Iconography

The gateway god was the iconographic symbol characteristic of Tiwanaku religion. It is found depicted in multiple variations from ceramics to stone carvings such as the Gateway of the Sun at Tiwanaku. Iconography depicted this extensively is very characteristic of state level organization with an elite ruling class forwarding the wide-spread distribution of a specific iconography. Gateway god iconography is extensively depicted throughout the Tiwanaku state.

Caral Iconography

Specific iconography in the form of drawings was not very prevalent at Caral, however designs in textiles were found and thought to be indicators of social status. One hundred unfired clay figurines depicting humans were found throughout the site as well, and the assemblage of flutes made from bird bone had depictions of frogs, monkeys, and humans on them. This is however

the extent of the iconographic data for Caral and the Norte Chico, considering the few extensive excavations done throughout the region. Thus, the distribution of a "state iconography" is very difficult to see at this time however, future excavations will surely lend more insight into the extent of what little iconography is seen at Caral, and tell whether it persisted throughout the Norte Chico. Until then, Caral is the primary source of iconography associated with the region.

Moche Burials

Burials found throughout the Moche state show differentiation of burial goods. The burials found at Cerro Blanco are thought to lend evidence to a three tired social hierarchy, with elites, a middle class, and a peasantry. The distribution of grave goods does not appear to be in connection with age or sex, thus indicative of social stratification. The opulent burial of the "Warrior Priest" found at Sipán is also evidence of social stratification. This burial directly relates to what is depicted in the iconography. The elaborate burial clearly illustrates class stratification from what is seen among other graves, some containing no burial goods at all.

Tiwanaku Burials

There were two main contexts of burials found at the site of Tiwanaku, sacrificial offerings, and curated bones pertaining to ancestor veneration. The bones in the context of offerings were located within the Akapana, along with camelid bones, beads, ceramics, and other offerings. These bones were in no particular order, not being a part of articulated bodies. This disarray is most suggestive of the "offering" context. The bones found at the Akapana East were arranged with care in what is thought to be a more private setting. These bones were perhaps de-fleshed and placed within easy accessible tombs in order to facilitate curation.

Caral Burials

Burials at Caral were diverse with some containing grave goods and others without any kind of offerings, or even clothing. Young children were found interred with grave goods, indicative of stratified societies rather than achieved status. There is also debate as to whether some burials at Caral were a form of human sacrifice. One grave in particular stood out to Shady, as potential evidence for ritual sacrifice. That of a young man, who died of two blows to the head, and was buried nude. Due to lack of excavations and published data related to sites found in the Norte Chico, a comprehensive comparison of graves was impossible at this time.

SUMMARY

Dr. Ruth Shady believes Caral, the Supe Valley settlement system and Norte Chico to represent the very first state level society in the Andes. Shady, like many other scholars studying the rise to complexity, provides her definition of a state level society: "We identify a political entity as a state when the society—which produces an economic surplus and whose members are organized into social strata of differing status and, on the basis of that varying status, participate differently in the benefits of the productive process—is directed by permanent authorities with coercive power to uphold their decisions" (Haas and Creamer 2006:751). This definition as pointed out by Haas and Creamer (2006) could very well encompass a number of chiefdoms throughout the world, for example, in Hawaii and Africa (Haas and Creamer 2006:752). This definition focusses on political organization, without taking into account the reach of this political hegemony.

Haas discusses that Shady's published dates for Caral of 2600-2020 B.C. does not place Caral as the oldest site in the region, and also points out that Caral was not even the largest of the

sites in the Supe Valley or the Norte Chico region (Haas and Creamer 2006:752). Haas believes Caral to be an important large early site in the Andes however, he believes there is no substantiating evidence pointing to Caral as being the Capital of the region. Haas proposed his own hypothesis for the rise to complexity in the Norte Chico. This hypothesis suggests inland agricultural based, social, economic, and religious systems arose inland from the coast, and competed among themselves for social capital and prestige. The most prestigious drew coastal fishing communities to them for trade (Haas and Creamer 2006:755). This trade network provided fish protein for the inland communities, as well as labor for building the large ceremonial centers seen in the Norte Chico (Haas and Creamer 2006).

Looking at Caral and the Norte Chico in comparison with Moche and Tiwanaku, we can see that Caral has many of the same qualities that characterize a state level society; a fairly large site, monumental architecture, craft specialization, and differential treatment in burials. However, on closer examination of the far reaching distribution of these items, Caral cannot compare with either Tiwanaku or Moche. Monumental architecture is seen throughout the Supe Valley and the greater Norte Chico region, and is the main basis for comparison of distribution of the Caral style. Yet, this is only four small river valleys, compared to the three hundred seventy-three mile stretch of coastline under Moche rule, and the hundreds of miles of Tiwanaku state territory with Tiwanaku style architecture prevalently feature throughout. Also, when looking at site size alone, the site of Caral only encompasses a mere sixty-six hectares, while Cerro Blanco covers over three hundred hectares, and Tiwanaku encompasses anywhere from four-nine hundred hectares.

Caral has craft specialization but it does not come even close to the size of the workshops and distribution seen in either Moche or Tiwanaku states. Cerro Blanco and Tiwanaku both have

distinct lapidary, ceramic, and metallurgy workshops that had the capacity for large scale production. Burial stratification and statewide iconography are also seen at Caral but in very limited quantities.

Based on the comparison of the widely recognized state level society characteristics seen in both Moche and Tiwanaku, Caral and the Norte Chico does not quite fit into the model characterized by state level society. It exhibits the basic characteristics found in a state, however the size and distribution does not seem great enough to truly be called a state, based off the comparison of Moche and Tiwanaku.

CONCLUSION

In conclusion, based off of my research, Caral does not equate a state level society, fitting much better into a chiefdom model. However, Caral is an intriguing site for many reasons, three of which are proposed by Jonathan Haas: 1) Caral and the Norte Chico arose in a "pristine" political environment, where Caral had interactions with regions outside of the Norte Chico, however there is no evidence suggesting that the outside area contained more complex polities that were exerting pressure on Caral, 2) Caral and the Norte Chico, once formed endured for some time and was not an "episodic phenomenon" which rapidly disappeared, 3) and lastly, the transformation and the evolution of cultural complexity in the Norte Chico took place rather rapidly, only taking a few centuries here, while in other parts of the world this kind of transformation took millennia (Haas and Creamer 2006:746).

Thus, Caral and the Norte Chico, being the first Andean region to undergo cultural evolution (nearly 2,000 years before any other Andean complex society) stands as a framework

that can be used to better understand the economic, social, and religious components of a society. By looking at the societies represented by Caral, Moche and Tiwanaku, one can see the complexity and expanse of the city change through time.

The monumental architecture became much larger with Moche and Tiwanaku, and the building material evolved from simple *shicra* bags to more complex and technologically advanced adobe bricks, and then to the time consuming carved andesite of Tiwanaku. The expanse of not only the capital sites but the territory under state control also expanded through time, going from the mere four river valleys of the Norte Chico, to the hundreds of miles controlled by Moche and Tiwanaku. The reach of hegemonic state control is clearly visible in these forms from the archaeological record. The differential treatment in burials is minor at Caral, having few if any grave items compared with the lustrous tomb of the "Warrior of Sipán" in the Moche state. Sate wide iconography facilitated by religion, which was generally controlled by elites and rulers is also distinctly visible in the later Moche and Tiwanaku, with very little found at Caral.

Therefore, Caral is the fascinating beginning of Andean civilization, with aspects of which can be seen to contribute to the later Andean civilization of the Moche and Tiwanaku, not only in architecture, but also sociopolitical, and religious characteristics as well.

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