AN ARCHAEOLOGICAL INVESTIGATION OF ETHNICITY AT LAS VARAS, PERU

by

Howard I. Tsai

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Anthropology)
in the University of Michigan
2012

Doctoral Committee:

Professor Joyce Marcus, Chair
Professor Kent V. Flannery
Professor Philip D. Gingerich
Professor Bruce Mannheim

To my parents

Acknowledgments

This dissertation was made possible by the kindness and generosity of my colleagues and mentors, members of the Las Varas Archaeological Project, individuals from domestic and foreign institutions, and my friends and families.

It is impossible to convey the amount of time and assistance given to me by my advisor, Joyce Marcus. Joyce has devoted so much of her labor and energy to my dissertation; she has given me invaluable advice on archaeology, writing, teaching, grants, job applications, and various other aspects of my professional development. She has generously shared her intelligence, wisdom, and knowledge with me. I cannot thank her enough. She will now receive a lifetime subscription to my future publications.

I am fortunate to have the complete support and constant encouragement of my parents, my sister, and my grandparents to pursue archaeology. I am sorry to have worried my parents by traveling so far from home. I thank them for visiting me in Peru during my fieldwork, and I am very happy and blessed to have their endless love and understanding. I dedicate this dissertation to them.

I want to thank my committee members Kent Flannery, Philip Gingerich, and Bruce Mannheim. I have learned much from Kent's insights, analyses, and perspicacious syntheses. I will cherish his stories of the great (and not so great) moments in archaeology, which often brought the house down in the 4027 seminar room. I am

grateful to Professors Philip Gingerich and Bruce Mannheim for reading and commenting on my dissertation. By showing me the complexity of Andean ethnography and ethnohistory, Bruce has sparked my fascination on these subjects. His class "Form and Interpretation" is the most theoretically challenging and stimulating course I have taken. I hope to see him again in conferences to discuss theory and the Andes over a pisco sour (or two).

I give my deepest thanks to the Bazán family of Pay Pay, who took me in as a member of their family and gave me much warmth and joy. Through them I was introduced to the Andean kin network. When I traveled between the coast, mid-valley, and highlands, searching for the elusive *ulluchu* or the palace of Guzmango Capac, Señor and Señora Bazán always made sure that I could find a *primo* or *compadre* in the towns or villages I was visiting. Their friendship and *cariño* shaped my understanding of exchange and interaction in the Andes. And for that reason I will never miss an opportunity to visit them in Pay Pay.

I was fortunate to have worked with a team of talented and excellent archaeologists at Las Varas: Leonardo Murga (co-director), Luis Chuquipoma (supervising archaeologist), Nicolás "Totti" Gálvez (supervising archaeologist), Solsiré Cusicanqui (supervising archaeologist), and Maritza Bazán (lab manager). I am grateful for their assistance and friendship, and I hope to collaborate with them again in the future. I could not have asked for a better team of excavators: Huner Bazán, Napoleón Bazán (my compadre), Lorenzo Bazán, Julio León, Sr. Clemente León, and José "Pachi" Palacios. They never missed a day of work, always gave 100%, and were a constant source of jokes, local legends, and chicha.

I am indebted to Dr. Carol Mackey, who introduced me to the archaeology of the north coast of Peru. Carol is a great mentor. At Farfán, she would show me an excavation unit and explain to me why that unit was opened, what she had found, and where her next unit would be. She patiently taught me the fundamentals of excavation and stratigraphy. On my next project, I hope to show her my excavations and explain to her my methods and objectives, just as she did for me years ago at Farfán.

I have learned much from the talented individuals of "Team Farfán": Robyn Cutright, Abigail Levine, Regina Richter, Gabriela Cervantes, Jason Toohey, Hugo Ikehara, Enrique Zavaleta, César Jáuregui, and Jorge Terrones. Robyn and I conducted our dissertation fieldwork in the same year. During that time we constantly visited each other's site to compare the material culture of the coast with that of the mid-valley. I treasure her friendship and company, and I look forward to seeing Robyn again on the balcony of the Estación to discuss pottery typology, lunch specials, and the inter-digitation of ethnic groups in the Jequetepeque Valley.

Enrique Zavaleta and César Jáuregui have patiently taught me the archaeology and local customs of Peru and generously hosted me in their homes whenever I visit Trujillo. I am grateful for their friendship and look forward to accompanying Enrique as he begins his long-term archaeological investigation of Huarmey. I will also help him find the best ceviche in town.

I want to thank my professors at the Museum of Anthropology – John O'Shea, Henry Wright, Bob Whallon, Jeffrey Parsons, and Carla Sinopoli – for their support and guidance. I am sad to leave an institution filled with so many great scholars. I thank Jeff for reading chapters of my dissertation and occasionally leaving articles and books on my

desk (I know it's you, Jeff). I also thank Gustavo Verdesio for our stimulating conversations on archaeology and interpretations of the past.

My friends and colleagues have made my time in Ann Arbor a wonderful and exciting experience. I want to express my gratitude to Khori Newlander and Alexi Smith for helping me with my excavations at Las Varas. I will remember with great affection and fondness the 2001 cohort – Karma Cochran, Paul Duffy, Ana Jankovic, Hemanth Kadambi, and Bella Muntz. I am grateful to have shared time with a brilliant group of Andean archaeologists at Michigan: Véronique Bélisle, Allison Davis, Kenny Sims, and Alan Covey. With equal gratitude I treasure the company of wonderful Andean scholars: Guillermo Salas, Joshua Shapero, Angelica Serna, Nick Emlen, Alysa Handelsman, and Allie Caine. I give many thanks to my good friends Cameron Gokee, Alice Wright, Casey Barrier, Matt Gallon, Shaun Lynch, Eric Rupley, Amy Nicodemus, Ashley Lemke, Colin Quinn, Jason De León, Ivan Cangemi, Jana Mokrisova, Margaret Wilson, Alicia Boswell, Lenny Ureña, Uthara Suvrathan, and Andy Gurstelle. I thank the new students for their friendship and for reminding me that it's time for me to graduate: Christina Perry, Lacey Carpenter, Anna Antoniou, Chelsea Fisher, and Travis Williams. And never shall I forget the camaraderie of Randy Hicks, Jonathan Devore, and Hemant Kannan.

My dissertation project was made possible by generous funding from the Social Science Research Council, Fulbright-Hays Commission, American Philosophical Society, James B. Griffin Research Award from the Museum of Anthropology, Rackham Graduate School, and the Department of Anthropology.

Table of Contents

List of Figures

Figure

List of Tables

Table

Abstract

How can archaeologists identity different ethnic groups using only their material remains? To investigate interaction and exchange between ethnic groups in the Andes, I excavated Las Varas, an 11th-century village in the Jequetepeque Valley, northern Peru. This dissertation presents the results of my excavation (which uncovered houses, plazas, burials, and a ritual platform) and provides information on the daily life, ceremony, and burial traditions of the inhabitants of Las Varas.

The presence of cist tombs, stone jambs next to entrances, and large quantities of painted bowls at Las Varas indicates influence from the highland culture of Cajamarca. Coastal-style pottery was found concentrated in the western entrance of Las Varas in a ritual platform. Plazas and cist tombs were found at the southern edge of the site, next to a trail that led to the highlands. A cemetery in the northeastern corner of Las Varas yielded three graves with seated individuals accompanied by coastal or Lambayeque-style pottery. From these results I argue that we can detect differences between ethnic groups by using evidence from different contexts such as residences, cemeteries, and ceremonial plazas. The synthesis of such disparate kinds of data provide us with an integrated picture of the process by which ethnic identity was constructed and maintained in the community.

Chapter 1

The Archaeological Investigation of Ethnicity

The staircase and the tree are "master figures" of anthropology: the former portrays the step-like ascent of complexity, the latter represents the divergence of cultures and ethnic groups (Trautmann 1997:8). Social evolution, except in the case of punctuated equilibrium (Spencer 1990), proceeds by oscillations that resemble the jagged lines of a seismograph (Carneiro 1969:1015; Marcus 1998). And ethnogenesis, the evolution of ethnic groups, involves both the splitting and joining of ethnic identities, like a tree with interweaving branches (see Kroeber 1948:Figure 18).

Just as there are archaeological correlates for each stage of social evolution, the ethnic affiliation of a group can be inferred by using various lines of archaeological evidence such as pottery, graves, and architecture. Going beyond mere classification, we want to know how ethnic groups construct and maintain their identities.

I start this chapter by presenting the observation made by twentieth-century anthropologists that an ethnic group is not a bounded, culturally homogeneous entity. I then provide a summary of previous archaeological research on ethnicity before proposing how we can study the interaction of ethnic groups using the archaeological record. I conclude this chapter by focusing on the Andes as a case study for the investigation of ethnicity in prehistoric societies.

Highland Burma

Edmund Leach's (1954) *Political Systems of Highland Burma* contained one of the earliest and most significant statements on ethnicity and social change. From 1939 to 1945, Leach visited and studied much of the area discussed in his book (Leach 1954:311-312); this extended fieldwork gave him a unique perspective on social and political change (Tambiah 2002:45).

In the first chapter, Leach argued that no social system is in equilibrium, a premise completely at odds with functionalist tenets. He noted that Kachin groups fluctuated between *gumsa* and *gumlao* forms of organization, that is, between chiefly and autonomous village societies. Gumsa is a hierarchical form of social organization where hereditary chiefs from high-ranking lineages collected labor and tribute from subject communities (Leach 1954:204-205). Gumlao is a more egalitarian form of social organization where the lineages are equally ranked (in theory, at least) and village leaders cannot demand tribute from villagers.

Gumsa communities could turn into gumlao and vice-versa. For example, the villages of N'Gum La and Sagribum were gumlao in 1915, but gumsa in 1945 (Leach 1954:208-209). In another case, gumsa villagers revolted against their chiefs and reverted back to gumlao (Leach 1954:207-208). Such fluctuation, argued Leach, was an inherent characteristic of the social system: among gumlao, there was a tendency for lineages to split and then arrange themselves in hierarchical order. Women of the higher-ranking lineage were married to men of the lower-ranking lineage, a system called *mayu-dama*. The highest ranking lineage received wives from Shan states, and chiefs within

this lineage aspired to become a separate class of nobles similar to the Shan aristocracy, the upper echelon of a stratified society.

Kachin villagers maintained their autonomy by resisting social ranking. Villages would revolt and remove chiefs of the highest lineage to restore gumlao. Yet the cycle of rank and anti-rank persisted because of the mayu-dama system, which created a hierarchy of lineages ordered according to their status as wife-givers or wife-takers (see Scott 2009:213-216 for a critical summary of research evaluating Leach's ethnography).

In highland Burma, the political structure was unstable, and people did not live in discrete, bounded social groups (Leach 1954:60-61). Within a particular tribe there were speakers of many languages, and one language might be spoken by different tribes. For example, within the Kachin community of Hpalang, which had 130 households, more than 6 dialects were spoken (Leach 1954:46). Such observations led Leach (1954:60) to conclude that the Kachin cannot be studied, in his words, "in the classical manner which treated culture groups as social isolates."

Among the Shan and Kachin, individuals changed their ethnic or linguistic affiliation within their lifetime. Leach (1954:293-297) cited cases where people changed their group membership, such as Jinghpaw becoming Shan, Assamese becoming Jinghpaw, Nagas becoming Jinghpaw, Shans becoming Jinghpaw, and Assamese becoming Jinghpaw and then Shan.

The Concept of "Tribe"

Leach's conclusions regarding ethnicity anticipated later anthropological debates over the existence of bounded social groups or "cultunits" (Fried 1975; Hymes 1968;

Naroll 1964). The argument against viewing cultural groups as "social isolates," or bounded homogeneous tribes, was developed most elaborately in Morton Fried's book, *The Notion of Tribe* (1975). Fried showed that groups the anthropologists called "tribes" were not linguistically, geographically, or culturally bounded social entities. Such a linguistically and geographically contained group was the result of states manipulating local circumstances to maintain administrative control (Fried 1975:102). Fried's earlier article (1966), which made the same argument, prompted Elman Service (1968:167) to modify his original band-tribe-chiefdom-state scheme into egalitarian society, hierarchical society, and archaic civilization. Later Townsend (1985:142) and Carneiro (2002:34-35) replaced the term "tribe" with "autonomous village" to describe the evolutionary stage between band and chiefdom.

However defined, every cultural "unit" exhibits a heterogeneous mix of languages, customs, and political affiliations. People, ideas, and materials diffuse from one culture to another. The idea of a naturally bounded social unit sharing one language, one territory, and one culture is derived from European nationalist ideology of the eighteenth century (Mannheim 1998:384). Under this ideology, the mixture of languages, races, and cultures is viewed as undesirable and morally suspect (Irvine and Gal 2000:63-65).

If societies are heterogeneous, with people constantly interacting across borders and changing identities, then why do "boundaries persist despite a flow of personnel across them" (Barth 1969:9)? Barth noticed that interaction, rather than isolation, creates ethnic boundaries. This observation goes against the "primordial" view of ethnogenesis, i.e., ethnic groups formed when people became isolated and developed different language

and customs. If interaction is the key to fomenting ethnogenesis, then we must look for mechanisms and processes that lead to the creation of boundaries.

Ethnogenesis

Before asking *how* ethnicity emerges, perhaps we need to ask *what* is ethnicity. Historian Hugh Seton-Watson (1977:5) remarked that "no 'scientific definition' of a nation can be devised; yet the phenomenon has existed and exists." The same can be said for ethnicity. Many archaeologists believe that the term "ethnicity" is better applied to histories of modern nation-states, and thus prefer more neutral terms like "social groups" or "polities." But an examination of the archaeological record shows that ethnic groups were present in prehistory before the emergence of nation-states. For example, archaeologists have found a Zapotec enclave in Teotihuacán (Spence 1992), a Bronze Age cemetery with foreign individuals in Hungary (O'Shea 1996:364), and altiplano communities moving toward the southern Peruvian coast during the Middle Horizon (Goldstein 2005). Archaeologists should try to identify ethnic groups and study ethnicity because interaction between ethnic groups was a common and important process in prehistory. We should refine the study of ethnicity rather than avoid the subject altogether.

Geoff Emberling (1997:302-305) provides four criteria for defining an ethnic group: (1) "having common [often fictive] ancestry, therefore as being kin"; (2) including "members of more than one lineage or extended family"; (3) sharing "some common language"; and (4) existing "in some relationship" to states. To show that a group perceived a common ancestry, archaeologists would need to find a public ritual or burial

ground used by a community with shared descent and heritage. For the second criterion, archaeologists could identify a style of pottery, architecture, or burial distributed over a region that would have included many households and communities. The third criterion, sharing a common language, is very difficult to demonstrate archaeologically; perhaps the overlap of an archaeological culture with an extinct language (as revealed by toponyms) would suggest that a language was spoken in that area. The last criterion, the presence of states, is easier to document since archaeologists have developed many ways to identify states in the archaeological record (Marcus 2008a:259).

Ethnic groups, however, were present long before the emergence of the state. Because most studies of ethnicity are based on ethnography, and since all ethnography was made in the presence of states, this creates the impression that the existence of a state is necessary for ethnic groups to form. Archaeologists should attempt to study the formation of ethnic groups prior to the emergence of the state. For example, Tammy Stone (2003) has documented cases of ethnic contact in the American Southwest during the 12th and 13th centuries, which would represent ethnic interactions between pre-state autonomous villages. John O'Shea's (1996:362-367) discussion of Maros ethnogenesis would represent another case of ethnicity in tribal societies without any influence from states.

During state formation, ethnic groups undergo major transformations. As outlined by James Scott (2009:67), states exert a "centripetal force" that pulls people from nearby villages and hamlets into the capital. Through raiding and recruitment, the state's objective is to concentrate labor – agriculturalists, craft specialists, administrators – at the center. The result is a polyglot, multi-ethnic, cosmopolitan capital. Examples of

such ethnically diverse capitals include Tiwanaku (Janusek 2009:168-169), Teotihuacán (Manzanilla 2009:32-36), and possibly Uruk during the Early Dynastic (Emberling 1997:323).

Colin Renfrew's peer-polity model describes how a group of early states or "modules" tends to share an ethnic identity. These polities share certain cultural similarities (or "structural homologies") such as architecture, ceramic style, and dialects (Renfrew 1986:4-5). Interaction between polities includes competition (through warfare or competitive display), transmission of information and innovation, and the exchange of materials. Renfrew (1986:7) suggests that "the processes of ethnic formation" operate at the level of the "larger community beyond the polity level, comprised of loosely related, yet politically independent, interacting groups." In other words, after the emergence of the state, competing polities can share a common ethnic identity with each polity still keeping its autonomy.

Ethnicity as Process

Ronald Cohen (1978:389) asserted that "ethnicity has no existence apart from interethnic relations." If so, then an investigation of ethnicity needs to focus on interaction. The "trait list" approach to ethnicity, which simply lists the characteristics unique to each group, is inadequate. We need to understand *how* these traits or practices maintain social differences. Rather than viewing culture as a grab bag of traits, we move toward an understanding of culture as a system of interrelated components and structures. We can then examine ethnogenesis as a process, i.e., how the system evolved to produce

contrasting identities, and how groups used aspects of their culture – language, songs, clothing – to maintain ethnic boundaries.

Ethnicity – a product of the contact and interaction between two or more different cultural systems with contrasting languages, beliefs, and socio-political organizations – is an important topic for archaeologists because it is a recurring process in history and prehistory. We want to know how, despite such differences, ethnic groups manage to exchange materials, information, and persons. The study of the history of their interaction, from initial contact to repeated and ritualized exchange, provides insight into culture. It is like watching two individuals who speak different languages trying to communicate and interact, a process that entails improvisation and creativity. The two individuals might build a structure of meaning that both participants will understand.

Anthropologists have long recognized the importance of investigating cultural contact to understand the *internal* workings of each culture. Marshall Sahlins (1985), for example, analyzed the Hawaiians' encounter with Captain Cook to investigate the cultural logic of Hawaiian religious ideology; such contacts are a rare opportunity to record how each group makes sense of unexpected moments. Their response reflects both invention and tradition. The emphasis on interaction as the locus of culture has been anticipated by earlier scholars such as Sapir (1994) and Bakhtin (1981) and continues to influence modern investigations (Mannheim and Tedlock 1995).

An Archaeological Study of Ethnicity

In the “old archaeology,” when ethnic groups were conceived as homogeneous and impermeable, the archaeologist’s goal was to find the objects associated with an

ethnic group and reconstruct its history of migration. Now that we know ethnic groups are heterogeneous with permeable boundaries, we need to view them as fluid and complex rather than as monolithic entities.

To investigate the interaction between ethnic groups, archaeologists can focus on trade and exchange, but first they need to identify which objects were acquired through trade and which were made locally. Charles Stanish (1989:12-14) argued that artifacts found in certain contexts (e.g., houses) would tend to be local, whereas other contexts (e.g., burials) were more likely to include foreign or exotic objects. Stefan Burmeister (2000) argued that the domestic setting or the "internal domain" (houses, kitchens) is most useful for finding artifacts that reveal the occupant's origin. Burials can also be used to identify ethnicity, but instead of focusing on grave goods, one should examine the grave (use of stone in tombs or stone-lined cists) and burial position, which can indicate the customs and beliefs of one particular ethnic group (Clarke 1975:50-53).

Joyce Marcus (2009:263) warned that the presumed evidence for ethnicity must be separated from evidence for other social categories such as occupation and status (elite vs. non-elite). If a particular style of artifact was associated with households throughout a region, and that style contrasts with another regional style, then it would reflect the style of a large ethnic group rather than just sub-divisions (lineage, occupational specialists) within a community.

The approach I advocate is to investigate ethnicity by excavating different contexts. Since we have no *a priori* reason to believe that a certain context or type of artifact would be the sole indicator of ethnic status, we should investigate different contexts to understand how ethnic identity might be expressed in the house, during public

ceremonies, in a rural village, or in a cosmopolitan capital. The identification of an ethnic group requires multiple lines of evidence – pottery, house plan, temple layout, burial position, textile motif, etc. Using just one class of objects (e.g., pottery) to make an argument about ethnicity is not sufficient. Lastly, because objects acquire meaning in the context in which they were used and discarded, excavating different contexts would tell us how those objects functioned in the society, providing us with a broader and systemic perspective on ethnicity and identity. My excavations at Las Varas targeted residences, plazas, cemeteries, and a ceremonial platform, and each context provided different information on interaction and ethnicity within the community. The results of my excavations will be presented in Chapters 4, 5, and 6.

Ritual and Ethnicity

Ritual is one among many processes (e.g., warfare, trade, marriage) that affect ethnic identity. Émile Durkheim (1912:309) described how individuals experience heightened emotional intensity – effervescence – during rituals. Effervescence divides one's existence into the sacred and the secular, creating a link between one's clan and its symbol, the totem. Since archaeologists cannot convincingly reconstruct ancient emotions, they should examine other properties of ritual, such as the three characteristics listed by Rappaport (1999) that I believe are linked to the formation of ethnic identities: (1) self-reference, (2) creation of discrete categories, and (3) demarcation of space and time.

One of the attributes of ritual is "self-reference," meaning that it "serves to express the individual's status as a social person in the structural system in which he

finds himself for the time being" (Leach 1954:10-11). During ritual, a person's status is either explicitly or implicitly stated: children become adults during an initiation ceremony (age status); a herder thanks the mountains for taking care of his flock (the status of giver vs. recipient in the world); athletes represent their nations during sport competitions (nationality).

The social categories recognized in rituals are "digital" rather than "analog" (Rappaport 1999:91). This means that clear-cut, black-or-white categories are established, as opposed to categories that grade into each other like shades of gray. In an initiation rite, a child becomes an adult; he goes from one discrete category to another. These two aspects of ritual, self-reference and discrete categorization, allow identities to be recognized and individuals placed within social categories.

Rituals often refer to points in the landscape and mark divisions in time. For example, the winter chief of the Tewa watches where the sun sets during winter solstice (Ortiz 1969:102); a llama herder in Ayacucho sprinkles *chicha* (corn beer) in the direction of the *wamani*, the animate mountain (Flannery et al. 1989:154). Such references to places in the landscape are important because they often indicate the homeland or origin place of ethnic groups or to their boundaries. And if myths are invoked, these narratives refer to a distant past when ancestors founded a lineage or ethnic group. The timing of rituals can be related to the agricultural cycle; if ethnic groups occupy different environmental zones and differ in staples and crops, they might have different ritual calendars and different ceremonies.

Rappaport (1999:37) emphasized that rituals are performed: they consist of activities. If such activities are repeated over and over in prescribed ways, they might

leave material evidence for archaeologists to document the ritual behavior. Most activities during ritual (such as dancing, singing, games) are not recoverable, and many rituals occur in places that can be both secular and sacred. We do, however, encounter archaeological traces of ritual, such as buried offerings, temples where religious specialists lived and worshiped, or family shrines in houses. Besides looking at the style of artifacts, architecture, or burial, we might turn to the ritual activities and see how they differed between ethnic groups (Marcus 2007:67). Most importantly, the ritual process, as discussed by Rappaport, serves to reinforce and maintain discrete social categories, including ethnicity.

Ritual and Ethnicity in the Andes: The Huarochirí Manuscript

The Huarochirí Manuscript, now archived in the Biblioteca Nacional in Madrid, is a document written in Quechua from the collection of Francisco de Avila (1573-1647). In 1607, while Avila was serving as a curate in San Damián de Checa in the province of Huarochirí, native parishioners filed complaints against him alleging abuses ranging from the exploitation of Indian labor to fathering illegitimate children. Avila was eventually cleared of those charges, but, as Taylor (2008:9) suggested, he prepared a manuscript with testimonies on idolatry as a defense against his accusers, allowing him to paint his huaca-fighting zeal as the real cause behind the many personal attacks and accusations.

Avila's campaign preserved the stories, customs, and beliefs of the Huarochirí people during the 17th century. The author of the Huarochirí Manuscript is unknown, though Durston (2007) argued that it was Cristóbal Choquecasa, a native Checa nobleman ("principal"), who penned the manuscript in a variety of Quechua ("la lengua

general") used by the church for religious instruction (Durston 2007:234-235; Salomon 1991:30; Taylor 2008:11). In the prologue of the manuscript, the narrator states

> I set forth here the lives of the ancestors of the Huaro Cheri people, who all descend from one forefather: What faith they held, how they live up until now, those things and more; Village by village it will be written down: how they lived from their dawning age onward. (Huarochirí Manuscript 1991 [1598-1608]:41-42)

The people of Huarochirí worshiped Pariacaca, a *huaca* (powerful being) who battled the *yunca* people, the original inhabitants of the highlands (Huarochirí Manuscript 1991 [1598-1608]:70). Pariacaca's son, Tutay Quiri, was transformed into yellow and red rain, charged down the Sici Caya and Mama (the Lurín and Rímac) Rivers, and pushed the yuncas into the mid-valley and onto the coast.

The Quechua word yunga (or yunca, yunka) denotes both a warm climate zone and the people who live there. Pedro de Cieza de León (1959 [1553]:306) provided a precise definition:

> In many parts of the sierra where the rivers flow, as the sierras are very high, the plains are sheltered and temperate, so much so that in many places it is hot, as it is on these plains. The people who live there, even though they are in the sierra, are known as Yungas; and throughout Peru, when they allude to these warm, sheltered regions that lie among the sierras, they say, "It is Yunga," and the inhabitants have no other name, even though their settlements and regions have names. Thus those who live in the regions I have referred to, and those who dwell in these plains and coastal regions of Peru, are called Yungas because they live in hot country.
>
> Beyond these, in the lowlands, are the dwellings of Chan-Chan, which, as they lie in the hot country, are called by the natives Yungas, which means "hot country." As it never snows or is very cold here, trees and other things thrive which are not to be found in cold climates. For this reason all those living in hot or warm valleys or regions are called Yungas, as

> they are known today and will be, even though centuries elapse. (Cieza de León 1959 [1553]:66-67)

Yunga is a climatic zone rather than a specific place. The term does not distinguish whether these warm lands are on the western or eastern slope of the Andes. When chroniclers mention specific coastal or mid-valley peoples, they will use the name of the polity, such as Chimo, Jayanca, or Chincha. But in the Huarochirí Manuscript, the term "yunca" refers to the people living in the warm zones below the highlands, including all the communities and polities in the Middle Lurín and Rímac Valleys.

Tutay Quiri chased out some yuncas, but others stayed and began worshipping Tutay Quiri and Pariacaca (Huarochirí Manuscript 1991 [1598-1608]:71, 75-76, 80). Tutay Quiri told his new converts: "Stay here; you shall come to recognize my father [Pariacaca]. Living henceforth, address the Checa [highlanders] as 'brothers' and say, 'We're their brothers, the youngest ones.'" Thus the yuncas had to submit to the invader's *huaca* and accept a lower place in the genealogical order.

In another incident, Pariacaca and his son, Chuqui Huampo, fought the female huaca Mana Ñamca, who lived below San Pedro de Mama in the mid-valley (Huarochirí Manuscript 1991 [1598-1608]:69). During the skirmish, she broke Chuqui Huampo's foot, but eventually she was defeated and cast into the ocean. Because of his injury, Chuqui Huampo stayed behind to guard the valley in case Mana Ñamca came back. Worried about his son, Pariacaca told Chuqui Huampo that "all the inhabitants of these two valleys must give coca to you first, before any of them may chew it. Only after you have chewed it shall the people chew coca from their harvest." The manuscript stated that many yunca communities were still offering their first coca to Chuqui Huampo.

Chapter 31 of the manuscript described how Yasali, the child of a yunca man, was orphaned when a group of highland marauders wearing stone helmets drove the yuncas out of Cocha (Huarochirí Manuscript 1991 [1598-1608]:137). Llacsa Misa, the leader of the invaders, wanted to adopt Yasali, but Llacsa Misa's brothers wanted to kill the boy. "Better to let him live," said Llacsa Misa, "He'll show us all their customs, their fields, and everything [causacochon caymi yma ayca causascantapa chacrantapas ymantaps aycantapas richuchi huasson]." So Yasali's life was spared. Yasali grew up herding Llacsa Misa's llamas; he later married Llacsa Misa's sister and became a priest in the Uma Pacha festival.

The Uma Pacha festival, also called Chuta Cara, happened once a year and alternated with the Machua festival every two years (Huarochirí Manuscript 1991 [1598-1608]:121). Thus: Uma Pacha (Year 1) → Uma Pacha (Year 2) → Machua (Year 3) → Machua (Year 4) → Uma Pacha (Year 5) → Uma Pacha (Year 6) → Machua (Year 7) → Machua (Year 8), and so on. These ceremonies consisted of huaca processions, llama sacrifice, dancing, and spear-throwing contests that used feathers ("tamta") to mark where the targets were hit.

The Machua festival, referred to as "Macua yunca" in the heading of Chapter 24, was performed by ayllus with yunca names. It is not clear, however, whether the performers were actual yuncas or highlanders who inherited yunca names. Salomon (Huarochirí Manuscript 1991 [1598-1608]:123, footnote 652) interpreted the Machua festival as an allusion to Tamta Ñamca, a yunca lord whose house was decorated with feathers (Huarochirí Manuscript 1991 [1598-1608]:55). A 1609 Jesuit report described

the *Inaccha* ceremony where participants dressed "al modo yunga" and raced with colorful feathers (Arguedas and Duviols 1966:247).

During Machua, people threw spears at two effigies that represented a man (Yomca) and a woman (Huasca). One ayllu would throw the spears first, followed by another ayllu, proceeding "ayllu by ayllu." The term "ayllu by ayllu" (ayllompi ayllompi, ayllo ayllomanta, etc.) appears four times in the manuscript (Huarochirí Manuscript 1991 [1598-1608]:100, 102, 118, 122) and is always associated with worship or ceremony. This shows that macro-groups such as the Checas (checacuna) or yuncas (yuncacuna) were composed of ayllus. Thus we can distinguish two levels of group integration: the ayllu and the macro-group. But the term "ayllu" is not precise, since it could also refer to the macro-group or a village/settlement. Furthermore, ayllus from one macro-group could break off and join another macro-group (see Marcus 2000:238).

Let us now examine closely the interaction between ethnic groups as described in the Huarochirí Manuscript. Rostworowski (1978) argued that the stories in the manuscript reflected real instances of highlanders moving toward the coast during the Late Intermediate. Regardless of the truth or reality of the battles, the constant use of the term "yunca" or "yuncacuna" indicates the perception of a group of people by the highlanders: "all the Yunca shared one single way of life [porque yuncacunaca huc causayniocllam tucoynin(pas) carcan]" (Huarochirí Manuscript 1991 [1598-1608]:71). On Folio 76R, the narrator imagined what the yuncas thought about the highlanders: "The highlanders [sallcacuna] are getting along all right. It's because they carry on our old way of life that their people flourish so" (Huarochirí Manuscript 1991 [1598-1608]:76). Besides this brief imagined dialogue among the yuncas, the narrator never used the

collective term *sallqaruna* (people of the wild or savage puna; see Flannery et al. 1989:21-22; Isbell 1978:57-6) for self-designation. The heroes in the stories were specific families, ayllus, or huacas in the highlands. So perhaps a yunca narrator, when talking about yunca history, would specify his or her ayllu, rather than use the catch-all term "yunca." In other words, one tends to generalize and stereotype the others but use more specific terms to describe his or his own group.

Following defeat in battle, a yunca could be incorporated into Pariacaca's cult, suggesting that membership was fluid: by changing one's huaca, a yunca could become ritually and genealogically integrated into another group. The Uma Pacha and Machua evoked the co-existence and ritual integration of yuncas and highlanders. The cycling of Machua and Uma Pacha and the spear-throwing contest by ayllus are examples of what Rappaport called "discrete categorization" and "self-reference" during rituals. Individuals joined their ayllus and followed a prescribed order of performance. People could change identities – Yasali was born a yunca but served as a highland priest – but discrete ethnic categories were invoked and preserved during ritual.

The Huarochirí Manuscript can be seen as a mythological map of the social and ritual landscape. In this map, ayllus and huacas were connected to each other through narratives about their life, exploits, and movement. As Moseley (2001:51) noted, "this all-encompassing cosmology provides deep identification with the environment. Andean people literally read their physical surroundings as a resonant text of sacred places and spaces that commemorate a trip across time and changing landscapes from super beings to human beings to present beings."

Ethnic Groups in the Inca Empire

The stories contained in the Huarochirí Manuscript were local and provincial, dealing mainly with the battles and rituals between neighboring ethnic groups. Chronicles of the Inca Empire, by contrast, concerned the vast territory of the Andes that incorporated a multitude of languages and ethnic groups.

The Inca capital, Cuzco, was ethnically diverse:

> As the city was full of foreign nationals and pilgrims, Indians of Chile, Pasto, Cañaris, Chachapoyas, Huancas, and Collas were there in the place and part that were indicated by the governors of the city. They kept the costumes of their fathers, and went about using the costumes in the way they were used in their native land; and although together there were one hundred thousand men, they easily recognized each other by the insignias they put on their heads. (Cieza de León 1984 [1553]:118; my translation)

> …those of each nation will speak their own language, throughout all this kingdom they all wore special insignia on their head to distinguish themselves one from the other. If they were Yungas, they went muffled like gypsies; if Collas, they wore caps shaped like mortars, of wool; if Canas, they wore larger caps, and much broader. The Cañari wore a kind of narrow wooden crown like the rim of a sieve; the Huancas, strands that fell below their chin, and their hair braided; the Canchis, broad black or red bands over their forehead. Thus all of them could be recognized by their insignia, which was such a good and clear system that even if there were five hundred thousand men together, they could be clearly told from each other. (Cieza de León 1959 [1553]:71)

Acosta (1940 [1590]:484) noted that Inca subjects were required to wear their native dress: “Y era ley inviolable no mudar cada uno el traje y hábito de su provincia, aunque se mudase a otra, y para el buen gobierno lo tenía el inga por muy importante, y lo es hoy día, aunque no hay tanto cuidado como solía.” Such division of subjects along ethnic lines, Cobo (1979 [1653]:195-197) explained, was necessary to recognize “who were the most diligent in serving [the Inca] on the occasions that came up in peace and

war" and thus creating an atmosphere of competition between groups. This "dress code" also allowed lords to keep track of their subjects:

> The vassals were not permitted to move from one province to another on their own free will. In fact, all vassals had to reside in their towns; they could not leave or wander around or take trips through strange lands without permission from their caciques. The men and women of each nation and province had their insignias and emblems by which they could be identified, and they could not go around without this identification or exchange their insignias for those of another nation, or they would be severely punished. (Cobo 1979 [1653]:196)

In an empire where laborers were constantly moving from one province to another, the dress code allowed administrators to keep track and take accurate census of the tribute payers.

The Inca heartland was marked by the route of a state ceremony, the *Citua* ritual. In this ceremony, four groups of armed warriors, starting from the main plaza of Cuzco, ran toward the cardinal directions until they reached a designated river a few leagues away (Quiquijana, Apurímac, Pisaq, or Cusibampa). They then washed their weapons in the river to drive out any sickness or misfortune (Cobo 1990 [1653]:145-146; Molina 1989 [1575]:73-76). Covey (2006:210) interpreted this ceremony as defining the boundaries of the Inca heartland: "The ritual marks the confluence of important transverse rivers into the Vilcanota and Apurímac rivers, probably staking a claim not only to the territory within the four points but to the drainages of the side valleys as well…The Citua ritual marked the boundary of the capital, as well as the limits of territory over which royal Inca lineages had traditional control."

The Inca Empire recognized and even reinforced differences between ethnic groups to maintain order and stability. There was no attempt to suppress diversity in the

empire or forcibly convert subjects to Inca customs, even though local people were required to worship Inca deities alongside their own huacas (Cobo 1990 [1653]:3). Quechua was promoted throughout the empire as a language of administration, but local people continued speaking their own languages (Cobo 1990 [1653]:181). Ethnic diversity was emphasized in the Inca Empire to facilitate the administration of labor and tribute. Making everyone speak the same language, practice the same religion, or wear the same clothes would have been impractical if not impossible.

Ethnic Conflicts in Quivi, Chillón Valley

Under the empire, the peaceful co-existence of ethnic groups is likely a façade. To satisfy disputing communities, empires improvise arrangements that often favor one party over another. The collapse of empires thus rekindles old ethnic rivalries; provinces now become polities that prey on each other's territories and resources.

A series of litigations (1558-1570) over yunga lands in the Chillón Valley shows how difficult it was to resolve centuries-old ethnic conflicts. Two highland groups – the Canta and the Chaclla – were the litigants fighting over this land. In pre-Inca times, the Canta invaded the mid-valley and claimed rights to the territories of Quivi, a yunga group allied with the coastal kingdom of Collec. The Inca Empire, after conquering the Chillón Valley, placed Chaclla *mitmaqs* (colonists whose migration was mandated by the Inca Empire) in the yunga zone once controlled by the Quivi (Rostworowski de Diez Canseco 1988:61-62).

After the Spanish conquest, the Canta and the Chaclla began fighting over the land around Quivi. During the revolt by Manco Inca, the Canta joined the Inca rebels, but the Chaclla refused to take part. The Chaclla and Canta continued their feud during this time of chaos. The Canta tricked a Chaclla curaca into a meeting and then killed him and his followers. In 1549, Francisco de Ampuero and Nicolás de Ribera, Spanish encomenderos in charge of the Canta and Chaclla, tried to end this conflict by making the Canta pay 200 "obejas [ovejas] de la tierra" (llamas or alpacas) to the Chaclla as compensation for the yunga lands. The Chaclla refused to accept the animals. Dissatisfied with the arrangement, the Chaclla filed suit on October 5, 1558. Throughout the litigation, the Canta and Chaclla went on damaging each other's irrigation canals, boundary markers, and coca plants. The court in Lima ultimately ruled in favor of the Chaclla, a decision consistent with the colonial policy of keeping the status quo of Inca mitmaq (Rostworowski de Diez Canseco 1988:67). The documents are now archived as Justicia 413 in the Archivo General de Indias in Seville.

The feud between the Chaclla and Canta shows how Andean ethnic groups interact while empires expand and collapse. First, what does it mean when we say *the* Chaclla, *the* Quivi, or *the* Canta? Under Inca administration, the Chaclla consisted of three *waranqas*: Chaclla, Carampoma, and Casta (Spalding 1984:Figure 1). Each waranqa was a unit of (ideally) 1000 tribute-paying families; the waranqa was divided into ten *pachakas*, or units of 100 tribute-paying families. Inca administrative units, however, did not necessarily coincide with indigenous socio-political units. The decimal nested hierarchy with clear

division between units was an administrative ideal enforced by the Inca Empire, and when such hierarchies were not present, the empire would create new groups or change the composition of existing ones (Julien 1982).

It is unclear how distinct each waranqa was culturally or linguistically. On the coast, there were two groups that spoke different languages: Carabayllo and Pachacamac (Marcus and Silva 1988:18). We could imagine the highland waranqas contrasted culturally with the yunga waranqas. There were many yunga waranqas in the middle Chillón Valley, including the Quivi, Guancayo, Guaravi, Maca, and Sapán, with each waranqa occupying only one side of the river. Archaeologically, we might find that the pottery style of the yungas was different from that of the highlanders.

The litigation between the Canta and Chaclla illustrates the complexity of the relationship between local groups. It is not a simple dichotomy of highlanders versus the yungas; rather, there were many groups involved, with alliances made between yungas and highlanders. Don Luis Zacalla Chunbi, the leader of the yunga village of Guarabi, stated that "with the Indians of Canta he has a great friendship, and they are partners because he deals with them, selling the coca in exchange for llama and potatoes" (Marcus and Silva 1988:30). During a period of drought in the mid-valley, the Canta helped the people of Quivi build canals to bring water down from highland lakes (Rostworowski de Diez Canseco 1988:61). This was likely done in the interest of the Canta, for the Quivi were paying tribute to the Canta, and such investment in infrastructure (canal building) would ensure more returns in revenue (more tribute in coca) to the Canta. So ethnic groups, in

their history of interaction, can be friends or enemies, or even "frienemies" whose alliance is strategic and expedient. Then comes the empire, which plays one ethnic group against another, worsening pre-existing rivalries. Once a region has been pacified, ethnic groups are prevented from fighting, but they hold their grudges, so that when empires collapse, conflicts flare up like the dispute we saw between the Canta and Chaclla over the coca lands of Quivi.

Conclusion

The above examples illustrate the diversity of ethnic interaction within the Andes. We have seen the importance of ritual in reinforcing ethnic categories (Huarochirí), the role of the empire in maintaining ethnic boundaries (Inca), and the fluctuating relationships between ethnic groups who – in the language of game theory – make strategic and interactive decisions to compete or cooperate (Quivi, Chillón). Such processes of ethnic interaction are commonly found in other parts of the world.

Another recurrent theme in the study of ethnic groups is the link between ecology and ethnicity, where each ethnic group occupies its own "ecological niche" (Barth 1969:19-20). In the next chapter, we will examine this relationship between ecology and ethnicity by taking a trip to northern Peru. We will travel up the coast, into the mid-valley (*chaupiyunga*), and arrive in the highlands, to see how the resources and subsistence risks from each zone might have affected the economic organization and institution of exchange among prehispanic Andean ethnic groups.

Chapter 2

The Environment of Northern Peru

In his *Crónica del Perú*, Cieza de León (1984 [1553]:23) argued that the environment of Peru created docile subjects:

> Those from Peru serve well and are tame…because they were all subject to the Inca kings…in this condition they were born; and if they did not want to do so, they were constrained by necessity, for the land of Peru is barren, full of mountains and snowy fields. If they were to leave their villages and valleys to these deserts, they could not live, for the land does not give fruit…in order to live and not die they have to serve and not abandon their lands. [my translation]

The diversity of ecological zones and societies in South America provided anthropologists with examples from every stage of Service's (1971) evolutionary typology (band, tribe, chiefdom, and state), making this continent the ideal laboratory for understanding how environment affected social evolution.

Yet societies evolved not in isolation, but in constant interaction with groups from other areas by exchanging materials, marriage partners, and ideas. In the Andes, generations of states developed in a variety of ecological zones, including arid coasts, intermontane valleys, and broad, high-altitude grasslands (altiplano). In this chapter I describe the western slopes of the Andes in northern Peru, including the coast, the mid-valley, and the highlands. I argue that inhabitants of these zones cope with

environmental risks, such as El Niño on the coast and drought in the highlands, by forming social ties between families and friends through regular visits and seasonal rituals, which unite communities from various altitudes or ecological "floors."

The Coast and Highlands of Northern Peru

The Andean Cordillera is formed by the subduction of the Nazca Plate under the South American Plate, which created the longest and second highest mountain range in the world. In central Peru the Western Cordillera dates to the Mesozoic-Tertiary and the Eastern Cordillera dates to Late Paleozoic (Cobbing and Pitcher 1972). A gap in the volcanic belt in central Peru may be to due to flat-slab subduction in that area (Barazangi and Isacks 1976; Cahill and Isacks 1992).

Coast. Rain in the mountains has carved steep river valleys that drain into the Pacific Ocean (Figures 2.1 and 2.2). Trade winds from the ocean, chilled by the cold Humboldt Current, retain their moisture until they reach the highlands. This rain inhibition on the coast has created deserts between the rivers, making each river an oasis, a miniature Nile. Farmers living on the coast depend on the river to irrigate their fields (Figure 2.3).

As the Andean Cordillera approaches northern Peru and Ecuador, it veers away from the shore, leaving large areas of flatlands suitable for agriculture in the valleys of Chicama, Jequetepeque, and Lambayeque (Figures 2.4-2.6). These northern valleys vary greatly in the amount of water and land they possess. The Moche Valley, for example, has only half the irrigated lands of its neighbor, the Chicama (Table 2.1). The Santa River, with its massive drainage basin (11,250 km^2), is the best-watered valley on the

north coast. Yet the Santa Valley has only 8,643 ha of arable land, less than half the average (18,697 ha) for the rivers of Peru. In poorly-watered valleys, such as the Virú, only one maize harvest a year is possible (Holmberg 1950:373). By contrast, well-watered valleys such as the Jequetepeque or Chicama can provide up to two harvests of maize per year (Grobman et al. 1961:29; Wilson 1988:43).

On the coast there is a hot summer between October and April, and a mild "winter," which feels more like spring, between May and September. During summer, rain from the highlands fills the coastal rivers, creating the *tiempo de abundancia* (Gillin 1947:15). During winter, with almost no rain in the highlands, the river becomes so dry that one can walk from one bank to another (Figure 2.7). At this time only a fifth of the coastal land cultivated in the abundant season is irrigated (Billman 1996:41).

The amount of water discharge varies greatly from year to year. Using data from Vos (2006), I have plotted the annual volume of water discharged from the Jequetepeque River from 1960 to 1996 (Table 2.2; see Billman 1996:40 and Kosok 1965:29 for comparable data on the Moche and Chicama Rivers). Table 2.2 and Figure 2.8 show that during the worst year (1979), the amount of water available was less than 5% of the "good year" (1982). Every five to ten years water flow falls below the recorded average (778 million m^3, 1960-1996). Neighboring valleys experience the same water shortage or abundance (Figure 2.9). In the Moche Valley, only 14 out of the recorded 40 years (1931-1970) had enough water to cultivate all the arable land in the lower and middle valley (Billman 1996:40).

Farmers remember the bad years and develop strategies to cope with periodic shortages in water. Holmberg (1950:376) described one way of storing maize in the village of Virú on the north coast of Peru:

> As a general rule, maize that is not marketed at the time of harvest is stored in pits dug in the desert sand around the village. This prevents the maize from being eaten by insects and other pests. Buried in this manner, it will keep for a couple of years without spoiling or until the price goes up. Most other products are stored in the house which frequently contains a room (or a place under the roof) for this purpose.

The storage of maize cobs in sand-covered pits was recorded by Bonavia (1982:68-71) in Huarmey. Gillin (1947:20) noted the storage of beans in sand in the town of Moche, and Eling (1987:167) described burying sacks of rice in sand in the Jequetepeque Valley. At the Late Intermediate site of Cerro Azul, sand was used to preserve fish in Room 8 of Structure D (Marcus 2008b:128-129); sand pits for storing maize have been found at the preceramic coastal site of Los Gavilanes (Bonavia 1982:60), demonstrating the antiquity of this technique.

Before agriculture, coastal people subsisted on clams, mussels, fish, and seaweed – the ingredients of modern *ceviche* – in addition to sea mammals and birds, which are not served in restaurants today. In the 1960s the Peruvian coast provided almost a fourth of the world's commercial fish. This productivity then dropped dramatically as a result of over-fishing, and since then the Peruvian fishery has been recovering slowly (Figure 2.10 and Table 2.3).

Fishing and agriculture on the coast are periodically disrupted by El Niño, a warm current that runs head-on against the Humboldt, creating a chain reaction of increased water temperature, mass death of fish and birds, and torrential rain that causes floods and

landslides. Arriving around Christmas, the majority of El Niños last 12 to 18 months, with most of the torrential rain falling between December and March. The most affected regions are northern Peru and southern Ecuador, where sea temperature rises by about 4 degrees Celsius (Figure 2.11). The two most devastating El Niños of the 20th century occurred in the years 1982-1983 and 1997-1998; the 1997-1998 El Niño caused rain, flooding, and landslides in many parts of Peru, including the highlands of Cajamarca and even Cuzco.

Much debated is the effect of El Niño on prehispanic political systems – whether it prohibited the development of complex societies (Wilson 1981) or contributed to the collapse of the Moche states (Moseley et al. 2008). In the 20th century, each of the three Peruvian governments (Velasco, Belaúnde, and Fujimori) reacted to an episode of El Niño differently (Caviedes 2001). To understand the relationship between disaster and social change, we must consider the political and historical context in which the disaster had occurred, and not assume that the bigger the El Niño, the more likely that it would cause a collapse in the socio-political system.

Highlands. The northern highlands of Peru, which rarely exceed 4000 m above sea level (masl), are generally lower than those of the south (Figure 2.12). Compared to the broad grassland or *puna* around Lake Titicaca, the northern highlands are more rugged and hilly (Figures 2.13 and 2.14). The average total annual precipitation for Cajamarca, from 1953 to 1972, was 725.7 mm (ONERN 1975:22), about 200-250 mm more than the Titicaca Basin (Moseley 1982:2). The northern highlands have a more gradual slope compared to the south: in the Jequetepeque Valley, one reaches 2200 masl by walking 120 km inland from the shore, whereas in the Moquegua Valley of southern

Peru, the same altitude can be reached by walking only 80 km (Table 2.4 and Figure 2.15).

Rainfall peaks between October and March (Figure 2.16). Crops like maize, potato, *oca*, and *olluco* are planted and harvested once a year (Figure 2.17). Rainfall varies from year to year (Figure 2.18 and Table 2.5), and extreme fluctuations in rainfall can be disastrous since insufficient rain leads to draught, while heavy rain causes floods and landslides. Crop failure is frequent. Juan Polo de Ondegardo (1999 [1571]:350), a Spanish chronicler writing in the 16th century, observed that "it is usual for three out of five years to be without harvests." Farmers cultivate a variety of crops at different altitudes, so if one crop fails, they can rely on crops from another altitudinal zone.

During his fieldwork in the community of Tangor, Enrique Mayer (2002:143-171) documented barter between people from different altitudinal zones. A bad potato harvest occurred during May 1969 in Tangor (2500 masl); one farmer described his experience: "[I] had planted potatoes but harvested grapes" (Mayer 2002:145). But many families had fields at lower elevations to cultivate maize, beans, and squash, which enabled them to take these products and travel to other towns to exchange for potatoes. One individual, Don Eulogio, went to visit friends in the town of Yanacocha (3500 masl) with gifts of maize and squash. The harvest was good in Yanacocha, and Don Eulogio's friend let him stay and work in the fields in return for potatoes ("two days of work for one full sack"). Like Don Eulogio, other individuals traveled to distant towns to barter their goods and labor, though with varying success.

In June, highlanders arrived in Tangor with trains of llama carrying cheese, wool, and meat. These travelers stayed with friends, bringing gifts of *chuño* (freeze-dried

potatoes) and lake algae. In return, the Tangorinos served them chile peppers, toasted maize, squash stew, and maize hominy (Mayer 2002:156). Maize was bartered for cheese and meat, and even though the whole process was accompanied by much haggling, there were no hard feelings and people left on friendly terms.

More profit could have been made by selling a product instead of bartering. For instance, a day's of work in the fields was worth 12 soles in cash, but Don Eulogio, for his day of work, received half a sack of potatoes that are worth 60 soles. This type of labor-for-food exchange was called *allapakuy* ("to help harvest") in Quechua or *costumbre* ("custom") in Spanish by the villagers (Mayer 2002:149).

Mayer's ethnography shows that social ties among families and friends across ecological zones can serve as a buffer against periodic crop failure. The distance between these zones may entail just a few days' walk to reach an area where the harvests are better, fields are not flooded, and crops not diseased. Moreover, monthly or annual trips to see a friend or relative, even during the good years, establish and maintain social ties that are crucial for surviving bad times. The making of such relationships requires only a few individuals walking back and forth between different ecological zones. This type of movement – the occasional visits – contrasts with the "mass exodus" scenario, in which a large group of colonists migrate and settle permanently in another area. Large-scale migrations may be more dramatic and exciting to document, but small-scale interactions and movements occur more frequently, and therefore are just as important in shaping the regional social network.

The Jequetepeque Valley

The broad plains on the north coast of Peru consist of Quaternary alluvial deposits. In the Lower Jequetepeque Valley, the coastal plain is dotted with hills that date to the Tertiary, including Cerro Faclo and Cerro Chepén (Mapa Geológico del Cuadrángulo Chepén 15-E, Instituto Geológico Minero y Metalúrgico de la República del Perú). The mid-valley from the neck at Talambo to Yonán consists of Jurassic and Jurassic-Cretaceous formations interspersed with intrusive granodiorite formations that date to the Cretaceous-Tertiary and Lower Cretaceous. East of Yonán one finds the same Tertiary formation as the coastal hills, and further east, by the towns of Cajamarca and Magdalena, are folds of Cretaceous formations (Inca, Chulec, Pariatambo) that have become parallel strips of rock outcrops. The Jequetepeque River, following the direction of these parallel folds, flows east-west.

Viewed from a satellite, the Jequetepeque River forms a green trident pointing to the Pacific Ocean (Figure 2.19). Hills and desert plains separate the trident's three prongs: between the northern and middle prongs is a chain of hills that include Cerro Faclo, Cerro Catalina, and Cerro Huaca Blanca, and between the middle and the southern prongs sits Cerro Chocofán.

North of the Jequetepeque Valley is the Zaña Valley, the route through which Pizarro and his men marched to Cajamarca to meet Atahuallpa. The upper Zaña Valley (1300-2400 masl) is unique in having a tropical forest that is more commonly found in far northern Peru and Ecuador (Dillehay and Netherly 1983). This tropical forest once hosted animals like parrots, bears, boa constrictors, monkeys, and jaguars, species now found almost exclusively in Ecuador and the eastern slopes of the Andes (Dillehay et al. 1989:736). Between the Jequetepeque and Zaña Rivers is a minor river system, the

Chamán, which occasionally receives water from the highland region of San Gregorio to the north.

The Jequetepeque Valley and the Chicama Valley are separated by the Paiján Desert, a 20-km stretch of arid land that served as a buffer between the northern and southern Moche kingdoms (Castillo and Donnan 1994). Traversing this desert, one arrives at the sugarcane fields of the Chicama Valley, a gigantic cultivated area of 40,371 hectares. This valley is just north of the Moche Valley, where the Huacas of Moche and Chan Chan, the capitals of the Moche state and the Chimú Empire, were founded.

The Jequetepeque Valley has both abundant agricultural fields and water flow. In the 1970s some 65% of the valley's fields produced rice (Begler 1980:32), whereas its northern neighbor, the Chicama, produced mostly sugarcane. Such valley-by-valley specialization of agricultural products was developed well after the 19th century (Begler 1980:97; Burga 1976:189-190). It is likely that during the prehispanic period, each valley was self-sufficient by cultivating a variety of crops, including maize (*Zea mays*), beans (*Phaseolus sp.*), potato (*Solanum tuberosum*, mostly grown at 2000 masl or higher), yuca (*Manihot esculenta*), sweet potato (*Ipomoea batatas*), and avocado (*Persea americana*). Prehispanic communities also cultivated cotton to make fishing nets and textiles, and people in the middle valley grew a variety of coca (*Erythroxylum novogranatense* var. *truxillense*) different from the coca grown on the eastern slopes of the Andes (Plowman 1979:111-114).

ONERN (1988:14) divides the Jequetepeque Valley into the lower (0 – 225 masl), middle (225 – 600 masl), and upper sectors (600 – 4183 masl). The valley can be subdivided into 8 climate and 15 life zones based on precipitation, biotemperature, and

evapotranspiration (Table 2.6; Figure 2.20). The lower valley, or the coast, receives 15.6-31.2 mm of precipitation annually (ONERN 1988:16). Modern farmers cultivate rice in one season (December-May) and maize in the other (June-November) (Begler 1980); in prehispanic times maize would have been the main crop for both seasons. Along the banks of the river one finds trees and plants like the algarrobo (*Prosopis chilensis*, *Prosopis juliflora*, and *Prosopis limensis*), faique (*Acacia macracantha*), caña (*Gynerium sagitatum*), and sapote (*Capparis angulata*). Standing on the rocky hillside, the columnar cactus (*Cereus macrostibas*) resembles a sentry overlooking the valley below.

The mid-valley is warm and ideal for growing coca. Extensive coca fields in the Department of La Libertad are found exclusively in the Upper Chicama Valley, though ethnohistorical documents mention the cultivation of coca in the Upper Moche Valley during the colonial era (Netherly 1988:270). Robyn Cutright (2009:144) has found coca seeds in her excavation of Pedregal in the Lower Jequetepeque Valley, though it is unclear whether those seeds were from plants grown on the coast or in the mid-valley.

The Upper Jequetepeque Valley is typical of the northern highlands in having elevations below 4000 masl. There is one rainy season and one harvest a year. The highlands of Cajamarca include two zones: the north bank of the Jequetepeque River, where the city of Cajamarca lies, and the south bank, which is the province of Contumazá. The word "Cajamarca" is usually associated with the city where the last Inca emperor Atahuallpa was captured by Pizarro. The Department of Cajamarca spans both banks of the Jequetepeque River, and ancient pottery of the Cajamarca style can be found throughout this region (Julien 1993).

Llamas and alpacas would have roamed the pastures of Cajamarca in the early 16th century. These camelids were ubiquitous in the northern highlands as evidenced by archaeological excavations and ethnohistorical documents (Bonavia 2008:121-124, 246-247). The Spanish invasion greatly reduced these camelid populations, and only a few camelids, mostly tourist attractions, can be found in Cajamarca today (Figure 2.21).

Going Up the Jequetepeque River

There is no better way to experience the Jequetepeque Valley than to take a trip from its shore to the highlands. To go upriver, we will take the "San Pablino," a small bus that leaves Pacasmayo every morning around 6:30 am and arrives in the highland town of San Pablo around 10 (that is, on a good day). The bus is filled with passengers carrying produce and poultry that will be sold in the local market. Leaving Pacasmayo (10 masl), the San Pablino first heads northeast toward Ciudad de Díos (90 masl), where the Panamerican Highway meets the road to Cajamarca. At Ciudad de Díos the bus will turn right and begin ascending the valley. There are restaurants cooking *camarones* (crayfish) along the sides of the road, after which we see a pass flanked by Cerro Talambo to the north and Cerro Pitura to the south (Figures 2.22 and 2.23). This is the neck of the valley, and many archaeological sites, including residences and administrative compounds, can be found near this gateway to the mid-valley.

As we head upriver the surrounding hills grow taller and steeper. The valley narrows again at the town of Ventanillas (260 masl), and to the right we see a sturdy suspension bridge that can withstand cattle and motorcycles (Figure 2.24). Across this bridge lie the pyramids of Ventanillas, the only adobe pyramids in the mid-valley. After

a few more twists and turns, the San Pablino climbs up a gentle slope landing us at Pay Pay (300 masl), a small town of about 800 people. The only restaurant in Pay Pay is the "Monterrey," and behind it is the field house of the Las Varas Archaeological Project (Figure 2.25).

One kilometer east of Pay Pay, on the south bank, is a 50-hectare pocket of land resembling a half-moon enclosed by the river and steep hills. This is the archaeological site of Las Varas. On the other side of the river, overlooking Las Varas, is the Gallito Ciego Dam (Figure 2.26), built during the 1980s by Salzgitter Industriebau Gesellschaft MBH, a German company commissioned by the Peruvian government (Keatinge 1980:467). It now forms a huge reservoir in the mid-valley, and the San Pablino will hug the northern edge of this lake before stopping at Tembladera (435 masl) to drop off and pick up passengers.

The last leg of the San Pablino's journey is a 1500-m climb from Chilete (855 masl) to San Pablo (2400 masl). Chilete is hot and sunny; people in shorts and sandals sit and chat in the plaza, where vendors sell *bombas* – fruit-flavored slushies. Chilete was known for its silver mine during the Colonial period (Espinoza Soriano 1967), and from here the bus will turn north and start climbing a steep switchback road to San Pablo (Figure 2.27), passing the Formative temple of Kuntur Wasi (Onuki 1995). Upon reaching its destination, the San Pablino will rest awhile before heading back to the coast around 1 pm, after the bus driver has finished his *menú* – a hearty, 7-soles lunch combo with soup, rice, and meat.

The Quebradas

Most books on the Inca Empire will include a map that shows the imperial highway running north-south along the cordillera with one road on the coast and the other in the highlands. Like the two legs of a ladder, the coastal and highland roads are connected by rungs which represent roads in the major river valleys. Coast-highland traffic is actually much more complicated than this simplified map, for there are many *quebradas,* or side drainages, that branch off from the main valley and serve as northeast and southeast-running paths to the highlands. Sometimes they connect one valley with other valleys to the north and the south, such as the Quebrada Montegrande near Tembladera that links the Jequetepeque and Chamán Valleys (Figure 2.28).

Archaeological features like walls, houses, and petroglyphs are often present in these quebradas, and administrative compounds frequently guard the quebrada's entrance. In the Jequetepeque Valley, the impressive petroglyphs of Yonán are located at the confluence of the main river and the Quebrada Chausís (Figure 2.29); this placement of important sites near intersections may relate to the concept of *tinkuy* ("coming-together" in Quechua) that attaches ritual significance to the confluence of two rivers (Allen 1988:65; Arriaga 1968 [1621]:48; Bauer 1998:118-119; Mayer 1977:76-78; Murra 1980:14). During times of heavy rainfall, farmers are able to irrigate and cultivate crops in the quebradas. The quebradas therefore may serve as a backup food supply when regular fields and canals have been damaged by flooding (Gálvez Mora and Briceño Rosario 2001:144).

Another way to reach Cajamarca from the coast is to travel in the quebradas. Instead of taking the San Pablino, we can ride on a bus that starts from the Cruce Cascas in the Chicama Valley and travel north-east through dry quebradas toward the highlands

of Contumazá. The journey is as follows: Cruce Cascas (119 masl) → Puente Moreno (444 masl) → Cascas (1274 masl) → Contumazá (2682 masl). From Contumazá we can take a car to go down to Chilete and proceed to Cajamarca.

It can be quite difficult, however, to find transportation in these quebradas. If one misses the bus, the next ride might not come for another day or two. The larger quebradas are traveled infrequently by buses or small vans, while the smaller ones are used only by cattle herders. The Quebrada del Caracol, located behind Las Varas, is utilized by cattle herders year-round, though many residents of Pay Pay have never heard of it.

The quebradas made ancient traffic in the valley immensely complex. Survey of the mid-valley is like exploring a maze: it entails more than just walking along the two sides of a river; it also requires looking for sites in the branches and sub-branches. The valley is like a hallway with many corridors and galleries, where some archaeological sites, like undiscovered rooms, are concealed in hidden passageways.

Moving Goods and Resources in the Ancient Andes

There is ample archaeological evidence for exchange between the jungle, highlands, and coast of Peru in prehistory. Moche potters frequently depicted the *ulluchu*, a fruit found in the tombs of Sipán and Dos Cabezas (McClelland 2008), that might have been used to prevent the blood of sacrificed victims from coagulating. It has been identified as either *Candis candicans* (Wassén 1987) or *Gurea sp.*(Bussmann and Sharon 2009). Regardless of its true identity, the ulluchu is not found on the coast and therefore must have been obtained from the upper-middle valley (in the case that it was

Candis candicans) or the tropical forests of the eastern Andes (*Gurea sp*.). Frequently paired with the ulluchu is the *espingo*, identified by Wassén as *Nectandra* sp. It was described by Arriaga (1968 [1621]:44) as native to Chachapoyas, the tropical zone east of the Peruvian northern highlands. Arriaga (1968 [1621]:41) also mentioned powdered espingo being added to chicha to "make it strong and thick."

The depiction of these exotic plants on Moche pottery indicates that long-distance exchange was vital for the proper functioning of state rituals. These resources could have been the cargos of llama caravans, as Moche pottery depicted llamas carrying jars, seashells, and fish (Shimada 1994:Figures 3.11, 18.16, and 18.17). Gillin's (1947) ethnography of the community of Moche described the town of Simbal as a trading post between the coast and the highlands. From the highlanders the coastal people received wool, potatoes, wheat, quinoa, maize flour, hams, and sheep. From the coastal people the highlanders received dried fish, chili pepper, lizards, salt, and cotton cords.

Spondylus, a spiny, reddish-pink seashell native to the warm waters of Ecuador and far northern Peru, was an important ritual object in the central Andes. Spondylus was found in the Preceramic site of Aspero on the central coast of Peru, dating to 2500 BC (Feldman 1985:81). It began appearing in various ceremonial centers of the Early Horizon, but the scale and intensity of Spondylus exchange drastically increased from the Middle Horizon onwards (Paulsen 1974), appearing in Wari centers such as Pikillacta in the Cuzco area, some 1500 km south of Ecuador (McEwan 2005). Spondylus was valued by Chimor during the Late Intermediate, and after the Inca conquest of Chimor and Cajamarca, Topa Inca "acquired innumerable riches of gold and silver and other precious things, such as precious stones and red shells, which these natives then esteemed more

than silver or gold" (Sarmiento de Gamboa 2007 [1572]:134). Writing in the seventeenth century, Arriaga (1968 [1621]:45) noted how Spondylus shells were highly prized by highlanders:

> *Mullu* is a large sea shell that they all have pieces of. An Indian gave me a piece, smaller than a fingernail, that he had bought for four reales. The Indians on the coast, and even the Spaniards, make a profit out of selling these shells to the Indians of the sierra. Yet they hardly know why they buy them. On occasion they make beads of mullu and place them with their huacas.

Items like the ulluchu, espingo, and Spondylus shell were needed for rituals. Bastien (1978:136) describes how objects from different altitudinal zones were incorporated in Kaatan rituals, including llama fetus from the high puna, incense and coca from the yungas, and seashell from the ocean. If the practice of pilgrimage in the Andes, like the procession of Qollor Rit'i (Sallnow 1987), has its roots in the Early Horizon (Burger 2008:700), then the movement of people and goods for ritual purposes would have allowed prehispanic Andean communities and ethnic groups to gather information and make sense of their natural and socio-political environment.

The archaeological evidence demonstrates the presence of an extensive exchange network in the prehistoric Andes. Goods and resources were constantly moving from one area to another, but what were the social and political mechanisms that allowed these resources to travel across the landscape? Were these resources passed from one group to another (down-the-line exchange), or were there professional merchants that specialized in acquiring and trading these goods? In the next chapter I present a summary of the Late Intermediate as a background to understanding prehispanic Andean exchange. The

vertical archipelago model, proposed by John Murra as a way by which communities acquired resources, will be evaluated using data from Las Varas.

Chapter 3

Northern Peru, AD 1000-1460

This chapter provides the archaeological background of northern Peru during the Late Intermediate (AD 1000-1460). I will discuss the cultures of Chimú, Lambayeque, and Cajamarca before zooming into the Jequetepeque Valley, located at the center of these three major culture areas. I then present the research design I used to excavate Las Varas, a Late Intermediate site in the Middle Jequetepeque Valley. My objectives were to study coast-highland interaction, clarify our understanding of Andean political economy, and provide insight into how states and empires, like Lambayeque and Chimor, interacted with chiefly polities like those of Cajamarca.

Chimor: From Kingdom to Empire

Chimor, or the Chimú Empire, was the largest prehispanic coastal state in the Andes. Chimor's capital, Chan Chan, was a city spanning more than 6 km^2 packed with palaces, residences, workshops, and burial platforms (Kolata 1982; Topic 2009). Its history of conquest was attested later by Cabello Valboa's (1951 [1586]) chronicle and archaeologically by imperial Chimú compounds installed in other coastal valleys (Mackey 1987). The Chimú Empire was conquered by the Inca around 1460 and rapidly disintegrated after the Spanish Conquest in 1532. According to David Noble Cook

(1981:Table 18), the north coast of Peru lost 92.6% of its population from 1520 to 1630. This loss of population would have shattered Chimor's vast and integrated systems of administration, craft production, and religion.

The beginnings of Chimor are obscure. Unlike the Moche, Tiwanaku, or Inca, whose state formation had been the focus of archaeological investigations (Billman 2002; Covey 2006; Kolata 2003), the period between the abandonment of the Moche Pyramids and the establishment of Chan Chan is understudied. Often cited is the anonymous and likely apocryphal account of Taycanamo (Vargas Ugarte 1936:231), who arrived by boat and established a lineage of Chimú rulers.

Chan Chan's ten palaces, or *ciudadelas*, were large rectangular adobe compounds between 8 to 22 hectares in size. The ciudadelas were built and used sequentially; the earliest palaces were Chayhuac, Uhle, and Tello, the latest Rivero and Tschudi (Kolata 1990). Common features of these palaces include northern entrances, plazas, storerooms, audiencias (niched U-shaped structures), water wells, burial platforms, and servant's quarters. At Ciudadela Tschudi, visitors would first enter from the north, encounter a plaza, and then arrive at the storerooms guarded by audiencias. Proceeding south, they would find another set of plaza-storerooms-audiencias before finally reaching the burial platform.

Outside the walls of the ciudadelas lived Chimor's artisans, who specialized in weaving and metallurgy and resided in cane-and-daub dwellings called SIAR (small, irregularly-agglutinated residences) (J. Topic 1982, 1990, 2009). Northeast of Ciudadela Tello, llama caravans from the highlands were received at a caravansary (Unit BB) that provided sleeping quarters for the weary travelers. Here John Topic (2009:228-232)

excavated a platform (Platform F5) that contained sacrificed llamas, a macaw (*Ara militaris*), mishpingo beads (*Nectandra* sp.), and a textile made from camelid wool, and two ollas.

Chimú provincial compounds, such as Farfán in the Jequetepeque Valley and Manchan in the Casma Valley, had the same arrangement of plaza-storeroom-audiencia-platform as the ciudadelas of Chan Chan. These administrative compounds are good archaeological indicators of Chimú conquest since they differed from structures built in the local architectural style. The seaside ruins of Pacatnamú, for example, were pre-Chimú and exhibited a style local to the Jequetepeque Valley (Sapp 2002:76), whereas Farfán, constructed by Chimú conquerors, was fashioned after the ciudadelas of Chan Chan.

Archaeologists do not agree on the timing of Chimú state formation and conquests. In the Moche Valley, the Chimú style of pottery has been divided into Early, Middle, and Late Chimú (Donnan and Mackey 1978), while Topic and Moseley (1983) devised a sequence of five ceramic phases for pottery found in Chan Chan. Scholars have traditionally placed Chimú consolidation of the heartland at around AD 1000 and expansion around AD 1200 (Kolata 1990; T. Topic 1990). Recently Mackey (2009:337), using data from her excavation of Farfán, argued that the Jequetepeque Valley was conquered in the early 1300s.

We know even less about Chimor's interaction with highland and mid-valley communities. Theresa Topic (1990:187-188) suggested that Chimor expanded into the Middle Moche Valley during Phase 2, around AD 1130-1200. In my survey of the Jequetepeque Valley, I noticed that Late Moche ollas (coastal, Middle Horizon)

diminished at the valley neck, whereas paddle-stamped ollas (coastal, Late Intermediate) were present in the mid-valley. The same pattern had been observed by Shimada (2010:71) for the Lambayeque Valley. The presence of coastal-style domestic pottery in the middle valley could indicate a movement of coastal people inland during the Late Intermediate.

Several Spanish chronicles mention the fall of Chimor to Inca armies, although the route of the conquest differs in the various accounts. Cieza de León (2000 [1550s]:168-173) described Inca armies going through the northern highlands, reaching as far as Ecuador, before making a U-turn to go south along the coast to attack Chimor. Sarmiento de Gamboa (2007 [1572]:134) and Cabello Valboa (1951 [1586]:317-319) provide the much-cited account of a Chimor-Cajamarca alliance against Inca forces. Rowe (1948:42-44) apparently combined information from the two chronicles, using Sarmiento's narrative to describe Inca troops entering Cajamarca to hunt down Chanka deserters, then utilizing Cabello's account to narrate how Inca armies, after conquering Cajamarca, went back to the southern highlands to subjugate the few remaining polities before returning to finish off Chimor. Later chroniclers, Garcilaso de la Vega (1966 [1609]:386) and Cobo (1979 [1653]:139), described a single wave of conquest as Inca armies marched north along the coast from Lima to Chimor.

Lambayeque or Sicán

The Lambayeque region, which includes four river valleys (the Leche, Motupe, Reque, and Lambayeque), contains the largest expanse of cultivated land (86,641 km^2) on the north coast of Peru. It was home to Chimor's most powerful coastal rival, the

Lambayeque or Sicán polity. Shimada (2000:51) divides the Sicán culture into Early (AD 750/800-900), Middle (AD 900-1100), and Late Sicán (AD 1100-1375). Like Chimor, the beginnings of Lambayeque are obscure. The legend associated with the founding of the Lambayeque dynasty is very similar to that of Chimor: it describes an individual – Naymlap – arriving by boat and starting a dynasty (Cabello Valboa 1951 [1586]:327). He brought with him a retinue that included a trumpeter, litter-bearer, chicha-maker, somone to spread crushed *Spondylus* shell, a cook, bath attendant, and cloth-maker (Means 1964:51).

The Sicán state emerged during the Middle Sicán period with its capital at the site of Sicán or Batán Grande. According to Shimada (2000:61), "the Middle Sicán exhibited state level sociopolitical integration with (1) control and deployment of multiple modes of resource exploitation (e.g., labor service, trade monopoly, land annexation) for the maintenance of the administrative system and its political economy, (2) distinct social classes with differential access to goods, information, and services, and (3) the governance through a centralized, hierarchical administration."

Sicán is located in the Pomac Ecological Reserve, a semitropical thorny forest with massive adobe pyramids rising like icebergs from a sea of algarrobo trees (Figure 3.1). Some 10 adobe pyramids occur in Sicán's ceremonial core. Unlike the Huacas of Moche which were of solid adobes, Sicán's pyramids were constructed using cells or rooms arranged like an ice cube tray that were filled with sand and refuse (Shimada 2000:60); this method required fewer adobes. These pyramids could be erected faster than previous Moche constructions. Sicán's two largest pyramids were Huaca Rodillona (80 x 100 m, 35 m high) and Huaca Loro (80 x 80 m, 35 m high).

The top of Huaca Loro was reached by climbing a ramp on its north side, and beneath this ramp Shimada discovered two elite burials, the Huaca Loro East Tomb and Huaca Loro West Tomb (Shimada et al. 2004:374-377). The Huaca Loro East Tomb was that of a man (30-35 years old) accompanied by two women (30-35 years old) and two youths (of indeterminate sex, one 12-15 and the other 5 years old). The Huaca Loro West Tomb contained a man (30-40 years old) surrounded by 18 young women, most of them 18 to 22 years old. The amount and quality of gold, silver, and copper artifacts found in these tombs rivaled those from the tombs of Sipán: the East Tomb included more than 700 kg of copper and gold objects and the West Tomb contained 500 kg of copper objects (Shimada 2000:56-57). The man from the East Tomb wore a large gold mask, gold ear spools, and a gold nose clip. These treasures from the Huaca Loro burials are now on display in the National Sicán Museum in Ferreñafe.

Around AD 1050/1100, the ceremonial structures atop the huacas of Sicán were burned and the site abandoned. Sicán, like Pampa Grande, was short-lived: they were occupied for about two centuries before being burned and abandoned (Shimada 1994:247-248; 2000:61). The Huacas of Moche (AD 100-750) and Chan Chan (AD 900-1460), by contrast, lasted more than four centuries.

Túcume became the capital of a Lambayeque polity in the following Late Lambayeque or Late Sicán. Located at the base of Cerro La Raya, Túcume covered more than 220 hectares and had 26 pyramids. Its largest pyramid was Huaca Larga – "larga" (long) because it stretched 700 m from north to south, with a width of about 280 m (Narváez 1995:79). The people of Lambayeque continued their tradition of building massive adobe pyramids, in contrast to Chimú architects who commenced a new regime

of rectangular compounds. Túcume was occupied and even flourished under Chimú and Inca administration, but the site was finally abandoned during the Colonial period.

A possible rival of Túcume was the polity of Cinto, whose capital, Patapó, was located upriver at the neck of the Lambayeque Valley. A survey of the Cinto region showed that Patapó was more than twice the size of the next largest site (Tschauner 2001:298). It is possible that prior to the Kingdom of Chimor, no indigenous polity had unified the entire Lambayeque region. When Spaniards visited this area in 1532, Túcume had just finished fighting another polity, Jayanca (Cabello Valboa 1951 [1586]:468; Hart 1983:221). Cabello Valboa (1951 [1586]:468) noted that during the Chimú conquest, Túcume sided with Chimor, the "capitales enemigos" of Jayanca. This brief sentence perhaps explains why Túcume was not abandoned, and even allowed to prosper, during Chimú occupation.

Ancient Cajamarca

According to Cabello Valboa (1951 [1586]:317), the two most powerful Andean polities at that time – Inca and Chimor – clashed in Cajamarca, where Chimor sent troops ("gente en Campaña") to assist the lord of Cajamarca in his fight against Inca incursions. Cajamarca is better known as the site of another momentous event: the capture of Atahuallpa by Pizarro in the plaza of Cajamarca on November 16, 1532.

Most archaeological work in Cajamarca has concentrated on Formative sites such as Layzón, Huacaloma, and Kuntur Wasi (Onuki 1995; Terada and Onuki 1985). Sites of later periods received less attention, though recently Shinya Watanabe (2001, 2002, 2009) has conducted a series of excavations investigating sites dating to the Middle

Horizon and Late Intermediate. Cajamarca pottery is known for its elaborate geometric designs painted on kaolin clay (Kroeber 1944:68-70; Larco Hoyle 1948:47-49; Topic 1996). This distinctive Cajamarca style was first named "three-legged" by Alfred Kroeber (1925:Plate 63f-p) or "Marañón" by Wendell Bennett (1946:132-133); later Jorge Muelle and Camilo Blas (1938:201, Lamina 272) located the homeland of the style and renamed it "Cajamarca," prompting Kroeber (1944:68-70) and Rafael Larco Hoyle (1948:47-49) to do the same.

Henry and Paule Reichlen (1949), after excavating several sites in the Cajamarca Valley, divided the culture into five phases (Cajamarca I-IV) based on pottery shapes and designs. Kazuo Terada and Ryozo Matsumoto (1985), utilizing a different sequence, divided the Cajamarca period into Initial, Early, Middle, Late, and Final Cajamarca, five phases that did not correspond completely with those of the Reichlen and Reichlen sequence.

Starting around the end of the Early Intermediate, Cajamarca ceramics began circulating in the central and southern Peruvian highlands (Lau 2006; Watanabe 2001). One intriguing pattern is the presence of both Cajamarca sherds and *Spondylus* shells at Wari sites such as Huari, Jargampata (Isbell 1977:118, 159), Conchopata (2004:11), Pikillacta (McEwan 2005:32, 62), and even Cerro Baúl (Moseley et al. 2005:17271; Nash and Williams 2009:264), 1,300 km south of Cajamarca. Cajamarca might have been the middleman in a *Spondylus* exchange network during the Middle Horizon (T. Topic 1991:243), feeding the demand of Wari rituals that utilized this spiny shell (Glowacki and Malpass 2003:442-443). *Spondylus* shells would have first entered the Cajamarca highlands through exchange with the north coast. Alternatively, traders bearing

Spondylus could have traveled south along the coast and then climbed east into the highlands. George Lau (2006:Figure 6.8) noted that there was less trade between Cajamarca and Ancash (Recuay) after the Middle Horizon.

Unlike Chimor, which we know to be a state or empire, very little is known about the political hierarchy of Cajamarca society. The only regional studies or archaeological surveys of Cajamarca were conducted by Jorge Sachún (1986) and Daniel Julien (1988), who provided important data on the long-term development of communities and polities in the area. Sachún and Julien's studies indicated that during the Late Intermediate, the largest sites were Santa Delia (47 ha), Tantarica (> 20 ha), and Guzmango Viejo (> 20 ha); Santa Delia is near the city of Cajamarca and Tantarica and Guzmango Viejo are located in the Contumazá area (Julien 1988:270; Sachún 1986:57-58). The lack of multiple tiers of site-size hierarchy suggests that Cajamarca was dominated by chiefly polities throughout its prehistory (Julien 1993:263). Hereditary lords were indeed present in Cajamarca during the time of Spanish administration, and they were likely a survival of Inca and possibly pre-Inca traditions. These lords possessed retainers and laborers in distant towns (Ramírez 1998:220-223) and multiple wives and concubines who followed their lords into the afterlife (Cieza de León 1984 [1553]:102; Espinoza Soriano 1977).

More archaeological research needs to be conducted in Cajamarca that targets sites dating to the Late Intermediate. Chiefly polities of Cajamarca could have competed over prized items like *Spondylus*. High-status individuals in Cajamarca, like the curacas described in Spanish documents, would ally themselves with powerful states – Wari, Chimor, Inca – to perpetuate social and political inequality at home. Some communities might strive for autonomy, but the need for ritual objects and other resources would

require them to interact with hierarchical polities. This is a hypothetical scenario that should be tested in the future through survey and excavation.

The Jequetepeque Valley during the Late Intermediate

Chimú, Lambayeque, and Cajamarca were, respectively, the southern, northern, and eastern neighbors of the Jequetepeque Valley during the Late Intermediate. The Jequetepeque Valley was a natural corridor connecting Chimor with Cajamarca, and it was here in 2005 that I conducted a 30-km transect survey from Talambo to Tembladera.

During the Middle Horizon, the Lower Jequetepeque Valley witnessed fragmentation and warfare among local Mochica polities. Dillehay et al.'s (2009) systematic survey of the lower valley revealed numerous hilltop fortresses from the Late Moche period (AD 600-800), indicating a time of intense military conflicts and also religious competition (Swenson 2006). The Moro style of fineline pottery appeared at this time in addition to exotic pottery from Cajamarca, Wari, and the central coast of Peru (Castillo 2001; McClelland et al. 2007).

It is unclear what happened to the various Moche polities in the valley during the following Transitional period (AD 800-1000). Marco Rosas Rintel's excavation of a Late Moche hilltop fort on Cerro Chepén uncovered Cajamarca-style fineware in elite residences, which he believed was evidence of a Cajamarca invasion that led to the collapse of the Moche culture (Rosas Rintel 2007). Cajamarca-style pottery was indeed ubiquitous in Late Moche sites of the Jequetepeque Valley, including Cerro Chepén (Rosas Rintel 2007), Huaca Colorada (Swenson et al. 2011:123), and San José de Moro

(Bernuy and Bernal 2008). It is difficult, however, to distinguish whether this was the result of conquest or long-distance exchange.

Castillo (2001:327-328) has suggested that Lambayeque polities from the north conquered the Jequetepeque Valley, though other scholars believe the valley maintained its autonomy until the Chimú conquest (Shimada 1990:339; Swenson 2004:339). Lambayeque-style pottery was indeed present in the Jequetepeque Valley, but the architecture of local sites (such as Pacatnamú and Cabur) differed from that of Sicán, Túcume, and other sites of the north (Sapp 2002:75-76). Late Intermediate adobes of the Jequetepeque Valley lacked makers' marks (McClelland 1986:39; Prieto Burmester 2010:239; Tsai 2012), unlike adobes from contemporary sites in the Lambayeque region (Shimada 1997:77-83). In sum, a mixture of both northern and southern elements characterized the pottery and architecture of the Jequetepeque Valley.

During the first three centuries of the Late Intermediate, the largest center in the lower valley was Pacatnamú, a sprawl of adobe compounds and pyramids next to the mouth of the Jequetepeque River. Steep bluffs protected Pacatnamú's southern and western flanks, and the northeast side was defended by three rings of massive city walls, the outermost wall being unfinished (Donnan 1986a). The core of Pacatnamú consisted of numerous adobe pyramids, rectangular compounds, and cemeteries. The largest pyramid, Huaca 1, measuring 70 x 70 m and more than 10 m high, overlooked a rectangular compound, the Major Quadrangle, that could have been the residence of elite individuals (Donnan 1986b:65, 80).

Donnan (1986c:22) suggested that Pacatnamú was abandoned after the Chimú conquest of the Jequetepeque Valley around AD 1370. Antonio de la Calancha (1977

[1639]:1227), a Spanish chronicler, described the Chimú conquest of the Jequetepeque Valley:

> Trató de conquistar el Chimo el valle que oy es Guadalupe…, i enbió un Capitán arriscado con gran número de gente diestra, que escogió entre las más belicosa; i después de varios encuentros, dudosas batallas i alternadas vitorias a costa de muchas vidas, i a precio de arroyos de sangre, conpraron doce lenguas de señorío, venciendo la perseverancia lo que avía arriesgado la valentía. Llamaron a este Capitán (que después de la vitoria nonbró por Governador el Chimo) Pacatnamu, que en aquella lengua quiere decir padre común, o padre de todos, porque norando a los vencedores, acariciava a los vencidos, a su adulación se llamó el valle de Pacatnamu, i oy se llama corrupto el nonbre el valle de Pacasmayo; i el cerro donde fundó su casa, cuyas reliquias viven, conserva sin corrupción el nonbre de Pacatnamu, que aún entre gentes incultas, se eternizan las memorias de los que favoreciendo a los súbditos, anparan con protección a los estraños.

Donnan and his team discovered what might have been sacrificed prisoners of war: the remains of fourteen men in a trench surrounding the city walls of Pacatnamú. They were found in three different layers – Group I (4 men) was found in the uppermost layer, followed by Groups II (8 men) and III (2 men). Individuals from Groups II and III had their limbs and necks broken, throats cut, and chests opened (Verano 1986:128-130). They could have been Chimú warriors captured by local defenders after unsuccessful attacks on the city (Verano and Deniro 1993:366). Group I was dispatched in a different way: men from this group were stabbed multiple times, most likely by the bone points found with the skeletons. These men could have been the local defenders of Pacatnamú, captured and executed after the city fell to Chimú invaders.

Keatinge (1982:207-208) identified Farfán as the palace of the victorious Chimú general. Located 13 km from the shore, Farfán consisted of six rectangular compounds built along the base of a small hill, Cerro Faclo. Compounds II and VI were built during

the Chimú occupation and bore close resemblance to the *ciudadelas* or palaces of Chan Chan (Mackey 2009:330). Compound III, built before the Chimú conquest, was razed to the ground after the Chimú takeover. Below Compound II, Mackey found four sacrificed women accompanied by Lambayeque-style ceramics lying above the stone foundations of earlier walls.

Robyn Cutright's (2010) excavations at Pedregal, a small (2.9 ha) village 8 km east of Pacatnamú, did not reveal sacrifice and destruction. Instead, maize production there had intensified throughout the Late Intermediate period: from layers dating to an earlier part of the Late Intermediate period, 14.8% of the botanical remains were maize (cobs and kernels); in the later phase this percentage jumped to 26.4% (Cutright 2010:33). Pedregal's most dramatic transformation came not during the Chimú period, but during the Late Horizon when an Inca road was built through the center of the site, cutting the village in two.

Compared to the coast, very few Late Intermediate sites have been excavated in the Middle Jequetepeque Valley; the most intensive mid-valley excavations were conducted in 1980-1981 by Rogger Ravines (1982) as part of the Gallito Ciego Dam rescue project (Keatinge 1980). Ravines (1982:158-164) excavated tripartite rectangular compounds with Late Intermediate pottery, which might suggest Chimú administration of the middle valley. Other evidence for Chimú occupation, such as audiencias or radiocarbon dating, is lacking. During my survey of the middle valley I observed many sites with carinated and paddle-stamped ollas (Late Intermediate). I also found many rectangular structures, though it is unclear whether these compounds were built during the Lambayeque or Chimú occupation.

Ventanillas, located 37 km from the coast at 280 masl (Figure 3.2), is the easternmost site in the Jequetepeque Valley with adobe pyramids. Its largest pyramid, Ventanillas 1, measures 50 x 65 m and 12 m high (Reindel 1993:416). The presence of carinated and paddle-stamped ollas, chamber-and-fill construction (Figure 3.3), and adobes that resemble McClelland's (1986:28-29) "Intermediate" type with sharp edges and slightly concave surfaces (Figure 3.4), would date the construction of the Ventanillas 1 pyramid to around AD 1000-1200. Eling (1987:416) has noted Cajamarca-style ceramics at Ventanillas, and my reconnaissance has confirmed his observation, though the majority of the ceramics is Chimú or Lambayeque in style. The hillside east of the pyramids is filled with terraces and structures that are presumably residences; Eling (1987:368) calls this area "the hillside town."

Further up the valley one finds rectangular compounds concentrated near Tembladera (Ravines 1982), though the construction of the Gallito Ciego Dam and the quarrying by modern factories have destroyed many of them. Petroglyphs are present throughout the Jequetepeque Valley, but the site with the greatest concentration of petroglyphs is Yonán, located at the opening of Quebrada Chausis which leads to the highlands (Pimentel 1986:121-143). Yonán was the eastern limit of my 2005 survey; Alexi Smith, a doctoral student at the University of Michigan, has extended my survey and documented sites between Yonán and Chilete. This 32-km stretch of the middle valley from Yonán to Chilete, between 500 and 900 masl, is adjacent to Late Intermediate highland centers such as Tantarica and Guzmango Viejo to the south, in the province of Contumazá.

Testing Murra's Fourth Case in the Middle Jequetepeque Valley

To investigate the interaction between the coast and the highlands in northern Peru, I surveyed the Middle Jequetepeque Valley and excavated Las Varas. One goal was to test whether a highland colony, Murra's "vertical archipelago," was placed in the *chaupiyunga* zone between Chimor and Cajamarca. The vertical archipelago involves the placement of colonies more than a few days' walk from the home community. Colonists would acquire resources through trade or direct exploitation, and later send the goods back to the home community (Murra 1972). By having vertical archipelagos, a social group – whether it is a family, community, or an entire ethnic group – would occupy different ecological zones along the slopes of the Andes and achieve self-sufficiency without having to obtain most goods through exchange with its neighbors.

In his 1972 paper, Murra provides examples of the vertical archipelago from a wide range of Andean societies and environments, including both the eastern and western slopes of the Andes, large kingdoms and small communities, and time periods from the ethnographic present to the prehispanic past. Murra's cases include (1) the Chaupiwaranga, Chupaychu (Cerro de Pasco, Junín); (2) the Lupaqa (southwest Lake Titicaca); (3) the Collique, Canta, and Chacalla (Río Chillón, Department of Lima); (4) the north coast of Peru (Chimú, Cajamarca); and (5) Songo, Bolivia (a negative case because it lacks a vertical archipelago). Plotting these cases on a map, we would see two clusters with one in central Peru (Cases 1 and 3) and another in northern Bolivia (Cases 2 and 5). Case 4, situated in northern Peru, is an outlier.

David Wilson (1999:303) noted that Murra's fourth case – the north coast of Peru – lacked sufficient archaeological evidence to be supported. Unlike the Moquegua

region, where archaeologists had found Wari and Tiwanaku (highland) enclaves in the mid-valley (Goldstein 2005; Williams 2001), no highland colony had been located on the north coast of Peru, nor coastal colonies in the northern highlands. The vast majority of archaeological research in northern Peru has concentrated on either the coast or the highlands, with very few investigations focusing on the intervening area, the mid-valley.

Murra's fourth case is especially important because Rostworowski (1977) argued that coastal kingdoms, in contrast to the highland polities, had specialists who were dedicated to full-time production of textiles, chicha, and pottery. These specialists supplied their overlords with finished products in addition to trading among themselves. Archaeological research on the coast of Peru has indeed yielded evidence for specialization among coastal kingdoms (Marcus 1987; J. Topic 1990). The coastal specialization model is the antithesis of the highland vertical-archipelago model, and this dichotomy between coastal and highland economies is similar to Durkheim's (1893) distinction between organic and mechanical solidarities. This debate over whether Andean societies are specialized or self-sufficient has dominated discussions of prehispanic Andean economy, though Mayer (2002:58) notes that "no economic system is as pure as the models that scholars construct for it." Marcus' (1987:400) excavation of Cerro Azul has shown that certain products such as cotton textiles and nets were made and used locally, in contrast to dried fish which was mass-produced for export.

Las Varas: Research Design

If a spectrum of economic strategies – ranging from self-sufficiency to specialization – existed in the Andes, how would different systems (specialized vs.

autonomous) interact? Would highlanders ignore coastal people by setting up their own colonies, or would they exchange some of their products with coastal communities? Would some products be made locally, and others traded or imported? Most importantly, how can we as archaeologists investigate this problem using survey and excavation data?

In his study of Andean political economy, Stanish (1992:41-48) provided archaeological correlates for distinguishing two different types of interaction – colonization and trade. The presence of foreign objects (such as pottery or textiles) in a burial is not definite proof of colonization since people could have obtained them through trade. Stanish therefore presented multiple lines of archaeological evidence to distinguish trade from colonization.

In colonization, Group A inserts a colony in the territory of Group B. The archaeological evidence for Group A's colony would be (1) presence of domestic and non-domestic artifacts in the style of Group A at the colony (Group A's style being the dominant style at the site); (2) Group A's colony being surrounded by other sites in the area that have domestic artifacts in the style of Group B; (3) sudden, rather than gradual, appearance of artifacts in the style of Group A; and (4) control of a separate agricultural area or technology by Group A's colony (Stanish 1992:41-48). In the Andes, the establishment of vertical archipelagos would be an example of colonization, and the existence of these vertical archipelagos could be verified using the four lines of evidence proposed by Stanish.

The alternative to colonization is trade, where Group A trades with Group B but does not establish any colonies in Group B's territory. In this case, we would expect that (1) Group A and Group B traded non-domestic (prestige or "fancy") artifacts but rarely

traded domestic artifacts; (2) each group would occupy distinct territories or "discrete culture areas"; and (3) artifact styles developed gradually in each area through time.

Stanish (1992:5-7) acknowledges that trade and colonization are not the only forms of interaction that might occur between two groups, and that trade and colonization are not mutually exclusive kinds of interaction. Instead, these two kinds of interaction can occur at the same time and one should "develop a framework capable of interpreting both of these seemingly opposing models into a single, consistent approach" (Stanish 1992:7). By using the archaeological data, we can evaluate whether two groups traded, established colonies, or adopted both strategies.

I applied Stanish's research design to my study of coast-highland interaction in the Middle Jequetepeque Valley. In 2005, I conducted a survey of the lower Middle Jequetepeque Valley, starting from the valley neck near Talambo (150 masl) and ending near Tembladera by the Gallito Ciego Dam (400 masl). In this 30-km transect almost all Late Intermediate sites had surface scatters of coastal-style domestic pottery, characterized by carinated rims and paddle-stamped surfaces. One site – Las Varas – was unique in having large quantities of painted Coastal Cajamarca style bowls. Ventanillas had the second highest number of Coastal Cajamarca bowls, though most of its pottery was still in the coastal style. Las Varas, by contrast, had an assemblage of ceramics in which the vast majority was in the Coastal Cajamarca style, with few coastal-style ceramics. Las Varas was also unique in having a plaza surrounded by cist tombs.

The site of Las Varas, located at 300 masl and 40 km inland, is on the south bank of the Jequetepeque River across from the modern town of Pay Pay. It sits on an isolated patch of land surrounded by steep cliffs to the east, west, and south, and the river and

cultivated fields to the north. To reach Las Varas, one has to cross the Jequetepeque River on a small suspension bridge in Pay Pay and walk on a trail hewn into the cliff face. During the months of July and August, when the river is dry, one can reach the site by fording the river and walking through the fields.

The maximal extent of Las Varas is approximately 50 ha. Archaeological remains are concentrated in four sectors (Figure 3.6). Sector 1 is a terraced area where I found both decorated and undecorated ceramics made in the Cajamarca style. The terraces often have internal dividing walls. Julien (1988:132-133) has found such terraces (Type I terraces) in the Cajamarca area, and he interprets them as "support for structures." My excavations have shown them to be domestic structures.

Sector 2 consists of several standing stones about 30-40 cm tall arranged to form a circle. I counted approximately 30 such features in Sector 2. Since the center of these stone circles was almost always looted, and a few human bones were scattered around the circles, these features may have been burials. Sector 3 is a series of plazas surrounded by cist tombs. Sector 4 appears to be a cemetery marred by looters' pits, although it lacks circles of standing stones like those of Sector 2. Such an unmarked, heavily-looted cemetery is common on the coast.

I carried out excavations at Las Varas to test whether it was a colony established by highlanders, an example of a vertical archipelago as hypothesized in Murra's model. I utilized Stanish's methodology to determine whether the presence of Coastal Cajamarca style pottery at Las Varas was due to colonization or trade. There are four different scenarios to explain the large quantities of non-local (either highland or upper mid-valley) ceramics and burial structures that are present at Las Varas:

(1) Las Varas was inhabited by non-local people.

(2) Las Varas was inhabited by local people who imported non-local artifacts or produced artifacts in imitation of non-local styles.

(3) Both local and non-local people occupied Las Varas.

(4) Non-local people replaced local people, or vice versa.

By excavating the various sectors at Las Varas, I wanted to evaluate which scenario best explains the presence of Coastal Cajamarca ceramics and cist tombs at the site. Table 3.1 summarizes the possible outcomes of my excavation and which scenario was most likely given the data.

Data obtained from my excavations confirmed some of the expectations for Scenarios 1 and 3 but also provided unexpected results. Las Varas had been settled by at least two ethnic groups, one from the mid-valley and the other from the coast. One finding that I did not expect was how the local residents of Las Varas received two different groups of visitors – highlanders and coastal people – in two separate ritual areas. Since Las Varas is located in the mid-valley and dates to the Late Intermediate, archaeological data from the site allow us to address coast-highland interaction, Murra's model of vertical archipelagos, as well as ethnicity and ritual. The following three chapters present the excavation results from Las Varas.

Chapter 4

The Residences of Las Varas

In this chapter I present data from my excavation of six residences at Las Varas. Most of the houses are located on hillside terraces, and in these residences I found evidence for cooking, grinding, raising guinea pigs, and spinning. My goals in excavating the residential sector of Las Varas were to (1) document the range of household activities, (2) investigate which activities were shared by all households and which were unique to certain households, and (3) identify the style of household artifacts (e.g., bowls, cooking jars, spindle whorls) that reflect the ethnic affiliation of the residents.

The Crystal House (Sector 1, Area B)

The Crystal House is located on a terrace in the residential sector (Sector 1, Area B) of Las Varas (Figures 4.1-4.4). Since we found the highest concentration of quartz crystals here, I named this structure the Crystal House (Figure 4.5; Table 4.1). Our excavation of the Crystal House exposed 122 m^2.

The Crystal House was built on two terraces, with a retaining wall (Wall 1) between the upper and lower terraces. Wall 1 was contoured to the hill and slightly curved. The upper and lower terraces were connected by a corridor; a stone jamb flanks

the entrance of the corridor's entrance on the lower terrace (Figure 4.6). The lower terrace likely served as a patio since we found few artifacts there, including some pottery and a core (Figure 4.7). Units P1 and P2 reached sterile soil (rocky, yellowish soil) at 5 cm below the surface; small test pits were excavated to 78 cm below surface in the northeast and southwest corners of Unit P1 to confirm that the rocky yellowish soil was indeed sterile (Figure 4.8).

Visitors entering the patio from the south would go through a baffled entryway with low step and bench (Figure 4.9). This entryway was covered by a layer of soil and collapse, and above this layer of collapse we found a hearth consisting of a circle of stones with charcoal and ash in the middle; beneath the charcoal and ash we found a flat stone (Figures 4.10 and 4.11). The hearth was stratigraphically above the patio of the Crystal House; had it been there when the house was occupied, it would have blocked the south entryway. Perhaps this hearth was made by someone camping in the Crystal House long after it was abandoned.

On the north side of the wall (Wall 4) in Unit P4, beneath wall collapse, we found a broken ring-base bowl (Las Varas Sherd #525) lying face down (Figures 4.12 and 4.13). It had some painted interior designs, though they were not as elaborate as the designs typical of Coastal Cajamarca bowls; also missing was the exterior white band around the rim. The occupants of the Crystal House had left this ring-base bowl by Wall 4, which later fell and crushed the bowl.

Proceeding south, one reaches a corridor, 4.5 m long and .95 m wide, whose entrance is flanked by a stone jamb. A piece of *Spondylus* shell was found inside the corridor, and a broken Lambayeque double-spout-and-bridge bottle had been placed in

front of the stone jamb (Figure 4.14). The Lambayeque bottle would have had a bridge made from twisted ropes of clay; the diameter of its body would have been 11 cm, the diameter of its pedestal base 9 cm, and the height of its pedestal base 3 cm.

Walking up this corridor, one arrives at the upper terrace which likely served as a kitchen area; it had (1) a guinea pig pen (Figure 4.15), (2) a hearth (Figures 4.16 and 4.17), and (3) a grinding slab (Figure 4.18). The guinea pig pen was a small stone circle (diameter 60 cm) and inside this circle we found guinea pig dung, pottery, crystals, and half of a metal tweezers (Figure 4.19). The hearth consisted of three stones placed close to Wall 7; a lens of ash was found in the middle of the three stones. This method of cooking, where a cooking jar is placed on three stones that surround a fire, is still practiced by people living in Pay Pay and Cajamarca (for similar example from the town of Moche, see Gillin 1947:49). East of the hearth, in Unit 8, was a small wall (Wall 6, width 20 cm), whose base shows floor plaster rising to meet the plaster of Wall 6 (Figure 4.20); these remnants of mud plaster were the only wall-to-floor plaster that we found at the Crystal House. We found orangish clay daub with cane impressions on the upper terrace (Units 9, 10, 13, 17, and 18), and a posthole (30 cm in diameter and 24 cm deep) next to the guinea pig pen in Unit 1 (Figures 4.21 and 4.22). The plaster, daub, and posthole suggest that plastered cane walls supported a roof, perhaps providing shade for those grinding and cooking in the kitchen area.

Trash served as the fill for creating new terraces at the Crystal House, especially the southern terraces in Units 5, 9, and 10 (Figures 4.23-4.25). Materials recovered in the midden, fill, and other contexts of the Crystal House included pottery, spindle whorls, bones of camelids and cervids, land snails (*Scutalus sp.*), guinea pig dung, burnt maize

cobs (Figure 4.26), chipped stone, and some small pieces of metal. Units 5, 9, and 10, comprising the middens and fill associated with the southern terrace, were some of our most productive units, since they contained great quantities of pottery, animal bones, and chipped stone.

Units 14-16 were the western limit of our excavation of the Crystal House. We stopped excavating beyond these units because very few artifacts and no architecture were found here. Terraces were present in the hillside above and below the Crystal House. We did not excavate these terraces, but they should be investigated in the future.

The profile of Unit T5, which spanned the lower and upper terraces, revealed what happened to the Crystal House after it was abandoned (Figure 4.27). The residents left the Crystal House without covering the structure with earth (unlike the Llama House; see below), thus exposing the walls to the wind and rain. Rainfall in the mid-valley, though not as heavy as in the highlands, can still be enough to erode soil and terraces on the hillside. The rain would have weakened the mud mortar, and wash from above would topple the retaining walls. When archaeologists excavate the edge of the upper terrace, they would find a slope of dirt and collapse covering the remnants of the original wall below (Figure 4.28).

Crystals in the Ancient Andes

Quartz crystals, in the form of bars or chipped flakes, have been found in archaeological sites in the Andes, such as Pachamachay (Rick 1980:180), Huaricoto (Burger and Burger 1980), Pacopampa (Rosas and Shady 1970), Chavín (Burger 1998:201-203), and Chinchawas (Lau 2010:301). At Huaricoto, an offering of burnt

crystals and shells was found in a hearth dating to the Late Preceramic, 2200-1800 BC (Burger and Burger 1980:28). At Las Varas, we did not find burnt offering of crystals, but we did find chipped crystals and crystal bars in construction fill (such as those from the Crystal House) or in the earth above a floor (Table 4.2).

Spanish documents referred to quartz crystals as "quispe" (González Holguín 1952 [1608]; Guaman Poma de Ayala 1993 [1615]) or "lacas" (Arriaga 1999 [1621]). Guaman Poma (1993 [1615]:249) illustrated a *Quispiranpa*, or a royal Inca litter decorated with shell and crystal. Gonzalez Holguín (1952 [1608]:306) defined "quespi" (now frequently spelled as "quispe," which is a common surname in Peru) as crystal or anything transparent; "yurak quespi vmiña" (white quespi) referred to a diamond, "pucca quespi vmiña" (red quespi) to a ruby, "komer quespi vmiña" (green quespi) to an emerald, and "ancas quespi vmiña" (blue quespi) to turquoise. "Quespiñaui" (glass eye) came to mean glasses or someone wearing glasses (Gonzalez Holguín 1952 [1608]:306). In modern Quechua, the word "qispi" means "glass" (Hornberger and Hornberger 2008:84).

Arriaga (1999 [1621]:34) described "lacas" as small pieces of crystals used for personal charms or amulets for protection ("conopa"). He wrote "en los llanos tenían muchos por conopas unas piedras pequeñas de cristal, al modo de puntas y esquinadas, que llaman lacas" (Arriaga 1999 [1621]:34). Quartz crystals are used by modern Peruvian shamans as part of their *mesa*, or a cloth spread on the ground with carefully arranged ceremonial paraphernalia (Joralemon and Sharon 1993; Sharon 1978).

In the 16th century, Cristóbal de Albornoz (1989 [1580s]:186) made note of important huacas in the province of Cajamarca; three of the huacas from Cajamarca have either "quispi" in their names or are associated with crystal ("xriptal"):

> Angasquispi, guaca de los indios caxas, es una piedra que dicen que andava vestida en un cerro junto al pueblo de Biena.
>
> Quispi, guaca prencipal destos indios caxamarcas del ayllo Cuyosmango, era una peña de donde nasce agua y xripstales, en un cerro junto al pueblo de Sanchadas.
>
> Utaran, guaca de los dichos de Cuyosmango, son unas piedras de xripstal. Están en un cerro que se dize Utaran junto al pueblo de Malcadan.

> Angasquispi [blue crystal], huaca of the Caxas [Cajamarca] Indians, is a rock, which they say was clothed, next to the village of Biena.
>
> Quispi, principal huaca of these Cajamarca Indians of the ayllu Cuyosmango, was a rock where there is a source of water and crystal, in a hill next to the village of Sanchadas.
>
> Utaran, huaca of the aforesaid from Cuyosmango, there are some rocks of crystal, which are in a hill called Utaran next to the town of Malcadan. [my translation]

The "ayllo Cuyosmango" likely refers to Guzmango, the most populous *huaranga* (the Inca unit of a thousand tribute payers) in Cajamarca (Remy 1992:68). The modern town of Guzmango, located in the Province of Contumazá, is about 37 km southeast of Las Varas. The pueblo of "Malcadan" is probably San Lorenzo de Malcadan listed in the 16th-century census (Remy 1992:101), which later became the modern village of Hacienda San Lorenzo (Julien 1993:Table 2; Pärssinen 2003:277-279), located in the Province of Contumazá, 28 km southeast of Las Varas.

The Spondylus House (Sector 1, Area C)

The Spondylus House was built on two terraces 97 m southwest of the Crystal House. Unlike the terraces of the Crystal House, in which one terrace was above the other, the terraces of the Spondylus House wrapped around the sides of a hill, with a patio (2 x 4 m) to the east and a room (2 x 5 m) to the south. From the patio, one enters the room by going through a doorway flanked by a stone jamb (Figure 4.29). We excavated 6 units here, exposing a total of 24 m^2. Few artifacts (sherds, chipped stones, and crystals) were recovered in the Spondylus House, the only notable find being a piece of *Spondylus* near the inside corner of the room in Unit 6 (Figures 4.30 and 4.31). No semi-compact earth floor was found; perhaps the surface beneath the collapse and rubble was the surface on which people had lived. Like the Crystal House, the Spondylus House featured a stone jamb entrance that opened to the east and a piece of *Spondylus* near this entrance.

Sector 1, Terrace 2

On the hills above the Reception Platform, we found some terraces that might have been part of a residence. Coastal-style ollas were present on the surface, so I placed a 2 x 2 m unit (Unit 1) to investigate this area (Figures 4.32 and 4.33). This unit was not as productive as the others, and the cultural layers (Layers A and B), about 10-15 cm thick, were quite thin compared to those from the Crystal House or the Llama House. We found a layer of ash and darkened soil (Layer B), though it was thin (5 cm) and sterile soil was found below. Artifacts recovered included ceramics, land snails, and bits of crystals. Such terraces, which lack architecture, are common at Las Varas; perhaps they

supported ephemeral cane-and-daub structures that were not as elaborate as the stone constructions of the Crystal House or the Spondylus House.

The Llama House (Sector 1, Quebrada 2)

The Llama House is located in a ravine between the Crystal House and the Reception Platform (Figures 4.34 and 4.35). We exposed 64 m^2 of the Llama House, which extended over three terraces (Figure 4.36).

The lower terrace was covered by a two-meter thick midden filled with pottery, guinea pig dung, ash, charcoal, animal bones, chipped stone, and other cultural materials. Burning had taken place on this terrace, which had darkened a large part of the retaining wall (Figures 4.37 and 4.38). We found a semi-compact floor 2 m below the surface (Figure 4.39) and a clay figurine 15 cm above this floor in a layer of ash (Layer E) (Figures 4.40 and 4.41).

The middle terrace was a patio with a semi-compact floor. Like the lower terrace, it was overlain by thick layers of midden. The Llama House receives its name from the large number of camelid bones we found here, especially from Units 1 and 2. Some of the camelid bones show cut marks.

In Unit 12 we found three complete Coastal Cajamarca bowls, perhaps as an offering to the house before it was ritually "sealed" and abandoned (Figure 4.42). The entire patio was first covered by ash and charcoal (Layer D), the bowls were then set atop this layer of burnt material and later covered by another layer of ash and midden (Layers B-C). The bowls were found in Layer C, a dark ashy layer filled with guinea pig dung and charcoal. Bowl 3 was set on its side, whereas Bowls 1 and 2 were stacked one atop

another, face down (Figures 4.43 and 4.44). All three bowls had ring bases and a band of white slip around the rim, typical of Coastal Cajamarca-style bowls.

Bowl 1 has painted red-on-white interior designs consisting of concentric circles in the center and dot-and-crescents around the rim (Figure 4.45). The dot-and-crescents motif is frequently painted on the bowls of Las Varas (Figure 4.46) and common on Cajamarca-style pottery of the highlands. The mid-valley (or Las Varas) version of this motif has only two crescents flanking the dot, whereas highland Cajamarca sherds (e.g. Sherd #1622) often have multiple crescents (Figure 4.47).

Bowl 2 depicts two foxes, each facing a plant (Figure 4.48). In the center is a post-firing incision drawn in the form of an arrow (Figure 4.49). This incision had been worn off at the bottom, indicating that the bowl was incised and then used. The arrow, when found in its original position, points in the direction of 206 degrees.

Bowl 3 has only a faint trace of its original paintings, which appear to have been worn off through extensive use (Figure 4.50). Close inspection shows that the painted motifs are the volute and funnel (Figure 4.51), which are commonly found on the bowls of Las Varas (Figures 4.52 and 4.53). The exterior surface has been repeatedly scraped (Figure 4.54), perhaps by a split cane like that found in the ceramic workshop at Maymi (Anders et al. 1998:241).

The bowls sat atop a layer of ash and charcoal (Layer D), and below Layer D was the semi-compact floor (Layer E) littered with crushed land snails (Figures 4.55 and 4.56). The floor was best preserved in Units 3, 12, and 16, and completely absent in Units 1 and 2. Once the floor had been exposed we could see the wall construction clearly: the wall was faced by the flat surfaces of angular, uncut stones. Larger stones

were usually placed in the lower course upon which smaller stones were placed and mud-mortared. It is unclear how the various terraces were connected, since we did not find corridors or steps that allowed access between terraces.

No layers of ash and burning were found on the upper terrace, and the only notable feature was a large guinea pig pen measuring 2 by 2 m in Unit 4 (Figure 4.57). This pen was completely filled with guinea pig dung and inside we found five stone cores (Figures 4.58-4.60). Unlike the lower and middle terraces, no floor was found on the upper terrace. Outside and to the east of the guinea pig pen (Unit 8, Layer A) we found what appeared to be a panpipe fragment with modeled human face (Figure 4.61). Toohey (2009:Figure 7.19) reports similar panpipes with modeled human faces from Yanaorco, a Late Intermediate site near the town of Cajamarca.

Like the Crystal House, the Llama House had domestic refuse including pottery, spindle whorls, animal bones, land snails, guinea pig dung, and chipped stone. Unlike the Crystal House, however, heavy burning occurred at the Llama House and later it was deliberately covered by ash and burnt refuse. It is unclear what the residents were burning at the Llama House.

Two artifacts from the Llama House indicate that the residence was occupied during the end of the Middle Horizon or the beginning of the Late Intermediate period. The first evidence is a modeled head of an individual who seemed to be wearing a four-cornered hat (Figure 4.62); the second is a modeled face of an individual having almond-shaped eyes and wearing an ear spool (Figure 4.63). Menzel (1977) dates the first figure to Middle Horizon 2B, and Shimada (1990:315) dates the individual with the almond-shaped eyes to Early Sicán (AD 700-900).

Two radiocarbon dates have been obtained from the Llama House: (1) a charred maize cob from Layer D of Unit 4 and (2) a charred maize cob from Layer C of Unit 12:

Beta 287770, Las Varas #1231

Las Varas, Sector 1, Llama House, Unit 4, Layer D, 60 cm below surface. Charred maize cob from guinea pig pen on the upper terrace.

Measured Age: 810 +/- 40 BP

13C/12C: -11.5 o/oo

Conventional Age: 1030 +/- 40 BP

2 Sigma Calibration: Cal AD 900 to 920, Cal AD 960 to 1040

Beta 287771, Las Varas #1344

Las Varas, Sector 1, Llama House, Unit 12, Layer C, 30 cm below surface, 40 cm above floor. Charred maize cob from midden covering the patio (middle terrace), associated with offering of three Coastal Cajamarca bowls.

Measured Age: 720 +/- 40 BP

13C/12C: -11.8 o/oo

Conventional Age: 940 +/- 40 BP

2 Sigma Calibration: Cal AD 1020 to 1200

In sum, the Llama House provided us (1) deep stratigraphy to seriate the designs of Coastal Cajamarca bowls, (2) an offering of three complete Coastal Cajamarca bowls, and (3) the largest guinea pig pen found at Las Varas.

House 3C (Sector 3, Area C)

House 3C was not built on hillside terraces but on a flat area in Sector 3, 110 m north of the Plazas of the Malquis. Measuring 10 m east-west and 2 m north-south, House 3C had stone steps on its north side leading up to the entrance (Figures 4.64-4.66). Because House 3C was an isolated structure, at first I thought it was a storeroom. But after finding large quantities of domestic refuse (ash, camelid bones, pottery, coprolites, and spindle whorls) along its south wall (Figure 4.67), I became convinced that this structure was a residence. The stone walls were likely the foundation for cane walls (Figure 4.68), since the amount of rubble around House 3C was insufficient to suggest that the stone walls reached higher than half a meter.

We excavated outside House 3C along its south wall, starting at the eastern end (Units 1 and 2), where we found pottery, ash, charcoal, cuy dung, camelid bones, and spindle whorls. The occupants of House 3C apparently dumped their trash behind their house. This accumulation of trash petered out toward the west and disappeared in Unit 5. In Layer B of Unit 1, we found part of a panpipe (Figure 4.69) depicting a face with coffee-bean eyes. Its form is similar to the panpipe found in the Llama House (Figure 4.60). In Layer A of Unit 2, about 7 cm below the surface, we found the head of a ceramic figurine depicting a person with braided hair or a braided headdress (Figure 4.70).

We opened five 2 x 3 m units (Units T1-T5) and one 1.5 x 3 m unit (Unit T6) to excavate the interior of House 3C. There was a looter's pit in Unit T1 that damaged the floor and east wall, but the rest of House 3C was unmarred by looting. Here the stratigraphy was more complicated than that outside the house (Figure 4.72). Before House 3C was built, the area that would become the interior of the house (Units T1-T5) was leveled, forming a semi-compact surface (Layer F). Above this semi-compact surface a layer of guinea pig dung (Layer E) was spread (Figure 4.73), and upon this layer of guinea pig dung the walls of House 3C were built, including a wall (Wall 5 in Unit T3) in the middle of the house, bisecting the interior space into two halves.

The south wall of House 3C was made from stones bound with mud mortar (Figure 4.74), with smaller stones set upon larger ones. The north wall and Wall 5, by contrast, appeared to have been loose rows of stones without mortar.

After building the stone walls, a semi-compact earth floor (Layer D) was laid down on both sides of Wall 5. Then a layer of fill (Layer C), consisting of loose earth, pottery, and guinea pig dung, was deposited west of Wall 5, and another floor (Layer B) was constructed above this fill. In the end, the floor west of Wall 5 was 20 cm higher than the floor to the east.

Two artifacts suggest that a potter had lived or left his/her paraphernalia in House 3C. A ceramic mold for making an eye was found in Layer C (fill below the floor) in Unit T3 (Figure 4.75). Julien (1988:Figure 20) photographed appliqué eyes on sherds from the Cajamarca Basin, which he classified as *Cajamarca Fine Black* and dated this type to Late (AD 850-1200) and Final Cajamarca (AD 1200-1532). In Layer B (midden) of Unit 2 we found a round piece of pottery, 12 cm in diamater, that could have served as

a turntable for shaping pottery (Figure 4.76). Although these artifacts are not conclusive evidence, they suggest that pottery-making could have been one of the activities carried out at Las Varas.

House 1D (Sector 1, Area D)

House 1D is located in Sector 1, Area D, on the south side of a small hill 138 m east of the Spondylus House, overlooking the fields of Las Varas (Figures 4.77 and 4.78). Although House 1D has the most elaborate architecture at Las Varas, we were only able to excavate it during the last days of the project. If Las Varas were to be excavated in the future, more excavation units should be placed in the western portion of House 1D.

House 1D is typical of Las Varas residences in having a patio, terrace, and stone walls bound by mud mortar. Its architecture is impressive since it has an elevated bench/walkway accessible by stone steps that lead into a room on a terrace (Figures 4.79 and 4.80). Our excavations targeted this bench and stone steps, located in the northeast corner of the house. The bench measured 2 x 10 m, and the stone steps measured 1 x 1 m; they were made from stones bound by orangish-brown mud mortar. We found few items, including pottery, animal bones, and chipped stone. We did not find any compact earth floor. Another stone step, which we did not excavate, was found in the patio; it measured 1 m wide and .5 m long (Figure 4.81).

Even though we did not clear the rubble in the western half of House 1D, we could see an enclosure slightly higher than the adjacent patio, and a possible ramp that connects the enclosure to a room built atop a higher terrace. In sum, House 1D was the

most elaborately constructed house at Las Varas and likely served as the residence of a high-ranking family.

Defining the "Coastal Cajamarca" Style

Excavation of the residences of Las Varas confirmed that, like what we found on the surface, pottery from Las Varas was predominantly in the Coastal Cajamarca style. In this and the next section I describe the history of the Coastal Cajamarca style and the steps involved in producing a Coastal Cajamarca-style bowl.

Cajamarca-like pottery in the Lower Jequetepeque Valley was first reported by Disselhoff (1958) in his excavations of San José de Moro. Kosok (1965:122) illustrated the same sherds from surface collection of Moro. Shimada (1982:173) also found Cajamarca-like pottery at the site of Sicán, and because it was suspected that the pottery was produced on the coast rather than in the highlands, he named the style "Coastal Cajamarca."

Jorge Montenegro (1997) analyzed Coastal Cajamarca plates from the Lambayeque region and few sherds from the Jequetepeque and Zaña Valleys. He divided the Coastal Cajamarca style into two sub-styles: Sicán Painted Plates (Lambayeque) and Zaña-Jequetepeque (Montenegro 1997:4-5). Daniel Julien (1988:228) made a similar observation when he divided the Coastal Cajamarca into three sub-styles based on geographic origin. In other words, the Coastal Cajamarca style varied from valley to valley.

Julien (1988:229; 1993:262) and Montenegro (1993:144) suggested that the Coastal Cajamarca style originated from the cis-Andean or the *chaupiyunga* zone rather

than the coast. It appears, then, we have sub-styles within the broader Cajamarca style, located in the middle valley or *chaupiyunga*. The vast majority of the bowls from Las Varas (more than 90%) was in the Coastal Cajamarca style, and the variety of designs from Las Varas was greater than that from any other reported site. This, I believe, is strong evidence that the Coastal Cajamarca style was native to the middle valley, which supports the observations made by Julien and Montenegro.

The Anatomy of a Las Varas Painted Bowl

The interior of a Las Varas painted bowl has either red or black (never both) designs in geometric and zoomorphic motifs painted against a white background. A band of white slip wraps around the rim on the exterior of the bowl. On some bowls this band is uniform in width, which indicates that the band has been carefully painted (Figure 4.82); on other bowls this band can be uneven or sloppy (Figure 4.83). Unlike ceramics from the highlands of Cajamarca, whose exterior designs include parallel lines and sometimes the dot-and-crescents motif, Las Varas bowls have only this band of white slip as their exterior decoration. A ring of red or black slip is then painted on top of the rim.

The upper portion of a Las Varas painted bowl (near the rim) is sometimes slightly thicker than the body (Figure 4.84), which leads Montenegro (1997:99) to suggest that the bowls were made by pressing clay into another bowl that served as a press mold. The pressing would result in a pronounced thickening near the rim (Figure 4.85).

The vast majority of the bowls are supported by a ring base, and a few bowls, usually the smaller ones with diameter less than 12 cm, have tripods (Figure 4.81). The

bases are made separately from the body and later attached before firing, as evidenced by joint lines between the base and the body (Figure 4.86), or pieces of ring bases that have fallen off (Figure 4.87).

Las Varas painted bowls often have interior post-fire incisions whose meaning is unclear (Figures 4.88 and 4.89). As Bowl 2 demonstrates, extensive usage occurs *after* the bowl was incised (Figure 4.49). Given the great variety of incisions found at Las Varas, the incision may be an owner's mark. It is important to distinguish the post-fire incision from a pre-fire potter's mark. The pre-fire mark allows the potter to distinguish his pot from other pots that have been fired together (Donnan 1971:465). Only a few potters' marks have been found at Las Varas.

The shape of Las Varas bowls suggests that they were used for serving food or drinks. Tschopik (1950:208) recorded a type of bowl called *čuwa* in Chucuito, Bolivia, which may be a good analog of the bowls from Las Varas:

> *Bowls*. The ordinary bowl, *čuwa*, is fairly standard in size, and has a diameter of 6 or 7 inches [15.2-17.8 cm] and a height of about 3 inches [7.6 cm]. Most bowls of this type have ring bases, and are slipped and painted with cursive designs in red or red and white. These vessels are used principally as food bowls, and are held to the lips by the base during meals, since spoons are not employed in eating. The *čuwa* is also filled with melted fat, supplied with a rag wick, and used as a lamp, on which occasions it is designated *meča čuwa* (from Spanish, *mecha*, "wick"). On other occasions, the bowls are employed as covers or lids for ollas and chicha jars, or are filled with glowing coals and used as incense burners. A second type of bowl, designated *platilo* or *platil čuwa*, has a flaring lip and lacks the ring base. These bowls always have painted decoration in red and white, and are employed as food bowls in weddings and on other festive occasions. Formerly, a generation ago, the bride and groom at a wedding jointly ate a special dish, *timpu*, from such a bowl in order to symbolize their union.

Talk about how the painted bowls are always found in fragments or broken in the midden and construction fills. The only whole bowls are found as offerings (Llama House) or in burials (such as those from San José de Moro).

Spoons

Ceramic spoons have been reported in the highlands of Cajamarca (Matsumoto and Ushino 1982:188-189; Watanabe 2006:86), and we have found four fragments of ceramic spoons at Las Varas, all from the Llama House. Three fragments were tips that came from two different spoons; the fourth fragment was an almost complete spoon that was only missing its tip (Figure 4.90). As noted by Watanabe (2006:86), these spoons are rare compared to the amount of pottery one finds during excavation, suggesting that the ceramic spoons were special objects produced and discarded infrequently.

Spindle Whorls

I found 78 spindle whorls at Las Varas: 71 round discs and 7 spheres. The disc whorls are generally heavier than the spherical ones (Table 4.1), and this difference may relate to the thickness of the thread being spun. The heavier discs could have been used to spin coarse llama hair, and the lighter spheres to spin cotton (Vaughn 2009:121), which would explain why disc whorls are more commonly reported for the highlands and more spherical whorls are reported for the coast, where cotton is grown. Two weight classes of spindle whorls have also been documented for Mexico, where the heavy whorls were used for spinning maguey fiber and the light whorls for spinning cotton (M. Parsons 1972, 1975).

The disc whorls were made by grinding the edges of a sherd into a round disc and then drilling both sides to create a hole in the center. Most of the discs found at Las Varas were unfinished: they range in shape from elliptical to round with incomplete perforations on one or both sides (Figures 4.91 and 4.92).

Most of the spherical whorls from Las Varas was made from fired clay (n = 5), but we also found spheres made from stone (Figure 4.93) and metal (Figure 4.94). Unlike torteros, which were made from sherds, the pirurus were made by firing a small sphere of clay incised with designs. Ethnohistoric documents described specialists on the coast dedicated to the manufacture of spindle whorls (Hart 1983:251), and all but one of the spherical whorls from Las Varas were elaborately decorated. None of the disc whorls were decorated, though some were made from the sherds of painted bowls (Figure 4.95). One spherical whorl depicted a miniature jar (Figure 4.96), and the one stone spherical whorl was decorated with 8 tiny inlays of chrysocolla (Figure 4.93).

Domestic Activities at Las Varas

Guinea pig pens were found in the Llama House and the Crystal House, which indicates that the inhabitants of Las Varas were raising and consuming guinea pigs. Guinea pig dung was found in the construction fill and midden of all the residences except for the Spondylus House. Besides guinea pigs, we found remains of camelid (most likely llama), deer, shellfish, crab from the ocean, river crab, and crayfish.

Heavy and light spindle whorls indicate that the residents were spinning camelid wool and cotton. We found awls or picks made from llama bones that resemble *wichuñas* or *pallanas* (Figure 4.97) – picks for spacing the warp and the weft (Miller 1979:77-79).

If these tools were indeed wichuñas, it would indicate that the residents of Las Varas were spinning threads and weaving textiles.

Ethnic Affiliation of the Residents of Las Varas

The pottery style of Las Varas is more similar to that of Cajamarca than to the coast. Designs on bowls were painted rather than press-molded, cooking pots and storage jars were decorated with appliqué rather than paddle-stamped. Though coastal-style sherds were found in Las Varas, they constitute a very small minority in the assemblage (400 coastal-style sherds out of 8681total diagnostic sherds). As we will see in the next chapter, most of the coastal-style pottery is concentrated in a ritual sector of Las Varas.

The Crystal House and the Spondylus House had a stone jamb next to their entrances; the stone jamb is a common architectural element in the highlands. Most of the spindle whorls at Las Varas were made from round ceramic discs, which were frequently found in highland sites. In sum, excavations at the residences show that the domestic pottery and architecture exhibit influence from the east, that is, from the mid-valley and the highlands.

Chapter 5

The Ritual Boundaries of Las Varas

In this chapter I describe two ritual areas of Las Varas: the Reception Platform, located next to the western entrance of Las Varas, and the Plazas of the Malquis, located near the southern entrance of the site. By placing these ritual structures near the edges of Las Varas, the residents were drawing a ritual boundary around their village, creating social differences between visitors from the coast and visitors from the highlands. I will present archaeological, ethnohistorical, and ethnographic examples from other parts of the Andes to provide additional support for my argument.

The Reception Platform

Walking across the Pay Pay bridge and traversing the cliffside path, one arrives at the Reception Platform, a structure built on a ridge overlooking the Jequetepeque Valley, the fields of Las Varas, the Crystal House, and the Gallito Ciego Dam (Figures 5.1 and 5.2). During fieldwork, this ridge was designated Area A of Sector 1. Here we found benches, plastered floors, and many coastal-style ceramics such as paddle-stamped and cambered-rim ollas. The total area exposed at the Reception Platform was 74 m^2 (Figure 5.3).

Excavation and lab analysis indicate that visitors from the coast entered Las Varas via the Reception Platform and left behind their coastal-style pottery and marine shellfish. Different lines of evidence, including architecture and the presence of certain artifacts, demonstrate the ritual function of the Reception Platform.

Architecture

Phase 1. During the first phase of the Reception Platform, a retaining wall (Wall 1) was built on the slope to create a terrace approximately 6 m long and 9 m wide (Figure 5.4). Then a rectangular structure (Bench 1) was built so that it projected out from Wall 1. Bench 1 measured 170 cm long, 40 cm thick, and 60 cm high (Figure 5.5). Bench 1 and the floors (Floor 1) of the terrace were then plastered with daub. The fine quality of the floor distinguished the Reception Platform from the residences: no plastered floors were found at the Crystal House, and the hard surfaces found at the Llama House were patchy and poorly preserved. In contrast, the floors of the Reception Platform were sturdy and could be easily uncovered using a trowel and brush (Figure 5.6).

The last addition to Bench 1 was a *quincha* wall (Wall 2) made from cane and daub. It ran parallel to Wall 1 and was constructed on both sides of Bench 1 (Figures 5.4 and 5.5). Wall 2 was removed during the next stage of remodeling, so all we found was the "ghost" of Wall 2 – a line of missing floor that ran parallel to Wall 1. Fragments of cane-impressed daub were found along this linear feature and against the sides of Bench 1 (Figure 5.7).

During Phase 1, Wall 2 would have blocked a visitor's view of the valley. Bench 1, however, created a 1.7 m-wide gap in Wall 2, and only by stepping through this gap could one see the valley below.

At the end of Phase 1, Wall 2 was removed. Wall 3 was built in front of Wall 1, and the space between them was filled with bedrock material (granodiorite), burying Bench 1 (Figure 5.8). The top of the fill was then sealed by a clay floor (Floor 2). The use of clean fill was unusual since most construction fill, especially that from the residences, included sherds, animal bones, and ash. Radiocarbon sample taken from this sealed context places the *terminus post quem* of Phase 1 to ca. AD 1090, when the Llama House was abandoned:

Beta 287769, Las Varas #811

Las Varas, Sector 1, Reception Platform, Excavation Unit 10, Layer F, 45 cm below surface, 30 cm below Floor 1, 20 cm above Floor 2. Maize cob deposited after Phase 1 but before Phase 2, sealed between Floors 1 and 2 and Walls 2 and 3.

Measured Age: 710 +/- 40 BP

13C/12C: -10.1 o/oo

Conventional Age: 950 +/- 40 BP

2 Sigma Calibration: Cal AD 1010-1170

Phase 2. During the second phase, three small rectangular rooms (each measuring 3 x 2 m with walls 30 cm high) were built in front of Wall 3 (Figures 5.9 and

5.10). Circular depressions, 10-30 cm in diameter, were present on the floor of these rooms (Figure 5.11). The floor dipped into some of these depressions (Figure 5.12), which indicates that they once held a jar. Indeed, the bottom half of an olla was found in a depression in Unit 10 (Figure 5.13); this olla had press-molded designs, a decorative technique typical of the north coast but not the northern highlands. The presence of these pot rests suggests that the rooms served as storage units during Phase 2.

Could the pot rests have been present in Phase 1, with the ollas placed in front of the *quincha* wall? Two lines of evidence indicate that the ollas had been placed on the floor during Phase 2 rather than Phase 1. First, the floor of the storerooms rises to join the plaster of walls from Phase 2 (Figure 5.14). Since the pot rests were contemporaneous with the floor, they should also date to Phase 2. Second, the depression holding the bottom half of an olla (Figure 5.15) was stratigraphically above Bench 1, and since Bench 1 dates to Phase 1, the olla must have been placed there during Phase 2.

A row of four adobes was found 10 cm below the surface of Unit 5 (Figure 5.15). This row of adobes are parallel to Walls 1, 2, and 3 (Figure 5.3), and therefore probably dates to Phases 1 or 2, or both. The adobes were not standardized in size – their lengths varied between 21 and 50 cm, their widths between 15 and 22 cm, and their average thickness was 10 cm. These were the only adobes found at Las Varas.

At the end of Phase 2, the storerooms were filled with earth that included few sherds and animal bones. Above this fill was a hard compact layer, and sitting atop this hard layer was a flat square rock measuring 30 x 30 x 15 cm (Figures 5.16 and 5.17). This square rock was flanked by two miniature walls measuring just 20 cm high and 5 cm

thick (Figure 5.18). The rock was then covered with earth, and afterwards no structure was built above this square dedicatory stone.

Phase 3. In the third and final phase of the Reception Platform, two walls (Walls 4 and 5) forming a "T" were built on the upper level (Figure 5.19). Two small square structures (Bins 1 and 2), each measuring 80 x 80 x 30 cm, were built at the intersections of Walls 4 and 5. Bin 2, located to the north of Wall 5, was mostly destroyed (Figure 5.20). Bin 1 was undamaged (Figure 5.21). Walls 4 and 5 have a slightly different orientation from earlier walls, with a deviation of approximately 11 degrees.

Two parallel lines of stones slightly longer than a meter were built against the south side of Wall 5 (Figure 5.22). Guinea pig or *cuy* pellets were found between the two walls, which suggest that they might have been a *cuy* pen. A concentration of ash, 30 cm in diameter, was found at the southwest corner of Wall 5 (Figure 5.23). The north side of Wall 5, by contrast, appeared to be "empty" since we did not find any stone structures or sign of activity. Finally, a broken, football-shaped vessel was found below Wall 5 near its western end (Figures 5.15 and 5.24).

Evidence Indicating the Ritual Function of the Reception Platform

The Reception Platform was unique in having storerooms, pot rests, adobes, and other features not found elsewhere at the site. Archaeologists would describe the platform as a "ritual" structure since it contained "attention-focusing devices" or "special fixtures" (Renfrew and Bahn 1996:391). For example, Bins 1 and 2 were built directly above Bench 1, even though they were oriented to different directions (Figure 5.3). By placing a square rock above the center of the storerooms, attention was focused on the

central part of the structure. The exact ritual meaning of these elements, however, is unknown.

Other lines of evidence besides architecture distinguish the Reception Platform from the residences. A human phalanx (Figure 5.25) was found in the fill of the central storeroom (Unit T2), which dates to the end of Phase 2. The phalanx exhibits prominent flexor sheath inserts (two ridges on the inferior surface), which are also present on the finger bones of females from Machu Picchu (Verano 2003:Figure 2.20) and San José de Moro (Nelson et al. 2000). Verano (2003:101) has suggested that such pronounced attachments were caused by activities requiring a firm grip such as weaving (see also Capasso et al. 1999:94). At Las Varas, this phalanx is the only human bone not found in a burial or cemetery. No human bones were found in the residences.

The Reception Platform also has the largest quantity of the marine gastropod *Polinices uber* (Figure 5.26) at Las Varas. The amount of *Polinices* (n=193) found at the Reception Platform contrasts sharply with its virtual absence in the residential areas (Table 5.1). Therefore when coastal visitors brought shellfish to Las Varas, *Polinices* were either discarded or offered at the entrance of the site, whereas other species were consumed in the residential areas.

The Reception Platform has more coastal-style pottery than all the residences – 80% of all the coastal-style sherds found at Las Varas (Table 5.2). Terrace 2 and the Lambayeque Cemetery also have high percentages of coastal-style pottery, but their sample size is low (Table 5.3). Since the Reception Platform and Terrace 2 are located near the western entrance of the site (toward the coast), they were probably the first areas to receive pottery from coastal visitors.

I summarize the evidence demonstrating the ritual function of the Reception Platform:

(1) architectural plans not shared by residences, such as T-shaped walls and *quincha* walls projecting from a central bench

(2) three construction phases, with drastic changes in each phase

Architectural elements not present in the residences, such as

(3) centrally placed bench and bins

(4) circular depressions for holding vessels (pot rests)

(5) storerooms

(6) well-made floor

(7) adobes

(8) clean gravel covering Bench 1

Unique objects or higher percentage of certain artifacts:

(9) square dedicatory stone

(10) human phalanx

(11) highest percentage of *Polinices uber*

(12) high percentage of coastal-style ceramics relative to the residences

Since the Reception Platform is next to the western entrance of Las Varas, it would have been the first structure seen by visitors coming from the coast. Instead of

walking directly into people's houses, the visitors had to pass through the Reception Platform and, in some cases, leave behind their coastal products. In addition, the ritual performed at the platform provided a protocol for the interaction between local residents and their guests from the lower valley. This interpretation is based on the evidence that (1) the Reception Platform was built near the road to the coast, (2) it has large quantities of coastal-style pottery, and (3) it was not a residence but a checkpoint or "welcome center." Thus the identity of an "outside" ethnic group would have been recognized at the Reception Platform.

In the following section, the Reception Platform will be contrasted with another ritual area, the Plazas of the Malquis, located at the southern end of Las Varas and next to a road to the highlands. The Plazas of the Malquis do not have large amounts of coastal-style pottery, though they are surrounded by cist tombs that might have contained the remains of community ancestors. I will use data from the Plazas of the Malquis and the Reception Platform to argue that ritual areas served to recognize and reinforce ethnic identities at Las Varas.

The Plazas of the Malquis

At the southern end of Las Varas is a hill more than 200 m high, and north of this hill, at its base, are three plazas – the Plazas of the Malquis (Figures 5.27-5.29). The plazas are placed along a north-south axis with the largest plaza (Plaza 1) situated at the northern end and the smallest plaza (Plaza 3) at the southern end (Table 5.4 and Figure 5.30). Standing in Plaza 3 and facing the hill, one would see to the right, the Cemetery of

Standing Stones, and to the left, a path that takes one behind the hill into the Quebrada del Caracol (Figure 5.27).

Plazas 1 and 2 are lined with single courses of stones, whereas Plaza 3 is a low platform made from stone and mud mortar. Since Plaza 2 is slightly higher than Plaza 1, and Plaza 3 higher than Plaza 2, benches and steps connect one plaza to another. This sequence of plaza-bench-plaza repeats until it reaches the southern end of Plaza 3, which has a 50-cm-high bench with cist tombs.

Compared to other sectors of Las Varas, a very small area (24 m^2) was exposed at the Plazas of the Malquis. Empty cists were present on the surface of Plaza 3, so we excavated them to determine whether these cists were tombs or storage pits. I also wanted to investigate the activities associated with these plazas, which – given their large size and unique layout – did not appear to be residences.

I named this sector the "Plazas of the Malquis" – *malqui* being the Quechua word for "ancestor" – because I believe the cist tombs once held the ancestral bones of Las Varas' residents. No more than ten cist tombs were found at Las Varas, and most were concentrated at the Plazas of the Malquis. Doyle (1988:94) noted that "hundreds of mummies and burial scenes are described in the [ethnohistorical] documents, but only a relatively small percentage of these are said to be malquis." Given the low number of cist tombs at Las Varas, it is likely that individuals placed in the cists were accorded "malqui" status.

Excavation of the Plazas

I excavated Unit 1, a 2 x 2 m square, to define the northern edge of Plaza 3. Patches of ash were found 5 cm below the present surface, and below those patches was a 5-cm-thick layer of guinea pig dung (Figure 5.31). This layer of dung was stratigraphically beneath the northern edge of Plaza 3, so the guinea pig dung was either (1) deposited before the construction of Plaza 3 or (2) tossed into a pit dug below the surface of Plaza 3 *after* the plaza was built. A few fragments of pottery and marine shell (*Protothaca*) were found in Unit 1. Below the layer of guinea pig dung was sterile soil.

Unit 2 was placed near the northern edge of Plaza 2, where four fragments of highland Cajamarca-style ceramics were found less than 10 cm below the surface. On both the interior and exterior surfaces of these sherds were curvilinear and circular designs in red and black painted over a white background (Figure 5.32). One rim sherd (Las Varas Sherd #7627) had an exterior appliqué that was painted and incised (Figure 5.33). These Cajamarca-style ceramic fragments recovered from Plaza 2 were not made from kaolin.

Units 3 and 4 were excavated to determine the function of some rectangular structures inside the plazas. These "structures," measuring 2.5 x 4 m, did not appear to be rooms since they only consisted of a single course of stones. Unit 3, placed in one of the two rectangular structures in Plaza 1, produced some marine shells (*Semele* and *Donax*), ceramics, and a small crystal bar (Figure 5.34). The excavation of Unit 4 produced few ceramics, chipped stone, bones, and quartz. A layer of dark ash appeared in the east profile of the unit (Figure 5.35). Very few artifacts or features were found in Units 3 and 4, thus we were unable to determine the function of the rectangular structures.

Units 5 and 6 were placed on the benches west and south of Plaza 3. A small fragment of *Spondylus* was found in Unit 5 (Figures 5.36 and 5.37), and 10-20 cm below the *Spondylus* was a stone post (Figure 5.38). The presence of the stone post suggests that the plaza was once roofed, though we did not find fragments of wall daub like those found at the Crystal House. The west wall of the west bench of Plaza 3 is slightly curved (Figure 5.39); a curved wall is also present at a structure east of the Plazas of the Malquis (Figure 5.40). Other artifacts from Unit 5 include small quantities of pottery and animal bones.

The excavation of Unit 6 gave us information on the size and construction of the south bench of Plaza 3 (Figure 5.41). This bench is 50 cm high and consists of a retaining wall made from stone and mud mortar. Its upper surface was compact but not hard or smooth enough to be classified as a floor. In fact, none of the excavation units in the plazas revealed well-prepared floors like those found at the Reception Platform. Artifacts from Unit 6 include small quantities of ceramics, animal bones, and guinea pig dung.

Unlike the Reception Platform, the Plazas of the Malquis did not have major episodes of re-modeling: below most walls and benches of the plazas was sterile soil. If re-modeling had occurred, new architectural units were likely built *adjacent* to previous walls or benches rather than above. In other words, the plazas and benches had expanded horizontally instead of growing vertically like the Reception Platform.

Excavation of Cist Tombs

Four cist tombs have been identified on the benches above Plaza 3 (Figure 5.42), though only one of them – Cist Tomb 3 – was excavated. Two more cist tombs (Cist Tombs 1 and 2) are located in the hillside 20 m southeast of Unit 6, and future excavations will likely reveal more cist tombs in the area. While Cist Tombs 1 and 2 are oval in shape, Cist Tomb 3 is rectangular with slightly rounded corners. Cist Tomb 1 (Figures 5.43-5.45) had been emptied, perhaps by looters, prior to our investigation. We left it unexcavated and, in order to prevent further damage and looting, we backfilled the tomb. Only Cist Tombs 2 and 3 were excavated for this project.

Cist tombs are common in the highlands of Peru, including Cajamarca (Julien 1988:136-138), Junín (Parsons et al. 2000:172-175), Ayacucho (W. Isbell 2004:9-10), and Cuzco (Zapata Rodríguez 1997). They have also been documented in the Moquegua Valley (Goldstein 2005:245-247) and on the coast of the Cañete Valley at the site of Cerro Azul (Marcus 2008b:308-312). In northern Peru, cist tombs are prevalent in the middle valley and highlands, but not on the coast (Figures 5.46 and 5.47). In the Jequetepeque Valley, I have not seen any cist tombs west of Las Varas except for a small cemetery about a kilometer west of the site. The area around Las Varas therefore represents the western limit of cist tombs in the Jequetepeque Valley.

Cist Tomb 1 is an oval, stone-lined pit that measures approximately 1 m deep and 1.5 m wide. The wall of the tomb consists of angular stones with smaller rocks in between. Rectangular stones are ideal for building cist tombs since they can be easily stacked and arranged. We backfilled Cist Tomb 1 without excavating it, so we do not know whether it was plastered at the bottom.

Cist Tomb 2 is very different from Cist Tomb 1 in construction. Instead of using rectangular stones, the wall of the pit is made entirely of flagstones bound by mud mortar (Figure 5.48). Cist Tomb 2 is the only example of this construction technique at Las Varas, though future excavations might reveal more tombs built in this way. The bottom of Cist Tomb 2 is paved with flagstones, and below the flagstones is bedrock (Figure 5.49). Small fragments of bones, too broken to be identified, were found in Cist Tomb 2. Since we did not find clear evidence of human remains, this structure could have been a storage pit instead of a burial. But if Cist Tomb 2 was indeed a burial pit, it would represent another way of making cist tombs at Las Varas.

Located on the west bench of Plaza 3, Cist Tomb 3 was found filled with stones prior to our excavation (Figure 5.50). These stones, being flat and rectangular, resembled other stones lining the cist. They appeared to have been dismantled or have fallen from the north wall of the pit. After removing the collapse, we found a surface paved with five flagstones (Figure 5.51), and beneath this layer of flagstones were the remains of a human foot (Figures 5.52 and 5.53). The foot rested on a layer of floor that had cane imprints on its underside (Figures 5.54 and 5.55). The foundation of Cist Tomb 3 was therefore a layer of cane stalks, each stalk measuring approximately 4 cm in diameter and oriented north-south. A floor was then plastered over this layer of cane, and human bone was placed above the floor. Besides the human foot, other artifacts in Cist Tomb 3 included small quantities of ceramics.

Three general observations can be made from our excavation of the cist tombs. First, Cist Tomb 3 provides clear evidence that stone-lined pits were once used as burials, though it is still possible that other pits were used to store food or pottery. Second, the

few cist tombs around Plaza 3 could not have accommodated everyone who died at Las Varas. It is more likely that selected individuals, such as the leaders of a lineage or *ayllu*, were placed in the cist tombs around Plaza 3. Most individuals were probably interred in a small hill overlooking the Lambayeque Cemetery. At other sites in the middle Jequetepeque Valley, human remains were placed in caves like those observed near the town of Santa Catalina in the Quebrada Chausis, some 17 km east of Las Varas (Figure 5.56).

Third, my excavations revealed different ways of building cist tombs at Las Varas. Cist Tombs 1 and 2 are oval, whereas Cist Tomb 3 is rectangular. Cist Tombs 1 and 3 were made from stacking rectangular stones, whereas Cist Tomb 2 was made entirely from flagstones. Sector 2B, the Cemetery of Standing Stones, would provide examples of other types of burials. Future excavations of cist tombs might reveal a correlation between the shape of the cist with the age, status, or gender of the interred individual. For example, rectangular cist tombs might have contained men, while oval cist tombs might have contained women. A larger sample of excavated cist tombs is needed to give us a better understanding of chaupiyunga burial practices.

Early Spanish Accounts of Andean Plazas

Ethnohistorical accounts of Andean societies often describe plazas used for ceremonies and celebrations. Cieza de León (1959 [1553]:94), for example, recorded the use of plazas in Cajamarca during the 16th century:

> And when they observed their feasts, a great multitude of people assembled in the clean, well-swept squares, where they performed dances

> with no small quantity of their wine, brewed from corn and other roots, consumed.

Another example of feasting in plazas came from the province of Huamachucho, south of Cajamarca:

> And in these plazas they make great fiestas of their sacrifices that last five days and they make great dances and songs, dressed in their best clothes, and there is great drunkenness, and all this time they never stop drinking, some falling down as others are getting up…(Agustinos 1992 [1560]:15, cited and translated in Moore 1996:792)

The presence of *malquis* near plazas was recorded in a 17th century extirpation document from Cajatambo, some 420 km south of Cajamarca:

> They discovered a large simulacre and temple from pagan times that had a small plaza and many small rooms all around it, and in the middle three tombs enclosed by stone walls, and they opened and dug up the middle one and showed the idol called Auca Atama, which was a corpse of a pagan individual whom the Indians of this ayllus [Chamas] and those of Nanis adored because he was their first progenitor and conqueror and founder of that town…(Doyle 1988:130)

Had no accounts been written about the plazas, I could still demonstrate their ritual and ceremonial function by relying solely on the archaeological evidence. First, the size of the three plazas, being much larger than that of the residences, is an indication that they were used for public events (Figure 5.57). Second, these plazas are associated with cist tombs, another feature absent from residences. Lastly, the ceramics recovered in the plazas have a higher percentage of large vessels compared to residences. In other words, here we found more large vessels or *tinajas* that were probably used to serve *chicha*, or maize beer. The presence of these prehispanic "kegs" is another indication that feasting

and celebration occurred in this area. I should note that only a few units were opened at the Plazas of the Malquis and that more investigation is needed to fully document their construction and associated activities.

Rituals Defining Social Boundaries: Other Examples from the Andes

It appears that the residents of Las Varas had marked the difference between visitors from the coast and the highlands by constructing two different ritual areas for them. Table 5.5 summarizes the differences between the Reception Platform and the Plazas of the Malquis.

A similar practice, where people of certain gender or ethnicity had to go through designated entrances, was recorded in Huacho during the 17th century:

> The site is on one side of the port of Herradura, two and a half leagues [10.5 km] from the town of Huacho, where the sea hits the Playa Chica and bends, and that is why it is called the "horseshoe", and the temple is located on a small hill to the right of the royal road; to enter this temple, one enters through a walled corridor, hand-made from stone and mud, well-made and very curious; it is more than one cuadra in length [100 m], and the temple is entered by different rooms and divisions, some used by the highlanders and others by the yungas [lowlanders], and for women it also had different entrances. (Medina 1904 [1650]:215, my translation)
>
> El sitio [la huaca de Choque Ispana] es á un lado del puerto de la Herradura, dos leguas y media de este pueblo de Huacho, donde bate la mar en la Playa Chica y hace á manera de un recodo, que llaman Herradura por formarse así, y el adoratorio cae en una media loma, á mano derecha del camino real; empiéyase á caminar y entrar á este adoratorio por un callejón de paredes, por una y otra banda, hecho á mano, de piedra y barro, bien formado y muy curioso; tiene más de una cuadra de largo, y *se entra al adoratorio…por diferentes compartimientos y divisiones, unas que servían para los serranos y otras para los yungas, y para las mujeres destos había también diferentes entradas*. (Medina 1904 [1650]:215, emphasis added)

Ritual was also used to demarcate sacred boundaries, an example being the Inca citua ceremony described in Chapter 1. The marking of sacred space continued into the 20th century as recorded by ethnographers conducting fieldwork in the Andes. In April of 1972, Bastien (1978) documented the "New Earth" ritual performed by the highland community of Kaata in Bolivia. In this ritual, people gathered in the courtyard of Sarito, "the one who knows." Here Sarito would send emissaries to "feed" the earth shrines – that is, put offerings of coca and llama fat into an artificial natural opening in the ground. These holes – the earth shrines – were usually covered with rocks and only opened during the time of feeding. Two shrines, Qowila and Kalla Kalla, were "interayllu ritual sites" where members of different ayllus would interact and exchange products such as fruits, pots, bread, and charqui (Bastien 1978:67). By feeding the various earth shrines, the New Earth ritual symbolically united the various body parts of the mountain, including its hands, legs, eyes, etc., into one complete body. This rite reinforced the ties between different communities (Bastien 1978:81) and, like the Inca Citua ceremony, used ritual journey to define the community's boundary.

In the highlands of Ayacucho, Billie Jean Isbell (1978) observed the Yaqar Aspiy ritual in September of 1970. During Yaqar Aspiy, a procession traveled from the *sallqa*, or high-altitude pasture, to the *quichwa*, the lower agricultural zone. This journey symbolized the fertilization of the earth, Pachamama, by the mountain spirit, the Wamani. The procession would stop at various chapels to make offerings of chicha and coca. These chapels formed concentric rings around the village, and each ring of chapels represented the boundary between the village, sallqa, and quichwa (B. Isbell 1978, Map 5). Isbell argued that this ritual and others reinforced the community's boundary: "the

three rituals [the Yarqa Aspiy, Santa Cruz, and the Herranza] embody the concepts of closed, bounded social space dichotomized as civilized (the village) and savage (the *sallqa*)…These three rituals remind the Chuschinos that their society is socially and spatially closed and bounded" (B. Isbell 1978:164).

Finally, in their survey of the Upper Mantaro and Tarma drainages, Parsons et al. (2000:168) found tombs that were placed near the outer walls of settlements. The authors inferred a relationship between ritual and community boundary:

> We suggest that the close spatial association at these settlements between external walls and tomb complexes relates to the importance of public rituals associated with ancestor cults in defining and validating the settlements' larger societal role. The combination of walls and tombs in this highly visible and strategic 'edge' or 'border' setting provided a powerful physical symbol, *vis à vis* comparable social units, of the social distinction of the settlement and of its long-term associations with the immediate area.

Two notes on my use of analogies from the Andes: first, the examples I have cited show a general relationship between ritual and social boundary, but each case features a different rite or ceremony. Indeed, various rituals may differ in their contents but at the end serve the same social function. Second, the use of ritual to define social boundaries is not specific to the Andes. There are numerous examples of ritual reinforcing social and ethnic identities in other parts of the world, and a research project could be designed to investigate the long-term effects of ritual on the emergence and evolution of various ethnic groups and their boundaries.

Conclusion

The results of my excavations at the Reception Platform and the Plazas of the Malquis suggest a relationship among ethnicity, ritual, and public space. First, interaction between different ethnic groups often occurred in the ritual or public area. Las Varas, located between the coast and the highlands, received products from both regions. Visitors or traders, however, did not walk directly into people's houses – instead, their arrival and traffic flow were channeled by ritual structures built near Las Varas' entrances. These "checkpoints" guided the interaction between locals and outsiders.

Second, the differences between the two ritual areas indicated the differences between coastal and highland communities. The Reception Platform is much smaller than the Plazas of the Malquis and therefore it restricted the number of visitors who entered from the coast. People arriving from the highlands would enter the Plazas of the Malquis and see the cist tombs. Coastal visitors, by contrast, could only see the plazas from a distance when they first entered Las Varas. These coastal people might advance further and see the Plazas of the Malquis and participate in the fiestas, and highlanders might go farther west and tour the Reception Platform. But an outsider visiting Las Varas for the first time would need to go through one of the two checkpoints, each with a unique reception area depending on whether one came from the coast or the highlands.

The implication is that ritual or public space, such as ceremonial plazas, was an important locale where people recognized and reinforced their ethnic identities. In the previous chapter I noted that the excavation of houses could provide data on the material culture of a particular ethnic group. It is in the public space, however, that people share their ideas regarding religion, gender, and politics with outside communities. Here they note the differences or similarities and decide to join or break away from other groups.

For archaeologists, the activities and material remains associated with the public areas will be different from those found in the house. In other words, each context tells a different story. By excavating different contexts such as houses, plazas, and cemeteries and assessing the differences among these data, we can get a more complete picture of how ethnic identity was constructed.

To detect the presence of social boundaries, archaeologists might investigate activities occurring near the border to see if they are different from those happening "inside," that is, closer to the center of a particular community or polity. The unit of analysis can be a settlement, region, or neighborhood. If there is a difference in activity between the inner and outer zones, then those activities may be associated with the creation of social boundaries, though one needs to establish the chain of causation between such activities and the creation of social boundaries. My argument in this chapter is that Andean public rituals, through the periodic and repetitive demarcation of territory, can be used to create social and ethnic boundaries. I have advocated the excavation of different contexts to investigate ethnicity, and in the next chapter I will use another type of data – tombs and burials – to demonstrate the co-existence of coastal and highland customs at Las Varas.

Chapter 6

The Cemeteries of Las Varas

Archaeologists often use burial data to infer cultural contact and migration. Yet the identification of ethnicity using grave goods is problematic, since exotic objects, obtained from long-distance exchange, might indicate a person's prestige rather than ethnicity (Stanish 1992). Indeed, some archaeologists have proposed that artifacts from houses or residences are better indications of migration or ethnicity (Burmeister 2000; Stanish 1992). I believe that burial data are still useful for investigating ethnicity, but we should focus less on the objects in a burial and instead examine the burial position, burial structure, and the larger context – e.g., other burials, the site, the region –in which the burial was found. For example, if a burial was found with only one foreign object, then the case is very weak for this person being a foreigner. But if that individual was found with multiple foreign objects, buried in a non-local-style tomb facing the direction of a distant homeland, and surrounded by 10 other individuals buried in a similar manner, then a much stronger case could be made for these individuals being immigrants or maybe converts of a foreign religion. Bioarchaeological data from osteometric, DNA, and strontium isotope analyses could provide further evidence for migration and colonization. We should, however, expect cases where the biology does not match the

ethnicity, such as when someone with genetic roots in the highlands joining a coastal ethnic group later in his life.

What would funerary practices tell us about the ethnic affiliation of the residents of Las Varas? Did Las Varas residents follow coastal, mid-valley, or highland customs of burial? To answer these questions, I excavated two cemeteries at Las Varas: Sectors 2 and 4. As a result of my excavations, I discovered that both coastal and local (mid-valley) burial customs were present, with coastal-style burials concentrated in Sector 4 and an unknown style of burial in Sector 2.

Sector 2: The Cemetery of Standing Stones

South of the residential sector we found an area with 25 small circles of standing stones, 1-2 m in diameter, with human bones and sherds scattered on the surface (Figures 6.1-6.5). Twenty circles of standing stones were found west of a quebrada between Sectors 1 (the residential sector) and 3 (Plazas of the Malquis), and 5 circles were found east of this quebrada. Because of the presence of human bones on the surface, I believe this area was a cemetery. Our excavations, however, did not find any intact burials, since many circles had been looted prior to our investigation.

The stone circles varied in size and construction. Some formed perfect circles with a ring of stone (Figure 6.6), while others consisted of only 3 or 4 stones enclosing a semi-circle (Figure 6.7). Some of these stone circles were built beneath large boulders (Figure 6.8), like the box tombs reported by Bennett (1944:34-35) in the Ancash highlands. Most of the standing stones formed a circle, though we found a few examples of stone-lined square chambers with a standing stone at each corner (Figure 6.9).

Las Varas is unique for being the only site with circles of standing stones in my survey of the Middle Jequetepeque Valley. I could not find other examples of these circles of standing stones in the literature; perhaps future surveys of the valley east of Las Varas would find sites with similar constructions.

Sector 4: The Lambayeque Cemetery

Sector 4 is located at the eastern edge of the site, where the field of Las Varas tapers to a point like the tip of a crescent moon (Figure 6.10). North of Sector 4 is a cable that spans the Jequetepeque River, and attached to this cable is a suspending plank with two pulleys, a device locally known as the *oroya* (see Wilson 1988:58). A porter on the oroya, lying on his back, propels the plank forward by kicking the cable between the two pulleys (Figure 6.11). Since 2010 the Las Varas oroya had been replaced by a large suspension bridge, a much more inviting structure than the previous contraption for crossing the river (Figure 6.12).

When I first visited Sector 4 in 2005, I met and spoke to Señor Geraldo, who lived close to Sector 4 and was one of the few residents of Las Varas. He told me that Sector 4 had been a frequent target for looters, but during an episode of heavy rain sometime in the 1970s (perhaps the 1973 El Niño?), water from the hills deposited a thick layer of mud and rocks over the ancient cemetery. Looters decided that it was not worth their effort to dig through the thick layer of wash, and since then the cemetery had been protected from further destruction.

We excavated the flat ground at the base of a small hill and found three intact burials of the Lambayeque culture (hence the name “Lambayeque Cemetery”). On top of

this small hill I found walls, looters' pits, and fragments of human bone. Because of time and budget constraints, we did not excavate on top of this hill, but future investigations at Las Varas should test to see if burials are present in this area. Instead, we excavated the flatland below the small hill, which, given its proximity to the river, supported large algarrobal trees for shade, giving us a change of scenery from the barren, rocky hillsides of Sector 1 (Figure 6.13).

We exposed ten 2 x 2 m units (40 m^2) at Sector 4 (Figure 6.14). In some of these units we reached a depth of 3 m below the surface, making them the deepest soundings at Las Varas. The surface of Sector 4 was littered with rocks and boulders that had washed down from the nearby small hill. The top layer, Layer 1 (0-60 cm below the surface), consisted of clean, loose grayish sand with few pieces of pottery and human bone (Figures 6.15 and 5.16). The next layer, Layer 2 (60-130 cm below the surface), consisted of semi-compact gray sand; here we found Tomb 1 and the "leftovers" from looters, including large pieces of pottery and textile, entire human bones, and even a whole *olla* (Figures 6.17 and 5.18). Layer 3 (130-280 cm below the surface), yellowish in color, was where we found Tombs 2 and 3. Layer 4 (280-300 cm below the surface) is a continuation of Layer 3, though with more rocks. We did not reach sterile soil in our excavation, since cultural materials such as pottery and human bone were still present in Layer 4. I decided to stop at Layer 4 because the soil was very loose, and, at 3 m below the surface, the sidewalls had become weak and susceptible to collapse.

Tomb 1

Tomb 1, located in Layer 2 of Unit 1, contained a seated individual (Individual 1), a ceramic bottle, and two pieces of metal (Figure 6.19). Individual 1 appeared to have been an adult whose knees were drawn up to its chest. The top of its skull was 175 cm below Datum 1 (or 75 m cm below the present soil surface) and the pelvis at 257 cm below Datum 1. Part of Individual 1'sleft parietal and occipital bones had "flaked" off (Figure 6.20), and it is unclear whether this flaking was due to a disease or post-depositional factors (e.g., water seepage). Individual 1 was buried facing north; the soil to the right (east) of this individual was hard and compact, suggesting that she or he was possibly leaning on a hardened, chair-like earthen support.

Next to Individual 1's feet was a Lambayeque-style bottle – a smudge-fired, polished blackware made from a two-piece mold with incised and excised designs (Las Varas #1545; Figures 6.21 and 5.22). Its handle was made from two parallel ropes of clay. The designs consisted of repeated triangle-and-step motifs arranged in two concentric circles on the vessel's chamber and pedestal base, in addition to two modeled birds adorning the shoulders of the bottle. The concentric circles on the vessel were made by pre-firing incisions. The back of the vessel had a white patch with a small pebble in the center (Figure 6.23).

Individual 1 sat on two pieces of copper that had been wrapped in cloth (Figure 6.24).

Tomb 2

Tomb 2 was found in Layer 3 of Unit 2, at 254-290 cm below Datum 1 (or 154-190 cm below the present soil surface). This individual (Individual 2) was an infant

buried in a seated position facing northeast and surrounded by rocks (Figures 6.25 and 5.26). Accompanying Individual 2 were three olive shells (*Oliva incrassata*) under the baby's arms, two pieces of metal, and two pendants (clay and shell)near its head (Figure 6.27).

Tomb 3

We found the remains of a young camelid 170 cm below Datum 1 in Unit 4 (Figures 6.28 and 5.29). Some of the camelid's vertebrae were found articulated, but other elements of the skeleton appeared to be scrambled or out of place (Figure 6.30). Fifty cm below the young camelid we found a clump of mud and stones (Figures 6.31 and 5.32), and below this mud clump we found Tomb 3in Layer 3 of Unit 4, 260-280 cm below Datum 1, in a crevice formed by two boulders (Figure 6.33). Tomb 3 contained a young child (Individual 3) whose skeleton was crushed and flattened by the soil above, although we could still discern that the child was buried in a seated position facing east (Figure 6.34). Individual 3 was buried with a plate (Figure 6.35), a ceramic whistle (Figure 6.36), an *Oliva incrassata* shell, and a shell pendant (Figure 6.37 and 5.38). The plate buried with Individual 3 was not in the Coastal Cajamarca style since it lacked elaborately painted designs. The whistle was shaped like an arrowhead and painted with black lines over red slip. Beneath the crushed cranium of Individual 3, we found a shell pendant in the shape of a bird inlaid with tiny beads (Figure 6.29).

It is possible that the young camelid had been placed above Tomb 3 to accompany or symbolically match the young child in the tomb. Similar examples of "like-with-like" (Gaither et al. 2008) burials have been found in the Moche Valley, where Donnan and

Mackey (1978) reported a Chimú burial with 17 children buried with young llamas. At Farfán in the Jequetepeque Valley, Mackey found a Late Horizon burial with an adolescent female and an older female holding a newborn. They were matched by four llamas buried above: two adult llamas, one adolescent llama, and one newborn llama (Gaither et al. 2008:116). Hence Tomb 3 of Las Varas might represent another case of a "like-with-like" burial on the north coast of Peru.

Burials of the Lambayeque Culture

In contrast to Sector 2 and the Plazas of the Malquis (Sector 3), Sector 4 of Las Varas was characterized by coastal or Lambeyeque-style burials that lacked stone structures such as chullpas or cist tombs. On the north coast of Peru people were buried in a supine, extended position during the Moche period (Early Intermediate and Middle Horizon); they were buried in a seated position during the Late Intermediate. This change in burial position occurred around AD 1100. Mackey's excavation of a burial mound (Mound G) south of Compound III at Farfán revealed both seated and extended burials, and she dated the Lambayeque occupation of Farfán to AD 1100-1320 (Mackey 2011:151-156). Hence AD 1100 may have been a time when both practices (seated and extended burials) were present. In the subsequent periods (Late Intermediate and Late Horizon) all burials were seated.

Though materials from the Lambayeque (Sector 4, Las Varas) have not been radiocarbon dated, the fact that all the individuals were seated suggests that they were interred ca AD 1100 or later.

Chapter 7

Conclusions

In this chapter I summarize my findings from Las Varas and provide a preliminary history of the mid-valley during the 11th century AD. I then discuss the implications of my excavations at Las Varas for understanding interaction and exchange in the Andes.

Summary of Excavation Results from Las Varas

By excavating the residences of Las Varas, I was able to find domestic objects such as cooking pots and spindle whorls that reflected the ethnic affiliation of the individuals using these items. In the residences we found features and artifacts associated with everyday activities: hearths for cooking, whorls for spinning, and pens for keeping guinea pigs. The Las Varas residents used pottery that was different from that of the coast and the highlands. This style of pottery, previously called Coastal Cajamarca, most likely originated in the mid-valley.

Most of the spindle whorls from Las Varas were made from round sherd discs. Such whorls made from "recycled" sherds are common in the highlands; by contrast, coastal whorls were made from fired spheres of clay decorated with incisions and inlays. Houses at Las Varas were built of stone on hillside terraces. Sometimes the entrance to a

house is flanked by a large standing stone, which is typical of the highlands. In sum, the pottery and houses of Las Varas were more similar to those from the mid-valley and highlands than those on the coast.

We excavated two ritual areas located near the west and south entrances of Las Varas. Near the west entrance, which faced the coast, we found a ritual platform that had marine shells and large quantities of coastal-style pottery. These data suggest that coastal people arrived at the platform and traded with the residents of Las Varas. The other ritual area we excavated was a series of plazas located near the south entrance which faced the highlands. There were three plazas; the smallest plaza was surrounded by cist tombs typical of the highlands.

Excavations in the ritual areas of Las Varas gave us a different view of ethnic interaction than that provided by the houses. The ritual areas showed that the community of Las Varas received outsiders and visitors at different entrances. Coastal visitors entered via a ritual platform, whereas highlanders entered via ceremonial plazas. This indicates that ethnic differences were perceived at Las Varas and that public ritual can be used to reinforce different identities.

The last sectors excavated at Las Varas were the cemeteries. One cemetery had circles of standing stones with scattered human bones on the surface. I did not encounter this type of cemetery in my survey of the valley nor have I seen it reported in the literature. Excavations here did not uncover any intact burials, which could have been looted in earlier times. We found three intact burials in another cemetery located at the northeast tip of Las Varas. This cemetery did not have circles of standing stones; instead the burials were unmarked. Burials here were typical of the coast in having seated

individuals with coastal-style pottery. These findings are important because they show that multiple burial traditions (cist tombs, circles of standing stones, and unmarked burials) were present at Las Varas. I suggest that coastal people also lived at Las Varas, making Las Varas a multiethnic community.

All the sectors of Las Varas, when combined, provide important data on the process of ethnic interaction. Excavation in the residential sector showed that people at Las Varas had houses and pottery different from those on the coast. By excavating the ritual areas, I was able to document how ritual played an important role in forming and reinforcing ethnic identities. My excavation of the cemeteries documented the presence of coastal-style burials, showing that Las Varas was a multiethnic settlement. Each excavation context provided a different piece of the puzzle.

Jequetepeque Valley, AD 800-1200

What is the significance of Las Varas for our understanding of the history of the Jequetepeque Valley? During the Late Moche period (AD 600-800), Moche polities on the coast began interacting with mid-valley and highland communities, as evidenced by the presence of Cajamarca-style pottery at the coastal site of San José de Moro. At San José de Moro, excavations of burials from the Late Moche, Transitional, and Lambayeque periods allowed Bernuy and Bernal (2008:73-75) to construct a chronology of Coastal Cajamarca bowls. The earliest Coastal Cajamarca bowls were found in Late Moche (AD 600-800) and Transitional (AD 800-900) tombs. Painted inside these bowls was a wavy red line that spirals out, like a coil, from the center. There is only one example of this design found at Las Varas (Figures 7.1 and 7.2). The wavy-line design

was followed by the satellite motif, which appeared in the Late Transitional tombs of San José de Moro (Bernuy and Bernal 2008:74). The last phase of Coastal Cajamarca designs (after AD 1000), seen on the painted bowls of Las Varas, was characterized by a proliferation of motifs, including animals (crab, llama, fox), checkerboard, volute, concentric circles, etc.

Only this last phase (post-AD 1000) of Coastal Cajamarca, or chaupiyunga-style, bowls was found at Las Varas. This could indicate that a chaupiyunga community moved closer to the coast and settled in Las Varas around AD 900-1000, bringing with them their architectural canon (stone jambs), burial tradition (cists), and pottery style (pots and jars adorned with appliqué). Had such a movement occurred, we would expect sites east of Las Varas to have bowls with the wavy-line design – that is, these sites would date earlier than AD 900. Since no earlier occupations were found at Las Varas, the new settlers most likely arrived at an empty or near-empty patch of land where they then began building their residences.

The people of Las Varas had a powerful neighbor, Ventanillas. The relationship between Las Varas and Ventanillas seemed to be one of peaceful exchange, since we found chaupiyunga pottery in Ventanillas and coastal pottery in Las Varas. Perhaps the Reception Platform of Las Varas was built to control the access of visitors from Ventanillas and other coastal communities. We did not find any fortification at Las Varas, and such evidence for warfare is not hard to find if it existed at Las Varas. Elsewhere on the north coast of Peru, evidence for warfare – hilltop forts, with defensive walls, parapets, and sling stones – was prevalent in the Lower Jequetepeque Valley during the Late Moche period (Figure 7.3).

Many sites with coastal pottery and architecture were located upvalley from Las Varas, which meant that chaupiyunga and coastal communities had permeable boundaries that allowed them to bypass each other's territory. The discovery of Lambayeque-style burials at Las Varas indicates that multiple burial practices were present at the site, making Las Varas a multi-ethnic community. This pattern of multiple ayllus and ethnic groups occupying a single village or settlement was recorded in a 16th-century visita from Cajamarca (Rostworowski de Diez Canseco and Remy 1992). But such co-existence and mingling of ethnic groups were possible mostly during times of peace and probably impossible during times of warfare, since rivalry between ethnic groups would prevent the free movement and settlement of people.

Las Varas was first occupied around AD 950, though it is unclear when the site was abandoned. The Llama House was the earliest structure at Las Varas, as indicated by radiocarbon dating and its associated pottery (press-molded ollas from the coast). The Crystal House and the Reception Platform, which had paddle-stamped ollas, would date to a time somewhat later than the Llama House. These structures were abandoned in different ways: the Llama House was deliberately covered with ash and midden; the Crystal House was simply abandoned, its walls left to decay and collapse. Based on the style of the pottery from the last construction phase of the Reception Platform, it is possible that Las Varas was abandoned around AD 1200-1300, but this needs to be confirmed by dating more radiocarbon samples.

Implications for the Vertical Archipelago Model

In Chapter 3 I described Murra's vertical archipelago model as one strategy to acquire distant resources. If indeed Las Varas was settled by chaupiyunga people from the east, then it appears that two strategies – colonization and exchange – were employed. Cieza de León (1959 [1553]:321-322) noted that, out of all the coastal valleys he had visited, the Pacasmayo (Jequetepeque) Valley was the "most fertile and thickly settled," which would imply that, centuries before his visit (1547), the valley was being gradually filled up with people and settlements. I believe that future archaeological investigations should find more evidence for movement and colonization in the Jequetepeque Valley throughout its prehistory. Perhaps the earliest layers of the Llama House, when compared with subsequent layers, had more pottery made with clay from a foreign source. This would indicate that migrants first brought jars and pots from their homeland and afterwards they began making pottery using clay from sources near Las Varas.

The inhabitants of Las Varas were able to acquire coastal resources (shellfish), but how? Did they trade with coastal fishermen, or did they go to the coast and bring seafood back to Las Varas? Since the Reception Platform appeared to have been a ritual "checkpoint" that filtered visitors, I believe that there was exchange with coastal communities. If everybody entering Las Varas was from the community itself, then there would be no need for an entrance like the Reception Platform.

It is likely that people acquired resources in many different ways, including pilgrimage (occasional homage to huacas), regular visits to friends and families, and "selling" their labor in exchange for goods. A hypothetical scenario: several families from Las Varas went upvalley to help harvest coca, which they then received in return for their labor. Some of these families then went to the coast to participate in a ceremony,

where they exchanged coca and fancy bowls for fish and seashell. These families then returned to Las Varas, along with some coastal friends, where they engaged in more exchange at the Reception Platform.

Decades of archaeological, ethnohistorical, and ethnographic research have revealed the variety and diversity of economic strategies available to Andean communities, ranging from intrusive colonies of ancient states and empires (Wari and Tiwanaku) to different ayllus and ethnic groups living in the same village (e.g., the visitas of Cajamarca and Chucuito). Stephen Brush (1977) argued that in valleys where resource zones are distributed over large areas – that is, where the slope of the valley is gradual – families and communities would tend to exchange their products. By contrast, when a valley has a steep slope, many altitudinal zones will be contained in a smaller area; in this case, communities would exploit diverse resources by colonizing different altitudinal zones. Perhaps because of its length and gradual slope, the Jequetepeque Valley fostered communities that traded and exchanged goods rather than colonized multiple ecological zones. This is a hypothesis that should be tested with data from other valleys.

The Importance of a Multi-Contextual Approach

Since identities are relational, i.e., they are created during interactions, there is no single social arena or place in which all our social categories are manifested and clearly defined. Ethnic identity, like other forms of identity (e.g., gender, class, age, profession), manifests itself differently in diverse contexts. For example, a foreigner abroad is identified as representing his or her nation, but once at home, this person becomes part of the internal divisions within the country (e.g., social class, ethnic group, religion).

Interactions are affected by the context: a conversation over the dinner table is different from a discussion at a town hall meeting or at an international conference.

To investigate ethnicity, it would be best if archaeologists excavated different contexts and examined artifacts at different levels of analysis – the household, neighborhood, site, and region. Sharp differences in style between adjacent houses, communities, or regions are suggestive of ethnic differences, but we must demonstrate that these groups were in contact and interacted with each other.

The pottery of Las Varas contrasts with the coastal-style pottery of Ventanillas, a neighboring site. The bowls of Las Varas had painted designs, whereas coastal-style bowls were decorated with designs from press-molds. The jars and cooking pots of Las Varas were adorned by appliqué, whereas kitchenware from the coast was press-molded or paddle-stamped with designs. Furthermore, highland-style burials, like cists tombs, box tombs, and burials beneath boulders, contrast sharply against the unmarked burials of coastal-style cemeteries.

Las Varas was in contact with the coast as evidenced by the presence of marine resources and coastal-style pottery on the site. This interaction was channeled through the Reception Platform, which served as an entrance for visitors from the west, that is, from the direction of the coast. In the Plazas of the Malquis, located by a trail leading to the highlands, ancestors were celebrated in the highland way – their bones were placed in cist tombs built next to ceremonial plazas. All this evidence suggests that ritual played an important role in the recognition and maintenance of ethnic identities.

In addition to ritual, there are other social and political processes like warfare, elite exchange, and urbanization that can be important factors in the evolution of ethnic

identities. This means that we as archaeologists have a great variety of sites and contexts to excavate and investigate, including fortifications, palaces, and urban neighborhoods, that will further our understanding of ethnic groups in prehistory.

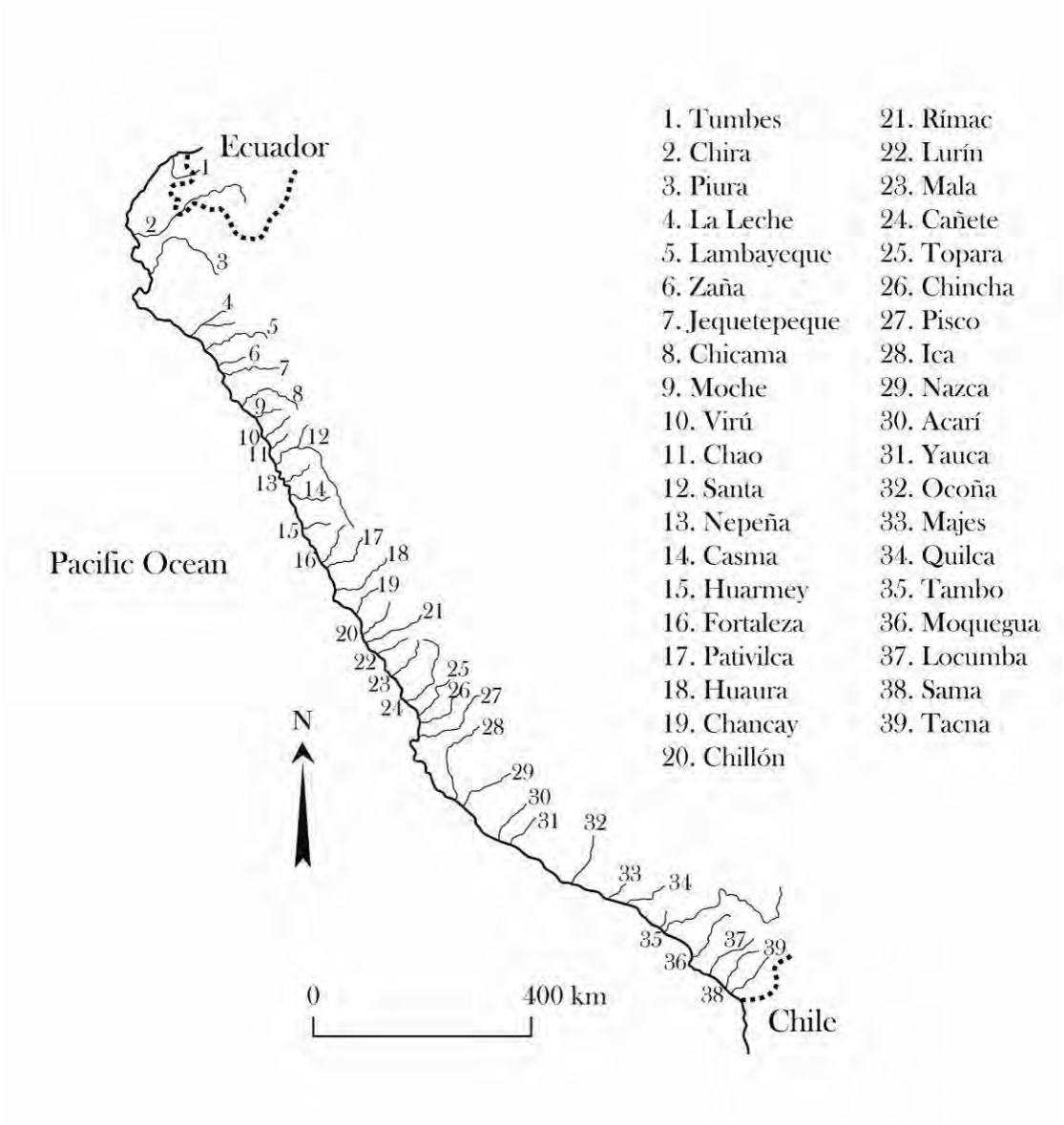

Figure 2.1. The coastal rivers of Peru.

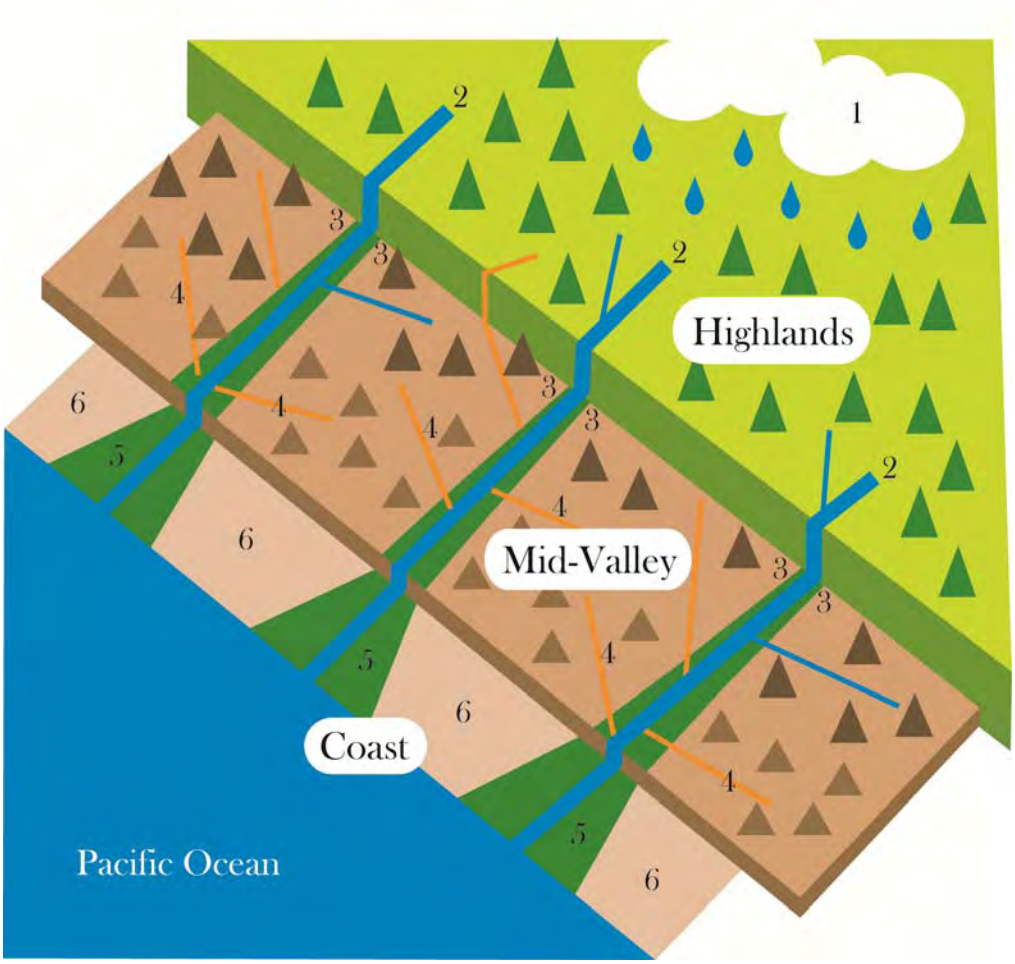

Figure 2.2. Idealized depiction of the coast, mid-valley, and highlands of Peru: (1) high-altitude precipitation enables rainfall agriculture in the highlands. This is where (2) the headwaters of rivers begin, and (3) agricultural fields can be found on both banks of a river. Because of the paucity of rainfall in the mid-valley, agriculture is only possible through irrigation. Here one finds (4) lateral quebradas that lead into the highlands. When the river leaves the mid-valley it will branch out (5) creating a fan of green fields. On the coast (6) desert separates one valley from another.

Figure 2.3. A desert bluff overlooking agricultural fields in the lower Jequetepeque Valley.

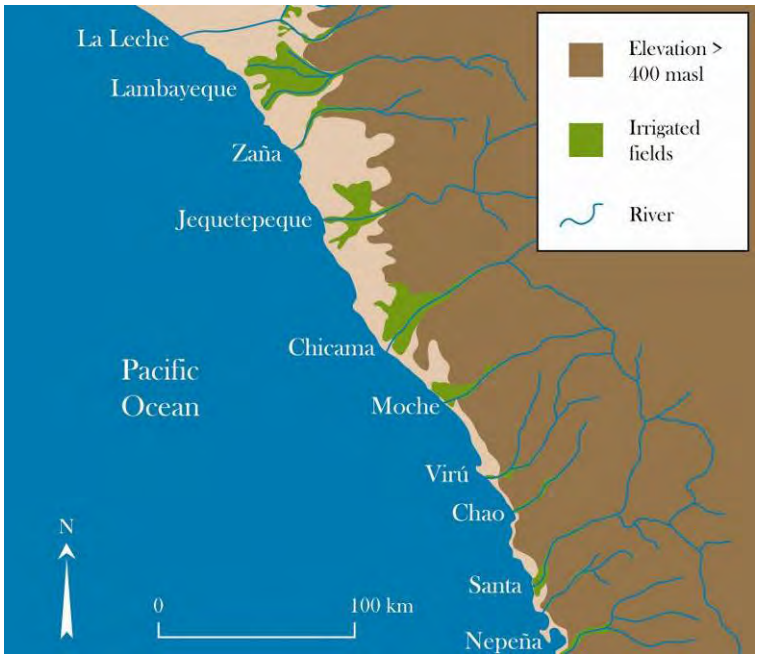

Figure 2.4. Rivers of the north coast of Peru. Towards the north, the foothills of the Andes gradually move away from the shore, exposing large coastal plains suitable for irrigation in the Chicama, Jequetepeque, and Lambayeque Valleys.

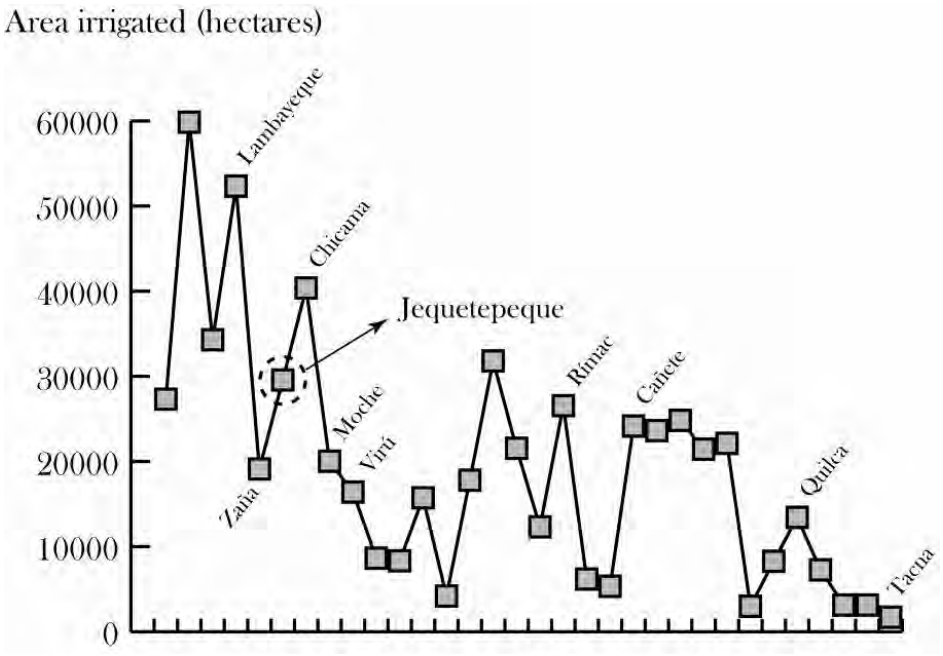

Figure 2.5. Number of hectares irrigated in Peruvian valleys, ordered from north (left) to south. Data from Robinson 1964:166-167.

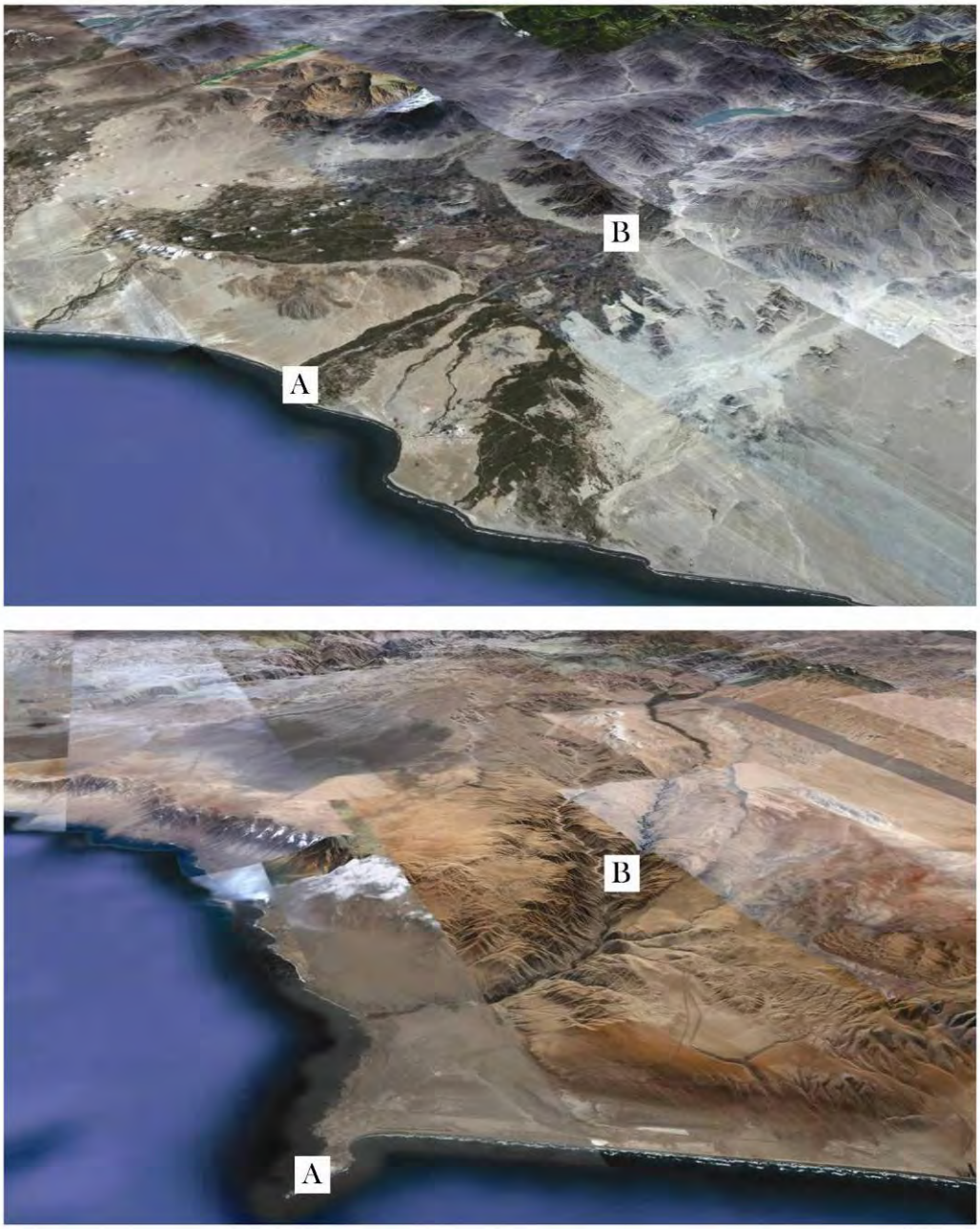

Figure 2.6. Aerial views of the lower Jequetepeque (top) and Moquegua (bottom) Valleys. The distance from A to B is 25 km. Note that the northern Peruvian valleys, like the Jequetepeque, have much more agricultural land than southern valleys like Moquegua (images taken from Google Earth).

Valley	Number on Figure 2.1	Area irrigated (ha)	Drainage area (km^2)
Tumbes	1	3168	2875
Chira	2	27320	14375
Piura	3	59866	6750
La Leche	4	34299	1213
Lambayeque	5	52342	3375
Zaña	6	19113	1125
Jequetepeque	7	29578	4050
Chicama	8	40371	3004
Moche	9	20026	1562
Virú	10	16405	1308
Santa	12	8643	11250
Nepeña	13	8333	1890
Casma	14	15729	2025
Huarmey	15	4188	2125
Pativilca	17	17792	5287
Huaura	18	31800	3300
Chancay	19	21541	2565
Chillón	20	12320	1755
Rímac	21	26556	2750
Lurín	22	6179	1237
Mala	23	5338	2063
Cañete	24	24158	6097
Chincha	26	23620	2790
Pisco	27	24818	3667
Ica	28	21437	1527
Nazca	29	22130	9967
Yauca	31	2991	800
Majes	33	8268	10237
Quilca	34	13443	10350
Tambo	35	7269	8932
Moquegua	36	3129	1575
Locumba	37	3129	2204
Tacna	39	1711	750

Table 2.1. Number of hectares irrigated in Peruvian valleys, ordered from north to south. Data from Robinson 1964:166-167.

Figure 2.7. Fording the Jequetepeque River near Tembladera. July 14, 2007.

Years	Jequetepeque (millions of m^3)	Lambayeque (millions of m^3)
1960-61	534	664
1961-62	314	853
1962-63	556	396
1963-64	746	797
1964-65	793	855
1965-66	493	700
1966-67	1932	858
1967-68	185	395
1968-69	540	892
1969-70	527	968
1970-71	1192	1578
1971-72	997	1288
1972-73	1193	1070
1973-74	901	1111
1974-75	1981	1718
1975-76	848	1179
1976-77	855	933
1977-78	264	614
1978-79	602	811
1979-80	88	375
1980-81	915	919
1981-82	425	772
1982-83	2075	1659
1983-84	1561	1390
1984-85	346	609
1985-86	476	892
1986-87	541	985
1987-88	523	894
1988-89	1139	1338
1989-90	292	665
1990-91	442	944
1991-92	317	628
1992-93	1059	1254
1993-94	1446	1382
1994-95	490	700
1995-96	949	1207
1996-97	254	584

Table 2.2. Annual volume of water discharge for the Jequetepeque and Lambayeque Rivers. Data from Vos (2006).

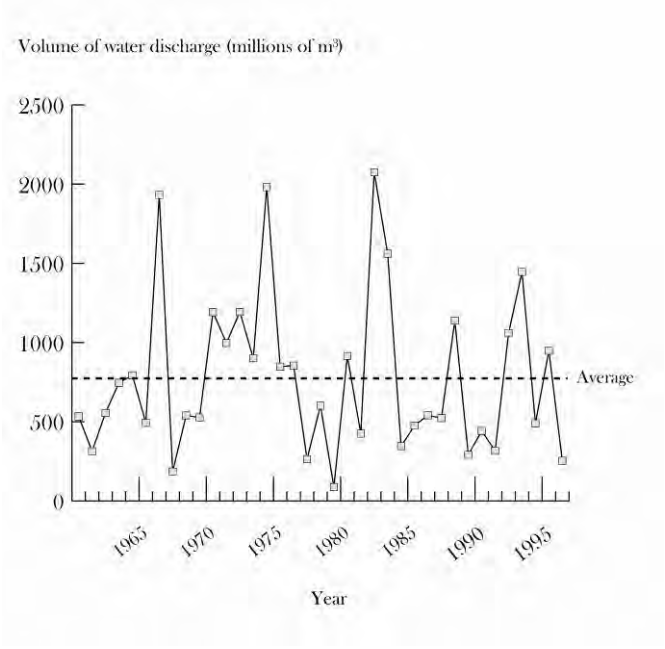

Figure 2.8. Annual water discharge from the Jequetepeque River, 1960-1997. Data from Vos (2006).

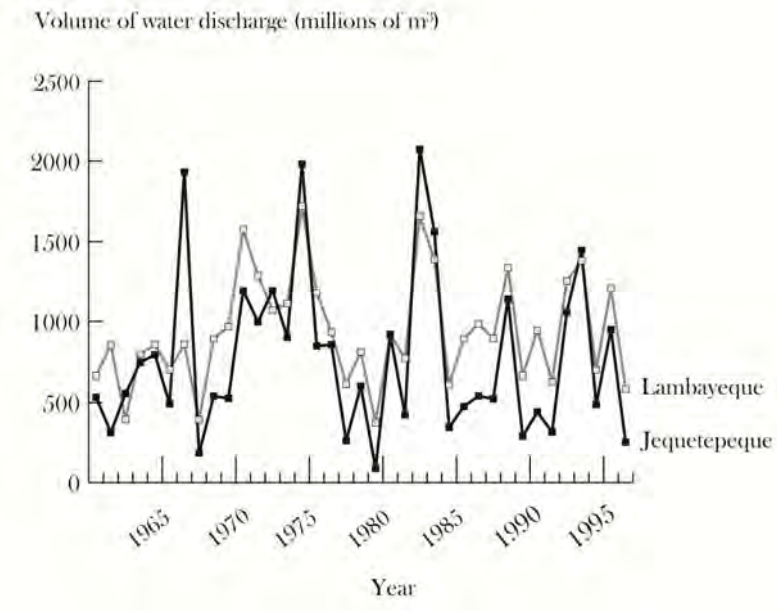

Figure 2.9. Comparison of annual water discharge from the Jequetepeque and Lambayeque Rivers, 1960-1997. Data from Vos (2006).

Figure 2.10. Percentage of the world's commercial fish produced by Peru between the years 1950 and 2007. Note decrease in productivity starting in the 1970s due to over-exploitation. Data from the Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations (www.fao.org).

Year	World production of commercial fish (kilotonnes)	Peru's production of commercial fish (kilotonnes)	Percentage of the world's commercial fish produced by Peru
1950	13292006	73500	0.552963939
1951	15024108	97100	0.646294609
1952	16528547	106600	0.644944773
1953	16575233	117000	0.70587243
1954	17973107	145300	0.808430062
1955	18801001	183000	0.973352429
1956	20191778	266200	1.318358393
1957	20374569	451700	2.216979412
1958	20831840	895300	4.297748063
1959	22950497	2117000	9.224201114
1960	24897874	3496600	14.04376936
1961	28050843	5208800	18.5691389
1962	30606872	6877500	22.47044389
1963	31002584	6815700	21.98429653
1964	35202070	9028100	25.64650317
1965	35212947	7376700	20.94882885
1966	38566022	8702500	22.56520001
1967	41227977	10046500	24.36816146
1968	43508945	10433500	23.98012639
1969	41786253	9132300	21.85479516

1970	46405471	12467900	26.86730623
1971	46424567	10488800	22.59321019
1972	41374662	4657300	11.25640616
1973	40750637	2265000	5.558195323
1974	43520065	4102553	9.426808071
1975	42166132	3387655	8.034066298
1976	45101538	4308560	9.553022338
1977	44129490	2469413	5.595833988
1978	46478796	3400608	7.316471795
1979	46900139	3605461	7.687527323
1980	46677568	2667218	5.714132322
1981	48602945	2674603	5.502964892
1982	49660502	3466810	6.981020852
1983	48980388	1501928	3.066386489
1984	53364450	3246047	6.082789198
1985	54759562	4039246	7.376330001
1986	59203637	5529547	9.339877211
1987	58841338	4508721	7.662505907
1988	71598315	6558287	9.159834278
1989	71693966	6761664	9.431287425
1990	68081642	6776783	9.953906517
1991	66763905	6807113	10.19579816
1992	67777763	7414263	10.93907894
1993	68592545	8928586	13.01684607
1994	73333219	11879289	16.19905571
1995	72083657	8816977	12.23158947
1996	73747332	9440587	12.80125903
1997	72328338	7770407	10.74324008
1998	65105390	4232919	6.501641416
1999	69519821	8257115	11.87735365
2000	71070008	10507044	14.78407601
2001	69034872	7823091	11.33208591
2002	69638462	8540594	12.26419102
2003	66815290	5827435	8.721708759
2004	71077433	9237754	12.9967468
2005	70296231	8991699	12.79115377
2006	67232314	6482581	9.642061405
2007	66965474	6655123	9.93814066

Table 2.3. Kilotonnes of commercial fish produced between the years 1950 and 2007. Data from the Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations (www.fao.org).

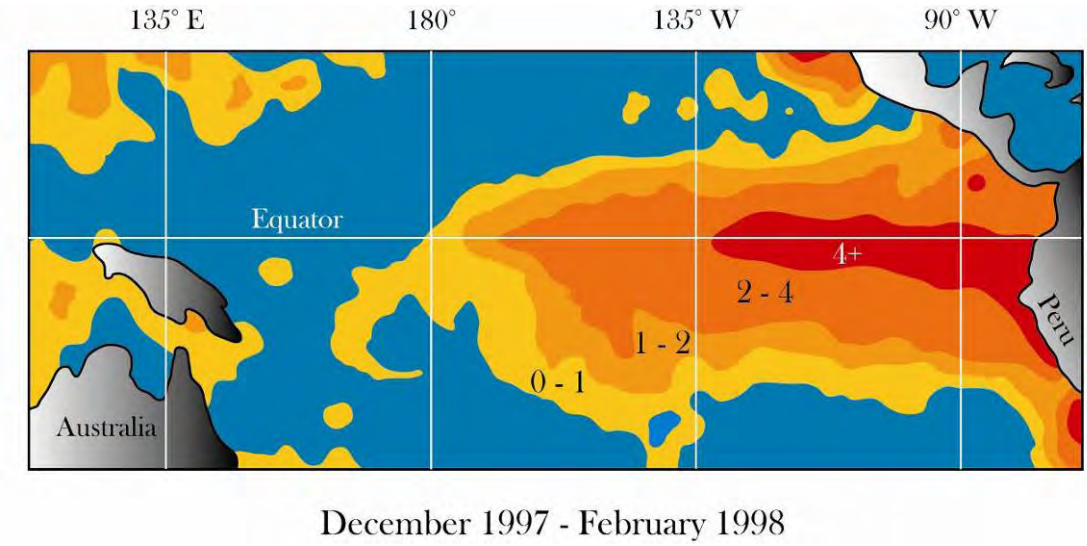

Figure 2.11. Increases in sea surface temperature during the 1998 El Niño. Numbers indicate degrees Celsius above average (red = 4 or more degrees above, orange = 2 to 4 degrees above, etc.). Redrawn from Glantz 2001:Figure 2.1.

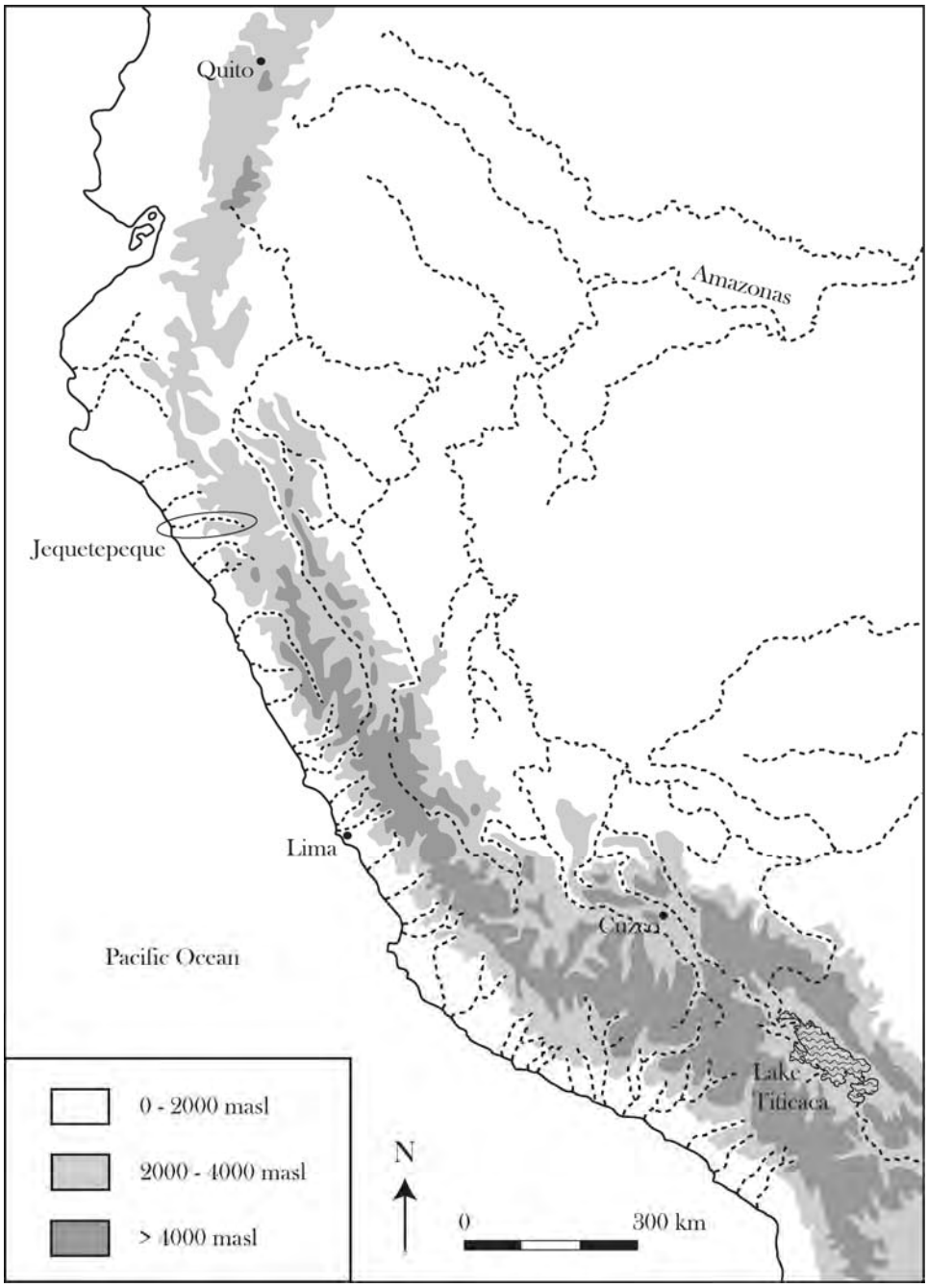

Figure 2.12. Map of the Central Andes, dotted lines indicate rivers. The northern highlands of Peru, where the headwaters of the Jequetepeque River (circled) are located, rarely exceed 4000 masl.

Figure 2.13. The highlands of Contumazá in northern Peru.

Figure 2.14. Titicaca Basin, southern Peru. Such a broad expanse of grassland is rare in northern Peru (photo by Abigail Levine).

Town	Valley	Distance from the coast (km)	Elevation (masl)
Pacasmayo	Jequetepeque	0	0
Ciudad de Dios	Jequetepeque	12	84
México	Jequetepeque	28	180
Ventanillas	Jequetepeque	37	272
Tembladera	Jequetepeque	51	430
Chilete	Jequetepeque	85	850
Magdalena	Jequetepeque	102	1250
San Juan	Jequetepeque	122	2310
Ilo	Moquegua	0	0
Algarrobal	Moquegua	8	112
--	Moquegua	18	250
--	Moquegua	45	924
Moquegua	Moquegua	65	1423
Torata	Moquegua	80	2200

Table 2.4. Towns in the Jequetepeque and Moquegua Valleys.

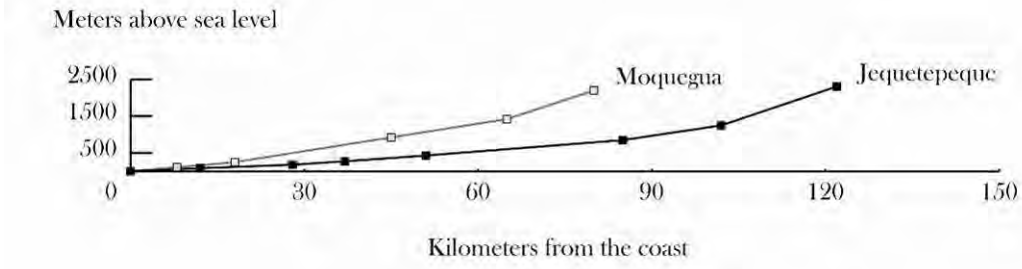

Figure 2.15. Plot of altitude (masl) against distance from the coast (km), using data from Table 2.4. In the Moquegua Valley, one reaches 2200 masl by walking 80 km inland from the shore, compared to 120 km for the Jequetepeque Valley. Rain-fed agriculture in the Moquegua Valley starts around 3900 masl, compared to 2000 masl in the Jequetepeque Valley.

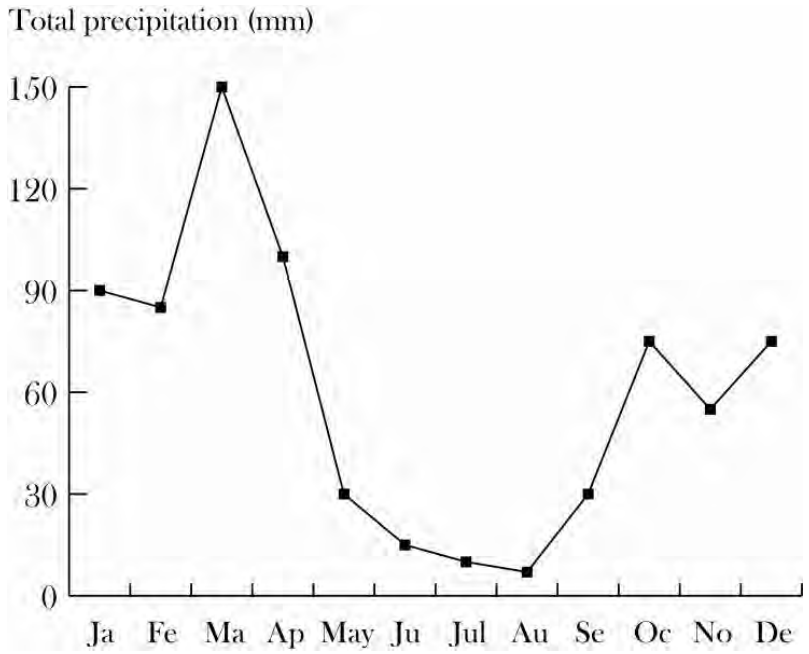

Figure 2.16. Average monthly precipitation, Cajamarca, 1953-1972. The rainy season begins around October and ends in April. Data from ONERN 1975:22.

Figure 2.17. Harvesting potatoes near the village of Cruz Grande (3000 masl, Province of Contumazá, Department of Cajamarca) in the northern highlands of Peru. This harvest took place on September 30, 2007.

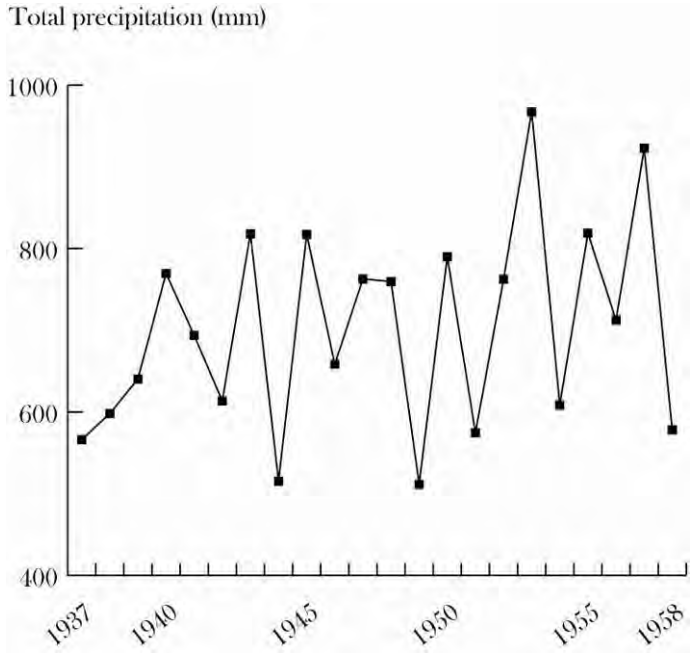

Figure 2.18. Total annual precipitation, Hacienda Edelmira, Cajamarca, 1937-1958. Hacienda Edelmira (2600 masl) is about 30 km southeast of the city of Cajamarca (2750 masl). Data from ONERN 1975:11.

Year	Total precipitation (mm)
1937	566.1
1938	598.1
1939	640.4
1940	769.5
1941	693.8
1942	613.5
1943	818.1
1944	515.0
1945	817.3
1946	658.5
1947	762.8
1948	759.6
1949	511.3
1950	790.2
1951	574.6
1952	762.5
1953	967.3
1954	608.4
1955	818.8
1956	712.4
1957	922.8
1958	578.1

Table 2.5. Total annual precipitation, Hacienda Edelmira, Cajamarca, 1937-1958. Data from ONERN 1975:11.

Figure 2.19. Satellite image of the Jequetepeque Valley. Image from Google Earth.

Climate zone	Life zone	Precipitation (mm)	Biotemperature (Celsius)	Evapotranpiration	Altitude (masl)
Mild and arid (1)	tropical premontane hyperarid desert	15.6-31.2	21-22	32-64	0-200
Mild and arid (1)	tropical premontane-superarid desert	31.2-62.5	22-23	16-32	200-400
Mild and arid (1)	tropical premontane-perarid desert	62.5-125	17-23	8-16	400-1800
Mild and arid-semiarid transition (2)	tropical premontane-desert shrub	125-250	17-23	4-8	600-1900
Mild and arid-semiarid transition (2)	subtropical montane thorn shrub	125-250	15-17	4-8	1800-2500
Mild temperate and semiarid (3)	tropical premontane thorn woodland	250-500	17-22	2-4	900-1800
Mild temperate and semiarid (3)	subtropical montane thorn steppe	250-500	12-17	2-4	1800-2900
Mild temperate and dry (4)	tropical premontane dry forest	500-900	17-20	1-2	1400-1900
Temperate and dry (5)	subtropical montane dry forest	500-1000	12-17	1-2	1900-2900
Temperate and dry (5)	tropical montane steppe	400-500	9-12	1-2	2800-3300
Temperate and humid (6)	subtropical montane humid forest	1000-1500		.5-1	2200-2900
Temperate and humid (6)	tropical montane humid forest	500-800	7-12	.5-1	2900-3700
Temperate and very humid (7)	tropical montane humid forest	1000-1600	6-12	.25-.5	2900-3700
Cold and pluvial (8)	tropical subandean very humid paramo	900-1100	4-6	.25-.5	3700-4000
Cold and pluvial (8)	tropical subandean pluvial paramo	900-1100	3-5	< .25	> 4000

Table 2.6. Environmental zones of the Jequetepeque Valley. Data from ONERN 1988:16.

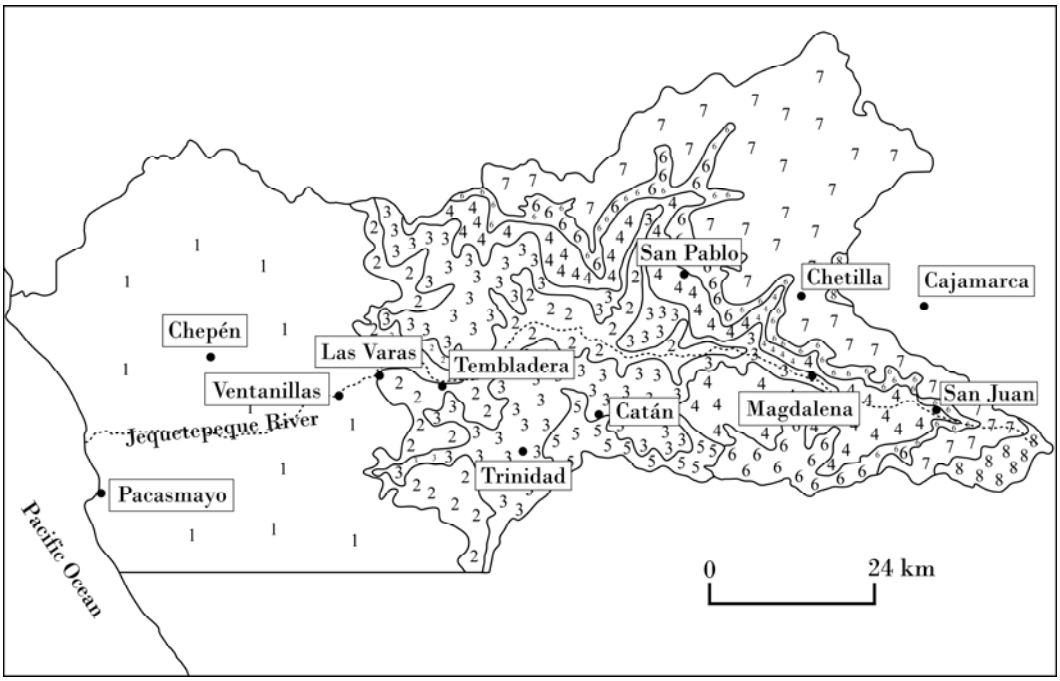

Figure 2.20. The climate zones of the Jequetepeque Valley: 1 = mid and arid; 2 = mild and arid-semiarid transition; 3 = mild temperate and semiarid; 4 = mild temperate and dry; 5 = temperate and dry; 6 = temperate and humid; 7 = temperate and very humid; 8 = cold and pluvial. North is at the top. Redrawn from ONERN 1988:18-19.

Figure 2.21. Llama in the town of Gallito, Middle Jequetepeque Valley.

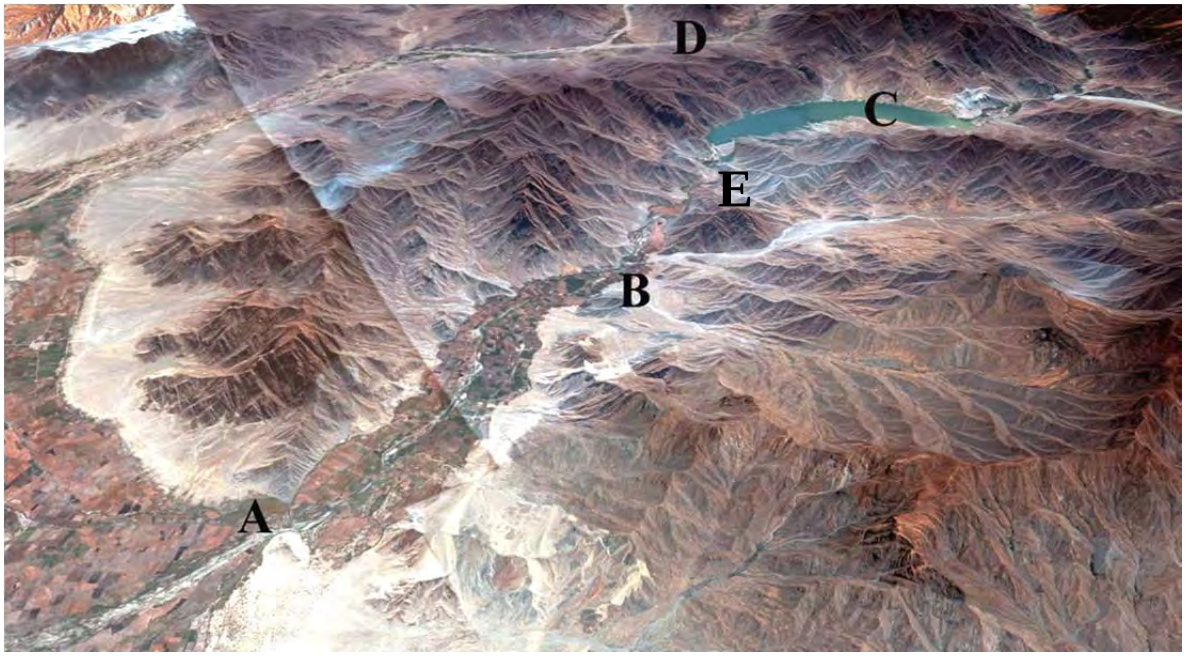

Figure 2.22. The Middle Jequetepeque Valley, looking northeast: (A) the valley neck; (B) Ventanillas; (C) Gallito Ciego Dam; (D) the Chamán River; (E) Las Varas. Image from Google Earth.

Figure 2.23. The neck of the Jequetepeque Valley ("A" in Figure 2.22), flanked by Cerro Pitura to the south (left) and Cerro Talambo to the north (right).

Figure 2.24. The Ventanillas bridge.

Figure 2.25. Pay Pay, a small town in the Middle Jequetepeque Valley.

Figure 2.26. The Gallito Ciego Reservoir, viewed from the town of Tembladera.

Figure 2.27. The highland town of Kuntur Wasi near San Pablo.

Figure 2.28. A quebrada near Tembladera linking the Jequetepeque and Chamán Valleys. A prehistoric wall (arrow) guards the entrance of the quebrada.

Figure 2.29. The petroglyphs of Yonán.

Figure 3.1. Huaca Rodillona, Sicán.

Figure 3.2. The huaca of Ventanillas (arrow), located at the base of Cerro Ventanillas. The Jequetepeque River is to the left; the Quebrada del Caracol is to the right.

Figure 3.3. The top of the Ventanillas huaca. Note rectangular chambers to the right and left; they are the remains of chamber-and-fill construction.

Figure 3.4. Adobes from Ventanillas, Middle Jequetepeque Valley.

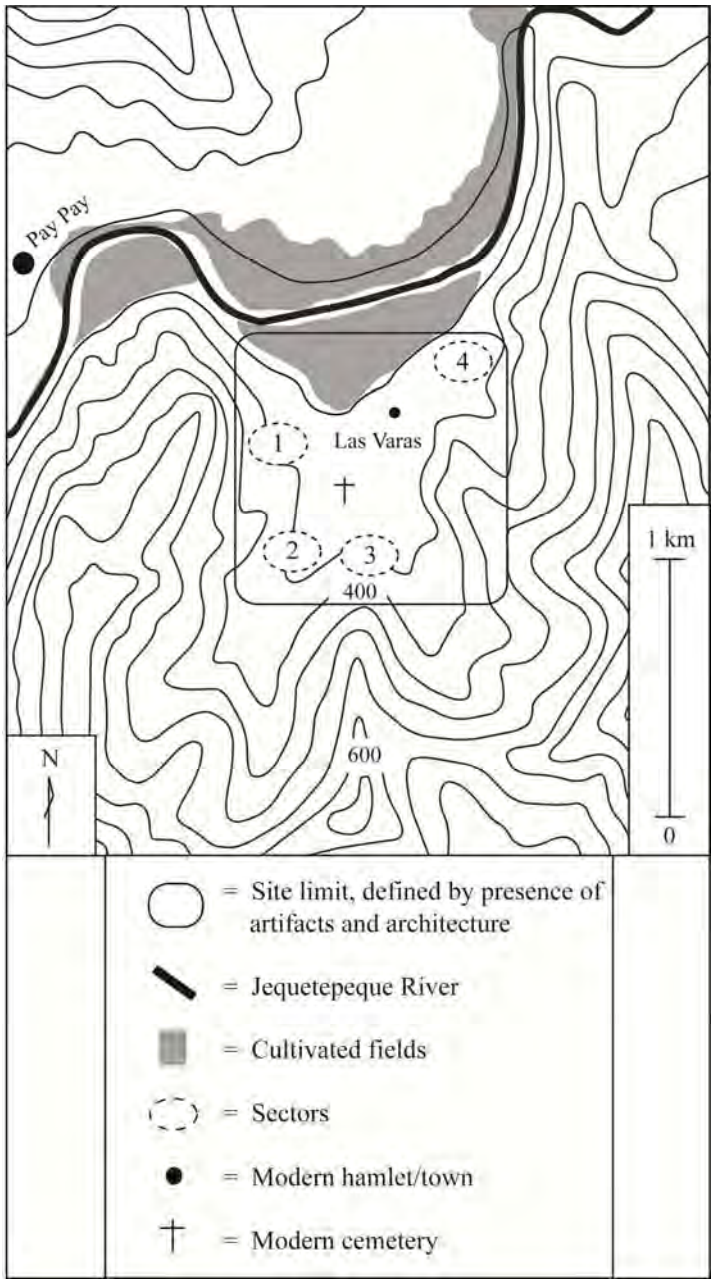

Figure 3.5. Map of Las Varas, showing the various features within the site. Contour intervals at 50 m.

Scenario	Archaeological Expectations	Model of Interaction Supported
1. Las Varas was a colony inhabited by non-local people.	• Non-local domestic artifacts • Non-local burial practices • Non-local artifacts in burials • Non-local origin of population (DNA, strontium)	Colonization
2. Las Varas was inhabited by local people who imported non-local artifacts or produced artifacts in non-local style.	• Local domestic artifacts • Non-local artifacts emulated • Local artifacts in burials • Local origin of population	Trade
3. Both local and non-local people inhabited Las Varas.	• Non-local and local artifacts found in separate areas of the site • Non-local and local artifacts used contemporaneously	Colonization
4. Non-local people replaced local people at Las Varas, or vice versa.	• Local artifacts found in layers below layers with non-local artifacts	Colonization

Table 3.1. Scenarios that could have occurred at Las Varas and the archaeological correlates for each scenario.

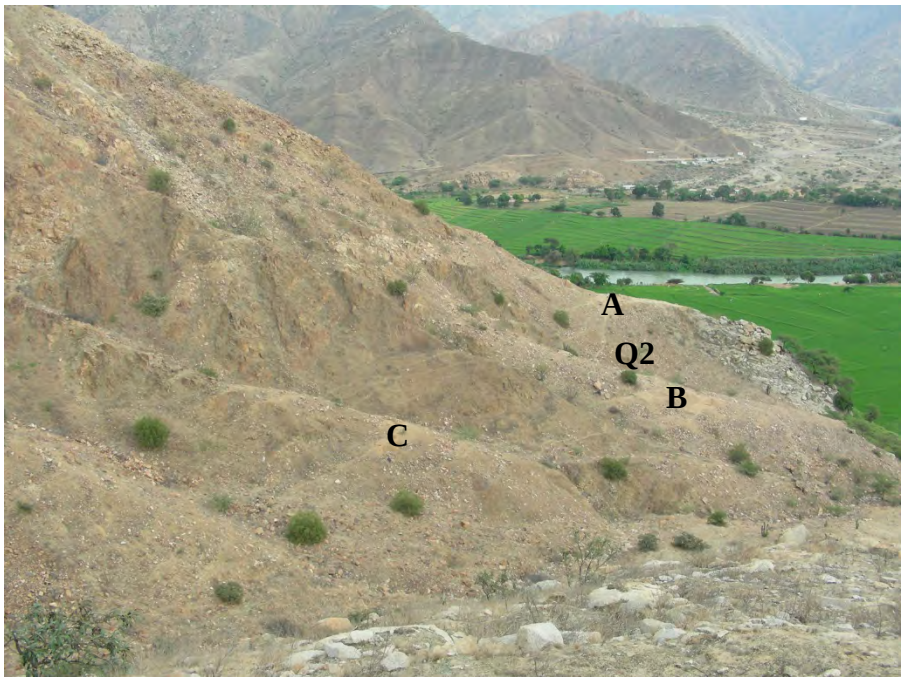

Figure 4.1. Sector 1 of Las Varas, looking north: (A) the Reception Platform; (Q2) the Llama House; (B) the Crystal House; (C) the Spondylus House. Each structure is located on a ridge, except for the Llama House, which is in a ravine.

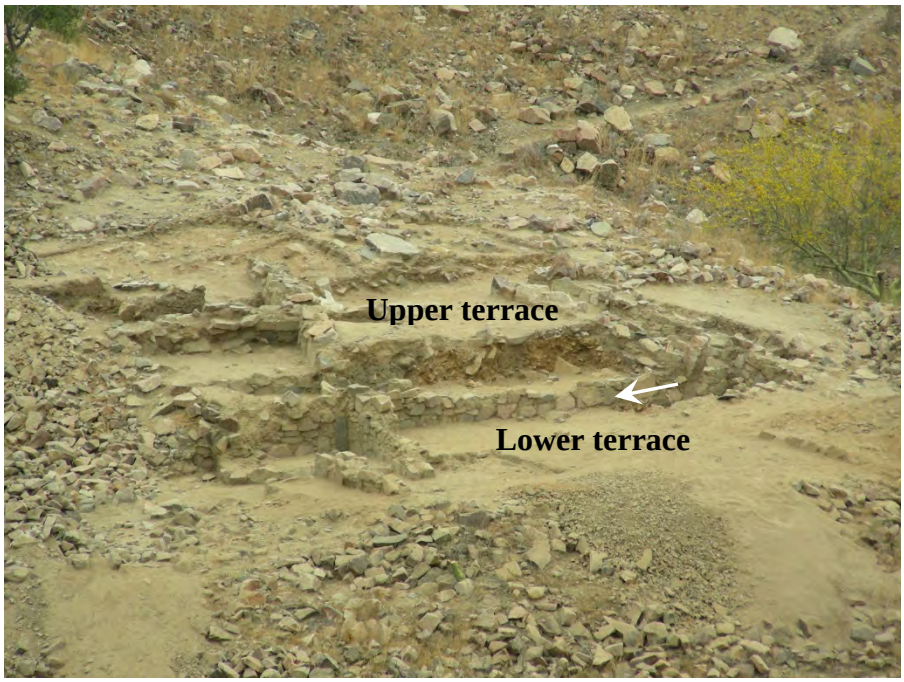

Figure 4.2. The Crystal House (Sector 1, Area B), Las Varas. Looking northwest. Wall 1 (arrow) originally reached the height of the upper terrace.

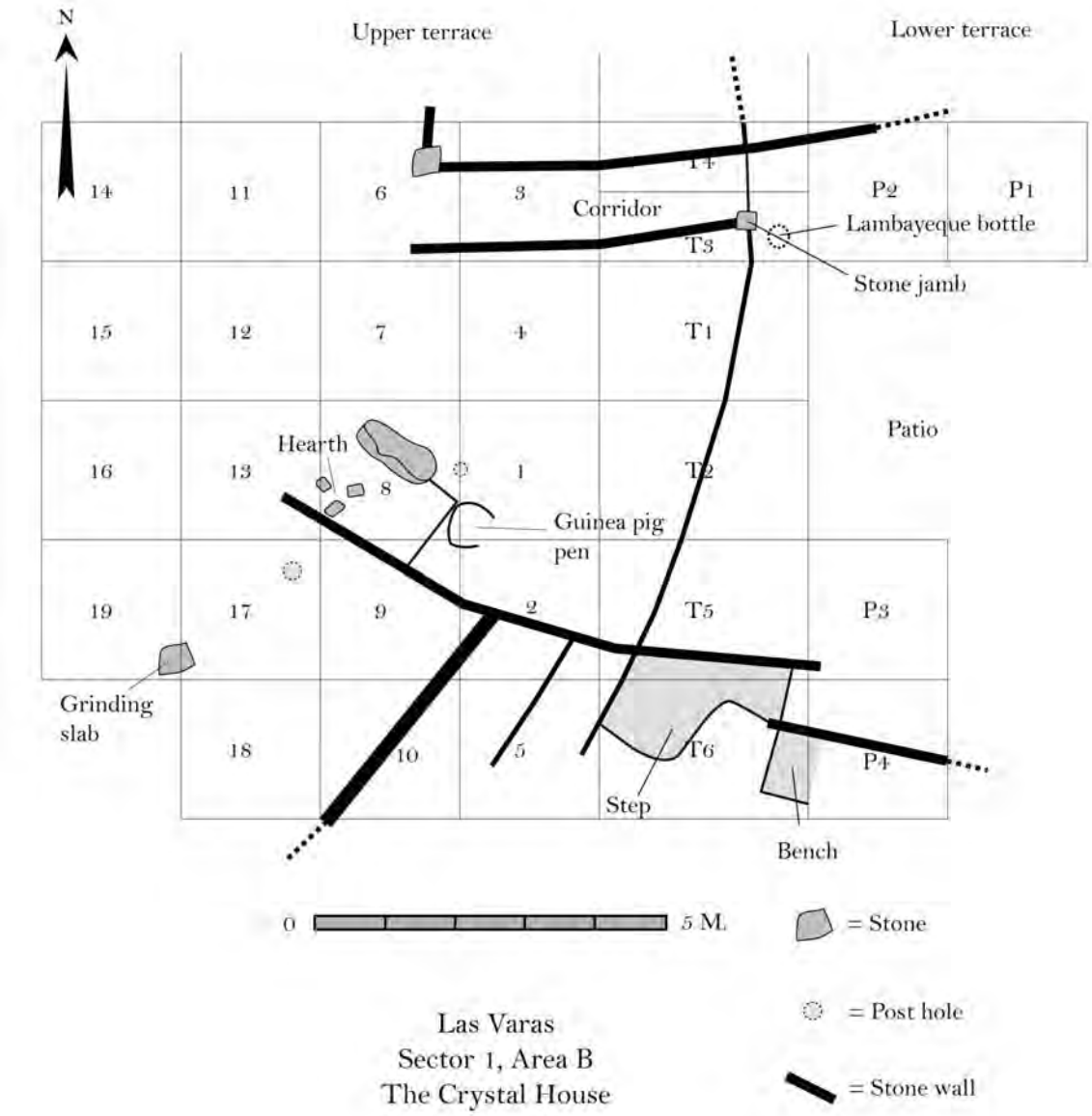

Figure 4.3. Plan of the Crystal House (Sector 1, Area B), Las Varas.

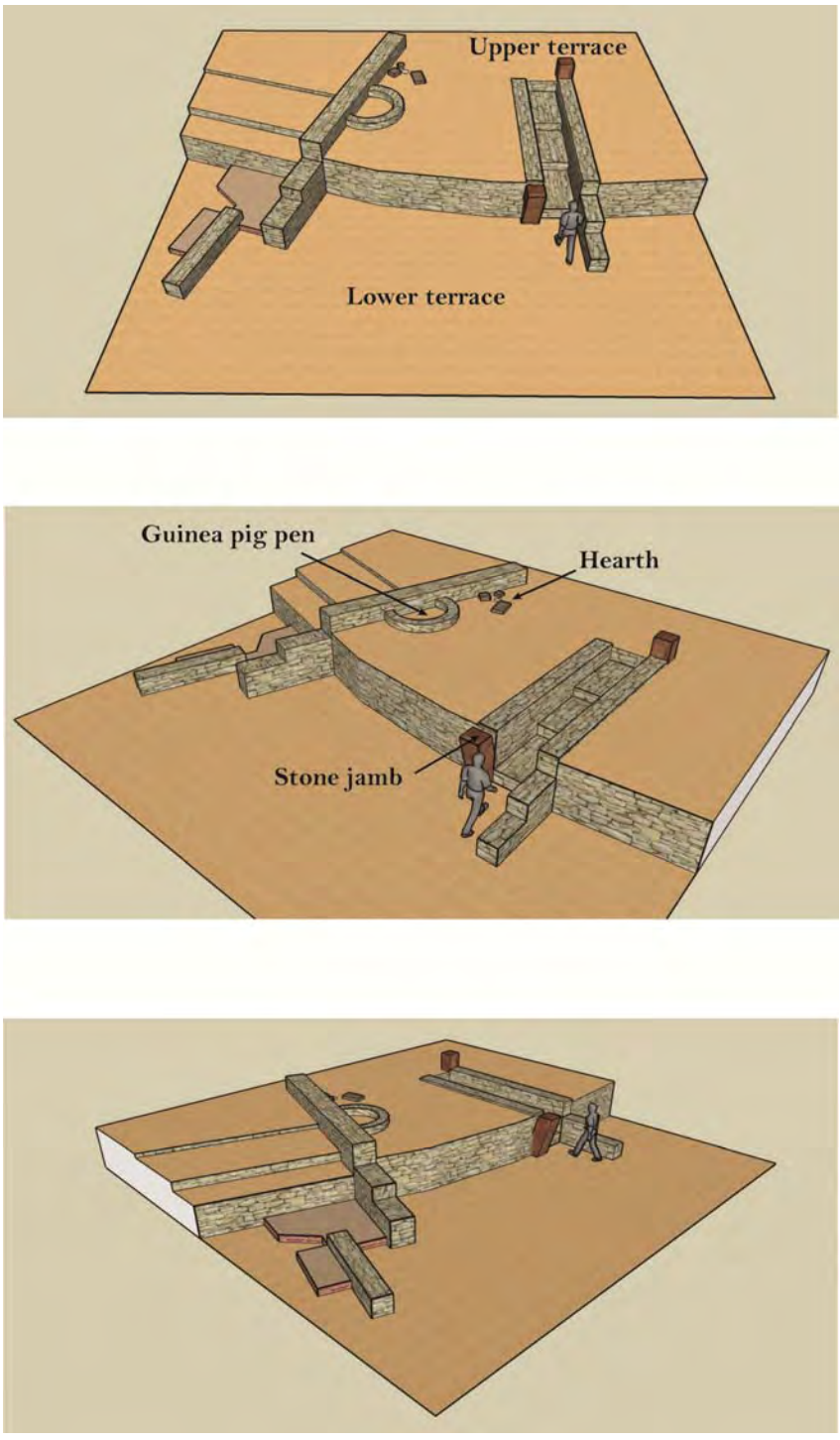

Figure 4.4. Three reconstructed views of the Crystal House.

Figure 4.5. Chipped crystals from Feature 2 of Unit T-2 (terrace fill; see Figure 4.27) of the Crystal House, Las Varas.

	Weight (grams)
The Crystal House	785
The Llama House	689
The Reception Platform	267
The Plazas of the Malquis	196
The Lambayeque Cemetery	101

Table 4.1. Amount of crystals (by weight) found at Las Varas.

Figure 4.6. Corridor that connects the lower and upper terraces of the Crystal House. Note stone jamb next to the entrance of the corridor. Scale, 1 m.

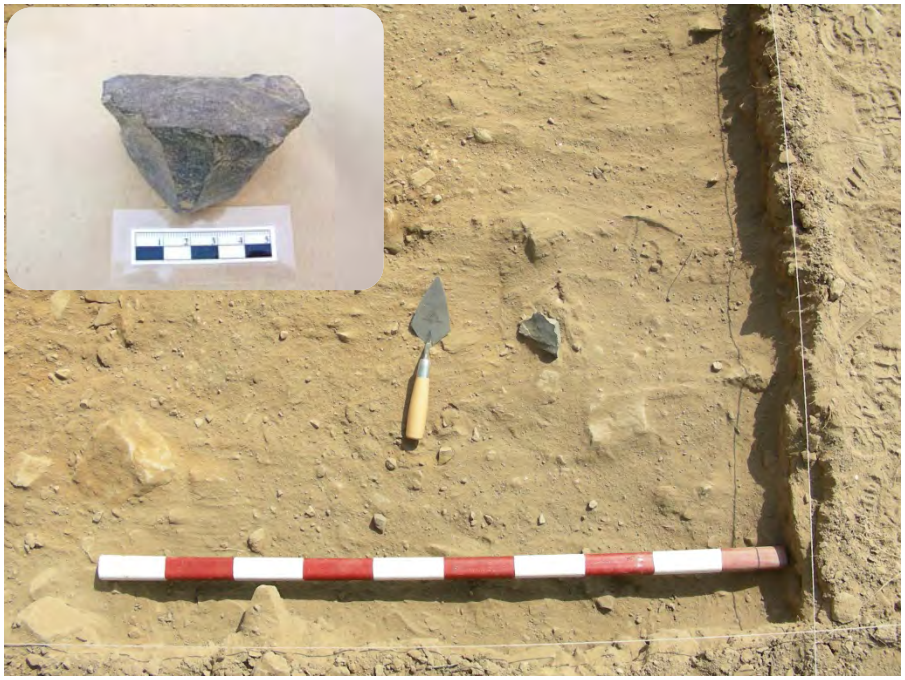

Figure 4.7. Core found in the southeastern corner of Unit P1, Crystal House, Las Varas. Trowel points north. Scale, 1 m.

Figure 4.8. Units P1 and P2 in the lower terrace of the Crystal House, Las Varas. The surface of Unit P2 has been cleared of rocks and brushed clean, but it has not been excavated. Test pits in Unit P1 reveal yellowish rocky sterile soil (arrow).Trowel points north. Scale, 1 m.

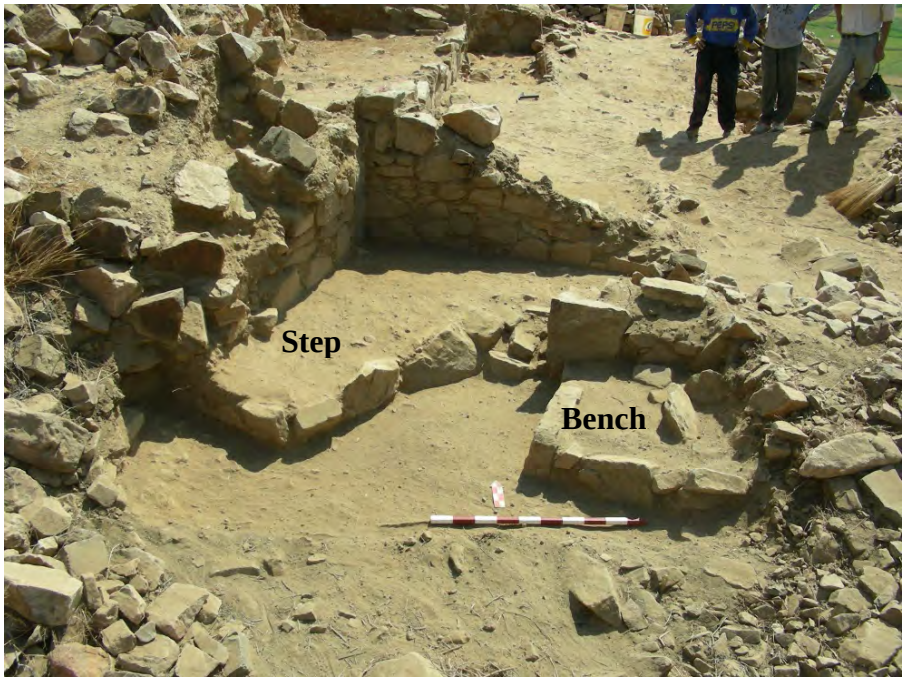

Figure 4.9. The southern entrance of the Crystal House. Three workmen are standing in the patio (lower terrace). Scale, 1 m.

Figure 4.10. Hearth found in Unit P4 of the Crystal House, Las Varas. Note ash and charcoal in the middle of the hearth. Scale, 1 m.

Figure 4.11. Huner Bazán and a piece of flat stone (arrow) found below the hearth in Unit P4 of the Crystal House, Las Varas.

Figure 4.12. Broken Lambayeque-style bowl (Sherd #525) found beneath the collapse of Wall 4 in Unit P4, Crystal House, Las Varas. North arrow, 20 cm.

Figure 4.13. Lambayeque-style bowl (Sherd #525; diameter 17 cm; ring base diameter 4.3 cm; height 5.5-6.5 cm) found in Unit P4 of the Crystal House, Las Varas.

Figure 4.14. Lambayeque-style double-spout-and-bridge bottle found next to the jamb stone in the lower terrace (Unit T3) of the Crystal House. The bridge is made from two twisted ropes of clay, and abstract animal heads adorn the sides.

Figure 4.15. Guinea pig pen on the upper terrace of the Crystal House. The north arrow points to a concentration of guinea pig dung.

Figure 4.16. Hearth from the upper terrace (Unit 8) of the Crystal House, Las Varas. Note ash between the three stones. North arrow, 20 cm.

Figure 4.17. Hearth from a modern house near Las Varas. The pot is set between three stones.

Figure 4.18. Grinding slab (length 50 cm) from Unit 19 of the Crystal House, Las Varas.

Figure 4.19. Metal pincer (width 2.1 cm) found in the guinea pig pen of the Crystal House, Las Varas.

Figure 4.20. Floor curving (white arrow) at the junction with Wall 6.Unit 8, Crystal House, Las Varas. North arrow, 20 cm.

Figure 4.21. Daub with cane impressions from the upper terrace of the Crystal House.

Figure 4.22. A posthole wedged with stones in Unit 1 of the Crystal House, Las Varas. North arrow, 20 cm.

Figure 4.23. The northwest face of a terrace retaining wall in Unit 10 of the Crystal House. Note step-like face of this wall, which had been buried by construction fill. Scale, 1 m.

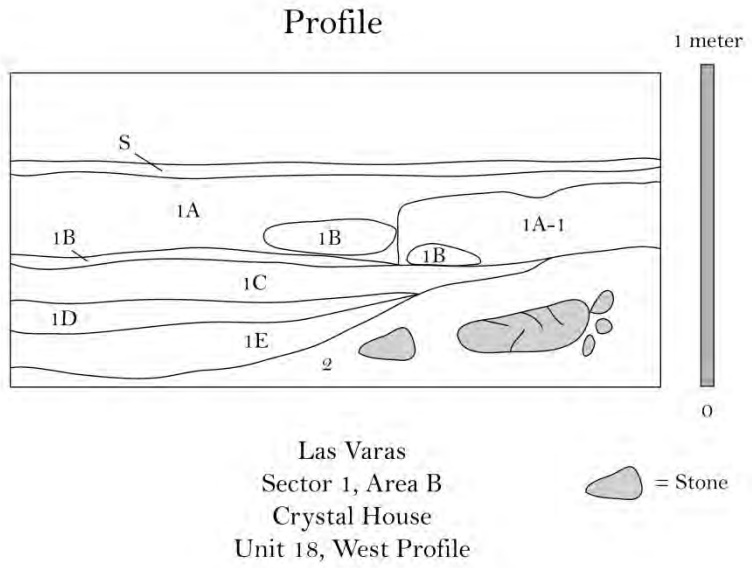

Figure 4.24. West profile of Unit 18 of the Crystal House: (S) surface, loose sandy loam (10YR 6/3); (1A) loose sandy loam (10YR 5/4); (1A-1) loose sandy loam with some burning (10YR 6/3); (1B) concentration of charcoal; (1C) yellowish brown sandy loam (10YR 5/4); (1D) loose sandy loam with guinea pig dung; (1E) brown sandy loam (7.5 YR 5/4); (2) sterile, semi-compact soil with gravel and rocks (7.5 YR 5/4).

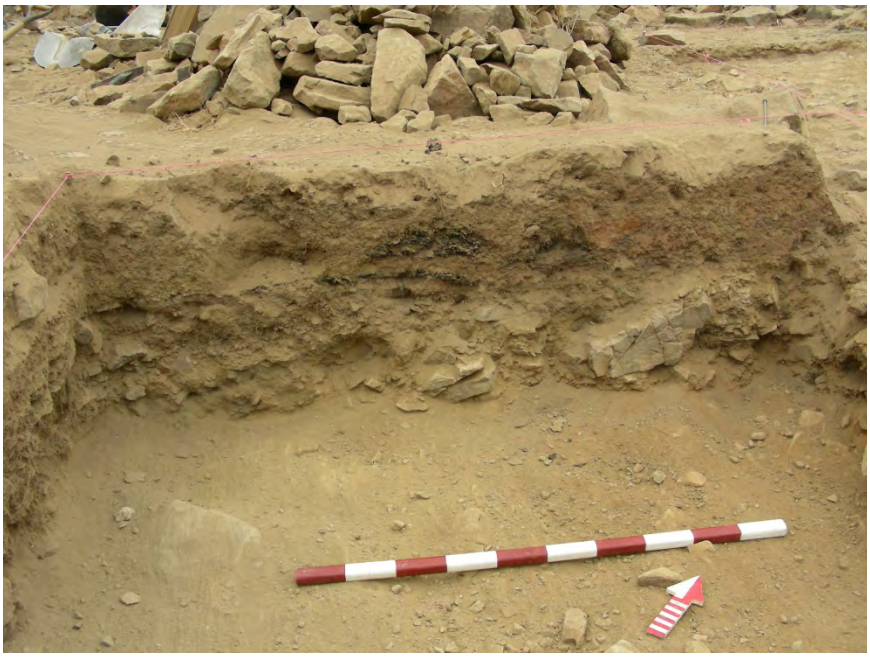

Figure 4.25. The west profile of Unit 18 of the Crystal House. See Figure 4.24 for drawing of this profile. Scale, 1 m.

Figure 4.26. Burnt maize cobs (length 3 cm) found in Layer A of Unit 18, Crystal House, Las Varas.

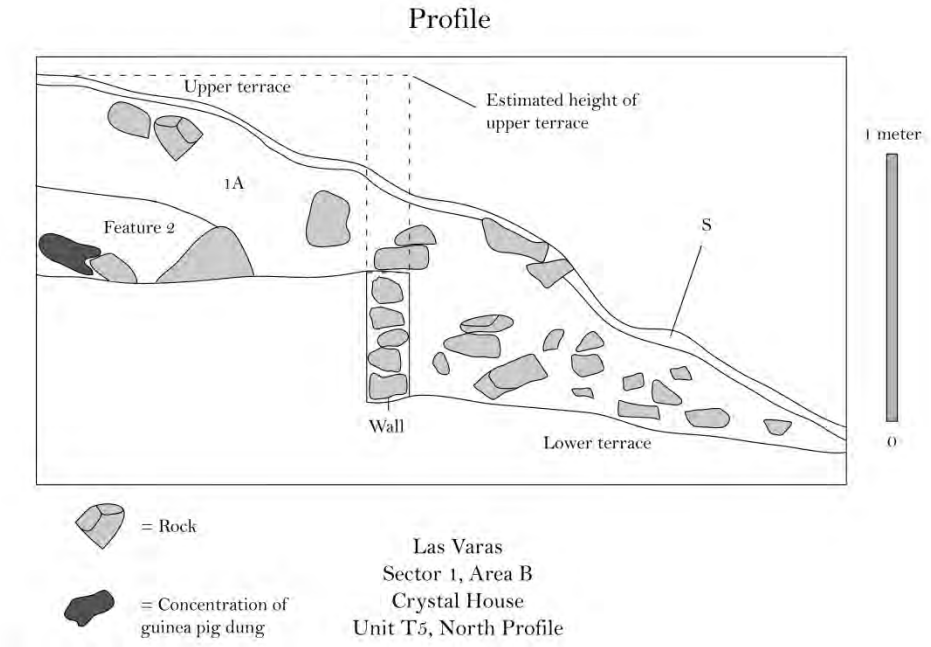

Figure 4.27. North profile of Unit T5 of the Crystal House: (S) surface, loose sandy loam (10YR 6/3); (1A) loose sandy loam with wall collapse (10YR 5/4); (Feature 2) loose sandy loam with guinea pig dung (7.5 YR 5/4).

Figure 4.28. Napoleón and Huner Bazán discovering the terrace wall of the Crystal House after removing a layer of dirt and collapse.

Figure 4.29. Unit 6 of the Spondylus House, Las Varas, looking southeast. Scale, 1 m.

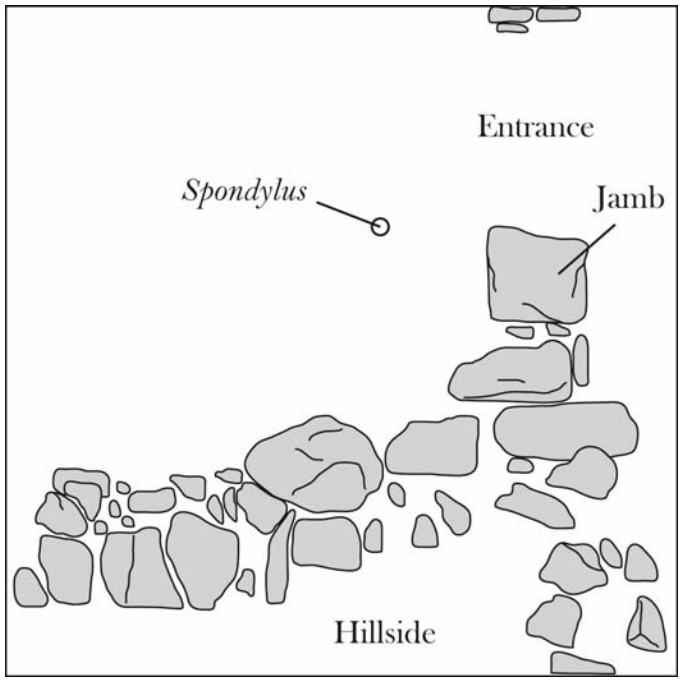

Figure 4.30. Plan drawing of Unit 6 (2 x 2 m) of the Spondylus House, Las Varas. North is at the top.

Figure 4.31. Piece of *Spondylus* (length 2.8 cm) found in Unit 6 of the Spondylus House, Las Varas.

Figure 4.32. Unit 1 of Sector 1, Terrace 2, Las Varas, before excavation. It overlooks the Reception Platform (where workers are standing). Scale, 1 m.

Figure 4.33. Unit 1 of Sector 1, Terrace 2, Las Varas, before excavation. Scale, 1 m.

Figure 4.34. The Llama House, viewed from the Reception Platform. The Crystal House is located on the ridge behind the Llama House.

Figure 4.35. View of the Llama House from the Reception Platform: (U) upper terrace; (M) middle terrace; (L) lower terrace.

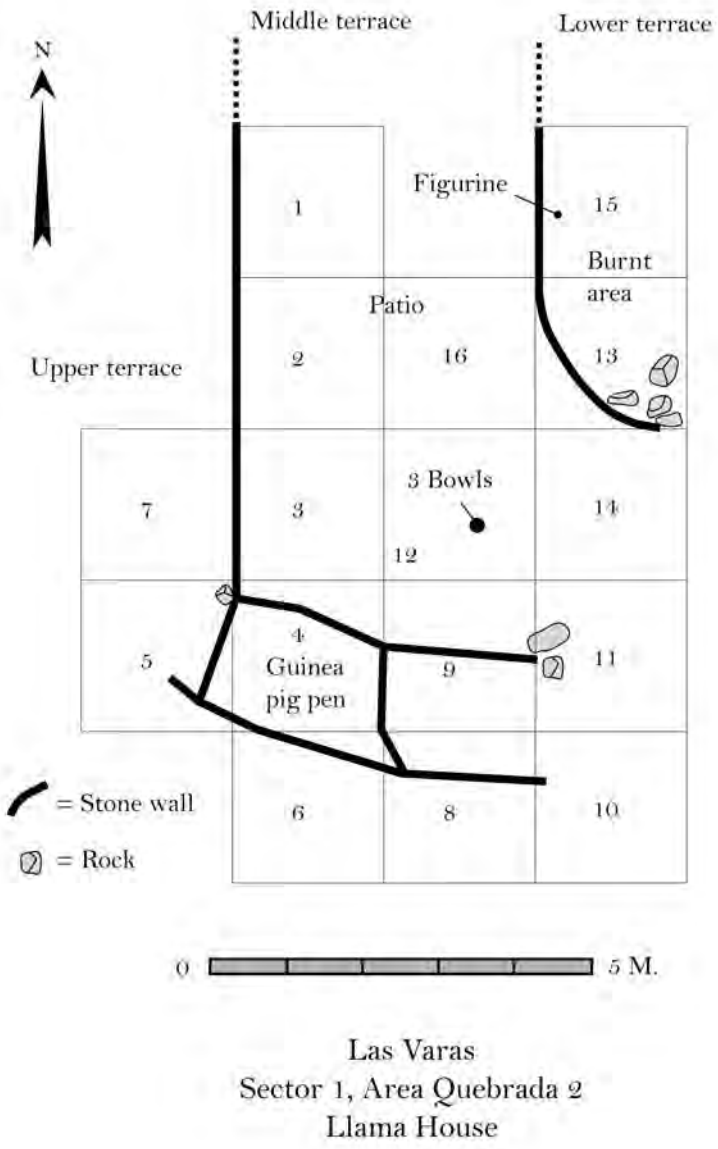

Figure 4.36. Plan of the Llama House, Las Varas.

Figure 4.37. The lower terrace of the Llama House, Layer C. Note smoke smudge on the wall. Scale, 1 m.

Figure 4.38. Close-up view of a rock smudged by smoke on the lower terrace of the Llama House, Las Varas.

Figure 4.39. The author standing on the floor (Layer F) of Units 13 and 15 (the lower terrace), Llama House, Las Varas. Scale, 1 m.

Figure 4.40. Figurine (Las Varas #1496) found in Layer E, Unit 15, Llama House.

Figure 4.41. Figurine (Las Varas #1496, length 11 cm) found in Layer E, Unit 15, Llama House.

Figure 4.42. The middle terrace of the Llama House, showing an offering of three bowls in Unit 12, Layer C.

Figure 4.43. Huner Bazán carefully cleans Bowls 1, 2, and 3 before they are taken out.

Figure 4.44. Las Varas Bowls 1-3. Note ring base and the band of white slip around the rim, features typical of painted bowls from Las Varas.

Figure 4.45. Las Varas Bowl 1 (diameter 15 cm, height 5.5-6.5 cm, ring base diameter 6.5 cm), found in Layer C, Unit 12, Llama House.

Figure 4.46. Las Varas Sherd #3400 (diameter 16 cm), found in Layer B, Unit 4, Llama House. Note alternating motifs of spikes and dot-and-crescents near the rim, similar to those of Bowl 1.

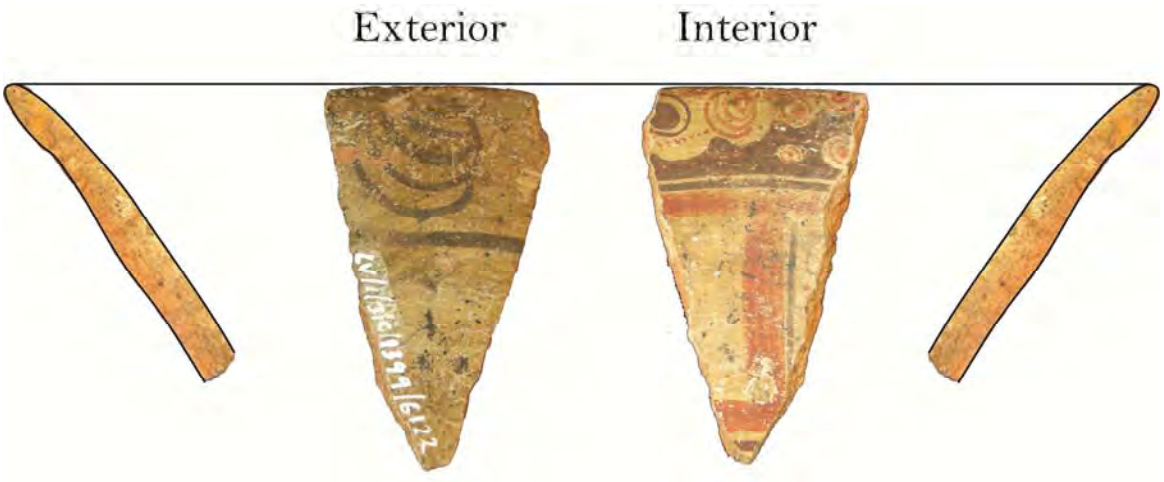

Figure 4.47. Las Varas Sherd #6122 (diameter 19 cm), found in Layer C, Unit 13, Llama House. Note dot-and-crescents motifs painted on the exterior and interior surfaces. Style: Highland Cajamarca Semicursive, Late Cajamarca (AD 900-1200).

Figure 4.48. Las Varas Bowl 2 (diameter 15.5 cm, height 5-6 cm, ring base diameter 6 cm), found in Layer C, Unit 12, Llama House.

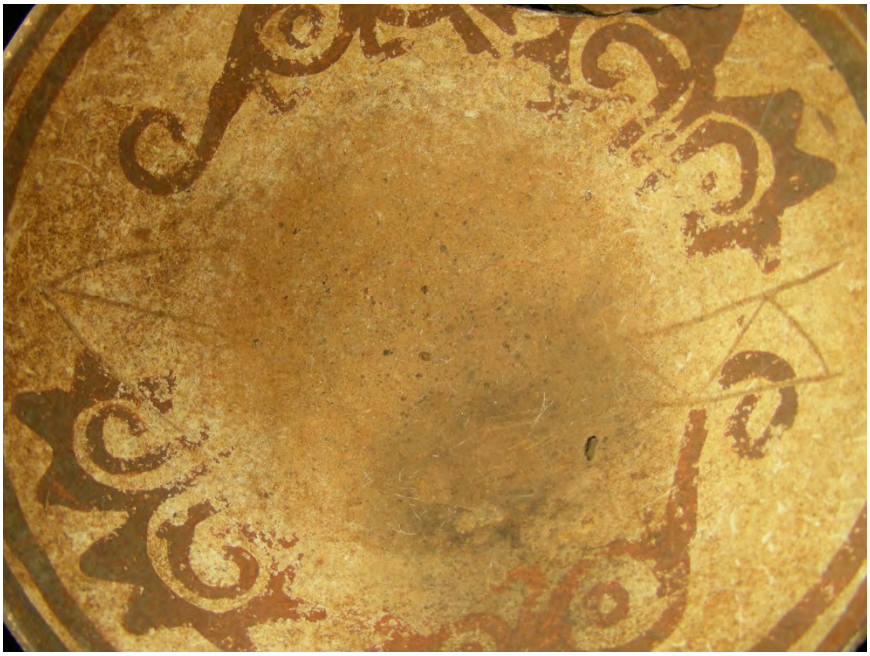

Figure 4.49. Close-up view of the post-fire incision and use wear on Las Varas Bowl 2.

Figure 4.50. Las Varas Bowl 3 (diameter 15.5 cm, height 6 cm, ring base diameter 6.75 cm), found in Layer C, Unit 12, Llama House.

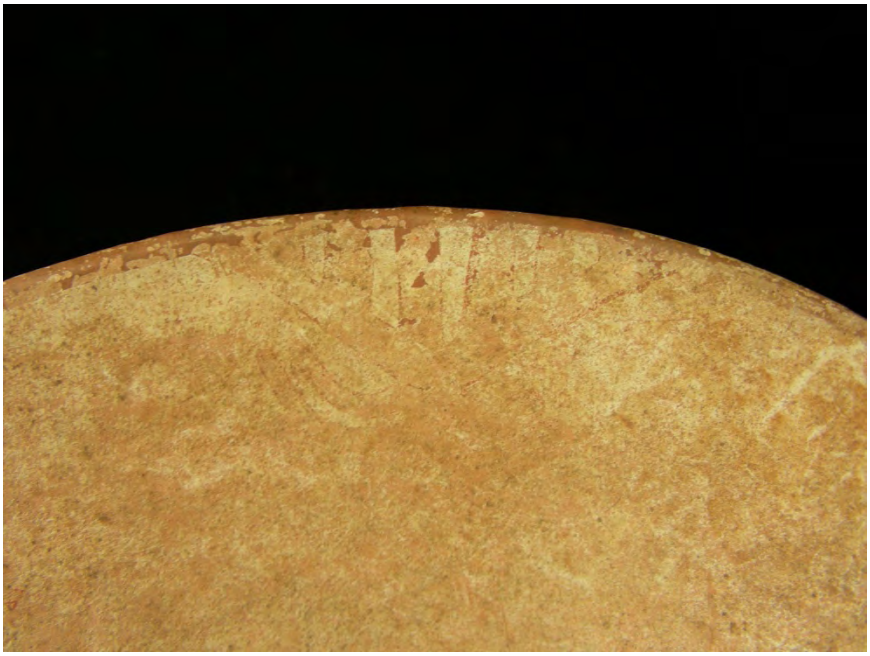

Figure 4.51. Close-up view of Las Varas Bowl 3's rim, showing traces of the volute motif.

Figure 4.52. Fragments of bowls found at Las Varas showing the volute (left, Sherd #8457 from the surface of the Llama House) and funnel (right, Sherd #2886 from Layer D, Unit 2, Llama House) motifs.

Figure 4.53. Reconstruction of the interior designs of Las Varas Bowl 3.

Figure 4.54. The exterior surface of Las Varas Bowl 3, which has been scraped before firing.

Figure 4.55. Layer E (floor) of the middle terrace of the Llama House, Las Varas. North arrows point to concentrations of crushed land snails. Scale, 1 m.

Figure 4.56. Crushed land snails found on the floor (Layer E) of the middle terrace of the Llama House, Las Varas.

Figure 4.57. Guinea pig pen found in the Llama House, Las Varas. Scale, 1 m.

Figure 4.58. Five cores found in the guinea pig pen of the Llama House (Layer B, Unit 4), Las Varas. North arrow, 20 cm.

Figure 4.59. Close-up view of the cores found in the guinea pig pen of the Llama House, Las Varas. North arrow, 20 cm.

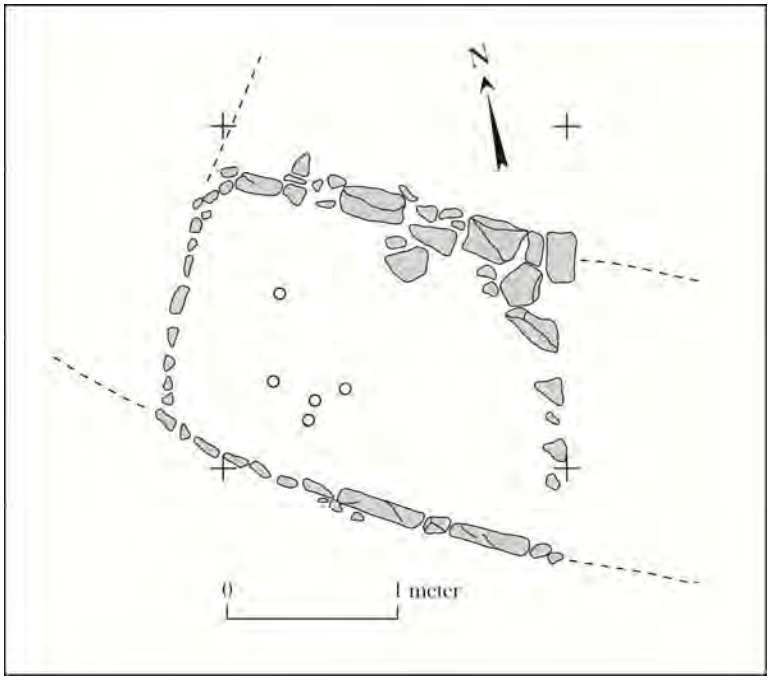

Figure 4.60. Plan drawing of the guinea pig pen found in Unit 4 of the Llama House, Las Varas. The crosshairs mark each of the four corners of Unit 4 (2 x 2 m). Each circle indicates where a stone core had been piece-plotted.

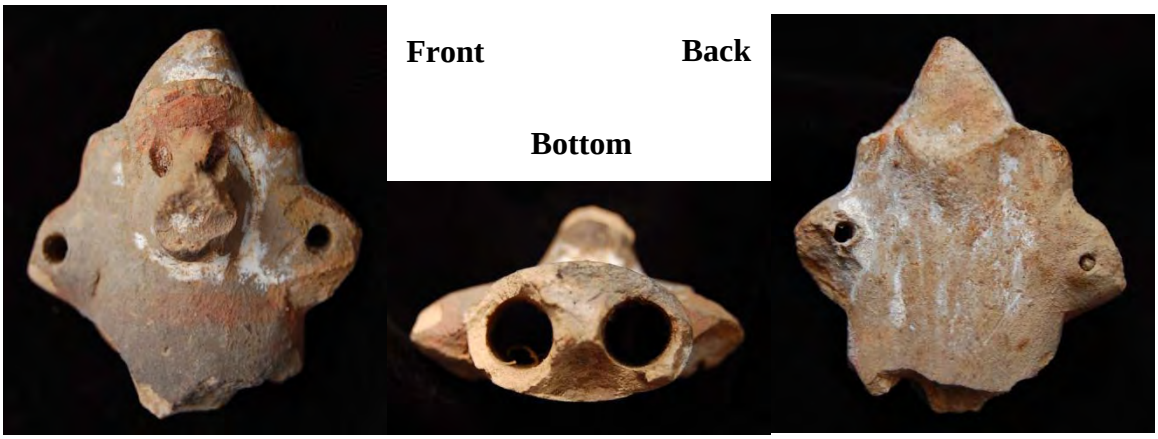

Figure 4.61. Fragment of panpipe (Las Varas #1246; length 4.2 cm) found in Layer A of Unit 8, Llama House, Las Varas.

Figure 4.62. Modeled head of an individual (Las Varas Sherd #1119, height 3.8 cm) found in Layer A, Unit 3, Llama House.

Figure 4.63. Modeled face of an individual (Las Varas Sherd #7128, height 5 cm) found in Layer E, Unit 15, Llama House.

Figure 4.64. Sector 3, Area C, Las Varas, looking north. House 3C is indicated by the arrow.

Figure 4.65. House 3C, Las Varas. The black arrow points north.

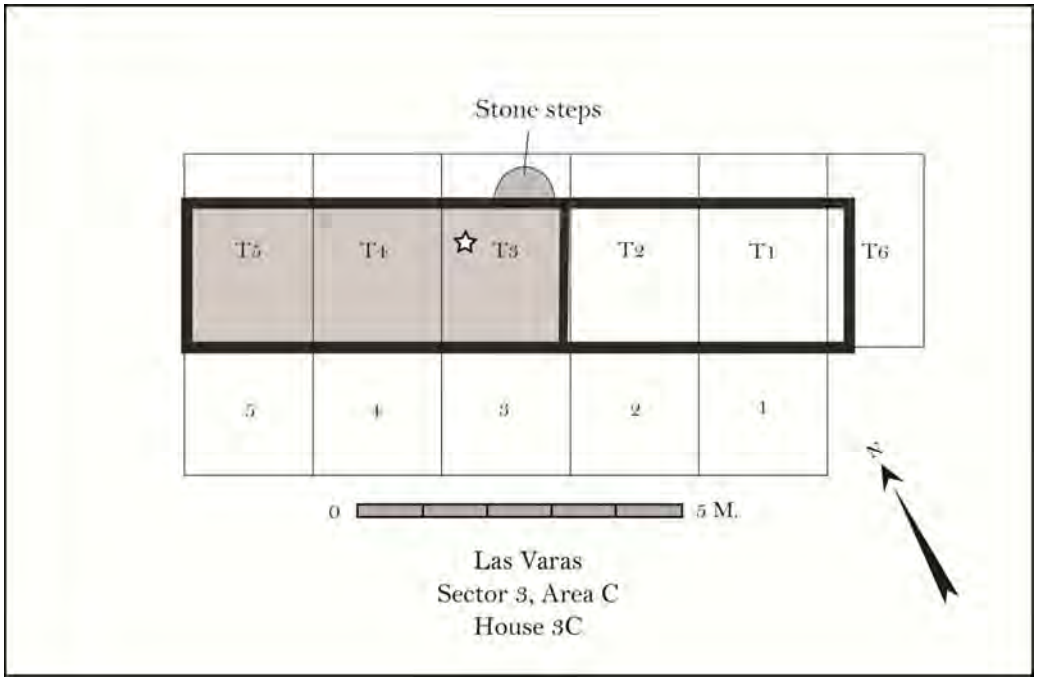

Figure 4.66. Plan of House 3C, Las Varas. The gray area in Units T3-T5 indicates a floor 20 cm higher than the floor in Units T1 and T2. Star indicates where a mold (Figure 4.75) was found beneath the floor.

Figure 4.67. Unit T3 of House 3C, Las Varas, before excavation. Note cacti and north arrow (left) on top of stone steps. Scale, 1 m.

Figure 4.68. José Palacios excavating in Unit 1 of House 3C, Las Varas. Note specks of ash and charcoal in adjacent Unit 2.

Figure 4.69. The wall of a modern house near Las Varas. Canes with stone foundation.

Figure 4.70. Fragment of panpipe (Las Varas #1850; length 4.7 cm) found in Layer B of Unit 1, House 3C, Las Varas.

Figure 4.71. Head of a ceramic figurine (height 3.4 cm) found in Layer A, Unit 2, House 3C, Las Varas.

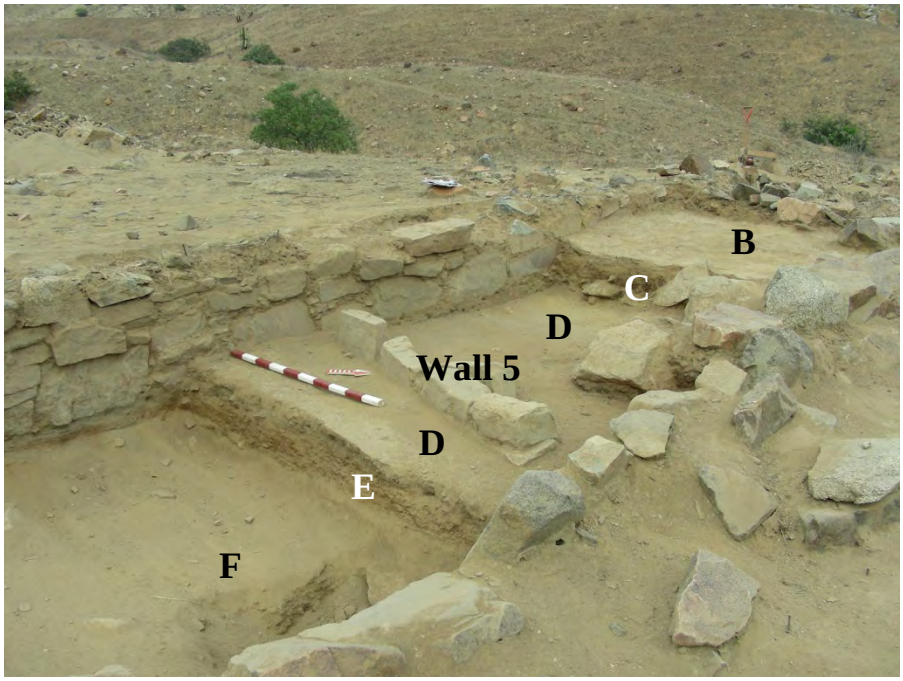

Figure 4.72. The western half of House 3C, Las Varas. Letters indicate Layers F, E (profile), D, C (profile), and B. Layer B originally extended to Wall 5, and Layer D extended left reaching the east wall (not seen in photo). Scale, 1 m.

Figure 4.73. Wall 5 pedestalled in Unit T3, House 3C, Las Varas. It rests on a dark brown layer of guinea pig dung (Layer E). Meter stick and north arrow are on Layer F, a light brown semi-compact surface. Scale, 1 m.

Figure 4.74. South face of the south wall in Unit 1, House 3C, Las Varas. Note layer of charcoal and ashy soil beneath the wall. Scale, 10 cm.

Figure 4.75. Ceramic mold (length 6.3 cm) found in Layer C, Unit T3, House 3C, Las Varas.

Figure 4.76. Possible turntable (Sherd #8038, diameter 12 cm) found in Layer A, Unit 2, House 3C, Las Varas.

Figure 4.77. House 1D (arrow), located on a hill overlooking the fields of Las Varas. Photo taken on February 14, 2007; rice had been planted in the fields of Las Varas.

Figure 4.78. House 1D, Las Varas. Excavations have exposed a bench and stone steps on the right.

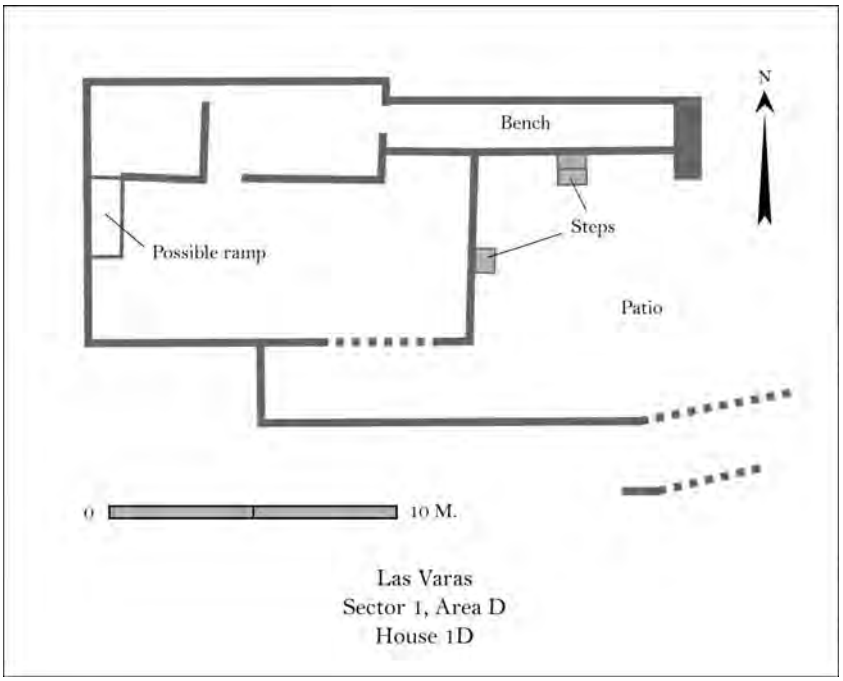

Figure 4.79. Plan of House 1D, Las Varas.

Figure 4.80. Northeast corner of House 1D, Las Varas. Stone steps lead into an elevated bench/walkway. Scale, 1 m.

Figure 4.81. Stone step in the patio of House 1D, Las Varas. It leads into an elevated enclosure. Scale, 1 m.

Figure 4.82. A small painted bowl with tripod base (Las Varas Sherd #7920; diameter 9 cm).

Figure 4.83. The exterior of a partial bowl (diameter 15 cm; height 5 cm; base diameter 7 cm) from Las Varas. Includes Sherds #186, 197, and 203, collected from the surface of Sector 2.

Figure 4.84. The profile of a Las Varas painted bowl (Las Varas Sherd #7410; diameter 30 cm). Note thickening of the rim.

Figure 4.85. The exterior surface of a Las Varas painted bowl (Las Varas Sherd #8472; diameter 22 cm). Note line (arrow) above which the rim begins to thicken.

Figure 4.86. Close-up view of the ring base of a Las Varas painted bowl (Las Varas Sherd #4677; ring base diameter 7 cm). Note line where the ring base is attached to the bottom of the bowl.

Figure 4.87. A piece of ring base from a Las Varas painted bowl (Las Varas Sherd #2504; ring base diameter 5 cm).

Figure 4.88. Las Varas Sherd #4680 (width 5 cm) from a painted bowl (diameter 14 cm), showing post-fire incision.

Figure 4.89. Las Varas Sherd #2708 (width 6 cm) from a painted bowl (diameter 14 cm), showing post-fire incision.

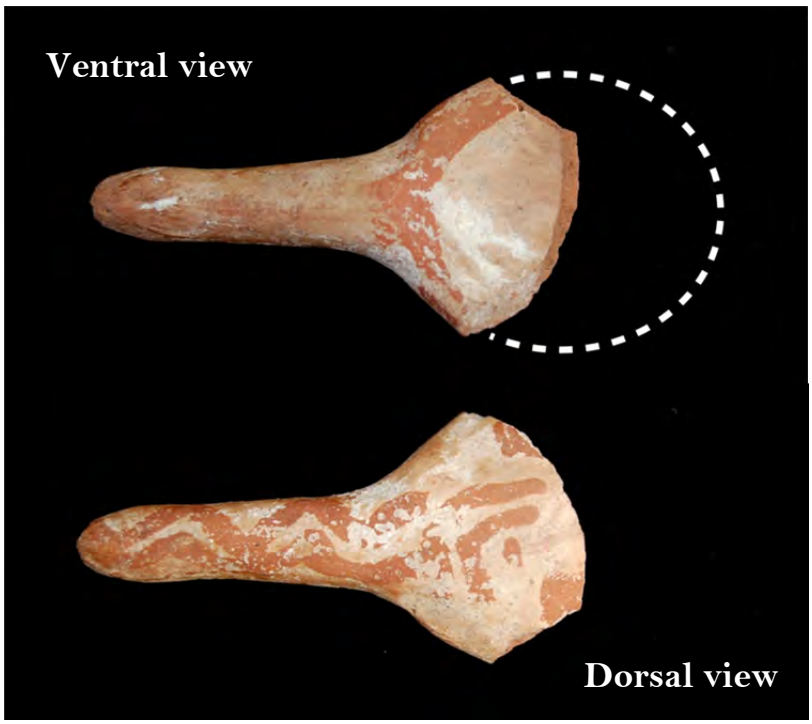

Figure 4.90. Ceramic spoon (Las Varas #1307; length 5.2 cm) from Layer B, Unit 10, Llama House.

Whorl Type	n	Average Weight (g)	Standard Deviation (g)
Disc	71	17.25	12.68
Sphere	7	5.74	1.55
Total	78		

Table 4.2. Average weight of spindle whorls from Las Varas.

Figure 4.91. Las Varas Spindle Whorl #1050 (Llama House, Unit 2, Layer C). Its maker had started to round the edges and drill a hole in the center. Length 4 cm.

Figure 4.92. Las Varas Spindle Whorl #345 (Crystal House, Unit 17, Layer A). The sherd had been rounded, and its maker had started to drill a hole in the center. Diameter 2.74 cm.

Figure 4.93. Las Varas Spindle Whorl #1507 (Lambayeque Cemetery, Unit 1). Only one out of the eight chrysocolla inlays remained. Diameter 2.11 cm.

Figure 4.94. Las Varas Spindle Whorl #1016 (Llama House,Unit 2, Layer A). Diameter 1.64 cm.

Figure 4.95. Las Varas Spindle Whorl #1192 (Crystal House, surface collection). Diameter 3.51 cm.

Figure 4.96. Las Varas Spindle Whorl #1060 (Llama House, Unit 2, Layer D). Height 2.39 cm.

Figure 4.97. Llama bone awls or picks from Las Varas. Las Varas #331 (left, Crystal House, Unit 10, Layer A) and Las Varas #184 (right, Crystal House, Unit T6, Layer A).

Figure 5.1. The Reception Platform, looking east.

Figure 5.2. The Reception Platform, looking northeast. The Gallito Ciego Dam (arrow) can be seen in the background.

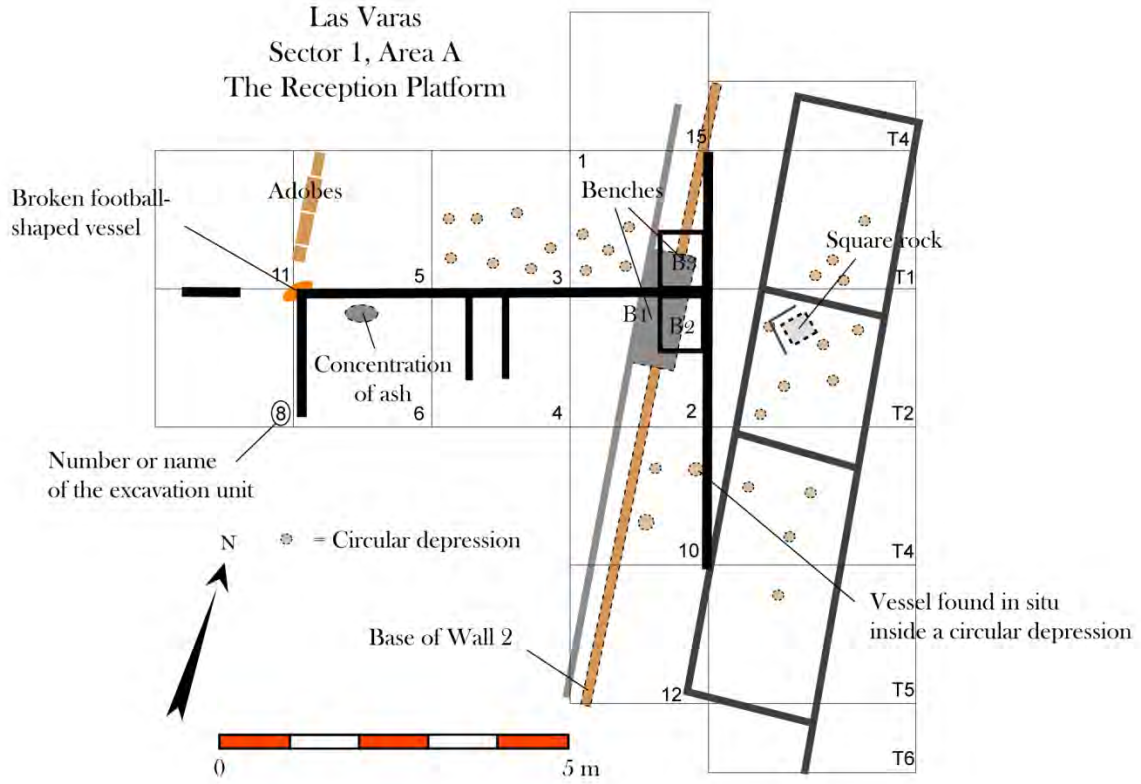

Figure 5.3. Plan of the Reception Platform, Las Varas.

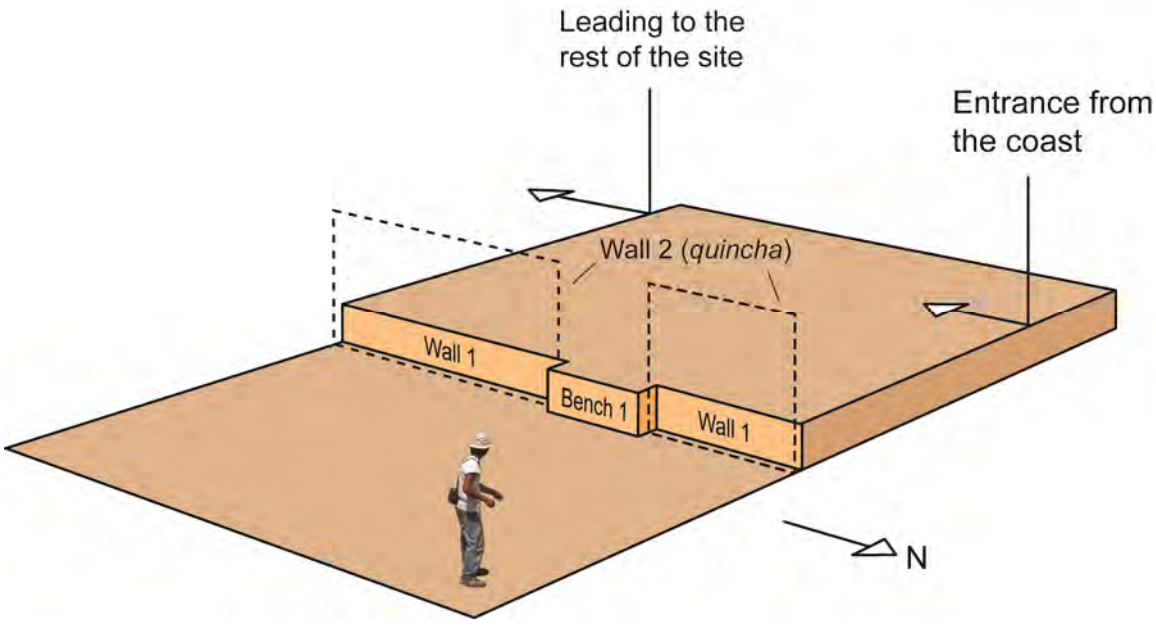

Figure 5.4. The Reception Platform during Phase 1. An archaeologist, 1.8 m tall, serves as scale.

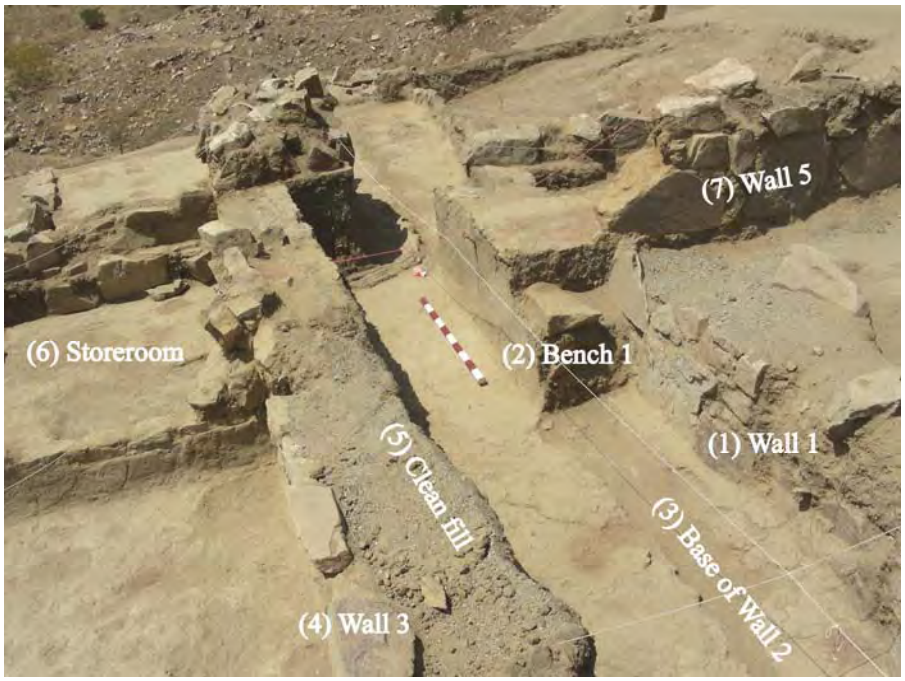

Figure 5.5. The Reception Platform, looking south. Numbers in parentheses indicate the sequence of construction. Scale, 1 m.

Figure 5.6. Uncovering a plastered floor in Unit 2 of the Reception Platform.

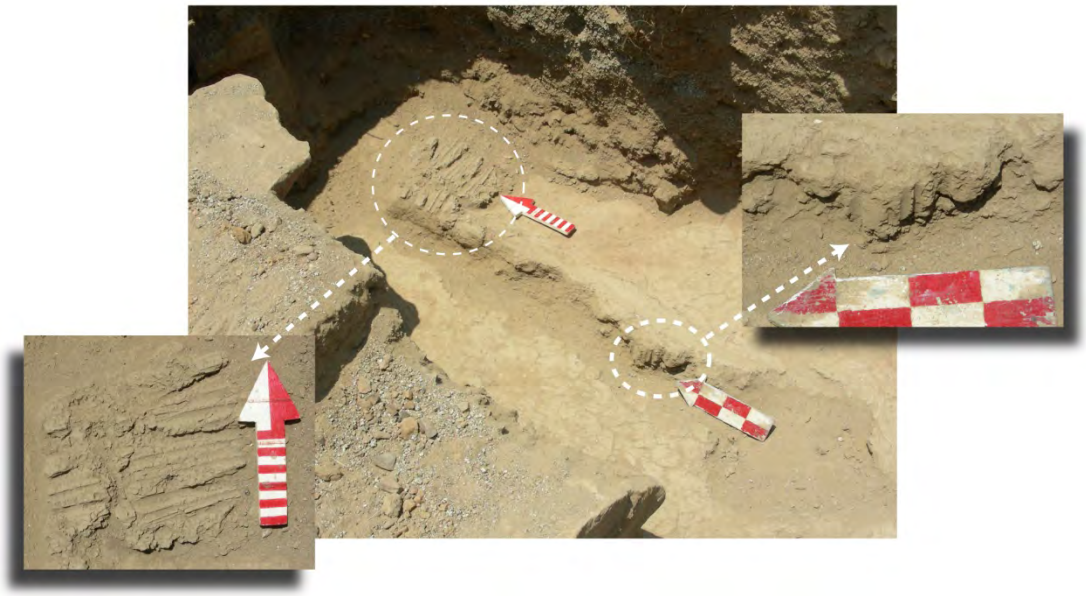

Figure 5.7. Cane-impressed daub found along the base of Wall 2 of the Reception Platform. Scale, 20 cm.

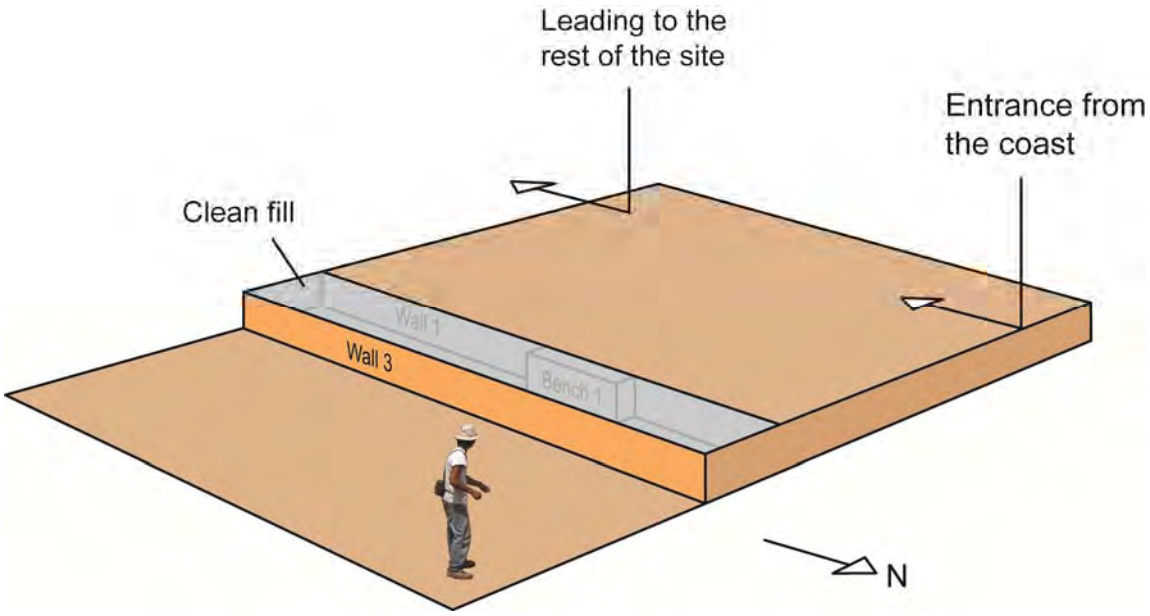

Figure 5.8. The Reception Platform at the end of Phase 1. Wall 3 was built in front of Wall 1 and the space between them was filled with bedrock material.

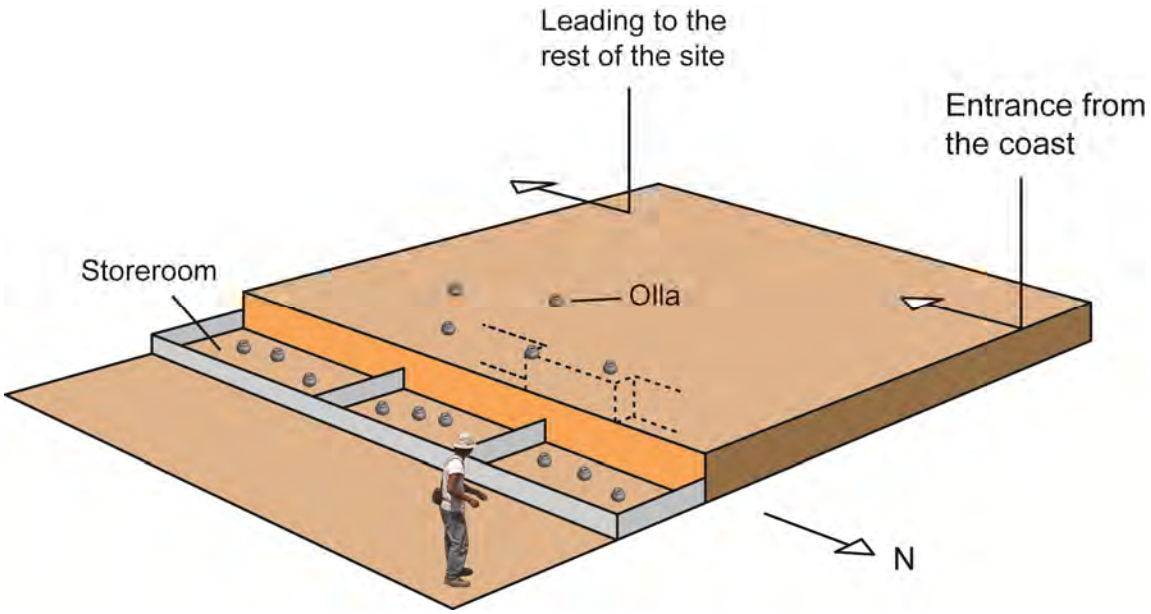

Figure 5.9. The Reception Platform during Phase 2.

Figure 5.10. The Reception Platform's storerooms built during Phase 2. Scale, 1 m.

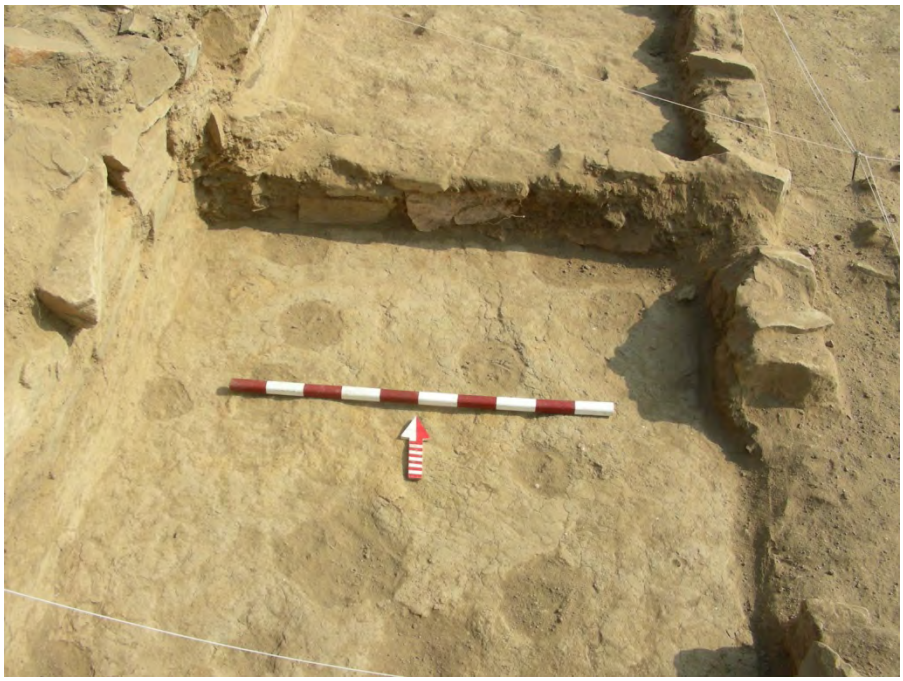

Figure 5.11. Circular depressions found on the floor of the Reception Platform. Scale, 1 m.

Figure 5.12. Close-up view of one of the depressions found on the floor of the Reception Platform. North arrow, 20 cm.

Figure 5.13. Vessel found in situ in one of the circular depressions in Unit 10 of the Reception Platform. North arrow, 20 cm.

Figure 5.14. The floor of the storeroom rising to meet the wall plaster in the Reception Platform.

Figure 5.15. Unit 5 of the Reception Platform. Scale, 1 m.

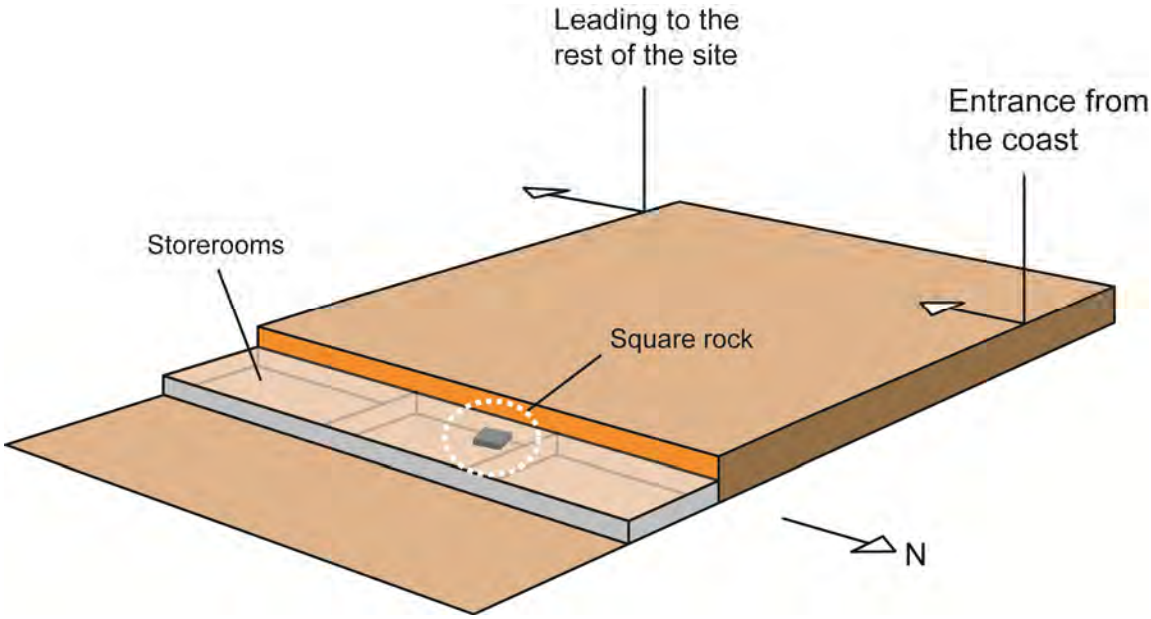

Figure 5.16. The Reception Platform at the end of Phase 2. The storerooms were filled with earth and midden, and above this fill a square rock had been placed.

Figure 5.17. The Reception Platform, looking west. A square rock (circled) was found above one of the storerooms.

Figure 5.18. Square rock found in the Reception Platform. North arrow, 20 cm.

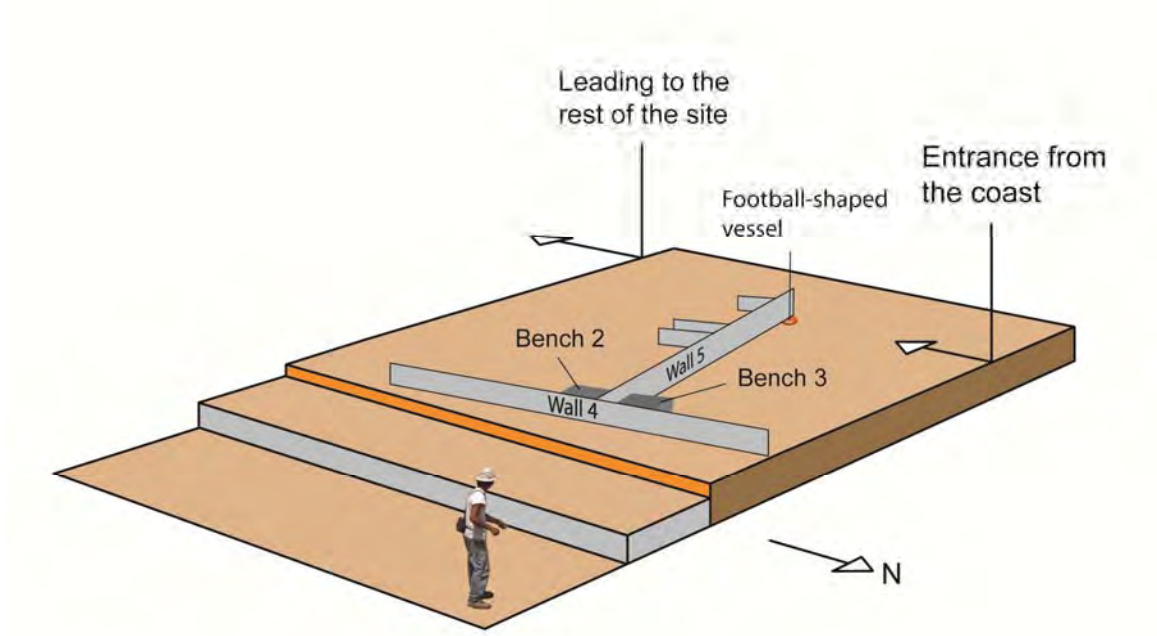

Figure 5.19. The Reception Platform during Phase 3. Two walls (Walls 4 and 5) forming a “T” were built on the upper level, and Benches 2 and 3 were built at the intersections of Walls 4 and 5.

Figure 5.20. The remains of Bench 3 of the Reception Platform. Scale, 1 m.

Figure 5.21. Bench 2 of the Reception Platform. Scale, 1 m.

Figure 5.22. Two parallel rows of stones built against the south side of Wall 5, Reception Platform. Scale, 1 m.

Figure 5.23. Concentration of ash (circled) at the southwest corner of Wall 5, Reception Platform. Scale, 1 m.

Figure 5.24. A broken, football-shaped vessel found below Wall 5 of the Reception Platform. Dotted line indicates its probable original shape. North arrow, 20 cm.

Figure 5.25. Human phalanx (length 3.9 cm) found in Unit T2 of the Reception Platform. Note prominent flexor sheath insertions (arrow).

Figure 5.26. *Polinices uber* found at Las Varas. Scale (white bar), 1 cm.

Location	*Polinices uber*	*Donax obesulus*
Reception Platform	193	67
Crystal House	3	75
Lambayeque Cemetery	2	2
Llama House	1	50
Spondylus House	1	1
House 3C	1	2
Total	201	197

Table 5.1. Minimum number of individuals of *Polinices uber* and *Donax obesulus* found at Las Varas.

Location	Coastal-style sherds (n)	%
Reception Platform	324	81
Llama House	36	9
Lambayeque Cemetery	13	3.25
Crystal House	10	2.5
Sector 1, Terrace 2	6	1.5
House 3C	5	1.25
Plazas of the Malquis	4	1
Cemetery of Standing Stones	2	.5
Total	400	100

Table 5.2. Number of coastal-style sherds found at Las Varas.

Location	Coastal-style sherds (n)	Diagnostic sherds (n)	%
Reception Platform	324	1442	22.5
Sector 1, Terrace 2	6	29	20.7
Lambayeque Cemetery	13	107	12.1
Cemetery of Standing Stones	2	18	11.1
Plazas of the Malquis	4	302	1.3
Crystal House	10	1118	.9
House 3C	5	567	.9
Llama House	36	5098	.7
Total	400	8681	

Table 5.3. Number of coastal-style sherds as a percentage of the number of diagnostic sherds found at each location of Las Varas.

Figure 5.27. Satellite image of Las Varas, looking south: (1) the Reception Platform; (2) the Plazas of the Malquis; (3) the Cemetery of Standing Stones; (4) a path up the mountains; (5) the Quebrada del Caracol. The distance between (1) and (2) is approximately 650 m. Image from Google Earth.

Figure 5.28. Las Varas in the morning. Archaeologists and workers are walking south toward the Plazas of the Malquis.

Figure 5.29. The Plazas of the Malquis (circled).

Plaza	Length, north-south (m)	Width, east-west (m)	Area (m^2)
1	20	22	440
2	16	17	272
3	11	11	121
Total			833

Table 5.4. Length, width, and area of the Plazas of the Malquis.

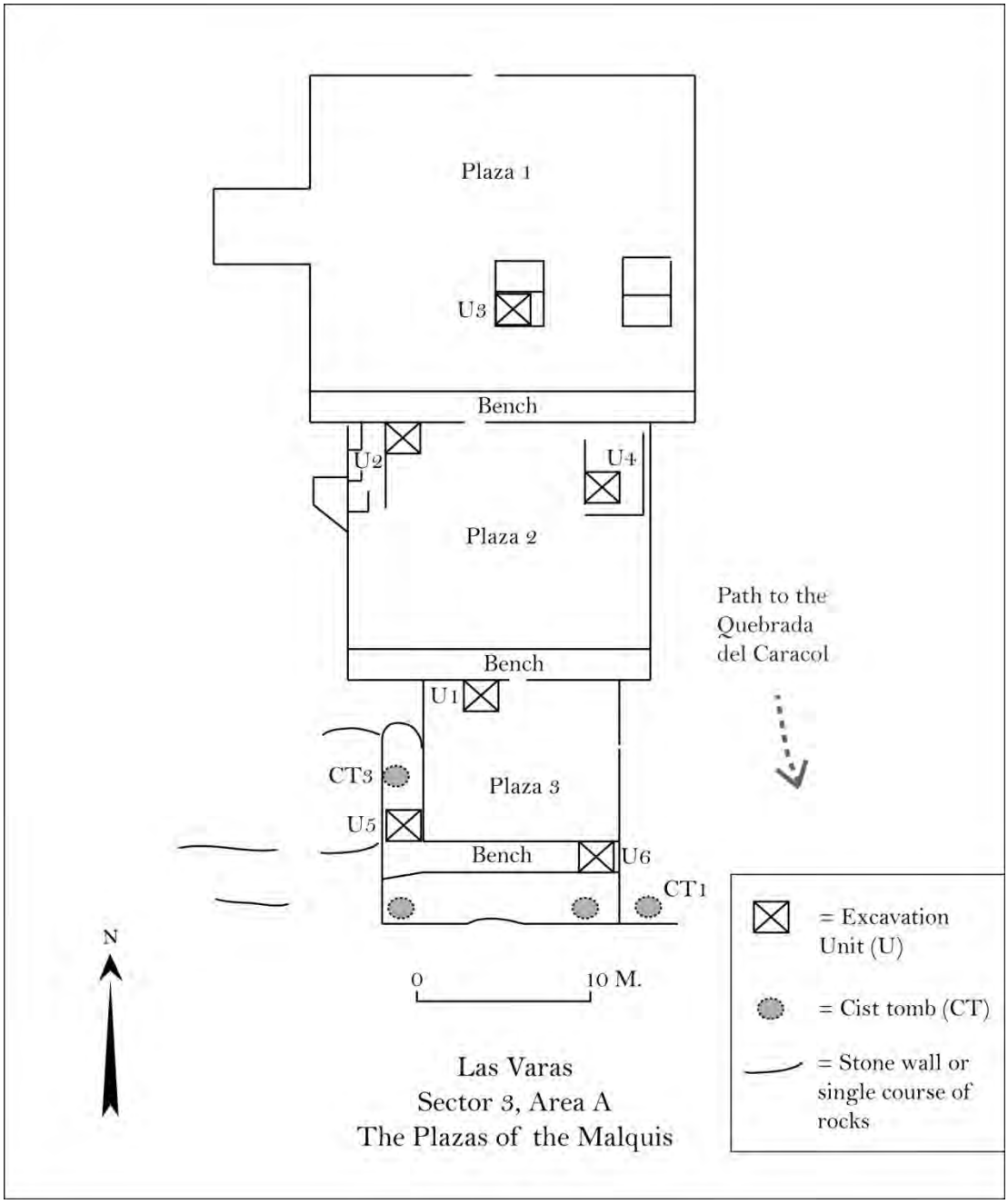

Figure 5.30. Plan of the Plazas of the Malquis, Las Varas.

Figure 5.31. Guinea pig dung (dark brown soil) starting to appear in Unit 1 of Plaza 3, Las Varas. The two standing stones mark the northern edge of Plaza 3.

Figure 5.32. Cajamarca-style ceramics from Unit 2, Plaza 2, Las Varas.

Figure 5.33. Cajamarca-style pottery (Sherd #7627, diameter 10 cm) from Unit 2, Plaza 2, Las Varas. The upper photo shows the interior and the bottom shows the exterior surface with an appliqué.

Figure 5.34. Crystal bar (length 3.3 cm) found in Unit 4, Plaza 2, Las Varas.

Figure 5.35. Layer B, Unit 4, Plaza 2, Las Varas. A layer of dark ash can be seen in the east profile. Scale, 1 m.

Figure 5.36. Layer B, Unit 5, Plaza 3, Las Varas. The north arrow points to a fragment of *Spondylus* (circled). Scale, 1 m.

Figure 5.37. Fragment of *Spondylus* (length 2 cm) found in Layer B, Unit 5, Plaza 3, Las Varas.

Figure 5.38. Layer C, Unit 5, Plaza 3, Las Varas. Note stone post to the right of the north arrow. Scale, 1 m.

Figure 5.39. Slightly curved west wall of the west bench of Plaza 3, Las Varas.

Figure 5.40. Semi-circular structure (unexcavated) east of the Plazas of the Malquis, Las Varas.

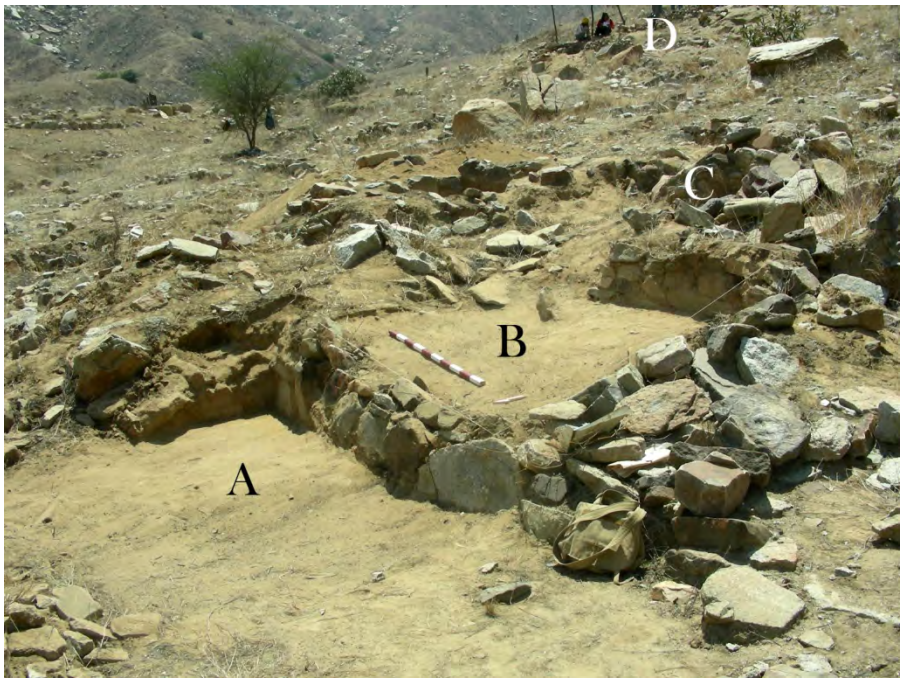

Figure 5.41. Unit 6, Plaza 3, Las Varas: (A) Plaza 3; (B) south bench; (C) an upper level with cist tombs; (D) archaeologists sitting by Cist Tomb 2 to the southeast. Scale, 1 m.

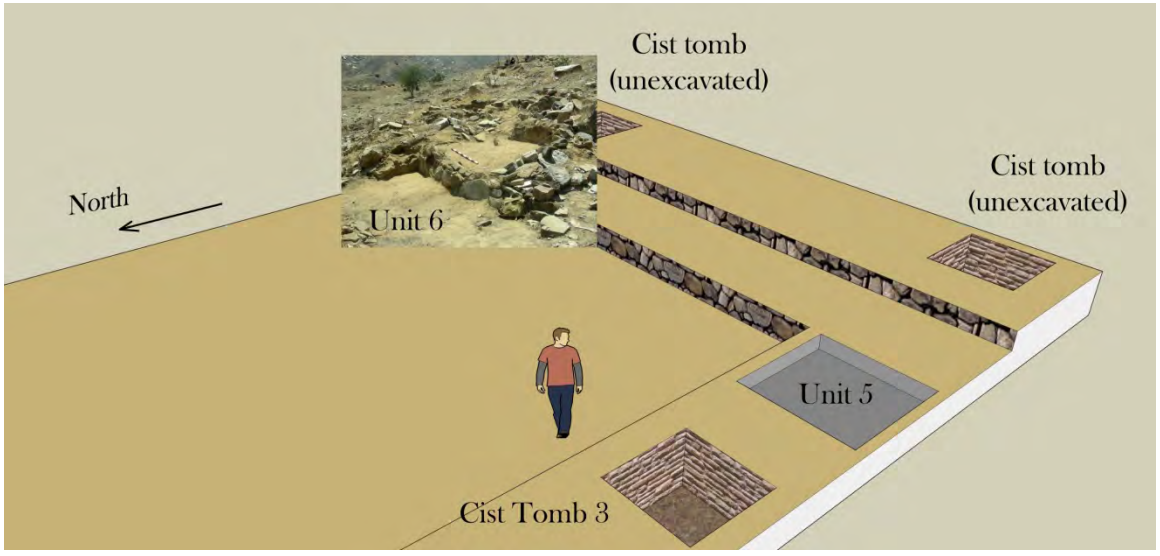

Figure 5.42. Reconstruction of Plaza 3, Las Varas. Unexcavated cist tombs are not assigned numbers, and a fourth cist tomb, east of Unit 6, is not shown. Unit 5 measures 2 x 2 m.

Figure 5.43. Cist Tomb 1, Plazas of the Malquis, Las Varas. Cist Tomb 1 was emptied prior to our investigation.

Figure 5.44. Cist Tomb 1, Plazas of the Malquis, Las Varas.

Figure 5.45. Cist Tomb 1 of Las Varas, showing details of construction.

Figure 5.46. Cist tomb labled as “chulpa” in a park in the highland town of Contumazá, 48 km east of Las Varas.

Figure 5.47. Close-up view of the cist tomb in Figure 5.46.

Figure 5.48. Cist Tomb 2, Plazas of the Malquis, Las Varas. Scale, 1 m.

Figure 5.49. Bedrock below Cist Tomb 2, Plazas of the Malquis, Las Varas. North arrow, 20 cm.

Figure 5.50. Cist Tomb 3, Plazas of the Malquis, Las Varas, before excavation. Scale, 1 m.

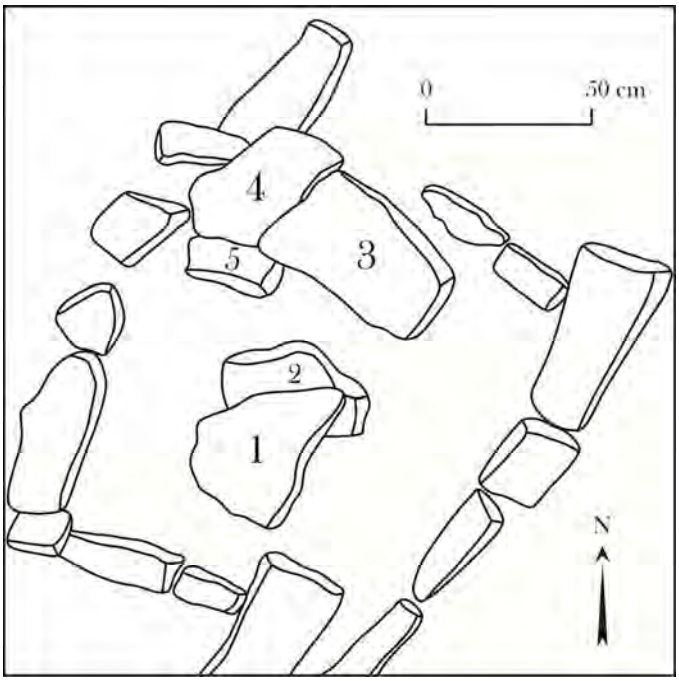

Figure 5.51. Plan of Cist Tomb 3 (Plazas of the Malquis, Las Varas), showing a layer of five flagstones (numbered). A human foot was found below the south tip of Flagstone 3.

Figure 5.52. Cist Tomb 3, Plazas of the Malquis, Las Varas. The north arrow points to the remains of a human foot. Scale, 1 m.

Figure 5.53. Human foot found in Cist Tomb 3, Plazas of the Malquis, Las Varas.

Figure 5.54. The floor of Cist Tomb 3 (Plazas of the Malquis, Las Varas) being excavated. There are impressions of cane stalks, oriented north-south, on the underside of the floor.

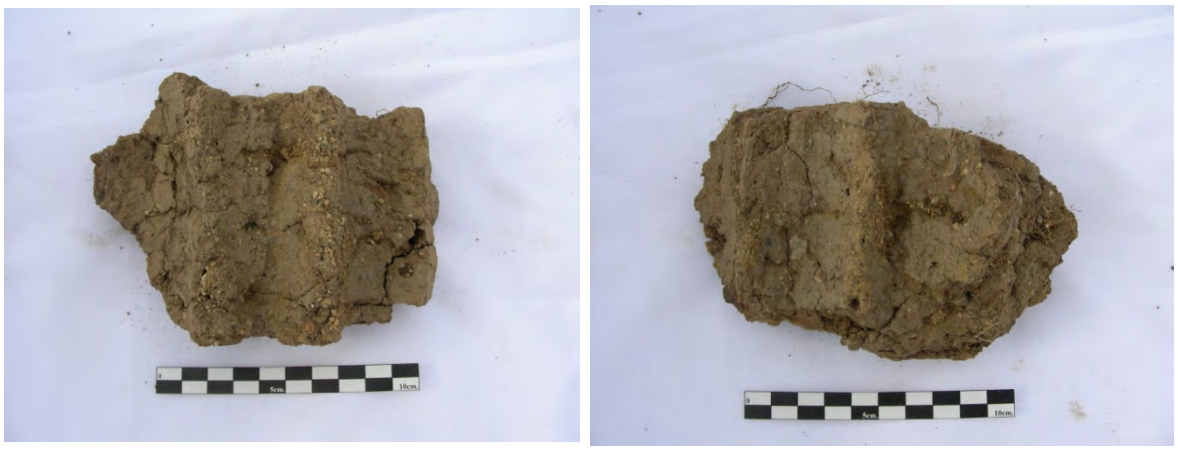

Figure 5.55. Fragments of floor from Cist Tomb 3 (Plazas of the Malquis, Las Varas) showing cane impressions. Each cane measures approximately 4 cm in diameter.

Figure 5.56. Entrance to a cave burial located near the town of Santa Catalina in the Quebrada Chausis. Note human cranium and tibia (circled) lying near the entrance.

Figure 5.57. Archaeologists working in the Plazas of the Malquis, Las Varas.

The Reception Platform	The Plazas of the Malquis
Located at the entrance to the coast	Located at the entrance to the highlands
Small restricted area	Large open space
Multiple phases of re-modeling	No evidence for drastic change in layout
Not associated with burials	Associated with cist tombs and nearby cemetery

Table 5.5. Differences between the Reception Platform and the Plazas of the Malquis.

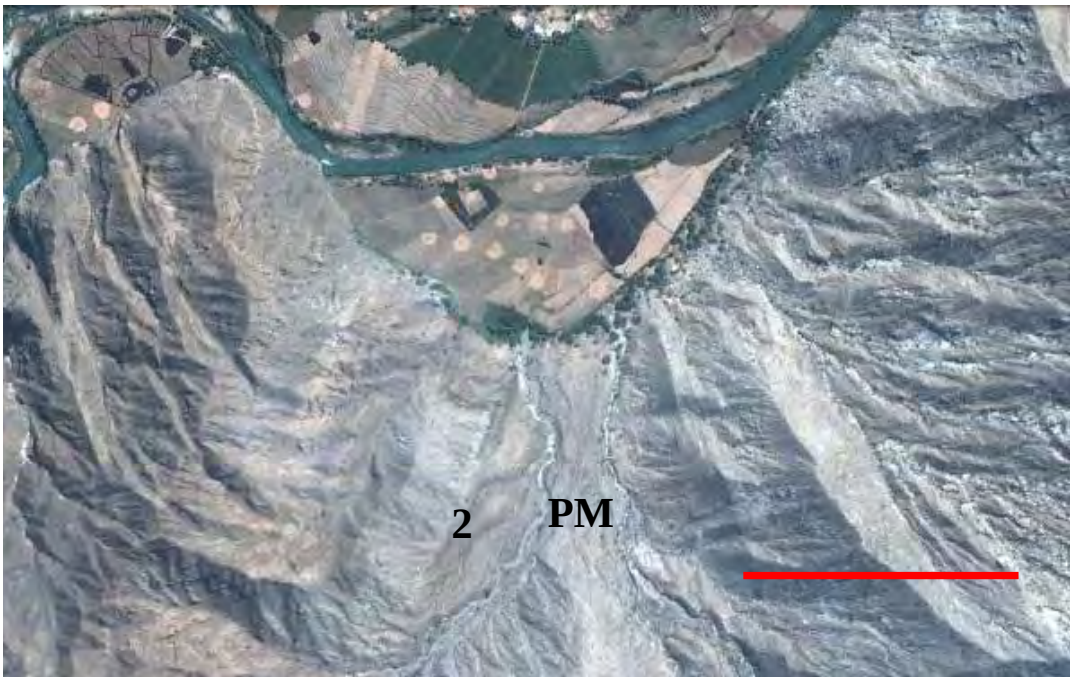

Figure 6.1. Google Earth image of Las Varas: PM = Plazas of the Malquis; 2 = Sector 2. Red bar measures 500 m. North is at the top.

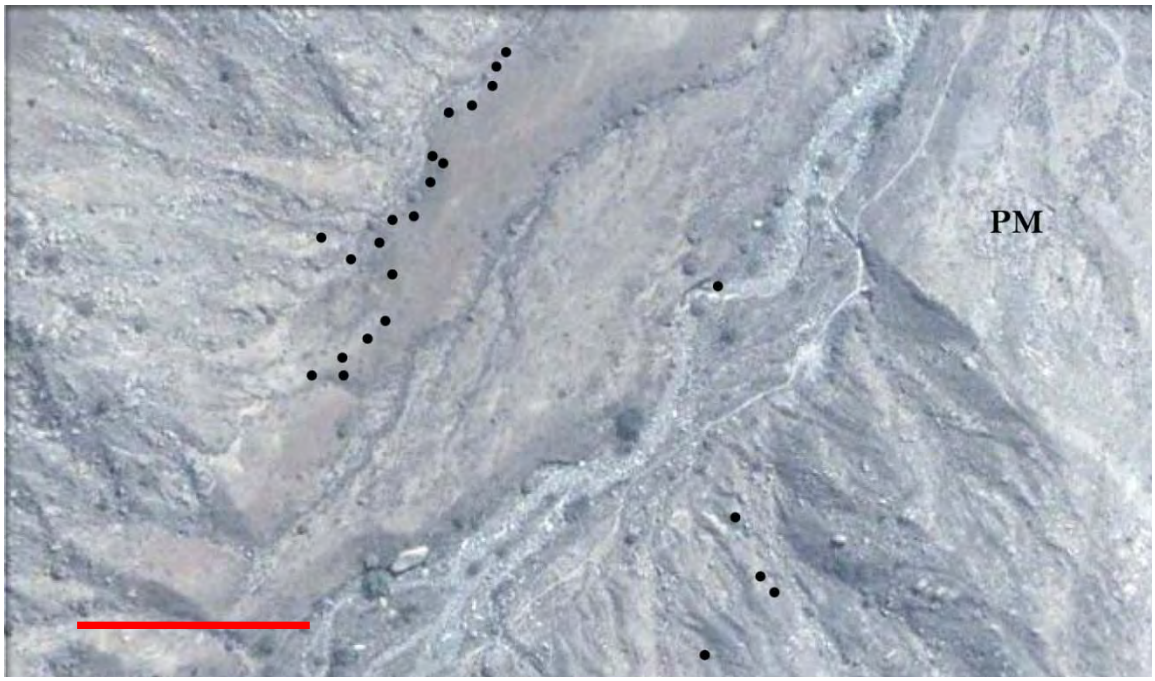

Figure 6.2. Google Earth image of Sector 2, Las Varas. Black dot indicates the location of a circle of standing stones. PM = Plazas of the Malquis. Red bar measures 100 m. North is at the top.

Figure 6.3. Sector 2, Las Varas. Three stone circles (arrows) can be seen.

Figure 6.4. A looted stone circle with scattered fragments of jars and painted bowls (arrow) on the surface. Sector 2, Las Varas.

Figure 6.5. Scattered human bones in Sector 2, Las Varas.

Figure 6.6. Circle of standing stones from Sector 2, Las Varas.

Figure 6.7. Circle of standing stones from Sector 2, Las Varas.

Figure 6.8. Standing stones beneath a large boulder in Sector 2, Las Varas.

Figure 6.9. Square, stone-lined chamber from Sector 2, Las Varas.

Figure 6.10. Satellite image of Las Varas: (1) Pay Pay; (2) Jequetepeque River; (3) fields of Las Varas; (4) Sector 4 of Las Varas; (5) Gallito Ciego Reservoir. North is at the top. Scale, 1 km.

Figure 6.11. Crossing the Jequetepeque River on the *oroya*.

Figure 6.12. Robyn Cutright and Maritza Bazán standing on a bridge across the Jequetepeque River. The bridge was built in 2010, replacing the *oroya*.

Figure 6.13. Excavations at the Lambayeque Cemetery, Las Varas.The adobe wall (right) is modern.

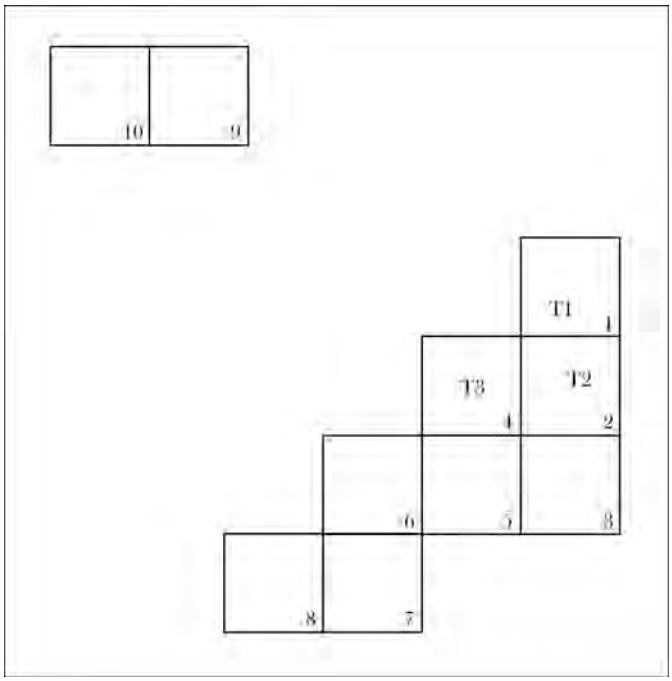

Figure 6.14. Plan of the Lambayeque Cemetery, Las Varas, showing the location of excavation units and three tombs (T1-T3). Each unit measures 2 x 2 m; north is at the top.

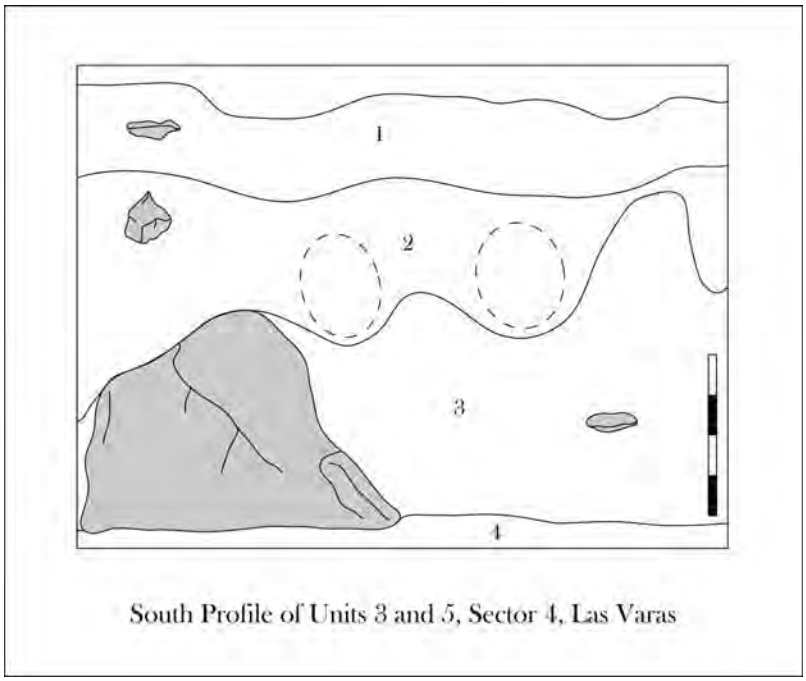

Figure 6.15. Drawing of the south profile of Units 3 and 5, Lambayeque Cemetery, Las Varas. The main text decribes the layers. Objects shaded gray are rocks, dashed ovals indicate where rocks had been removed during excavation. Scale, 1 m.

Figure 6.16. Workers helping with the drawing of the south profile of Units 3 and 5, Lambayeque Cemetery, Las Varas. See Figure 6.15 for a drawing of this profile.

Figure 6.17. Unit 1, Lambayeque Cemetery, Las Varas. A complete olla, probably discarded by looters, was found in Layer 2.

Figure 6.18. Textile found in Layer 2 of Unit 1, Lambayeque Cemetery, Las Varas. It was probably discarded by looters. Scale (pointing north), 20 cm.

Figure 6.19. Tomb 1 from Layer 2 of Unit 1, Lambayeque Cemetery, Las Varas. North arrow, 20 cm.

Figure 6.20. The back of Individual 1's skull in Tomb 1, Lambayeque Cemetery, Las Varas.

Figure 6.21. Front of Lambayeque-style bottle (Las Varas #1545) found with Individual 1 in Tomb 1, Lambayeque Cemetery, Las Varas. Height 20.3 cm.

Figure 6.22. Back of Lambayeque-style bottle (Las Varas #1545) found with Individual 1 in Tomb 1, Lambayeque Cemetery, Las Varas. Scale, 10 cm.

Figure 6.23. White patch (diameter 3 cm), made from dried sap with a small pebble in the center,was found on the back of the Lambayeque-style bottle (Las Varas #1545) buried with Individual 1 in Tomb 1, Lambayeque Cemetery, Las Varas.

Figure 6.24. Two pieces of copper, wrapped in cloth, were found beneath Individual 1 in Tomb 1, Lambayeque Cemetery, Las Varas. Scale, 5 cm.

Figure 6.25. Two pieces of copper (diameters 1.58 cm and 1.8 cm) found beneath Individual 1 in Tomb 1, Lambayeque Cemetery, Las Varas.

Figure 6.26. Tomb 2, found in Layer 3 of Unit 2, Lambayeque Cemetery, Las Varas. North arrow, 20 cm.

Figure 6.27. Tomb 2, found in Layer 3 of Unit 2, Lambayeque Cemetery, Las Varas. The infant was buried in a seated position accompanied by shells, pieces of metal, and clay pendant. North arrow, 20 cm.

Figure 6.28. Tomb 2, Lambayeque Cemetery, Las Varas: (1)-(3)*Oliva* shells; (4) clay pendant; (5) piece of metal; (6) shell pendant.

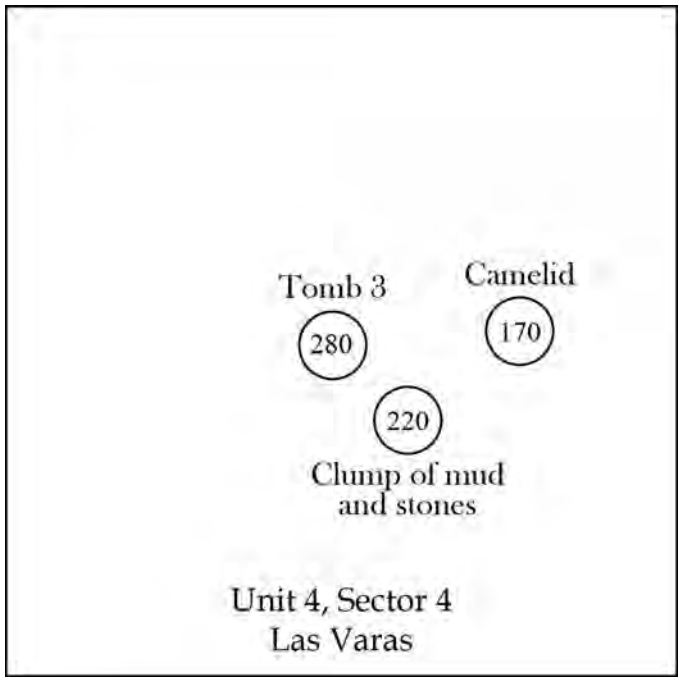

Figure 6.29. Plan drawing of Unit 4 (2 x 2 m) of the Lambayeque Cemetery, Las Varas. Circles indicate the locationsof the remains of a camelid, a clump of mud and stones, and Tomb 3. Numbers inside the circles indicate centimeters below Datum 1. North is at the top.

Figure 6.30. Unit 4, Lambayeque Cemetery, Las Varas. North arrow points to the remains of a camelid found in Layer 2. Scale, 1 m.

Figure 6.31. Camelid found in Layer 2 of the Lambayeque Cemetery, Sector 4, Las Varas. North arrow, 20 cm.

Figure 6.32. Huner Bazán brushing the surface on which a clump of mud and stones was found in Unit 4 of the Lambayeque Cemetery, Las Varas. North arrow points to the clump of mud and stones. Scale, 1 m.

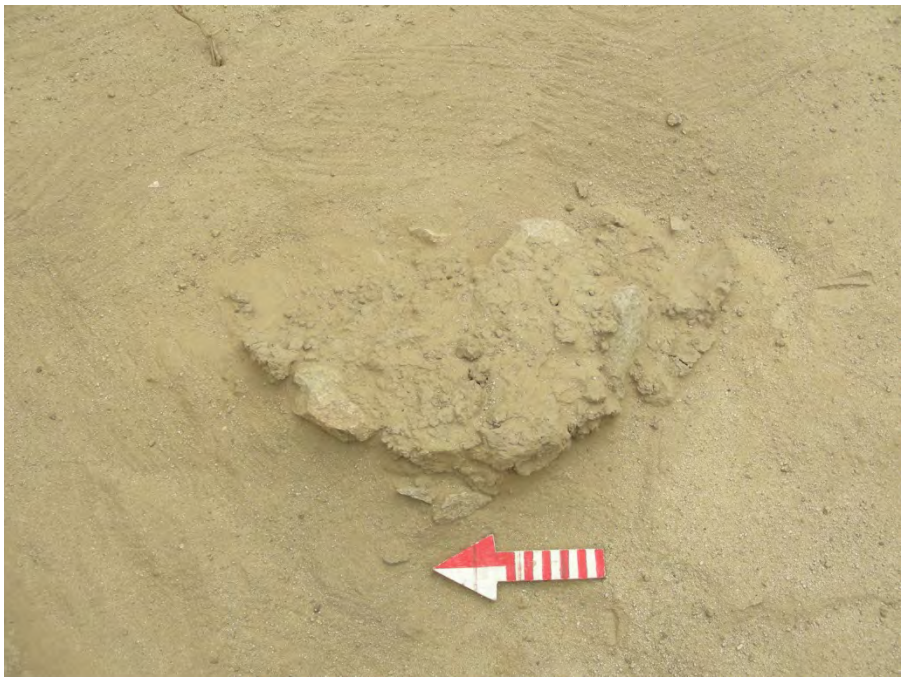

Figure 6.33. Clump of mud and stones found in Unit 4 of the Lambayeque Cemetery, Las Varas. North arrow, 20 cm.

Figure 6.34. Tomb 3, Lambayeque Cemetery, Las Varas. Scale, 1 m.

Figure 6.35. Tomb 3, Lambayeque Cemetery, Las Varas: (1) *Oliva* shell; (2) whistle; (3) plate.

Figure 6.36. Plate (Las Varas #1635; diameter 19 cm; ring base diameter 5 cm; height 5 cm) found in Tomb 3, Lambayeque Cemetery, Las Varas.

Figure 6.37. Ceramic whistle (Las Varas #1633; length 3 cm) found in Tomb 3, Lambayeque Cemetery, Las Varas.

Figure 6.38. Shell pendant (Las Varas #1641) found beneath Individual 3's skull in Tomb 3 of Unit 4, Lambayeque Cemetery, Las Varas.

Figure 6.39. Shell pendant depicting a bird (Las Varas #1641; length 3.5 cm) found in Tomb 3, Lambayeque Cemetery, Las Varas.

Figure 7.1. Las Varas Sherd #222 (Crystal House, Unit T2, Feature 1).

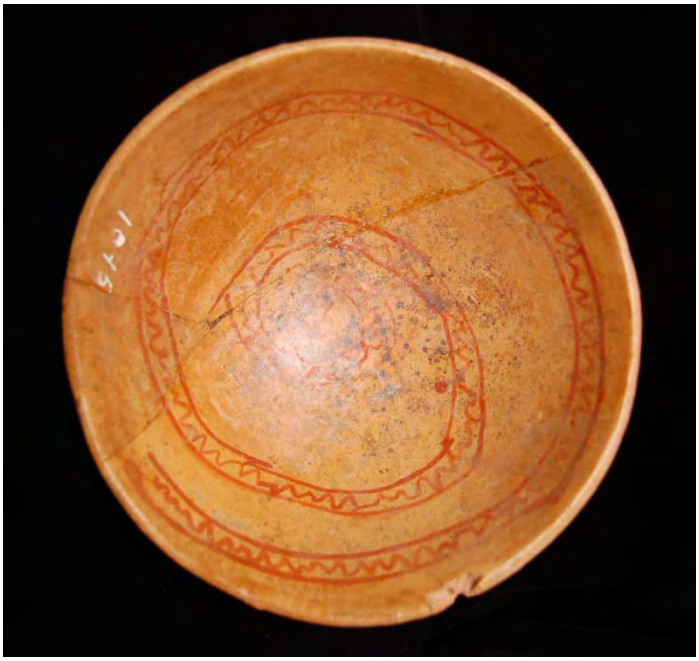

Figure 7.2. Vessel #001075 (diameter 16 cm) from the National University of Cajamarca.

Figure 7.3. Lorenzo Bazán standing next to a defensive wall on top of Cerro Faclo.

References Cited

Acosta, José de
1940 [1590] *Historia natural y moral de las Indias*. Fondo de Cultura Económica, Mexico City.

Agustinos
1992 [1560] *Relación de la religión y ritos del Perú hecha por los padres agustinos*. Pontificia Universidad Católica del Perú, Lima.

Albornoz, Cristóbal de
1989 [1580s] Instrucción para descrubrir todas las guacas del piru y sus camayos y haziendas. In *Fábulas y mitos de los incas*, edited by Henrique Urbano and Pierre Duviols, pp. 160-198. Historia 16, Madrid.

Allen, Catherine J.
1988 *The Hold Life Has: Coca and Cultural Identity in an Andean Community*. Smithsonian Institution Press, Washington, D.C.

Anders, Martha, Susana Arce, Izumi Shimada, Victor Chang, Luis Tokuda, and Sonia Quiroz
1998 Early Middle Horizon Pottery Production at Maymi, Pisco Valley, Peru. In *Andean Ceramics: Technology, Organization, and Approaches*, edited by Izumi Shimada, pp. 233-251. Museum Applied Science Center for Archaeology, University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Arguedas, José María and Pierre Duviols
1966 *Dioses y hombres de Huarochirí: Narración quechua recogida por Francisco de Avila [¿1598?]*. Instituto de Estudios Peruanos, Lima.

Arriaga, Pablo José de
1999 [1621] *La extirpación de la idolatría en el Pirú*. Cuadernos para la historia de la evangelización en América Latina No. 13. Centro de Estudios Regionales Andinos "Bartolomé de Las Casas", Cuzco, Peru.

1968 [1621] *The Extirpation of Idolatry in Peru*. Translated by L. Clark Keating. University of Kentucky Press, Lexington.

Bakhtin, Mikhail Mikhailovich
1981 *The Dialogic Imagination: Four Essays*. Translated by Caryl Emerson and Michael Holquist. University of Texas Press, Austin.

Barazangi, Muawia and Bryan L. Isacks
1976 Spatial Distribution of Earthquakes and Subduction of the Nazca Plate beneath South America. *Geology* 4:686-692.

Barth, Fredrik
1969 Introduction. In *Ethnic Groups and Boundaries: The Social Organization of Culture Difference*, edited by Fredrik Barth, pp. 1-38. Little, Brown, Boston.

Bastien, Joseph W.
1978 *Mountain of the Condor: Metaphor and Ritual in an Andean Ayllu*. Waveland Press, Long Grove, Illinois.

Bauer, Brian S.
1998 *The Sacred Landscape of the Inca: The Cusco Ceque System*. University of Texas Press, Austin.

Begler, Elsie B.
1980 *Modernization of Agricultural Production and the Problem of Rural Unemployment: The Search for Work among the Rural Proletariat of the Peruvian North Coast.* Ph.D. dissertation, Colombia University, New York. University Microfilms, Ann Arbor.

Bennett, Wendell C.
1944 *The North Highlands of Peru: Excavations in the Callejon de Huaylas and at Chavin de Huantar*. American Museum of Natural History, New York.

1946 The Archeology of the Central Andes. In *The Andean Civilizations*, edited by Julian H. Steward, pp. 61-147. Handbook of South American Indians, Vol. 2. Smithsonian Institution, Washington, D.C.

Bernuy, Katiusha and Vanessa Bernal
2008 La tradición Cajamarca en San José de Moro: Una evidencia de interacción interregional durante el Horizonte Medio. In *Arqueología mochica: Nuevos enfoques*, edited by Luis Jaime Castillo Butters, Hélène Bernier, Gregory D. Lockard, and Julio Rucabado Yong, pp. 67-80. Fondo Editorial de la Pontificia Universidad Católica del Perú, Lima.

Billman, Brian R.
1996 The Evolution of Prehistoric Political Organizations in the Moche Valley, Peru. Ph.D. dissertation, University of California, Santa Barbara. University Microfilms, Ann Arbor.

2002 Irrigation and the Origins of the Southern Moche State on the North Coast of Peru. *Latin American Antiquity* 13(4):371-400.

Bonavia, Duccio

1982 Trabajos efectuados. In *Los Gavilanes: Mar, desierto y oásis en la historia del hombre*, edited by Duccio Bonavia, pp. 25-72. Corporación Financiera de Desarrollo S.A., Lima.

2008 *The South American Camelids*. Translated by Javier Flores Espinoza. Monograph 64. Cotsen Institute of Archaeology, University of California, Los Angeles.

Brush, Stephen B.
1977 *Mountain, Field, and Family: The Economy and Human Ecology of an Andean Valley*. University of Pennsylvania Press, Philadelphia.

Burga, Manuel.
1976 *De la encomienda a la hacienda capitalista: El valle del Jequetepeque del siglo XVI al XX*. Instituto de Estudios Peruanos, Lima.

Burger, Richard L.
1998 *Excavaciones en Chavín de Huántar*. Pontificia Universidad Católica del Perú, Lima.

2008 Chavín de Huántar and Its Sphere of Influence. In *Handbook of South American Archaeology*, edited by Helaine Silverman and William H. Isbell, pp. 681-703. Springer, New York.

Burger, Richard L. and Lucy Salazar Burger
1980 Ritual and Religion at Huaricoto. *Archaeology* 33:26-32.

Burmeister, Stefan
2000 Approaches to an Archaeological Proof of Migration. *Current Anthropology* 41(4):539-567.

Bussmann, Rainer W. and Douglas Sharon
2009 Naming a Phantom - the Quest to Find the Identity of *Ulluchu*, an Unidentified Ceremonial Plant of the Moche Culture in Northern Peru. *Journal of Ethnobiology and Ethnomedicine* 5(1):8.

Cabello Valboa, Miguel
1951 [1586] *Miscelánea antártica: Una historia del Perú antiguo*. Instituto de Etnología, Universidad Nacional Mayor de San Marcos, Lima.

Cahill, Thomas and Bryan L. Isacks
1992 Seismicity and Shape of the Subducted Nazca Plate. *Journal of Geophysical Research* 97(B12):17503-17529.

Calancha, Antonio de la

1977 [1639] *Corónica moralizada del orden de San Agustín en el Perú*. Vol. 4. Universidad Nacional Mayor de San Marcos, Lima.

Capasso, Luigi, Kenneth A. R. Kennedy, and Cynthia A. Wilczak
1999 *Atlas of Occupational Makers on Human Remains*. Edigrafital S.p.A., Teramo, Italy.

Carneiro, Robert L.
1969 The Measurement of Cultural Development in the Ancient Near East and in Anglo-Saxon England. *Transactions of the New York Academy of Sciences*, Series 2, 31(8):1013-1023.

2002 The Tribal Village and Its Culture: An Evolutionary Stage in the History of Human Society. In *The Archaeology of Tribal Societies*, edited by William A. Parkinson, pp. 34-52. International Monographs in Prehistory, Ann Arbor.

Castillo, Luis Jaime
2001 The Last of the Mochicas: A View from the Jequetepeque Valley. In *Moche Art and Archaeology in Ancient Peru*, edited by Joanne Pillsbury, pp. 306-332. Yale University Press, New Haven.

Castillo, Luis Jaime and Christopher B. Donnan
1994 Los mochica del norte y los mochica del sur. In *Vicús*, edited by Krzysztof Makowski, Christopher B. Donnan, and Iván Amaro Bullón, pp. 143-176. Banco de Crédito del Perú, Lima.

Caviedes, César
2001 *El Niño in History: Storming through the Ages*. University Press of Florida, Gainesville.

Cieza de León, Pedro de
1959 [1553] *The Incas of Pedro de Cieza de León*. Translated by Harriet de Onis. University of Oklahoma Press, Norman.

1984 [1553] Crónica del Perú. Parte primera. In *Pedro de Cieza de León: Obras completas*, edited by Carmelo Sáenz de Santa María, pp. 1-144. Vol. 1. Consejo Superior de Investigaciones Científicas, Madrid.

2000 [1550s] *El señorío de los Incas*. Dastin, Madrid.

Clarke, Giles
1975 Popular Movements and Late Roman Cemeteries. *World Archaeology* 7(1):46-56.

Cobbing, E. J. and W. S. Pitcher

1972 Plate Tectonics and the Peruvian Andes. *Nature Physical Science* 240:51-53.

Cobo, Bernabé
1979 [1653] *History of the Inca Empire: An Account of the Indians' Customs and Their Origin, together with a Treatise on Inca Legends, History, and Social Institutions*. Translated by Roland Hamilton. University of Texas Press, Austin.

1990 [1653] *Inca Religion and Customs*. Translated by Roland Hamilton. University of Texas Press, Austin.

Cohen, Ronald
1978 Ethnicity: Problem and Focus in Anthropology. *Annual Review of Anthropology* 7:379-403.

Cook, David Noble
1981 *Demographic Collapse: Indian Peru, 1520-1620*. Cambridge University Press, Cambridge.

Covey, R. Alan
2006 *How the Incas Built Their Heartland: State Formation and the Innovation of Imperial Strategies in the Sacred Valley, Peru*. University of Michigan Press, Ann Arbor.

Cutright, Robyn E.
2009 *Between the Kitchen and the State: Domestic Practice and Chimú Expansion in the Jequetepeque Valley, Peru.* Unpublished Ph.D. thesis, Department of Anthropology, University of Pittsburgh.

2010 Food, Family, and Empire: Relating Political and Domestic Change in the Jequetepeque Hinterland. In *Comparative Perspectives on the Archaeology of Coastal South America*, edited by Robyn E. Cutright, Enrique López-Hurtado, and Alexander J. Martín, pp. 27-44. Center for Comparative Archaeology, University of Pittsburgh, Pittsburgh.

Dillehay, Tom D., Alan L. Kolata, and Edward R. Swenson
2009 *Paisajes culturales en el valle del Jequetepeque: Los yacimientos arqueológicos*. SIAN, Trujillo, Peru.

Dillehay, Tom D. and Patricia J. Netherly
1983 Exploring the Upper Zaña Valley in Peru. *Archaeology* 36(4):22-30.

Dillehay, Tom D., Patricia J. Netherly, and Jack Rossen
1989 Middle Preceramic Public and Residential Sites on the Forested Slope of the Western Andes, Northern Peru. *American Antiquity* 54(4):733-759.

Disselhoff, Hans D.
1958 Cajamarca-Keramik von der Pampa von San José de Moro (Prov. Pacasmayo). *Baessler-Archiv* 6:181-193.

Donnan, Christopher B.
1971 Ancient Peruvian Potters' Marks and Their Interpretation through Ethnographic Analogy. *American Antiquity* 36(4):460-466.

1986a The City Walls at Pacatnamu. In *The Pacatnamu Papers*, edited by Christopher B. Donnan and Guillermo A. Cock, pp. 47-62. Vol. 1. Museum of Cultural History, University of California, Los Angeles.

1986b The Huaca 1 Complex. In *The Pacatnamu Papers*, edited by Christopher B. Donnan and Guillermo A. Cock, pp. 63-84. Vol. 1. Museum of Cultural History, University of California, Los Angeles.

1986c Introduction. In *The Pacatnamu Papers*, edited by Christopher B. Donnan and Guillermo A. Cock, pp. 19-26. Vol. 1. Museum of Cultural History, University of California, Los Angeles.

Donnan, Christopher B. and Carol J. Mackey
1978 *Ancient Burial Patterns of the Moche Valley, Peru*. University of Texas Press, Austin.

Doyle, Mary Eileen
1988 *The Ancestor Cult and Burial Ritual in Seventeenth and Eighteenth Century Central Peru.* Ph.D. dissertation, University of California, Los Angeles. University Microfilms, Ann Arbor.

Durkheim, Emile
1893 *De la division du travail social: étude sur l'organisation des sociétés supérieures*. Félix Alcan, Paris.

1912 *Les formes élémentaire de la vie religieuse: le système totémique en Australie*. Félix Alcan, Paris.

Durston, Alan
2007 Notes on the Authorship of the Huarochirí Manuscript. *Colonial Latin American Review* 16(2):227-241.

Eling, Herbert H., Jr.
1987 *The Role of Irrigation Networks in Emerging Societal Complexity during Late Prehispanic Times, Jequetepeque, North Coast, Peru.* Ph.D. dissertation, University of Texas, Austin. University Microfilms, Ann Arbor.

Emberling, Geoff

1997 Ethnicity in Complex Societies: Archaeological Perspectives. *Journal of Archaeological Research* 5(4):295-344.

Espinoza Soriano, Waldemar
1967 El primer informe etnológico sobre Cajamarca. Año de 1540. *Revista Peruana de Historia* 11-12:1-37.

1977 La poliginia señorial en el reino de Caxamarca. Siglos XV y XVI. *Revista del Museo Nacional* 43:399-466.

Feldman, Robert A.
1985 Preceramic Corporate Architecture: Evidence for the Development of Non-Egalitarian Social Systems in Peru. In *Early Ceremonial Architecture in the Andes*, edited by Christopher B. Donnan, pp. 71-92. Dumbarton Oaks, Washington, D.C.

Flannery, Kent V., Joyce Marcus, and Robert G. Reynolds
1989 *The Flocks of the Wamani: A Study of Llama Herders on the Punas of Ayacucho, Peru*. Academic Press, San Diego.

Fried, Morton H.
1966 On the Concept of 'Tribe' and Tribal Society. *Transactions of the New York Academy of Sciences*, Series 2, 28(4):527-540.

1975 *The Notion of Tribe*. Cummings, Menlo Park, California.

Gálvez Mora, César and Jesús Briceño Rosario
2001 The Moche in the Chicama Valley. In *Moche Art and Archaeology in Ancient Peru*, edited by Joanne Pillsbury, pp. 140-157. Yale University Press, New Haven.

Garcilaso de la Vega, El Inca
1966 [1609] *Royal Commentaries of the Incas and General History of Peru*. Translated by Harold V. Livermore. Part 1. University of Texas Press, Austin.

Gillin, John P.
1947 *Moche: A Peruvian Coastal Community*. Publication No. 3. Institute of Social Anthropology, Smithsonian Institution, Washington, D.C.

Glowacki, Mary and Michael Malpass
2003 Water, Huacas, and Ancestor Worship: Traces of a Sacred Wari Landscape. *Latin American Antiquity* 14(4):431-448.

Goldstein, Paul S.
2005 *Andean Diaspora: The Tiwanaku Colonies and the Origins of South American Empire*. University Press of Florida, Gainesville.

González Holguín, Diego
1952 [1608] *Vocabulario de la lengua general de todo el Pirú llamada lengua Quichua o del Inca*. Edición del Instituto de Historia, Universidad Nacional Mayor de San Marcos, Lima.

Grobman, Alexander, Wilfredo Salhuana, and Ricardo Sevilla
1961 *Races of Maize in Peru: Their Origins, Evolution and Classification*. National Academy of Sciences-National Research Council, Washington, D.C.

Guaman Poma de Ayala, Felipe
1993 [1615] *Nueva corónica y buen gobierno*. Translated by Jan Szemiński. Vol. 1. Fondo de Cultura Económica, Mexico City.

Hart, Elizabeth A.
1983 Prehispanic Political Organization of the Peruvian North Coast. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan, Ann Arbor.

Holmberg, Allan R.
1950 Viru: Remnant of an Exalted People. In *Patterns for Modern Living. Divison 3: Cultural Patterns*, pp. 367-416. The Delphian Society, Chicago.

Hornberger, Esteban and Nancy H. Hornberger
2008 *Diccionario trilingüe quechua de Cusco: Qhiswa, English, Castellano*. Centro Bartolomé de Las Casas, Cusco.

Huarochirí Manuscript
1991 [1598-1608] *The Huarochirí Manuscript: A Testament of Ancient and Colonial Andean Religion*. Translated by Frank Salomon and George L. Urioste. University of Texas Press, Austin.

Hymes, Dell H. (editor)
1968 *Essays on the Problem of Tribe*. University of Washington Press, Seattle.

Irvine, Judith T. and Susan Gal
2000 Language Ideology and Linguistic Differentiation. In *Regimes of Language: Ideologies, Polities, and Identities*, edited by Paul V. Kroskrity, pp. 35-83. School of American Research Press, Santa Fe, New Mexico.

Isbell, Billie Jean
1978 *To Defend Ourselves: Ecology and Ritual in an Andean Village*. Latin American Monographs No. 47. Institute of Latin American Studies, University of Texas, Austin.

Isbell, William H.

1977 *The Rural Foundation for Urbanism: Economic and Stylistic Interaction between Rural and Urban Communities in Eighth-Century Peru.* Illinois Studies in Anthropology No. 10. University of Illinois Press, Urbana.

2004 Mortuary Preferences: A Wari Culture Case Study from Middle Horizon Peru. *Latin American Antiquity* 15(1):3-32.

Janusek, John W.
2009 Residence and Ritual in Tiwanaku: Hierarchy, Specialization, Ethnicity, and Ceremony. In *Domestic Life in Prehispanic Capitals: A Study of Specialization, Hierarchy, and Ethnicity,* edited by Linda R. Manzanilla and Claude Chapdelaine, pp. 159-179. Memoirs No. 46. Museum of Anthropology, University of Michigan, Ann Arbor.

Joralemon, Donald and Douglas Sharon
1993 *Sorcery and shamanism: curanderos and clients in northern Peru*. University of Utah Press, Salt Lake City.

Julien, Catherine J.
1982 Inka Decimal Administration in the Lake Titicaca Region. In *The Inca and Aztec States, 1400-1800: Anthropology and History*, edited by George A. Collier, Renato I. Rosaldo, and John D. Wirth, pp. 119-151. Academic Press, New York.

Julien, Daniel G.
1988 *Ancient Cuismancu: Settlement and Cultural Dynamics in the Cajamarca Region of the North Highlands of Peru, 200 B.C.-A.D. 1532.* Ph.D. dissertation, University of Texas, Austin. University Microfilms, Ann Arbor.

1993 Late Pre-Inkaic Ethnic Groups in Highland Peru: An Archaeological-Ethnohistorical Model of the Political Geography of the Cajamarca Region. *Latin American Antiquity* 4(3):246-273.

Keatinge, Richard W.
1980 Archaeology and Development: The Tembladera Sites of the Peruvian North Coast. *Journal of Field Archaeology* 7(4):467-477.

1982 The Chimú Empire in a Regional Perspective: Cultural Antecedents and Continuities. In *Chan Chan: Andean Desert City,* edited by Michael E. Moseley and Kent C. Day, pp. 197-224. University of New Mexico Press, Albuquerque.

Kolata, Alan L.
1982 Chronology and Settlement Growth at Chan Chan. In *Chan Chan: Andean Desert City,* edited by Michael E. Moseley and Kent C. Day, pp. 67-85. University of New Mexico Press, Albuquerque.

1990 The Urban Concept of Chan Chan. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by Michael E. Moseley and Alana Cordy-Collins, pp. 107-144. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Kolata, Alan L. (editor)
2003 *Tiwanaku and Its Hinterland: Archaeology and Paleoecology of an Andean Civilization. Vol. 2: Urban and Rural Archaeology*. Smithsonian Institution, Washington, D.C.

Kosok, Paul
1965 *Life, Land and Water in Ancient Peru*. Long Island University Press, New York.

Kroeber, Alfred L.
1925 The Uhle Pottery Collection from Moche. *University of California Publications in American Archaeology and Ethnology* 21(5):191-234.

1944 *Peruvian Archaeology in 1942*. Viking Fund Publications in Anthropology No. 4. Wenner-Gren Foundation for Anthropological Research, New York.

1948 *Anthropology: Culture Patterns and Processes*. Harcourt, Brace & World, New York.

Larco Hoyle, Rafael
1948 *Cronología arqueológica del norte del Perú*. Sociedad Geográfica Americana, Buenos Aires.

Lau, George F.
2006 Northern Exposures: Recuay-Cajamarca Boundaries and Interaction. In *Andean Archaeology III: North and South*, edited by William H. Isbell and Helaine Silverman, pp. 143-170. Springer, New York.

2010 *Ancient Community and Economy at Chinchawas (Ancash, Peru).* Yale University Press, New Haven.

Leach, Edmund R.
1954 *Political Systems of Highland Burma: A Study of Kachin Social Structure*. Harvard University Press, Cambridge, Massachusetts.

Mackey, Carol J.
1987 Chimu Administration in the Provinces. In *The Origins and Development of the Andean State*, edited by Jonathan Haas, Shelia Pozorski, and Thomas Pozorski, pp. 121-129. Cambridge University Press, Cambridge.

2009 Chimú Statecraft in the Provinces. In *Andean Civilization: A Tribute to Michael E. Moseley*, edited by Joyce Marcus and Patrick Ryan Williams, pp. 325-349. Monograph 63. Cotsen Institute of Archaeology, University of California, Los Angeles.

2011 The Persistence of Lambayeque Ethnic Identity: The Perspective from the Jequetepeque Valley, Peru. In *From State to Empire in the Prehistoric Jequetepeque Valley, Peru*, edited by Colleen M. Zori and Ilana Johnson, pp. 149-168. Archaeopress, Oxford.

Mannheim, Bruce

1998 A Nation Surrounded. In *Native Traditions in the Postconquest World*, edited by Elizabeth Hill Boone and Tom Cummins, pp. 383-420. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Mannheim, Bruce and Dennis Tedlock (editors)

1995 *The Dialogic Emergence of Culture*. University of Illinois Press, Urbana.

Manzanilla, Linda R.

2009 Corporate Life in Apartment and Barrio Compounds at Teotihuacan, Central Mexico: Craft Specialization, Hierarchy, and Ethnicity. In *Domestic Life in Prehispanic Capitals: A Study of Specialization, Hierarchy, and Ethnicity*, edited by Linda R. Manzanilla and Claude Chapdelaine, pp. 21-42. Memoirs No. 46. Museum of Anthropology, University of Michigan, Ann Arbor.

Marcus, Joyce

1987 Prehistoric Fishermen in the Kingdom of Huarco. *American Scientist* 75(4):393-401.

1998 The Peaks and Valleys of Ancient States: An Extension of the Dynamic Model. In *Archaic States*, edited by Gary M. Feinman and Joyce Marcus, pp. 59-94. School of American Research Press, Santa Fe, New Mexico.

2000 Toward an Archaeology of Communities. In *The Archaeology of Communities: A New World Perspective*, edited by Jason Yaeger and Marcello A. Canuto, pp. 231-242. Routledge, London.

2007 Rethinking Ritual. In *The Archaeology of Ritual*, edited by Evangelos Kyriakidis, pp. 43-76. Cotsen Institute of Archaeology, University of California, Los Angeles.

2008a The Archaeological Evidence for Social Evolution. *Annual Review of Anthropology* 37:251-266.

2008b *Excavations at Cerro Azul, Peru: The Architecture and Pottery*. Monograph 62. Cotsen Institute of Archaeology, University of California, Los Angeles.

2009 Understanding Houses, Compounds, and Neighborhoods. In *Domestic Life in Prehispanic Capitals: A Study of Specialization, Hierarchy, and Ethnicity*, edited by Linda R. Manzanilla and Claude Chapdelaine, pp. 257-266. Memoirs No. 46. Museum of Anthropology, University of Michigan, Ann Arbor.

Marcus, Joyce and Jorge E. Silva

1988 The Chillón Valley "Coca Lands": Archaeological Background and Ecological Context. In *Conflicts Over Coca Fields in XVIth-Century Perú*, pp. 1-32. Memoirs No. 21. Museum of Anthropology, University of Michigan, Ann Arbor.

Matsumoto, Ryozo and Tsuyoshi Ushino

1982 Clay, Stone, Metal, Bone and Shell Artifacts. In *Excavations at Huacaloma in the Cajamarca Valley, Peru, 1979*, edited by Kazuo Terada and Yoshio Onuki, pp. 181-220. Report 2 of the Japanese Scientific Expedition to Nuclear America. University of Tokyo Press, Tokyo.

Mayer, Enrique

1977 Beyond the Nuclear Family. In *Andean Kinship and Marriage*, edited by Ralph Bolton and Enrique Mayer, pp. 60-80. American Anthropological Association, Washington, D.C.

2002 *The Articulated Peasant: Household Economies in the Andes*. Westview Press, Boulder, Colorado.

McClelland, Donald H.

1986 Brick Seriation at Pacatnamu. In *The Pacatnamu Papers*, edited by Christopher B. Donnan and Guillermo A. Cock, pp. 27-46. Vol. 1. Museum of Cultural History, University of California, Los Angeles.

McClelland, Donna

2008 *Ulluchu*: An Elusive Fruit. In *The Art and Archaeology of the Moche: An Ancient Andean Society of the Peruvian North Coast*, edited by Steve Bourget and Kimberly L. Jones, pp. 43-65. University of Texas Press, Austin.

McClelland, Donna, Donald H. McClelland, and Christopher B. Donnan

2007 *Moche Fineline Painting from San José de Moro*. Cotsen Institute of Archaeology, University of California, Los Angeles.

McEwan, Gordon F.

2005 Excavations at Pikillacta. In *Pikillacta: The Wari Empire in Cuzco*, edited by Gordon F. McEwan, pp. 29-62. University of Iowa Press, Iowa City.

Means, Philip A.
1964 *Ancient Civilizations of the Andes*. Gordian Press, New York.

Menzel, Dorothy
1977 *The Archaeology of Ancient Peru and the Work of Max Uhle*. R. H. Lowie Museum of Anthropology University of California, Berkeley.

Miller, George R.
1979 *An Introduction to the Ethnoarchaeology of the Andean Camelids*. Ph.D. dissertation, Department of Anthropology, University of California, Berkeley. University Microfilms, Ann Arbor.

Molina, Cristóbal de
1989 [1575] Relación de las fábulas i ritos de los ingas hecha por Cristóbal de Molina, cura de la parroquia de Nestra Señora de los Remedios, de el Hospital de los naturales de la ciudad de el Cuzco, dirigida al reverendísimo señor Obispo don Sebastián de el Artaum, del consejo de su magestad. In *Fábulos y mitos de los incas*, edited by Henrique Urbano and Pierre Duviols, pp. 47-134. Historia 16, Madrid.

Montenegro, Jorge
1993 Estilo Cajamarca Costeño: Una aproximación. In *IX Congreso peruano del hombre y la cultura andina*, edited by Segundo Arréstegui, pp. 137-144. Vol. 1. Universidad Nacional de Cajamarca, Cajamarca.

1997 Coastal Cajamarca Pottery from the North Coast of Peru: Style, Technology, and Function. Unpublished Master's thesis, Department of Anthropology, Southern Illinois University, Carbondale.

Moore, Jerry D.
1996 *Architecture and Power in the Ancient Andes: The Archaeology of Public Buildings*. Cambridge University Press, Cambridge.

Moseley, Michael E.
1982 Introduction: Human Exploitation and Organization on the North Andean Coast. In *Chan Chan: Andean Desert City*, edited by Michael E. Moseley and Kent C. Day, pp. 1-24. University of New Mexico Press, Albuquerque.

2001 *The Incas and their Ancestors: The Archaeology of Peru*. 2nd ed. Thames and Hudson, London.

Moseley, Michael E., Christopher B. Donnan, and David K. Keefer
2008 Convergent Catastrophe and the Demise of Dos Cabezas: Environmental Change and Regime Change in Ancient Peru. In *The Art and Archaeology of the*

Moche: An Ancient Andean Society of the Peruvian North Coast, edited by Steve Bourget and Kimberly L. Jones, pp. 81-91. University of Texas Press, Austin.

Moseley, Michael E., Donna J. Nash, Patrick Ryan Williams, Susan D. deFrance, Ana Miranda, and Mario Ruales
2005 Burning Down the Brewery: Establishing and Evacuating an Ancient Imperial Colony at Cerro Baúl, Peru. *Proceedings of the National Academy of Sciences of the United States of America* 102(48):17264-17271.

Muelle, Jorge C. and Camilo Blas
1938 Muestrario de arte precolombino. I-Cerámica. *Revista del Museo Nacional* 7(2):163-280.

Murra, John V.
1972 El "control vertical" de un máximo de pisos ecológicos en la economía de las sociedades andinas. In *Visita de la provincia de León de Huánuco en 1562*, edited by John V. Murra, pp. 427-476. Vol. 2. Universidad Nacional Hermilio Valdizán, Huánuco, Peru.

1980 *The Economic Organization of the Inka State*. Research in Economic Anthropology, Supplement 1. JAI Press, Greenwich, Connecticut.

Naroll, Raoul
1964 On Ethnic Unit Classification. *Current Anthropology* 5:283-312.

Narváez, Alfredo
1995 The Pyramids of Túcume: The Monumental Sector. In *Pyramids of Túcume: The Quest for Peru's Forgotten City*, edited by Thor Heyerdahl, Daniel H. Sandweiss, and Alfredo Narváez, pp. 79-130. Thames and Hudson, New York.

Nash, Donna J. and Patrick Ryan Williams
2009 Wari Political Organization: The Southern Periphery. In *Andean Civilization: A Tribute to Michael E. Moseley*, edited by Joyce Marcus and Patrick Ryan Williams, pp. 257-276. Monograph 63. Cotsen Institute of Archaeology, University of California, Los Angeles.

Nelson, Andrew J., Christine S. Nelson, Luis Jaime Castillo, and Carol J. Mackey
2000 Osteobiografía de una hilandera precolombina: La mujer detrás de la máscara. *Íconos* 4(2):30-43.

Netherly, Patricia J.
1988 From Event to Process: The Recovery of Late Andean Organizational Structure by Means of Spanish Colonial Written Records. In *Peruvian Prehistory: An Overview of Pre-Inca and Inca Society*, edited by Richard W. Keatinge, pp. 257-275. University of Cambridge Press, Cambridge.

O'Shea, John M.
1996 *Villagers of the Maros: A Portrait of an Early Bronze Age Society*. Plenum Press, New York.

ONERN (Oficina Nacional de Evaluación de Recursos Naturales)
1975 *Inventario, evaluación y uso racional de los recursos naturales de la zona sur del departamento de Cajamarca*. Vol. 1. Oficina Nacional de Evaluación de Recursos Naturales, Lima.

1988 *Plan de ordenamiento ambiental de la cuenca del río Jequetepeque para la protección del reservorio Gallito Ciego y del valle agícola*. Oficina Nacional de Evaluación de Recursos Naturales, Lima.

Onuki, Yoshio (editor)
1995 *Kuntur Wasi y Cerro Blanco: Dos sitios del formativo en el norte del Perú*. Hokusen-sha, Tokyo.

Ortiz, Alfonso
1969 *The Tewa World: Space, Time, Being, and Becoming in a Pueblo Society*. University of Chicago Press, Chicago.

Parsons, Jeffrey R., Charles M. Hastings, and Matos M. Ramiro
2000 *Prehispanic Settlement Patterns in the Upper Mantaro and Tarma Drainages, Junín, Peru*. Memoirs No. 34. Vol. 1, The Tarama-Chinchaycocha Region, Part 1. Museum of Anthropology, University of Michigan, Ann Arbor.

Parsons, Mary Hrones
1972 Spindle Whorls from the Teotihuacán Valley, Mexico. In *Miscellaneous Studies in Mexican Prehistory*. Anthropological Papers No. 45. Museum of Anthropology, University of Michigan, Ann Arbor.

1975 The Distribution of Late Postclassic Spindle Whorls in the Valley of Mexico. *American Antiquity* 40(2):207-215.

Pärssinen, Martti
2003 *Tawantinsuyu: El estado inca y su organización política*. Instituto Francés de Estudios Andinos, Lima.

Paulsen, Allison C.
1974 The Thorny Oyster and the Voice of God: *Spondylus* and *Strombus* in Andean Prehistory. *American Antiquity* 39(4):597-607.

Pimentel, Victor
1986 *Felszeichnungen im mittleren und unteren Jequetepeque-Tal, Nord-Peru*. C.H. Beck, München.

Plowman, Timothy
1979 Botanical Perspectives on Coca. *Journal of Psychedelic Drugs* 11(1-2):103-117.

Polo de Ondegardo, Juan
1999 [1571] Del linaje de los yngas y como conquistaron. In *Polo de Ondegardo: Un cronista vallisoletano en el Perú*, edited by Laura González Pujana, pp. 344-367. Instituto de Estudios de Iberoamérica y Portugal, Universidad de Valladolid, Valladolid.

Prieto Burmester, O. Gabriel
2010 Approximating Lambayeque Political Configurations: A Perspective from the Site of San José de Moro, Jequetepeque Valley. In *Comparative Perspectives on the Archaeology of Coastal South America*, edited by Robyn E. Cutright, Enrique López-Hurtado, and Alexander J. Martín, pp. 231-246. Center for Comparative Archaeology, University of Pittsburgh, Pittsburgh.

Ramírez, Susan E.
1998 Rich Man, Poor Man, Beggar Man, or Chief: Material Wealth as a Basis of Power in Sixteenth-Century Peru. In *Dead Giveaways: Indigenous Testaments of Colonial Mesoamerica and the Andes*, edited by Susan Kellogg and Matthew Restall, pp. 215-248. University of Utah Press, Salt Lake City.

Rappaport, Roy A.
1999 *Ritual and Religion in the Making of Humanity*. Cambridge University Press, Cambridge.

Ravines, Rogger
1982 *Arqueología del valle medio del Jequetepeque*. Instituto Nacional de Cultura, Lima.

Reichlen, Henry and Paule Reichlen
1949 Recherches archéologiques dans les Andes de Cajamarca: Premier rapport de la Mission ethnologique française au Pérou septentrional. *Journal de la Société des Américanistes* 38:137-174.

Reindel, Markus
1993 *Monumentale Lehmarchitektur an der Nordküste Perus: Eine Repräsentative Untersuchung Nach-Formativer Grossbauten vom Lambayeque-Gebiet bis zum Virú-Tal*. Holos, Bonn.

Remy, Pilar
1992 El documento. In *Las visitas a Cajamarca 1571-72/1578*, edited by María Rostworowski and Pilar Remy, pp. 37-108. Vol. 1. Instituto de Estudios Peruanos, Lima.

Renfrew, Colin
1986 Introduction: Peer Polity Interaction and Socio-Political Change. In *Peer Polity Interaction and Socio-Political Change*, edited by Colin Renfrew and John F. Cherry, pp. 1-18. Cambridge University Press, Cambridge.

Renfrew, Colin and Paul Bahn
1996 *Archaeology: Theories, Methods, and Practice*. Thames and Hudson, London.

Rick, John W.
1980 *Prehistoric Hunters of the High Andes*. Academic Press, New York.

Rosas Rintel, Marco
2007 Nuevas perspectivas acerca del colapso Moche en el Bajo Jequetepeque: Resultados preliminares de la segunda campaña de investigación del proyecto arqueológico Cerro Chepén. *Bulletin de l'Institut Français d'Études Andines* 36(2):221-240.

Rostworowski de Diez Canseco, María
1977 *Etnía y sociedad: Costa peruana prehispánica*. Instituto de Estudios Peruanos, Lima.

1978 *Señoríos indígenas de Lima y Canta*. Instituto de Estudios Peruanos, Lima.

1988 *Conflicts Over Coca Fields in XVIth-Century Perú*. Memoirs No. 21. Museum of Anthropology, University of Michigan, Ann Arbor.

Rostworowski de Diez Canseco, María and Pilar Remy (editors)
1992 *Las visitas a Cajamarca 1571-72/1578: Documentos*. 2 vols. Instituto de Estudios Peruanos, Lima.

Rowe, John H.
1948 The Kingdom of Chimor. *Acta Americana* 6:26-59.

Sachún, Jorge
1986 *Patrones de asentamiento en el proceso cultural prehispánico del valle de Cajamarca (primera aproximación)*. Materiales para la Arqueología de Cajamarca No. 3. Editorial Sudamérica, Trujillo.

Sahlins, Marshall
1985 *Islands of History*. University of Chicago Press, Chicago.

Sallnow, Michael J.
1987 *Pilgrims of the Andes: Regional Cults in Cusco*. Smithsonian Institution Press, Washington, D.C.

Salomon, Frank
1991 Introductory Essay: The Huarochirí Manuscript. In *The Huarochirí Manuscript: A Testament of Ancient and Colonial Andean Religion*, pp. 1-38. University of Texas Press, Austin.

Sapir, Edward
1994 *The Psychology of Culture: A Course of Lectures*. Reconstructed and edited by Judith T. Irvine. Mouton de Gruyter, Berlin.

Sapp, William D.
2002 *The Impact of Imperial Conquest at the Palace of a Local Lord in the Jequetepeque Valley, Northern Perú.* Ph.D. dissertation, University of California, Los Angeles. University Microfilms, Ann Arbor.

Sarmiento de Gamboa, Pedro
2007 [1572] *The History of the Incas*. Translated by Brian S. Bauer and Vania Smith. University of Texas Press, Austin.

Scott, James C.
2009 *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. Yale University Press, New Haven.

Service, Elman R.
1968 War and Our Contemporary Ancestors. In *War: The Anthropology of Armed Conflict and Aggression*, edited by Morton H. Fried, Marvin Harris, and Robert F. Murphy, pp. 160-167. Natural History Press, Garden City, New York.

1971 *Primitive Social Organization: An Evolutionary Perspective*. Random House, New York.

Seton-Watson, Hugh
1977 *Nations and States: An Enquiry into the Origins of Nations and the Politics of Nationalism*. Westview Press, Boulder, Colorado.

Sharon, Douglas
1978 *Wizard of the Four Winds: A Shaman's Story*. Free Press, New York.

Shimada, Izumi
1982 Horizontal Archipelago and Coast-Highland Interaction in North Peru. In *El Hombre y su Ambiente en los Andes Centrales*, edited by Luìs Millones and Hiroyasu Tomoeda, pp. 137-210. Senri Ethnological Studies 10. National Museum of Ethnology, Osaka.

1990 Cultural Continuities and Discontinuities on the North Coast of Peru. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by Michael E.

Moseley and Alana Cordy-Collins, pp. 297-392. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1994 *Pampa Grande and the Mochica Culture*. University of Texas Press, Austin.

Shimada, Izumi

1997 Organizational Significance of Marked Bricks and Associated Construction Features on the North Peruvian Coast. In *Arquitectura y civilización en los Andes prehispánicos*, edited by Elisabeth Bonnier and Henning Bischof, pp. 62-89. Reiss Museum, Mannheim.

2000 The Late Prehispanic Coastal States. In *The Inca World: The Development of Pre-Columbian Peru, A.D. 1000-1534*, edited by Laura Laurencich Minelli, pp. 49-110. University of Oklahoma Press, Norman.

2010 Moche Sociopolitical Organization: Rethinking the Data, Approaches, and Models. In *New Perspectives on Moche Political Organization*, edited by Jeffrey Quilter and Luis Jaime Castillo, pp. 70-82. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Shimada, Izumi, Ken-ichi Shinoda, Julie Farnum, Robert Corruccini, and Hirokatsu Watanabe

2004 An Integrated Analysis of Pre-Hispanic Mortuary Practices: A Middle Sicán Case Study. *Current Anthropology* 45(3):369-402.

Spalding, Karen

1984 *Huarochirí: An Andean Society under Inca and Spanish Rule*. Stanford University Press, Stanford.

Spence, Michael W.

1992 Tlailotlacan, a Zapotec Enclave in Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet Catherine Berlo, pp. 59-88. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Spencer, Charles S.

1990 On the Tempo and Mode of State Formation: Neoevolutionism Reconsidered. *Journal of Anthropological Archaeology* 9(1):1-30.

Stanish, Charles

1989 Household Archeology: Testing Models of Zonal Complementarity in the South Central Andes. *American Anthropologist* 91(1):7-24.

1992 *Ancient Andean Political Economy*. University of Texas Press, Austin.

Stone, Tammy

2003 Social Identity and Ethnic Interaction in the Western Pueblos of the American Southwest. *Journal of Archaeological Method and Theory* 10(1):31-67.

Swenson, Edward R.

2004 *Ritual and Power in the Urban Hinterland: Religious Pluralism and Political Decentralization in Late Moche Jequetepeque, Peru.* Ph.D. dissertation, University of Chicago. University Microfilms, Ann Arbor.

2006 Competitive Feasting, Religious Pluralism and Decentralized Power in the Late Moche Period. In *Andean Archaeology III: North and South*, edited by William H. Isbell and Helaine Silverman, pp. 112-142. Springer, New York.

Swenson, Edward R., Jorge Y. Chiguala, and John P. Warner

2011 *Proyecto Arqueológico Jatanca-Huaca Colorada: Informe final de la temporada de investigación 2010*. Preliminary report submitted to the Intituto Nacional de Cultura, Lima. Copies available from the Instituto Nacional de Cultura, Cajamarca.

Tambiah, Stanley J.

2002 *Edmund Leach: An Anthropological Life*. Cambridge University Press, Cambridge.

Taylor, Gerald

2008 Introducción. In *Ritos y tradiciones de Huarochirí*, edited by Gerald Taylor, pp. 9-17. Instituto de Estudios Peruanos and Fondo Editorial Universidad Nacional Mayor de San Marcos, Lima.

Terada, Kazuo and Ryozo Matsumoto

1985 Sobre la cronología de la tradición Cajamarca. In *Historia de Cajamarca. I. Arqueología*, edited by Fernando Silva Santisteban, Waldemar Espinoza Soriano, and Rogger Ravines, pp. 67-89. Instituto Nacional de Cultura, Cajamarca, Peru.

Terada, Kazuo and Yoshio Onuki (editors)

1985 *The Formative Period in the Cajamarca Basin, Peru: Excavations at Huacaloma and Layzón, 1982*. University of Tokyo Press, Tokyo.

Toohey, Jason L.

2009 Community Organization, Militarism, and Ethnogenesis in the Late Prehistoric Northern Highlands of Peru. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Santa Barbara.

Topic, John R.

1982 Lower-Class Social and Economic Organization at Chan Chan. In *Chan Chan: Andean Desert City*, edited by Michael E. Moseley and Kent C. Day, pp. 145-175. University of New Mexico Press, Albuquerque.

1990 Craft Production in the Kingdom of Chimor. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by Michael E. Moseley and Alana Cordy-Collins, pp. 145-176. Dumbarton Oaks Research Library and Collection, Washington, D.C.

2009 Domestic Economy as Political Economy at Chan Chan, Perú. In *Domestic Life in Prehispanic Capitals: A Study of Specialization, Hierarchy, and Ethnicity*, edited by Linda R. Manzanilla and Claude Chapdelaine, pp. 221-242. Memoirs No. 46. Museum of Anthropology, University of Michigan, Ann Arbor.

Topic, John R. and Michael E. Moseley
1983 Chan Chan: A Case Study of Urban Change in Peru. *Ñawpa Pacha* 21:153-182.

Topic, Theresa Lange
1990 Territorial Expansion and the Kingdom of Chimor. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by Michael E. Moseley and Alana Cordy-Collins, pp. 177-194. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1991 The Middle Horizon in Northern Peru. In *Huari Administrative Structure: Prehistoric Monumental Architecture and State Government*, edited by William H. Isbell and Gordon F. McEwan, pp. 233-246. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1996 Cajamarca. In *The Dictionary of Art*, pp. 408-410.

Townsend, Joan B.
1985 The Autonomous Village and the Development of Chiefdoms. In *Development and Decline: The Evolution of Sociopolitical Organizations*, edited by Henri J. M. Claessen, Pieter van de Velde, and M. Estellie Smith, pp. 141-155. Bergin and Garvey, South Hadley, Massachusetts.

Trautmann, Thomas R.
1997 *Aryans and British India*. University of California Press, Berkeley.

Tsai, Howard I.
2012 Adobe Bricks and Labor Organization on the North Coast of Peru. *Andean Past* 10: 131-167.

Tschauner, Hartmut
2001 *Socioeconomic and Political Organization in the Late Prehispanic Lambayeque Sphere, Northern North Coast of Peru.* Ph.D. dissertation, Harvard University, Cambridge. University Microfilms, Ann Arbor.

Tschopik, Harry, Jr.
1950 An Andean Ceramic Tradition in Historical Perspective. *American Antiquity* 15(3):196-218.

Vargas Ugarte, Rubén
1936 La fecha de la fundación de Trujillo. *Revista Histórica* 10(2):229-239.

Vaughn, Kevin J.
2009 *The Ancient Andean Village: Marcaya in Prehispanic Nasca*. University of Arizona Press, Tucson.

Verano, John W.
1986 A Mass Burial of Mutilated Individuals at Pacatnamu. In *The Pacatnamu Papers*, edited by Christopher B. Donnan and Guillermo A. Cock, pp. 117-138. Vol. 1. Museum of Cultural History, University of California, Los Angeles.

2003 Human Skeletal Remains from Machu Picchu: A Reexamination of the Yale Peabody Museum's Collections. In *The 1912 Yale Peruvian Scientific Expedition Collections from Machu Picchu: Human and Animal Remains*, edited by Richard L. Burger and Lucy C. Salazar, pp. 65-117. Yale University Publications in Anthropology No. 85. Department of Anthropology, Yale University, New Haven.

Verano, John W. and Michael J. Deniro
1993 Locals or Foreigners? Morphological, Biometric, and Isotopic Approaches to the Question of Group Affinity in Human Skeletal Remains Recovered from Unusual Archaeological Contexts. In *Investigations of Ancient Human Tissue: Chemical Analyses in Anthropology*, edited by Mary K. Sandford, pp. 361-386. Gordon and Breach, Langhorne, Pennsylvania.

Vos, Jeroen
2006 *Pirámides de agua: Construcción e impacto de imperios de riego en la costa norte del Perú*. Instituto de Estudios Peruanos, Lima.

Wassén, Henry S.
1987 "Ulluchu" in Moche iconography and blood ceremonies: the search for identification. *Årstryck, Göteborgs Etnografiska Museum 1985-1986*:59-85.

Watanabe, Shinya
2001 Wari y Cajamarca. In *Huari y Tiwanaku: Modelos vs. Evidencias. Segunda Parte*, edited by Peter Kaulicke and William H. Isbell, pp. 531-541. Boletín de Arqueología PUCP N.º 5. Fondo Editorial de la Pontificia Universidad Católica del Perú, Lima.

2002 El reino de Cuismancu: Orígenes y transformación en el Tawantinsuyu. In *Identidad y transformación en el Tawantinsuyu y en los Andes coloniales.*

Perspectivas arqueológicas y etnohistóricas. Primera parte, edited by Peter Kaulicke, Gary Urton, and Ian Farrington, pp. 107-136. Boletín de Arqueología PUCP No. 6. Pontificia Universidad Católica del Perú, Lima.

2006 Una aproximación a la Cultura Cajamarca: Su relación con otras culturas. *Espiga*. *II Etapa* 9:83-96.

2009 La cerámica caolín en la cultura Cajamarca (sierra norte del Perú): el caso de la fase Cajamarca Media. *Bulletin de l'Institut Français d'Études Andines* 38(2):205-236.

Williams, Patrick Ryan

2001 Cerro Baúl: A Wari Center on the Tiwanaku Frontier. *Latin American Antiquity* 12(1):67-83.

Wilson, David J.

1981 Of Maize and Men: A Critique of the Maritime Hypothesis of State Origins on the Coast of Peru. *American Anthropologist* 83(1):93-120.

1988 *Prehispanic Settlement Patterns in the Lower Santa Valley, Peru: A Regional Perspective on the Origins and Development of Complex North Coast Society*. Smithsonian Institution Press, Washington, D.C.

1999 *Indigenous South Americans of the Past and Present: An Ecological Perspective*. Westview Press, Boulder, Colorado.

Zapata Rodríguez, Julinho

1997 Arquitectura y contextos funerarios wari en Batan Urqu, Cuzco. In *La muerte en el antiguo Perú*, edited by Peter Kaulicke, pp. 165-206. Boletín de Arqueología PUCP N.º 1. Fondo Editorial de la Pontificia Universidad Católica del Perú, Lima.