AK'AWILLAY: WARI STATE EXPANSION AND HOUSEHOLD CHANGE
IN CUSCO, PERU (AD 600-1000)

By

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Diane Baillargeon et Normand Bélisle,
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ABSTRACT

This study documents how ancient state expansion affected local communities and how political changes were experienced by families living outside a state's heartland. During the Middle Horizon (AD 600-1000) the site of Wari in the central highlands of Peru became a large city that dominated the Ayacucho region. Its distinctive architecture and polychrome pottery started to appear at villages and towns beyond Ayacucho, leading many scholars to believe that the Wari state conquered widely and established tight control over several provinces across Peru. Scholars have studied the Wari capital, its heartland, and large Wari sites outside the heartland, but rarely have they studied smaller, local settlements to see how and if local populations were affected by the expansion of the Wari into their areas.

In the Cusco region of the southern highlands of Peru, research has focused on two large Wari installations, Pikillaqta and Huaro. My research takes a complementary "bottom-up" approach and examines the impact of Wari state expansion on the village of Ak'awillay. Ak'awillay was first occupied in the Late Formative and grew to become the largest village (10 ha) of the Xaquixaguana Plain during the Middle Horizon. The pre-Middle Horizon and Middle Horizon contexts that I excavated at Ak'awillay provide a unique opportunity to evaluate change through time and assess Wari impact and local responses to Wari expansion in the region.

Results suggest that the presence of Wari colonists in Cusco had a minimal impact on the villagers of Ak'awillay. They only rarely procured Wari vessels and obsidian, and they continued to practice the same kinds of domestic and ritual activities as they had before, using similar pots, tools, and paraphernalia through time. Most of the changes seen at Ak'awillay occurred *before* the arrival of Wari colonists and included the increasing importance of chicha drinking and the procurement of new pottery and stone materials through regional exchange networks. I conclude that the Wari state did not tightly control the population of the Cusco region and that some communities continued to live as they had. Wari presence in Cusco is best characterized as a colony, not a province.

RESUMEN

La expansión del estado Wari y cambios domésticos en el pueblo de Ak'awillay, Cusco, Perú (600-1000 d.C.)

En este estudio se documenta como la expansión de un estado prehispánico afectó las comunidades locales y como los cambios políticos pudieron cambiar la vida cuotidiana de las familias viviendo a fuera de la capital del estado. Más específicamente, se evalúa el impacto de la expansión del estado Wari sobre el pueblo de Ak'awillay, Cusco, durante el Horizonte Medio (600-1000 d.C.).

Durante el Horizonte Medio, el sitio Wari en la sierra central del Perú se transformó en una gran ciudad que dominaba la región de Ayacucho. Cerámica wari y formas arquitectónicas típicas de la cultura wari se encontraron en muchas partes del Perú fuera de Ayacucho, lo que convenció a muchos arqueólogos que estas regiones fueron conquistadas por los Wari e incorporadas en su imperio expansionista. La capital wari y los grandes sitios wari fuera del centro han sido investigados, pero los pequeños asentamientos y pueblos locales no han sido estudiados. Por consiguiente, no se sabe como las poblaciones locales fueron afectadas por la expansión o intrusión de los Wari en su área.

En la región del Cusco en la sierra sur del Perú, las investigaciones arqueológicas se han concentrado en dos sitios wari grandes: (1) Pikillaqta en la cuenca del Lucre y (2) el Complejo Arqueológico Huaro en el valle de Huaro, 12 km al sureste de Pikillaqta. En el estudio presentado aquí, se toma una perspectiva complementaria y se examina el impacto de la presencia wari sobre el pueblo local de Ak'awillay, ubicado en la pampa de Xaquixaguana o pampa de Anta a unos 20 km al noroeste de la cuidad actual del Cusco. Ak'awillay fue ocupado desde el período formativo y se transformó en el pueblo más grande (10 Ha) de la pampa de Xaquixaguana durante el Horizonte Medio. Los contextos domésticos y rituales excavados en Ak'awillay, fechados a la época formativa, al Período Intermedio Temprano y al Horizonte

Medio, proporcionan nuevos datos para evaluar los cambios a través del tiempo y para entender el impacto de la presencia wari en la región y las reacciones locales frente a esta presencia.

Los resultados de las excavaciones en Ak'awillay sugieren que la gente de este pueblo se vio afectada mínimamente por la presencia wari en el Cusco. Casi todos los cambios notados en Ak'awillay ocurrieron *antes* de la llegada de los Wari al Cusco (antes del Horizonte Medio). En el Período Intermedio Temprano, el consumo de chicha en contextos públicos o ceremoniales y la adquisición de nuevos estilos cerámicos y de nuevos tipos de piedras por redes de intercambios locales y regionales crecieron. El consumo de chicha y el intercambio de productos siguieron en el Horizonte Medio, y durante esta época pocas vasijas wari y pocas herramientas de obsidiana proveniente de una fuente cerca a la capital wari fueron obtenidas por la gente de Ak'awillay. Más bien, las actividades domésticas y rituales del pueblo de Ak'awillay siguieron sin muchos cambios durante el Horizonte Medio. Se concluye que el estado wari no tuvo un control absoluto sobre la población del Cusco durante el Horizonte Medio y que en algunas comunidades la vida siguió como antes. Consecuentemente, la presencia wari en Cusco se parece más a una colonia que a una provincia de un imperio.

Chapter 1

STATE EXPANSION AND LOCAL CHANGE IN THE ANDES

This study documents how state expansion affected local communities and how political changes were experienced by families living outside a state's heartland. More specifically, I examine the impact of Wari state expansion on the village of Ak'awillay in Cusco, in the southern highlands of Peru, during the Middle Horizon (AD 600-1000). Although many case studies of state expansion are available, it is worth noting that a large number focus on periods for which both textual and archaeological data are available (e.g., Alcock et al. 2001; Berdan et al. 1996; Doyle 1986; Lyons and Papadopoulos 2002; Sinopoli 1994). For earlier states like the Wari and for regions lacking texts such as the prehispanic Andes, we rely on archaeological data alone.

Wari architecture and material culture, particularly its polychrome pottery, were widely distributed throughout Peru during the Middle Horizon. Most researchers have focused on the Wari capital, its heartland, and large Wari sites outside the heartland (e.g., Anders 1991; Isbell 1977, 1984, 1989, 1997, 2001, 2007, 2009; Isbell and Cook 2002; Isbell and McEwan 1991b [ed.]; Isbell and Schreiber 1978; McEwan 2005d [ed.]; Nash and Williams 2009; Schreiber 1992; Valdez et al. 2002; Williams 2001; Williams and Nash 2002). Rarely (e.g., Jennings 2010b [ed.]) have scholars studied smaller, local settlements to see how or if local populations were affected by the expansion of the Wari into their regions.

This "Wari-centric" focus has led scholars to overestimate Wari impact in several regions of Peru. The popularity of a foreign pottery style should not be mistaken for the exercise of asymmetrical power relationships. In addition, state officials do not always conquer a contiguous territory, nor are they necessarily interested in or capable of controlling all the communities they encounter (e.g., Bauer and Covey 2002; Berdan et al. 1996; D'Altroy 2001; Sinopoli 2001; Stanish 2003). Local communities outside state colonies can sometimes be largely unaffected and can continue to maintain their autonomy. States can affect communities

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and different segments within communities in diverse ways, and local populations respond to state expansion in equally diverse ways (Bauer and Covey 2002; Hastorf 1990; Morris 1998; Schreiber 1987a; Sinopoli 1994, 2001). Since both state strategies and local responses vary through space and time, we can only fully evaluate a state's strategies and impact by studying the local communities that may have come into contact with the state.

This study looks at Wari expansion in Cusco and its impact on the village of Ak'awillay. Ak'awillay is a multi-component settlement that was first occupied in the Late Formative (500 BC-AD 200) and grew to become the largest village (10 ha) of the Xaquixaguana Plain during the Middle Horizon. The pre-Middle Horizon and Middle Horizon contexts that I excavated at Ak'awillay provide a unique opportunity to evaluate change through time and assess Wari impact and local responses to Wari expansion in the region. Before looking at the Wari in Cusco and their impact on areas outside their installations, I review previous approaches to Wari and the strategies of expansion used by states in the Andes and elsewhere.

The Wari Debate: Two Models

During the Middle Horizon (AD 600-1000) the site of Wari in Ayacucho, in the central highlands of Peru, became a large city with streets, public architecture, multistoried residential compounds, temples, and royal tombs (Figure 1.1) (Isbell 2004, 2009; Isbell et al. 1991). The city of Wari soon dominated the Ayacucho Valley and its distinctive architecture and polychrome pottery started to appear at villages and towns beyond Ayacucho. Scholars who have studied the Wari and their widespread art style usually fall into one of two groups: (1) those who believe that Wari was a strong, unified empire; and (2) those who believe that Wari was only one state that interacted with many others.

The first group has argued that the Wari, emanating from Ayacucho, conquered widely and established tight control over several provinces across Peru (Isbell 1983, 1987, 1989, 1997, 2001; Isbell and McEwan 1991a; Isbell and Schreiber 1978; Lumbreras 1974; Matos Mendieta 1968; McEwan 1989, 1991, 2005a; Menzel 1964, 1968; Nash and Williams 2009; Rowe 1956; Schaedel 1993; Schreiber 1984, 1987a, 1987b, 1992, 2001a; Valdez et al. 2002; Williams and Nash 2002). In this view the Wari expanded for several reasons: gaining access to maize lands, exploiting complementary ecological zones, exacting labor tribute for state projects, and

securing a frontier with Tiwanaku. Wari mostly used military conquests to incorporate these regions and, over the long term, built large administrative centers to maintain control over conquered lands. These provincial centers were linked to one another by an elaborate system of roads similar to the Inka *Qhapaq Ñan*. Wari impact was felt throughout Peru as local populations lost their autonomy, lost control of their lands and resources, and provided tribute, labor, and allegiance to the Wari empire.
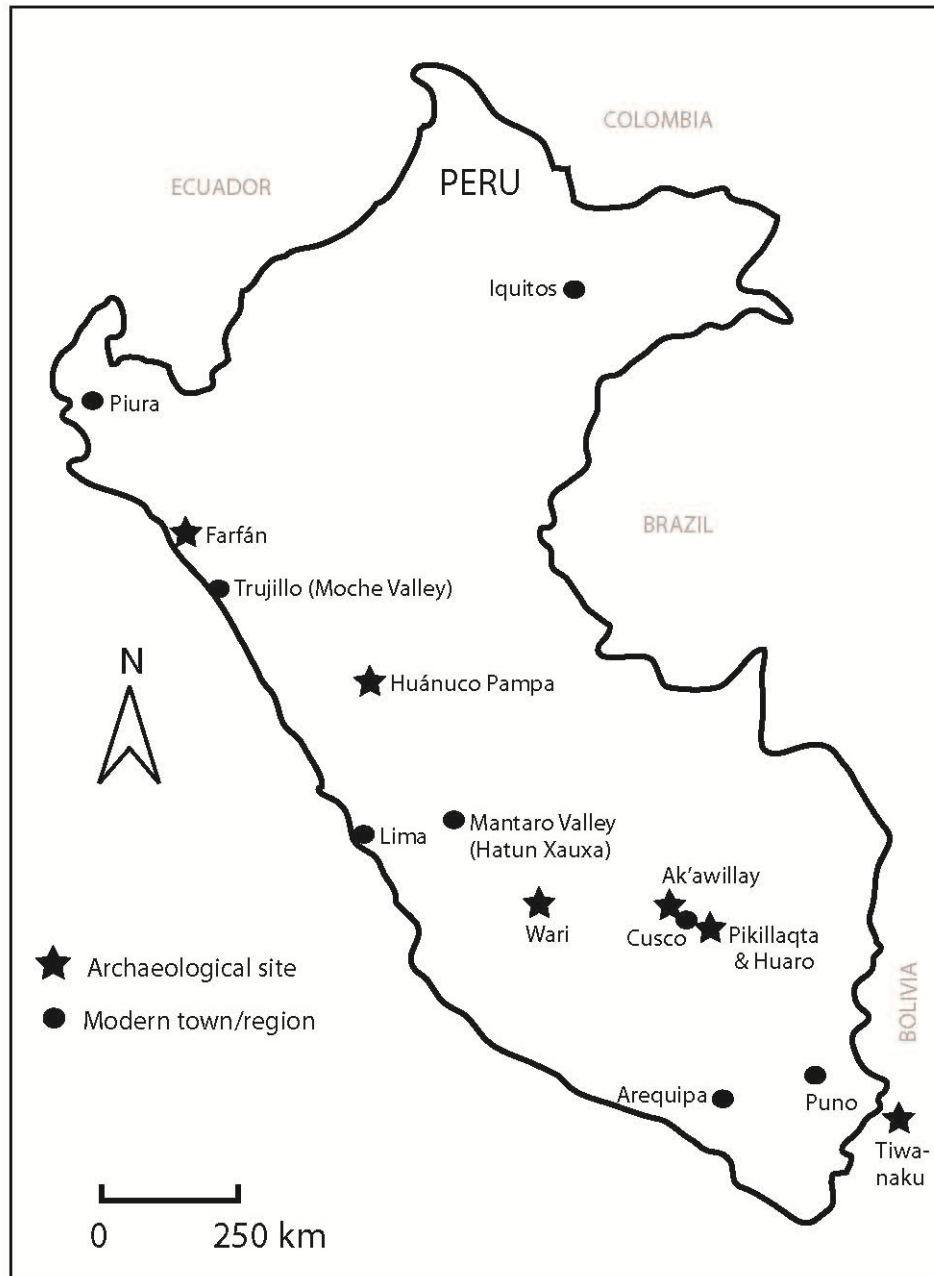
Figure 1.1. The location of Wari, Ak'awillay, other archaeological sites, and modern towns mentioned in the text.

This interpretation of Wari is mostly based on the presence of Wari architecture outside the Wari heartland. Wari architecture was not present in all areas that were supposedly under Wari control, but scholars explain that in certain regions characterized by political complexity, the Wari did not have to build large administrative centers and were able to rule through local institutions. The Wari only built their own provincial capitals where the existing populations lacked the necessary administrative infrastructure (Isbell 1983; Schreiber 1987a). In addition to architecture, Wari polychrome pottery also appears hundreds of kilometers away from the city of Wari. The presence of this pottery alone has often been used as evidence for the presence of Wari officials and, by extension, for the existence of a powerful Wari empire. The *contexts* in which this pottery was found, however, have been ignored; in many regions, Wari pottery only appears in elite burials along with local and other exotic goods.

These critiques have led a second group of scholars to question whether or not Wari had such extensive and pervasive control outside its heartland, arguing instead that some regions had considerable autonomy while others lay outside the Wari state (Anders 1991; Bawden 1982, 1983; Castillo 2001; Chapdelaine 2010a; Donnan and Mackey 1978; Jennings 2006a, 2006b, 2010a; Jennings and Yépez Álvarez 2001; Mackey 1982, 1983; Marcone 2010; Shady Solís 1982, 1988; T. Topic 1991; Topic and Topic 2010; Wilson 1988). In this view, Wari was one interacting state among others; the presence of Wari pottery outside Ayacucho was the product of long-distance exchange or contact between the elites of these autonomous polities. Wari architecture outside the heartland does not represent "administrative centers" but rather colonies, enclaves, or outposts where Wari colonists did not control host populations but did interact with them. The exchange of prestige goods and other items between local and Wari elites benefited both parties in a context of increasing interregional exchange and competition.

Although seemingly mutually exclusive, I argue that parts of both models can explain the Wari phenomenon in the Middle Horizon. The dichotomy between "empire" and "no empire" is simplistic. As is true of many states and empires, Wari could have controlled regions close to its heartland while establishing symmetrical exchange relationships with regions and polities farther away. In addition, within any region, Wari's impact could have been profound at some sites and not others, or experienced by elite families but not commoners. As I explain below, this view of Wari is more in accordance with other states (or even empires) in the Andes and elsewhere.

State Expansion

In the following I use the term "state" to refer to expansionist states and empires, that is, territorially extensive, heterogeneous sociopolitical systems that are forged through the incorporation of other groups, including other states. I do not refer to the smaller, culturally and linguistically homogenous states such as city-states or the early Uruk states. I chose this approach (instead of using "empire") to be more neutral and to avoid being categorized in the "Wari was a powerful empire" side of the Wari debate. Scholars who have used "Wari empire" have generally argued that Wari institutions and colonists were implanted in several regions of Peru, controlling many resources and populations and imposing a similar kind of rule from province to province. To move away from such simplistic and monolithic reconstructions of Wari institutions and agents, I have decided to use the term "state" in this work.

In an effort to understand expansionist states and imperial expansion, some scholars have drawn on Luttwak's (1976) hegemonic-territorial model (e.g., see D'Altroy 1992; Hassig 1985, 1992; Hastorf and D'Altroy 2001:19-20; Sinopoli 1994:160-161). They recognize two types of states along a continuum: the hegemonic state and the territorial state. The former is a state that rules through local elites and has diffuse or indirect control over conquered areas. The territorial state, on the other hand, is a state that establishes tight control over its provinces and invests substantial labor and resources in administrative infrastructure. This typology has often been used to contrast the Aztec (hegemonic) and Inka (territorial) states.

I argue that the dichotomy of hegemonic or territorial is far too simplistic to characterize states. States are not monolithic and static but diverse and dynamic. One state can be both hegemonic and territorial; it can use a hegemonic strategy in one region at one point in time, and a territorial strategy in another area or at a different moment. To be sure, some regions are more interesting than others to imperial powers and are easier to incorporate (e.g., Patterson 1991:107). State presence in some areas can start as outposts and become provinces, depending on the state's interests and local responses. Some colonies do not control their host communities, but others certainly do. As a result, each colony or province is administered differently and, to be successful, the administrative structure of the state has to be flexible and adapt to these different circumstances.

For example the Inka, and many other states and empires worldwide, succeeded in incorporating and maintaining control over very diverse ethnic groups and environments (e.g.,

Burger et al. 2007). As Morris (1998:295) argues, "[t]he hallmark of Inka rule was the flexibility and variability with which Inka rulers governed their provinces." In the Upper Mantaro Valley of central Peru, for example, the Inka established an administrative center using Inka-style architecture, moved settlers from hilltop sites to lower elevations to be closer to maize fields, increased the production and consumption of maize among local households, and provided elite families with Inka-style ceramics (D'Altroy and Hastorf [ed.] 2001; Hastorf 1990). On the Chimú-dominated north coast of Peru, the Inka transformed the local administrative center of Farfán and introduced several changes in the production of craft goods, storage, and funerary rituals (Mackey 2005). In the valleys south of Farfán, however, Inka expansion was less disruptive and the Inka left local life almost intact (Collier 1955:139-141; Donnan and Mackey 1978:356-357; Wilson 1988:350-352).

Before the Inka, other Andean states also used a variety of strategies to adapt to different situations. For instance, on the north coast of Peru the Southern Mochica state used two different strategies in Virú and Santa. In the Virú Valley immediately south of Moche, local elites remained in position and developed diplomatic relationships with the few Mochica established in the valley (Millaire 2010). In contrast, in the Santa Valley to the south, the administrative structure of the Mochica established a small colony that was later transformed into a province when thousands of Mochica people migrated to Santa. Mochica state officials in Santa ultimately controlled lands and irrigation canals and may have forced the local population to relocate further up the valley (Chapdelaine 2010b).

The Inka and Mochica examples illustrate how one state can use a variety of strategies through space and time. To be sure, states expand for various reasons and use different strategies of expansion and consolidation in different regions and at different moments. The Wari state was certainly no different; but before I look at Wari's motivations and strategies, I briefly discuss why and how states generally expand.

Motivations for Expansion

States expand for various reasons. These motivations can be economic, military, political, social, and cultural. One of the reasons most often cited behind expansion is gaining access to land and agricultural resources. Political elites have to accumulate agricultural surpluses to support administrators and full-time specialists. In the Andes, the presence of agricultural terraces (in the highlands) or raised fields (in the high *puna*), irrigation canals,

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agricultural tools, and storage facilities (*qulqa*) at villages around state capitals indicate that these were devoted to agriculture and the processing and storage of crops (e.g., Bauer 2004; Bermann 1994; Chapdelaine 2010b; Covey 2006; Janusek 2008; Morris 1982, 1986; Morris and Thompson 1985:97-108; Moseley and Deeds 1982). If such lands proved insufficient then either territorial expansion or intensification would be required.

Access to land and agricultural resources was likely an important motivation for expansion, but in the Andes (and many other places, e.g., Carrasco 1991) this works best close to home (D'Altroy and Earle 1985). The broken terrain of the highlands makes it very costly to ship bulky foodstuff over long distances. Llamas can only carry 20-30 kg each and, since the llamas need to be fed during the trip, a number of llamas in a caravan carry food that does not reach the final destination (D'Altroy 1992:84-90). The Inka addressed part of this problem by constructing storehouses and way stations (*tampu*) along the roads where officials, soldiers, caravans, and messengers (*chaski*) could stop, eat, and rest (Hyslop 1984; Morris 1982; Morris and Thompson 1985:109-118;). Earlier Andean states, however, could not count on this infrastructure; shipping crops over long distances was thus costly and, in most cases, not worth the effort.

The first important exception to this rule is the procurement of desired crops and items that are not available locally. In the Andes, each ecological zone is (1) determined by an elevation and climate and (2) characterized by certain resources that can only grow or live in that zone. Therefore, the availability of resources depends on elevation. For example, chili peppers grow best below 1500 m; coca can only grow between 730 and 1920 m (the best coca grows between 1000 and 1300 m); maize can be grown up to 3500 m; and tubers and quinoa grow up to 4200 m (Gade 1975). A state based in the highlands, like Wari, had access to maize, tubers, and cereals in its heartland, but no ready access to marine products, chili peppers, coca, tropical fruit, and other plants used for their hallucinogenic properties. As a result, states may have established colonies or provinces in complementary ecological zones to procure products not available at home, but would be unlikely to have established colonies in distant zones similar to home. For example, a village in the highlands could have shipped dehydrated potatoes and camelid meat to a colony on the coast in exchange for marine products, but would probably not ship potatoes to another highland location where potatoes were already grown (Flores Ochoa 1985). Once a state had incorporated a territory and established colonists or administrators in that region, the settlers certainly had to grow food to survive, but if this region was in an

ecological zone similar to home but distant, access to land was probably not the primary reason for the colony's formation.

The second exception to this rule is the acquisition of a new domain or estate to be exploited by the ruler and his relatives. In some ancient Andean states, inheritance rules stipulated that the lands conquered by a ruler were passed on to his close relatives and followers upon his death instead of being passed to his successor. As a result, the next ruler had to expand and incorporate new lands to support his own relatives and followers. Such was the case with the Chimú empire on the north coast of Peru, where the rule of split inheritance led each ruler to build a new royal compound at the capital of Chan Chan, accumulate prestige goods, and conquer new lands (Conrad 1982). Similarly, each new Inka ruler conquered new territories to accumulate lands and goods since those gathered by his predecessor were retained by the lineage and followers of that previous ruler (Conrad and Demarest 1984:116-126). Each new Inka ruler transformed some areas into private royal estates, allowing him to gain direct access to labor tribute and resources and to bypass local elites who would have otherwise claimed part of the tribute in the name of reciprocity (Covey 2006:116; Hyslop 1990:300-301; Murra 1980:38-39).

Apart from access to agricultural land, another common motivation for state expansion is the extraction of valuable and exotic resources or the access to trade routes that will lead to these resources (e.g., Algaze 1993; Sinopoli 1994). In the Andes, such items included cloth, obsidian, gold, silver, *Spondylus* shell, some plants that have ritual significance such as coca or Amazonian hallucinogenic plants (e.g., *Banisteriopsis sp.* [ayawasca] or *Anadenanthera sp.*), and other highly localized resources like *wanu* (*guano* or bird excrement used as fertilizer). When a state does not have direct access to these resources, it can attempt to establish a colony that will tap into regional trade routes. For example, early on the Inka established joint rule with the Chincha kingdom at La Centinela (south-central coast of Peru) to tap into trade networks that provided *Spondylus* shell from the coast of Ecuador and perhaps access to *wanu* islands off the coast of Chincha (Morris and Santillana 2007).

Access to labor has often been cited as another motivation behind state expansion (Patterson 1991:99-101; Rowe 1946:265-269; Sinopoli 1994, 2001).   In the Andes, most of the tribute exacted by states was in the form of labor (*mit'a*) (Murra 1982; Rowe 1946:265-269). State officials provided the necessary resources or raw materials to tribute laborers who then planted and harvested fields, participated in state projects and military expeditions,

transformed resources into finished objects or buildings, or performed services for the ruling elite. The Mochica rulers, for example, requested adobe mud bricks from the communities of the Moche Valley. Each community or labor party marked its adobes with distinct makers' marks for accounting purposes; these adobes were then used to build the large Huaca de la Luna and Huaca del Sol (Hastings and Moseley 1975; Moseley 1975).

Apart from these economic motivations, states also expand to defend their territory and secure their borders (Rowe 1948:42; Sinopoli 1994). States need to protect strategic regions and resources and may expand as a response to threats from other expanding polities. The Wari state, for example, established a colony in Moquegua that could have served as a frontier with Tiwanaku (Moseley et al. 2005). The Chimú could have expanded in part to become stronger and larger before they met with the rapidly expanding Inka forces (Rowe 1948:42).

Rulers can also expand to show military prowess, power, and authority. Before taking office, a future ruler often has to show his bravery and demonstrate that he deserves to be on the throne. For instance, future Aztec kings had to prove themselves in battle and take captives that would be sacrificed at the ruler's final inauguration ceremony (Townsend 2000:214). Once in office, rulers constantly have to prove that they have the skills to run the state; adding new provinces is often a way for rulers to show their fitness and power. Elites and commoners alike also use warfare to show their prowess, obtain rewards, and achieve higher status (Conrad and Demarest 1984; Hassig 1992). For Inka elites, for example, warfare and the conquest of territory became an arena for competition and the accumulation of prestige and status; for commoners, bravery in battle could be rewarded with titles of nobility (Conrad and Demarest 1984:123-124).

States also expand to fulfill a divine mission and maintain the universe. For example, rulers may wish to convert native populations to their religion or obtain resources that will support a cult fundamental for world preservation (e.g., the royal mummies of the Inka [Conrad 1992]). From a distance, these explanations may appear to meet instrumentalist ends of legitimating conquest and the aggrandizing ambitions of the ruling elite (e.g., Conrad 1992; Conrad and Demarest 1984:124-125; Kolata 1992), but in reality religious beliefs may have been at the center of many expansionist campaigns. Such was the case with Spanish priests in South America, who worked to convert Andean peoples to Catholicism and "civilization" (the *mission civilisatrice*). In doing so, they destroyed many temples, mummies, and *wak'a* (sacred objects or places) and persecuted and punished those who continued to practice indigenous rituals (Bauer 2004; D'Altroy 2002; Rowe 1948, 1957; Wachtel 1971:209-211).

Strategies of Expansion

As they expand for different reasons, states expand in different ways. No state adopts the same strategy in all the regions it colonizes or incorporates. The strategy adopted in a particular area depends on a number of factors, including the interests and benefits of that region for the expanding state's rulers, prior local history, the existing local political organization, the nature and extent of resistance to state incorporation, the nature of previous relationships between the region to be incorporated and the state, the distance of that region to the state's capital, and the costs of incorporation (Berdan et al. 1996; Earle and D'Altroy 1989; Morris 1998; Morris and Thompson 1985:24; Patterson 1991:107; Schreiber 1987a; Smith 2001; Stein 1998).

Military conquest is an effective but high-cost strategy. It is costly in logistics, human lives, and food and supplies that have to be provided to soldiers (D'Altroy 1992; Sinopoli 1994). For this reason, states often try to avoid military conquest, but use it where diplomacy is ineffective, where diplomacy has failed, or where powerful local polities are likely to rebel against the state, like the Chimú during Inka expansion (Rowe 1948). The Inka army, for example, could include several thousands of soldiers; the state had to feed them and provide human porters and llama caravans to carry food, weapons, and supplies. D'Altroy (1992:85-90) calculated that there could be as many as one porter for every two Inka soldiers (the Aztec army had the same ratio of one porter for every two soldiers [Hassig 1988:64]). All of these people, as well as the llamas accompanying them, needed to eat and rest.

Military conquests are also costly because the state has to install its own administrators instead of ruling through loyal local elites. The use of force may also have the disadvantage of destroying agricultural fields; once established the state has to ship products grown in another area to support its personnel (D'Altroy 1992; Sinopoli 1994). Military conquests are thus effective but costly and complex; states often choose an alternative strategy. For these reasons and because of the lack of weapons at large Inka centers like Huánuco Pampa, Morris (1982) concludes that military activity, although present, has been exaggerated in the Andes.

The threat of force is often sufficient to convince people to surrender peacefully. Coercive persuasion entails the threat of destruction for those who resist incorporation and rewards for those who surrender. This strategy works well in regions where competing factions prevent local populations from organizing unified resistance against the expanding state. The Inka, for example, often parked their army in a place visible to local populations and sent an

ambassador to threaten them (D'Altroy 1992:75-79). Local rulers, seeing the enormous size of the Inka army bivouacked close by, would often surrender to avoid the devastation of their community. While still costly in terms of logistics, food, and supplies provided to soldiers, this strategy has the advantages of creating less resentful subjects and of not destroying fields and storehouses from which state personnel will be supported.

When the use or threat of force is not necessary, states use diplomacy to forge alliances and rule through local leaders. Alliance building involves gift-giving and intermarriage (e.g., Calnek 1982; Hassig 1992; Murra 1986; Patterson 1991:108). This strategy works best with groups that were allies of the state before incorporation; these groups are also less likely to rebel later. In other instances, states can take advantage of local factionalism or internal disputes to make alliances with one faction to the detriment of others (e.g., D'Altroy 1994; Espinoza Soriano 1973; Hicks 1994). In all cases, local leaders remain in power and continue to rule their polity, with the condition that they provide tribute and loyalty to the expanding state (Calnek 1982; Hicks 1994; Hodge 1991; Morris 1998; Rowe 1982; Sinopoli 1994, 2001). For the state, it is a low-cost strategy to access resources, important trade routes, or labor; for local leaders, it is an opportunity to gain benefits for their own aggrandizement (Algaze 1993:320-321; Hicks 1994).

In all of the preceding cases, the expanding state dominates – to greater or lesser extents – local populations. Sometimes, however, the state's goal is only to extract resources without controlling the host population or receiving tribute from local communities (Stein 2002a, 2002b). In this case, the state establishes "colonies without colonialism" (Stein 2002a), also called outposts, enclaves, way stations, or diasporas; these are usually established for access to resources not available in the heartland, for access to trade routes, or for diplomatic reasons (e.g., Algaze 1989, 1993; Goldstein 2005). State colonists seek to settle in an area that was not previously occupied (either an area within a region or an area within an existing settlement) where they are accepted, tolerated, or marginalized by locals. One example is the Zapotec enclave at Teotihuacán in Mexico (Marcus and Flannery 1996:233-234).

Similarly, some scholars believe that early Andean state expansion started with vertical archipelago communities (e.g., Goldstein 2005; Isbell 1983; Murra 1986). The vertical archipelago is a model of community self-sufficiency that was first defined by Murra (1972). In this model, a community establishes permanent colonies in complementary ecological zones to gain access to resources not available at home. Colonies may also be founded to gain access to

localized resources or to tap into a region's exchange network. In all cases, colonists are separated from their home but are in regular communication with relatives and friends who stayed there. The homeland does not necessarily control these colonies, but in certain cases the state can encourage or force some of its members to establish colonies. In some cases, what starts as a colony ends up as a province of the state. For example, Goldstein (2005) suggests that during the Tiwanaku period, colonists first moved to Moquegua on their own initiative; later, Tiwanaku rulers gained interest in Moquegua and sent additional colonists to incorporate the region.

Consolidation, Infrastructure, and Long-Term Institutions

In cases where the state or colony does control local populations, the next step is to consolidate this control and implement long-term institutions (Sinopoli 1994, 2001). The transformation of a newly incorporated territory into an administered province can be a very long process. The strategy employed by the state often depends on whether the administrative structure of the state sends its own administrators to rule directly over a region or uses local elites to rule indirectly over the area.

Whether a state implements direct or indirect rule, state authorities usually seek to establish political ties with local elites through intermarriage, exchange, attendance to ceremonies, and the distribution of "material and symbolic benefits" (Sinopoli 1994:164; see also D'Altroy 1992; Earle and D'Altroy 1989:203; Hassig 1992; Hicks 1994; Murra 1986; Sinopoli 2001). The state may also attempt to discourage ties among local elites and maintain some local rivalry to avoid coalition against central rule (Brumfiel 1983:274; D'Altroy 1992, 1994; Sinopoli 2001).

When large numbers of state officials are present in an incorporated region, they may construct a colonial or provincial center from which they can operate. Bureaucracy and administrative infrastructure varied greatly in complexity through space and time and from one state to another (Sinopoli 1994). These centers were built in strategic locations for the "efficient movement of goods, people, and messages between regions" (D'Altroy 1992:80). Inside or around the colony or administrative center, the state builds storage facilities to stock food that will support its personnel and store the items exacted in the region (D'Altroy and Earle 1985; Day 1978; Morris 1982, 1986).

D'Altroy (1992:155-159) estimated the number of Inka colonists that could be supported from the lands within five km of the provincial center at Hatun Xauxa in the central highlands of Peru. He based his estimate on average modern yields obtained with traditional techniques, differential production according to ecological zones, crop cycles, and fallow periods, from which he subtracted the resources needed to support the local population who worked these fields. His results suggest that within five km of Hatun Xauxa, the Inka could grow enough food to feed everybody living at the provincial center, the individuals working on these lands, and a minimum of 10,000 additional people, for a total of about 16,000 people annually. Like other Inka provincial centers (e.g., Morris 1982, 1986), the area around Hatun Xauxa contained many storehouses that were used to store and display agricultural surplus and other items.

The resources and items stocked in Inka storehouses were obtained through exchange with local groups or through the implementation of tribute. Tribute provided the state with a variety of resources, whether in the form of staple products, prestige goods, or human labor. By monopolizing the resources obtained from tribute, state officials sought to prevent local elites from accessing these items; local elites soon depended on the state to access valued goods, accumulate prestige, and legitimate their position locally (Morris 1982:167-168). Tribute payers, on the other hand, were rewarded for their effort in different ways. In the Andes, they were compensated with protection, land, and food and chicha given during feasts and ritual ceremonies. The exchange of food and chicha for labor was a form of hospitality, generosity, and (asymmetrical) reciprocity and was the basis of a leader's prestige and authority (Jennings and Bowser 2009; Marcus 2009; Morris 1982; Morris and Thompson 1985:81-96; Murra 1980:121-122; Rostworowski 1977:240-244).

The colonial or provincial center and its storehouses were complemented by a complex system of roads. The Inka imperial road system, the *Qhapaq Ñan*, ran the entire length of the empire in the highlands and on the coast, with several transverse roads linking these two major arteries (Hyslop 1984). Although the Inka built some road segments, historic documents mention that most were older roads built before the emergence of the Inka state. The location of many pre-Inka sites (including Middle Horizon settlements) close to these roads also suggests that most Inka roads were part of earlier roads that the Inka improved and expanded (Hyslop 1984:270-274; Lumbreras 1974:162-163; Regal 1936:6-7). To secure their position and reduce the threats of rebellion and outside aggression, state armies also build forts along their borders (e.g., Carrasco 1991; Hyslop 1990:146-190).

To legitimate the ruling power, state officials may foster the development of an official ideology, origin myth, history, or state religion. Some ruling elites develop origin myths that place the origin of their ethnic group, and by extension civilization, outside of the area where they eventually flourished. Such was the case for the Chimú and the Inka (Rowe 1946:316-318; 1948). In these accounts, migration and expansion were necessary and state officials merely followed a priest's vision. In other instances, rulers appropriate local beliefs and capture the local sacred images or statues to control sources of legitimacy. The Tiwanaku, for example, may have captured the sacred statues (*wak'a)* of the communities they had conquered and exhibited them in a temple at the capital (Kolata 1992). The captured statues were the symbol of Tiwanaku dominance and could have been used to maintain control over these communities who were encouraged to comply with state rule in order to avoid the destruction of their precious *wak'a*. This interpretation is heavily based on Inka analogy (e.g., Rowe 1967:63, 1982:109), though similar practices are known from many historic empires.

State Territory

An expansionist state or empire's territory is not always geographically contiguous; states may conquer some areas while other contiguous regions remain autonomous (Bauer and Covey 2002; Berdan et al. 1996; Carrasco 1991; D'Altroy 2001; Hassig 1992; Rowe 1948:42-43; Sinopoli 1994, 2001; Stanish 2003). Some regions are not of interest to imperial rulers or are occupied by powerful enemies, like the Tlaxcalla in the middle of the Aztec empire (Berdan 1994). Other areas resist incorporation and states go around them to incorporate neighboring areas. Later, when the expanding state is stronger and the resisting region isolated, the state can go back and incorporate this pocket of resistance. This pattern of expansion has been called "leapfrogging" by Murra (1986:51; see also Bauer and Covey 2002:859).

Such was the case with the expansion of the Inka. The Inka state formed in the Cusco Basin during the Late Intermediate Period (AD 1000-1400). While consolidating the basin, the Inka forged alliances and intermarried with other ethnic groups to the north and west of Cusco (Bauer 2004:71-90; Bauer and Covey 2002). The Inka soon incorporated these allied regions. To the east in the Lucre Basin, however, were other ethnic groups who resisted incorporation into the Inka state. The Lucre Basin contained a large fortified settlement and was separated from the Cusco Basin by a buffer zone that had previously been densely occupied. Only later, when

much of the Cusco region was under Inka control, were the Inka capable of conquering the Lucre Basin and transform it into a productive area.

As a result, a state's territory is not static; its frontiers shift as new territories are incorporated and others are lost. Whatever the strategy used in a particular region, incorporation or conquest is rarely a single event (Hicks 1994; Murra 1986; Patterson 1991:106-128; Sinopoli 1994), as subjugated peoples and polities are rarely content to lose their autonomy and resistance to imperial rule is common. Some regions have to be conquered several times, often years after the initial conquest. Some areas may surrender temporarily, then resist and rebel against central rule, and re-obtain their autonomy. Conquered groups can also ally with a state's rivals to regain or maintain their independence. The state usually responds to these rebellions with violent force (e.g., Patterson 1991:116-128).

The Wari State

In light of these observations on state expansion, it is reasonable to suggest that Wari, like other ancient states in the Andes and elsewhere, expanded for different reasons and used different strategies of expansion and consolidation through space and time. In contrast to the scenario that some have proposed, the Wari very unlikely controlled all of the highlands and coast of Peru during the Middle Horizon. More realistically, the Wari state probably controlled a few regions close to its heartland (and perhaps more distant strategic areas), established symmetrical exchange relationships with regions farther away, and ignored areas in which Wari rulers had no interest. I explore this topic further in Chapter 2.

This understanding of Wari, although more flexible and dynamic, is only one side of the story. Focusing on the Wari capital and its large colonies means that we still do not know much about the communities that were supposedly under Wari control or that may have come into contact with Wari officials. To be sure, state expansion involves the interaction of three groups: (1) the local host society, which may itself be heterogeneous; (2) the intrusive colonists or state officials, who may be from the center, from other regions within the state, or local; and (3) the heartland (Stein 2005). Colonists maintain contact with their home, but equally important is the fact that they develop a variety of relationships with local communities. In order to understand fully the expansion and incorporation strategies employed by a state, it is essential to adopt a complementary "bottom-up" perspective that studies the changes experienced at the regional and household levels by diverse local families and communities.

The Impact of State Expansion on Local Communities

Understanding a state's motivations for expansion and its various strategies of expansion and consolidation is fundamental; it allows archaeologists to gain a fuller picture of the complexity and flexibility of these polities. However, although essential, this approach is insufficient to fully understand a state. It is a "top-down" perspective that analyzes everything from the capital's standpoint (and a small portion of the capital – its leaders and administrative institutions), leaving aside the smaller villages that made up the state. This "top-down" approach privileges large settlements associated with the expanding state, focusing on rulers, administrators, and craft specialists, and on how the provinces are linked to the state's center through an infrastructure of roads, administrative centers, way stations, and forts (Bermann 1994).

The investigation of capitals and regional administrative centers alone cannot explain and document how an expanding polity affected local populations, and explain how (and if) the expanding polity controlled the local people and resources of a region. To get a more complete picture of how ancient states operated, it is crucial to look at the other side of the coin and understand how *local people* experienced colonization or incorporation into an expanding polity.

The Other Side of the Coin: The "Bottom-Up" Approach

Bermann (1994:11) defines the local or "bottom-up" approach as "a perspective that views the relationship between the capital and a smaller site from the standpoint of the subordinate site." In this perspective, local communities are entities with their own historical trajectories and culture. They do not exist *because* of larger polities or appear when states and empires start to expand; instead, they have an existence of their own.

The "bottom-up" approach emerged as a response to "top-down" approaches that privileged palaces, royal burials, and monuments. Other movements in history, cultural anthropology, and the humanities also contributed to the shift toward "bottom-up" approaches. One of the critiques of the "bottom-up" approach in archaeology is the use of core-periphery models inspired by World Systems Theory. World Systems Theory was originally proposed by Wallerstein (1974) to account for 16th century relationships between Western countries and the Third World. The model was soon adopted by a number of archaeologists and historians to

understand ancient colonial systems and to explain interregional interaction and long-distance exchange between early complex societies and their neighbors (e.g., Algaze 1989; Champion 1989; Hall and Chase-Dunn 1993; Hornborg 1998; Santley and Alexander 1992). The model works in some cases where the relationship between two societies is asymmetrical. In most cases, however, core-periphery models fail to consider the complexity of the relationships between expanding states and local communities.

The applicability of the core-periphery or world systems model to the past has been criticized or rejected by many archaeologists, mainly because in its original formulation it assumed an asymmetrical relationship between a dominant core and a subjugated periphery and left no room for internal processes of change in the "periphery," local agency, and the role of interaction with other neighboring groups in culture change (e.g., Balkansky 2002; Jennings 2006a; Lightfoot and Martinez 1995; Schortman and Urban 1998; Stein 1998, 2002b, 2005; Upham 1992). Core-periphery models are core-centric; everything is analyzed from the core's perspective. They assume that all change in the "periphery" is a direct or indirect result of contact with the "core." Local communities accept the expanding state's material culture because it is necessarily desirable. In this line of thought, state and imperial expansion have often been seen as an "extension of civilization (presumably that of the conquerors)" (Doyle 1986:20).

In reality, rather than being passive recipients of a "donor" culture, local communities often co-exist in symbiotic and complex ways with an expanding state. Members of local communities are active agents who have their own history and culture. When they do interact with an expanding state, this interaction may take different forms (trade, exchange, feasting, intermarriage, emulation, war, control, conquest, etc.) and can be accompanied by changes in the culture of one or both parties (Lightfoot and Martinez 1995; Rogers 1990; Yao 2008). Therefore, interaction between a state and a community is not unidirectional and not always structured in asymmetrical ways. As mentioned earlier, colonies can exist outside of colonialism (Stein 2002a) and interaction with a state does not necessarily lead to incorporation into that state.

Even when communities are integrated into an expanding state, the impact of intrusive political authority on local groups often varies both within individual communities and regions and from area to area within the state. One group can be heavily affected and transformed, with changes in its domestic economy and the adoption of state material culture and

administrative architecture, while other groups can show few traces of having been incorporated into an expanding polity (e.g., Bauer and Covey 2002; Berdan et al. 1996; D'Altroy and Hastorf [ed.] 2001; Hastorf 1990; Morris 1998; Sinopoli 1994, 2001; Smith 2001; Terrenato 1998). In addition, the impact of an expanding state may be disproportionately experienced by certain segments of local societies (e.g., elites vs. commoners and men vs. women) such that the impact of state expansion may vary even within individual communities or from house to house.

Local communities or segments of local societies may adopt or emulate certain elements of an expanding state's material culture, but these items are carefully selected and are redefined and contextualized locally; they are given a meaning that can be quite different from the meaning that these items have for the state (e.g., Marcus 2003; Stark and Curet 1994; Stein 2002b; Yao 2008). In addition, states are not always interested in or capable of changing local cultures. Domination is not absolute, and there can be relative local autonomy. Local beliefs, practices, languages, and other institutions can continue to exist or even be encouraged by state intermediaries (e.g., Berdan 1994; Rowe 1946:269, 272).

Measuring Local Impact: The "Bottom-Up" Approach in Practice

The study of the impact of state expansion on local communities is often a study of change through time (or lack thereof). To evaluate the nature of state control and domination (if present) in a region and understand how local people were affected, it is imperative to go beyond the simple presence/absence of state material culture and look at changes at the regional (settlement patterns), local (sites), and household (domestic spaces) levels (Bermann 1994). Such an approach allows an assessment of both macro scale changes and more fine scale changes in the rhythms, practices, and experiences of daily life in communities brought into the titular domain of expanding states.

At the regional level, survey data can be helpful in determining the nature of changes that followed state expansion (e.g., Bauer and Covey 2002; Billman and Feinman 1999 [ed.]; Covey 2006). For example, whole villages can be moved closer to agricultural fields, state roads, or state supervision (Schreiber 1987a). Sometimes, incorporation into a state creates regional peace. By repressing some local conflicts and violence (mostly to facilitate the payment of tribute and the circulation of caravans), people can move freely throughout their area and establish their villages closer to important resources (e.g., Berdan 1994; Murra 1986). The state can also foster the development of long-distance exchange networks linking regions far away

from each other; as a result, local communities may gain access to a variety of exotic goods. In other cases, resistance to incorporation may lead to the destruction of entire ethnic groups, as was the case with the Cañari and Caranqui under Inka rule (Patterson 1991:111-114).

At the level of the site, state expansion can change local political dynamics; it can level status differences or suppress local elites or, on the contrary, benefit local leaders. Through interaction with the state, indigenous leaders can gain access to new prestigious resources, which can in turn increase their prestige and authority over their subjects (e.g., Castillo 2001; Goldstein 2000; Helms 1979). Local leaders can also increase their status locally and regionally by organizing exchange, finding new markets for the items produced locally, and granting the state access to local resources, labor, and trade routes (Algaze 1993).

At the household or family level, tribute obligations may reduce time available for other household activities such as food processing and cooking, which will in turn affect diet and consumption patterns (e.g., Brumfiel 1991; Cutright 2010). Diets may change as families start consuming what they produce for tribute. After the Inka conquest of the Mantaro region, for instance, the Wanka started to consume more maize than before (Hastorf 1990). Families may need to build new or extra storage space to store and accumulate goods for the payment of tribute (e.g., Bermann 1994), while heavy tribute burdens may lead to complaints, uprisings, and rebellions (Hodge 1991; Patterson 1991:104; Rowe 1957).

Tribute obligations can also separate families for extended periods of time. The Inka, and perhaps earlier Andean states, required taxpayers to participate in state projects that often took place far from their village (Murra 1982; Rowe 1946:267-269, 1982). The Inka also moved whole communities of loyal *mitmaqkuna* to pacify problematic regions and resettled resisting communities in loyal territory (D'Altroy 1994; Hyslop 1990:147-152; Murra 1980:173-182; Patterson 1991; Rowe 1946:269-270; Rowe 1982). For example, upon conquering their rivals in the Lucre Basin, the Inka resettled the Pinahua in the lowlands of Paucartambo northeast of Cusco (Bauer 2004:84). The Inka also moved communities in underpopulated areas and in regions close to desirable resources, and skilled craft specialists to the capital (Hyslop 1990:151; Rowe 1982; Wachtel 1982). An example of the latter is the Chimú artisans of Chan Chan who were resettled in Cusco to work for the *Sapa Inka* (Murra 1980:163; Pease 1982; Rowe 1948).

Apart from tribute obligations, families may also gain access to resources from other ecological zones or regions that were previously outside of their networks of exchange. These resources can in turn affect culinary practices or domestic tasks, among other things. For

example, some families may gain access to marine resources (diet change) or obsidian (new tools for more expedient household tasks). Families may also adopt new beliefs or new ritual practices and paraphernalia. All of these resources may change activities and relations at the household level, and the contexts in which these new items are found can provide valuable information on the circumstances in which they were introduced and utilized.

Household Archaeology

The study of change at the household level provides valuable insights on the impact of state expansion on local communities. The study of change at the regional level is important, but it does not allow us to see *who* within a society is affected by state expansion or how it modified people's daily activities. Household archaeology, the study of households through the excavation of domestic remains, allows archaeologists to understand how local people experienced colonization or incorporation into an expanding polity. Households are a basic economic unit in all societies and can provide important understandings of social change because regional processes often affect households (Bermann 1994:8-9). Household members are active agents in their society who variably participate in local political life and interact with people within and beyond their community (Bowser and Patton 2004; Hendon 1996; Rathje 1983; Robin 2003). The excavation of domestic spaces is also fundamental to document how the non-elite living at some distance from a colony or administrative center reacted to and were affected by the presence of an intrusive polity.

On the diachronic level, the comparison of houses that were occupied *before* and *during* state expansion can reveal both local cultural change and the impact of intrusive political authority on local families. In several regions of the world, archaeological studies focusing on houses through time have documented changes in material culture and domestic activities at the household level (e.g., Bermann 1994; Brumfiel 1991, 2006; D'Altroy and Hastorf [ed.] 2001; Smith 2003; Wattenmaker 1994, 1998). These changes, or lack thereof, may be the result of local dynamics or larger regional processes. Importantly, the study of change can also document local decisions and trajectories in a context of state expansion.

On the synchronic level, household archaeology opens a window on the residential, ritual, economic, and political life of a village's residents. This approach also provides valuable information on the *contexts* in which an expanding state's material culture is found locally. The simple presence of foreign material culture is, of course, not an indication of foreign conquest

and domination. For example, people may borrow or emulate a state's pottery for various reasons. Elites may display these exotic objects to increase their prestige locally; shamans or priests may wish to display connections to certain beliefs or to a larger culture or ideal; and villagers may procure foreign vessels simply because they are popular or because nothing else was available at the market that day. As a result, state material culture could be limited to the local chief's house or to the local public building or temple, or be ubiquitous and reflect a more pervasive influence on all segments of society. The context is thus key to evaluating how families were affected by state presence.

The Wari State and the Village of Ak'awillay

During the Middle Horizon, the Wari expanded to Cusco and built two clusters of settlements in the Lucre Basin and Huaro Valley (Pikillaqta and Huaro; see Figure 1.1). Almost all research on this period in the Cusco region has focused on these two large Wari centers and a few cemeteries nearby (Barreda Murillo 1973; Glowacki 1996, 2002; Glowacki and McEwan 2002; McEwan 1984, 1987, 1989, 1991, 1996, 2005d [ed.]; Zapata Rodríguez 1995, 1997). This "top-down" approach has led scholars to argue that the Wari conquered and controlled the Cusco region during the Middle Horizon (Glowacki 2002; Glowacki and McEwan 2002; McEwan 2005d [ed.]).

Apart from a series of systematic regional surveys outside the Wari colony (Bauer 1992, 1999, 2004; Bauer and Covey 2002; Bauer and Jones 2003; Bélisle and Covey 2010; Covey 2006; Covey et al. 2008), scholars have not studied smaller settlements to see how and if the local population of Cusco was affected by the presence of the Wari polity in the area. Yet, for reasons mentioned earlier, the investigation of only the largest Wari centers cannot explain how deeply Wari presence penetrated into the lives of the local people and resources of Cusco. That is, to what extent did Wari presence in the Cusco region effectively contribute to changes in economic, social, political, or ideological relations and structures in local communities? If changes did occur, were such changes direct (i.e., the result of deliberate state policies) or indirect (i.e., the incidental or accidental effects of state presence)? It is now essential that we take a complementary "bottom-up" perspective that concentrates on smaller communities.

One key to investigating the nature of the Wari state's impact or lack of impact is to excavate local houses occupied *before* and *during* Wari presence in Cusco.

The "Bottom-Up" Approach at Ak'awillay

My research evaluates how the occupants of the village of Ak'awillay were affected by the presence of nearby Wari colonies during the Middle Horizon. Ak'awillay was the largest village (10 ha) of the Xaquixaguana Plain, a region of 600 km^2 northwest of the Wari colony. The site is also close to the Inka imperial road to Chinchaysuyu that may already have been in use in Wari times between Cusco and Ayacucho, the Wari capital. Ak'awillay is thus an ideal candidate to evaluate Wari impact in the Cusco region.

By comparing the activities, artifact inventories, features, and architecture of houses occupied before and during Wari expansion, my research documents domestic changes between the two periods and evaluates if any of those changes can be related to wider regional processes, i.e. the incorporation of the Cusco region into the Wari state. The excavation of a public building and a small cemetery provides additional information on the public and ritual life of the residents of Ak'awillay during the Middle Horizon. Before introducing the Cusco region, the Wari colony in Cusco, and the results of my excavations at Ak'awillay, Chapter 2 reviews the evidence gathered at the Wari capital, its heartland, and other sites using Wari architecture or material culture elsewhere in Peru.

A Note on Middle Horizon Chronology

In this study I use "Middle Horizon" as a convenient expression to refer to a chronological period (AD 600-1000). I do not use "Middle Horizon" as a concept that presupposes cultural and political unity throughout the Andes. As will become clear in the following chapters, if we were to accept the Middle Horizon concept as one of Wari unity, then there would be no Middle Horizon at Ak'awillay, even if the site was occupied during this time! It is therefore in a purely chronological sense that I use "Middle Horizon," until Andeanists come together and develop a new chronological framework that not only incorporates Wari but also highlights regional particularities.

I do not use the Middle Horizon phases (1-4) elaborated by Menzel (1964). Menzel's seriation is based on fancy wares found in high-status burials from the Ica Valley approximately 200 km away from the Wari capital. This seriation has proved to be difficult to apply outside the

Ica Valley. At the Wari colony of Cerro Baúl in Moquegua, for example, most of the Wari pottery belongs to the Chakipampa and Okros styles, usually associated with Middle Horizon phase 1 (ca. AD 600-700). Radiocarbon dates obtained at the site, however, indicate that Cerro Baúl was continuously occupied from the seventh century until around AD 1000 (Williams 2001; Williams and Nash 2002:257).

Unsurprisingly, Menzel's phases are incompatible with the sequence of occupation at Ak'awillay since the great majority of pottery at the site is local. Therefore, until further chronological refinement is possible, I use "Early Middle Horizon" to refer to the first half of the period (AD 600-800) and "Late Middle Horizon" to refer to the second half (AD 800-1000).

Chapter 2

THE WARI STATE OF MIDDLE HORIZON PERU

> "... althoeugh the Wari certainly held considerable influence over numerous regions outside of their Ayacucho heartland, we can no longer assume that their influence on the intervening areas was continuous, even, or direct."
> **Bauer et al. 2010:66**

As reviewed in Chapter 1, ancient state expansion strategies varied through space and time, and the Wari state was certainly not an exception. While complementing earlier research that focused on general trends, the study of Wari's diverse strategies as well as the variability, nature, and impact of its "influence" provides a richer understanding of the Andean past – not only of the Wari state itself, but also of the many other polities and smaller communities that came into contact with Wari.

In this chapter I introduce the Wari state and review evidence from its capital, its heartland, and other settlements outside its heartland. I evaluate the motivations for Wari expansion, the strategies of expansion, the presence of so-called "regional administrative centers," and, where the data are available, Wari impact on local communities. The first stop of our Wari tour is the Wari capital close to the modern city of Ayacucho.

The Wari Capital

The Wari capital is in the Department of Ayacucho in the south-central highlands of Peru (see Figure 1.1). At its peak, Wari was a densely occupied city extending over 2.5 km^2 in the Ayacucho Valley. The site may have housed between 25,000 and 40,000 people (Isbell 2009:213). A series of agricultural terraces that probably relied on small irrigation works surrounded the city (Isbell 1987; Isbell et al. 1991).

The farmers who lived at and around Wari most likely cultivated maize in the *kichwa* ecological zone between 2500 and 3000 m above sea level. Stable isotope analyses from human remains indicate that the people living at Wari and other sites in the Ayacucho Valley consumed maize in large quantities (Finucane 2009; Finucane et al. 2006). Stable isotope data from animal remains recovered at these same sites also suggest that some domesticated camelids and guinea pigs were fed maize (probably the stalks and husks) (Finucane 2004; Finucane et al. 2006). These camelids were likely kept in corrals in or near settlements. Other camelids that were not fed maize were eating grasses typical of the *puna* and probably lived at higher altitudes.

Chronology of the Wari Capital

William Isbell and colleagues conducted several seasons of fieldwork at Wari in the 1970s and early 1980s and more recently in the 2000s after the decline of the Shining Path. The site has a long history of occupation spanning more than 1000 years, and these scholars developed a chronology of occupation based on architectural changes (Isbell 1997; 2009; Isbell et al. 1991). Wari was first inhabited in the Early Horizon (Churucana phase, ca. 1200-200 BC). Very little is known about this period, except that occupation was concentrated on a hilltop.

In the subsequent Early Intermediate (Vista Alegre phase, ca. 200 BC-AD 500), Wari was a small farming hamlet of at least 5 ha that probably housed between 1,000 and 2,000 people (Isbell 1997; 2009; Isbell et al. 1991). The agricultural terraces surrounding Wari were likely constructed during this period, and the residents of Wari may have competed for water with neighboring communities (Isbell 1984, 1987). People living at Wari during this phase used pottery called Warpa (also spelled Huarpa), built rectangular buildings and stone-lined canals (probably drains), and placed cists and clay-lined offering pits below their house floors.

At the end of the Early Intermediate and beginning of the Middle Horizon (Quebrada de Ocros phase, ca. AD 500-650), the Ayacucho Valley witnessed important population growth (Isbell 1984-1985, 1987; Isbell and Schreiber 1978; MacNeish et al. 1975, 1981). Wari and the neighboring site of Conchopata (see next section) gained importance and soon became ceremonial and residential centers. New temples were constructed in these two settlements that may have attracted immigrants and followers from neighboring hamlets and villages (Isbell et al. 1991).

Early in the Middle Horizon the city of Wari outgrew Conchopata in size and population and started to dominate the Ayacucho Valley. The presence of four tiers in the regional site-size hierarchy suggests the emergence of a centralized state in the Ayacucho Valley (Isbell 1984-1985, 1987; Isbell and Schreiber 1978; MacNeish et al. 1975, 1981). The new state centered at Wari included several towns, villages, and hamlets; at the same time, a few Wari sites were established outside the Ayacucho Valley. Wari polychrome pottery also started to appear at several settlements in Ayacucho and beyond. Some of this pottery included motifs that have been interpreted as a "Front-Face Deity" (Cook 1984-1985), suggesting that Wari rituals and religion were gaining popularity and prestige during the Middle Horizon.

During this phase, the city of Wari grew to 500-1000 ha and housed between 10,000 and 20,000 people (Isbell 1997; 2009; Isbell et al. 1991). An urban grid with walled compounds and narrow streets began to be constructed in the city, and its inhabitants started to produce and use different styles of Wari pottery. A long canal was built to bring water to the city, perhaps by a large labor force directed by Wari leaders. Differences in residences, tomb types, and access to sumptuary goods suggest the existence of different social classes (Isbell 1987, 2004; see below).

Slightly later in the Early Middle Horizon (Muraduchayuq phase, ca. AD 650-800), the site of Wari experienced another period of growth and reached its peak (Isbell 1997; 2009; Isbell et al. 1991). The city then housed between 25,000 and 40,000 people. Some temples and other buildings were buried and new buildings were built on top of them. Compound enclosures with parallel and perpendicular walls became common, a rigid spatial layout that archaeologists have called "orthogonal cellular architecture." Buildings were planned and constructed along narrow streets. People were living in patio groups consisting of a central patio surrounded by benches and multi-story lateral halls or galleries. D-shaped temples and megalithic burial chambers were also built during this phase.

The last phase of occupation at Wari (Royac Perja Phase, ca. AD 800-1000) was characterized by more remodeling (Isbell 1997; 2009; Isbell et al. 1991). Orthogonal cellular architecture was no longer used and the patio groups within rectangular compounds were abandoned, one by one. Thick high walls were built as well as large trapezoidal, triangular, and irregular buildings. Some burials were placed in the thick walls of these buildings. The city of Wari was finally abandoned at around AD 1000 before remodeling could be completed.

Residences and Palaces

All of the information available on residences at Wari comes from (1) rectangular compounds that probably housed elite families and (2) high status palaces that housed rulers and their relatives (Brewster-Wray 1989; Isbell 1997, 2009; Isbell et al. 1991; Isbell and Vranich 2004). The excavated elite residences and palaces were occupied during the Early Middle Horizon. No commoner houses were excavated at the site.

The Muraduchayuq Compound was an elite residence built on top of a temple (Brewster-Wray 1989; Isbell 1997, 2009; Isbell et al. 1991). The compound was surrounded by streets and contained several patio groups built with parallel and perpendicular walls in the orthogonal architectural tradition. Each patio group included: (1) a central patio with roofed benches on all sides where most daily activities took place; and (2) long niched lateral halls or galleries on each side of the patio. Rows of projecting stones on the interior walls of the lateral halls indicate that these rooms had a second story. Walls and floors were white-plastered, and below the floors of the lateral halls were cist burials and caches of sumptuary goods.

Each patio group within the Muraduchayuq Compound was used for the same residential activities, suggesting that each was occupied by one or two households. Features and items recovered in this compound further suggest that its inhabitants were not involved in agriculture or craft manufacture. Instead, the high proportion of pottery bowls and cups and the presence of large vessels for the fermentation and storage of chicha indicate that its inhabitants were involved in hosting guests and in feasting activities. In addition, the presence of sumptuary and imported goods, such as fancy Wari pottery, pottery imported from other regions (such as Cajamarca), marine shell, and obsidian, suggest that the residents of this compound were members of the elite. The elite families residing in these compounds over generations were in constant communication with their ancestors, as shown by the caches and burials below the floors of lateral halls (Brewster-Wray 1989).

Brewster-Wray, Isbell, and colleagues (Brewster-Wray 1989; Isbell 1997; Isbell et al. 1991) concluded that the Muraduchayuq Compound was the residence of low-level state administrators who were in charge of hosting feasts for their followers and subordinates as part of their administrative duties. Apart from hosting feasts, it is unknown what these "state administrators" would have done. Feasting was probably part of the state's political strategy to appear generous and foster relations of reciprocity with its subjects; the state gave food and drink to its subject population in exchange for labor and tribute (Isbell 1984:106-107). The

administrators who lived in the Muraduchayuq Compound depended on others for food, manufactured items, and sumptuary goods since they were not involved in these activities themselves (Brewster-Wray 1989).

South of the Muraduchayuq Compound was another walled elite compound referred to by Isbell et al. (1991) as Sector A. This compound was also surrounded by streets. Several ceremonial offerings were placed under the compound floor. Clay-lined caches contained sumptuary goods and fancy pottery; stone-lined cists sealed with stone lids contained human remains and sumptuary goods. Human remains were from secondary burials and included mostly skulls and long bones. Isbell et al. (1991:35-36) argue that these human remains may have been trophies, but they could also have been the final resting place of ancestors who had originally been buried or exposed elsewhere.

Apart from these elite compounds, a structure interpreted as a royal palace was excavated at Wari (Bragayrac 1991; Isbell 2009; Isbell and Vranich 2004). In the Vegachayuq Moqo sector of the city was a plaza surrounded on three sides by a U-shaped platform mound with two terraces. This area has been interpreted as the center of the ruler's administrative activities. The ruling household(s) and associated retainers would have lived in residential complexes attached to the platform mound. Enclosures contained rooms with niches and some included offerings or caches of smashed pottery buried below the floors.

Temples

In the Muraduchayuq sector of the city, the Wari built a semi-subterranean temple (Isbell 1997, 2009; Isbell et al. 1991). Construction of the temple preceded that of the Muraduchayuq Compound, which was built on top of the sunken temple. The semi-subterranean temple measured 24 m on each side and was built with cut stone blocks fitted to one another without mortar. The floor and walls were plastered and painted red or pink. This temple was constructed within a walled compound, which Isbell (1997:197) suggests may have served to separate the sacred space from the surrounding profane residential areas. This temple was in use during the Early Middle Horizon, then intentionally sealed and buried before the elite Muraduchayuq Compound was built.

The Muraduchayuq sunken temple appears to be unique at Wari. More common in the city and at other Wari sites were D-shaped temples. After what may have been the death of one of their rulers, the Wari transformed the plaza of the Vegachayuq Moqo palace into a D-shaped

temple (Isbell 2009; Isbell and Vranich 2004). This D-shaped temple contained trapezoidal niches and was intentionally buried upon the abandonment of the site (Bragayrac 1991). Another D-shaped temple was built on top of the platform mound in the same sector and evidence indicates that it was used for the ritual burning of items. Another D-shaped temple was built at Mongachayuq and in other sectors of the city, but these need to be more fully investigated and described.

Royal Tombs, Elite Interments, and Commoner Burials

Most burials at Wari and other Wari sites have been looted, but a few unlooted tombs and the remaining items and architecture of looted burials provide valuable information on Wari mortuary patterns. Tombs clearly show differences in status (Isbell 1987, 2004). In the Monjachayuq sector of Wari, archaeologists have found a subterranean complex of megalithic mortuary chambers (Isbell 2004; Isbell and Vranich 2004). This complex contained several levels. At ground level, a perimeter wall and a D-shaped temple were built; below ground were up to three levels of masonry burial chambers and "offering houses" (see the Conchopata section) placed on top of burials. Subterranean levels were accessed through small shafts. All these tombs were looted a long time ago, but the impressive arrangement of these chambers suggest that the Monjachayuq complex housed a royal tomb that was later covered with burial chambers of nobles and family members.

The Cheqo Wasi sector of Wari contained semi-subterranean megalithic mortuary chambers within a walled D-shaped enclosure. These chambers contained human bones and luxury items, indicating that they housed the remains of the high-status individuals of the city (Benavides 1991; Isbell 1984, 1997, 2004). Burials were sealed with a stone lid that had a circular hole, allowing the descendants to open the tomb and insert or add new offerings for their ancestors. Some chambers were more complex and included two levels. In these cases, human remains were placed in a lower chamber that was connected to an upper chamber via a small hole; offerings could be given to the deceased via this hole.

Burials of individuals of lesser status were excavated in the Vegachayuq Moqo sector of the city (Bragayrac 1991:78). During the Late Middle Horizon the mortuary temple of the Vegachayuq Moqo sector was abandoned, and into the thick wall surrounding it were burials. These burials were secondary interments and contained multiple individuals in a flexed position.

The burials contained few grave goods and probably represent a cemetery of commoners (Isbell 2004, 2009; Isbell and Vranich 2004).

The Wari Heartland

Archaeological data including site hierarchies, architecture, ceramics, and burials suggest that several towns, villages, and hamlets were incorporated into the Wari state. These settlements were located in the Ayacucho Valley around the city of Wari and in neighboring valleys. Most were in productive agricultural areas where considerable quantities of maize and other crops could have been grown and shipped to the capital. These sites formed the heartland of the Wari state. I will now discuss a sample of settlements for which archaeological data are available.

Conchopata

Twelve km south of the city of Wari is Conchopata, a site which may have been "Huari's foremost second city" (Isbell and Cook 2002:251). Located at 2700 m, Conchopata lies in the *kichwa* ecological zone where maize can grow. The site is on a flat ridge surrounded by terraced steep-sided valleys. Conchopata is now mostly covered by an airport and other buildings, but archaeologists who have worked there estimate that the site extended over at least 20 ha at its peak during the Middle Horizon (Cook and Benco 2001; Isbell and Cook 2002; Pozzi-Escot 1991). Today only 2 or 3 ha are preserved and all the research has been concentrated there.

Like Wari, Conchopata was not only occupied in the Middle Horizon. In the Early Intermediate, the people living at Conchopata and Wari were both building new temples that attracted numerous followers. By the end of the Early Intermediate and beginning of the Middle Horizon, Conchopata and Wari were the biggest settlements in the Ayacucho Valley (Isbell 1984-1985). Wari soon surpassed Conchopata, but Conchopata continued to be occupied throughout the Middle Horizon (Isbell 2001; Isbell and Cook 2002; Pozzi-Escot 1991).

During the Middle Horizon Conchopata may have been surrounded by a perimeter wall. The presence of two orthogonal cellular buildings suggests that at least part of the site was deliberately and carefully planned (Isbell and Cook 2002). Differences in residences and burials further suggest that people of different status occupied the settlement (Isbell 2001, 2004). As is

the case at Wari, no commoner houses have been excavated at Conchopata. The elites lived in large multi-room complexes that had plastered rectangular rooms arranged around central patios (Isbell 1984-1985; Pozzi-Escot 1991). Excavations indicate that a range of activities took place in these rooms and patios, including cooking, craft production, and feasts and rituals.

Craft activities in these large elite residential complexes focused on the production of domestic pottery and large polychrome ceremonial vessels (Cook and Benco 2001; Isbell 2007; Isbell and Cook 2002; Ochatoma and Cabrera 2001, 2002; Pozzi-Escot 1991). Evidence of such production includes abundant pottery fragments, pottery manufacturing tools (molds, polishers, paddles, anvils, pestles, etc.), open firing areas and pit kilns, and concentrations of rejected pots that were broken or badly fired. These items and features were widely distributed, suggesting that pottery production was not concentrated in one location but took place in several compounds. In addition to domestic, administrative, and ritual activities, the elites living in these compounds (or their retainers) appear to have been involved in pottery production.

Outside of the elite compounds, Ochatoma and Cabrera (2001) report a small workshop involved in the manufacture of turquoise (or its imitation, chrysocolla) items. These items were probably produced for Conchopata's elite. In addition, the presence of large pottery vessels at several locations at the site further suggests that part of the population brewed chicha that was consumed in feasts (Isbell 2007). Stone tools do not seem to have been produced locally (Isbell 2007).

Conchopata had several circular and D-shaped temples (Ochatoma and Cabrera 2001, 2002). One of the former measured 10.5 m in diameter and was surrounded by low stone walls with no niches. The floor of the temple was sunken and accessed via a few steps. Temples included offering pits with camelid burials and large vessels that were probably used to store chicha. In addition, a total of 31 isolated human skulls had been burned, smashed, and left on the floor in two temples (Tung 2008; Tung and Cook 2006). These skulls had small circular perforations; similar skulls found in the Nasca region still had a cord passing through the hole, suggesting that such skulls were trophy heads that could be suspended or worn around the neck. Such trophy heads have local antecedents at Conchopata but none has been found at the city of Wari (Tung and Cook 2006). Tung (2008) demonstrated that most Middle Horizon trophy heads from Conchopata had cut marks, indicating that the skulls of individuals who had recently died were transformed into trophy heads while flesh was still attached to their bones.

Most trophy heads were taken from adult males, but the presence of several children and a few adult females suggests that the Wari obtained captives or skulls while raiding villages (Tung 2008). Several male trophy heads showed evidence of cranial trauma, indicating that these men had been involved in violent activities during their lifetime (Tung and Knudson 2008). Strontium analyses of tooth enamel and bone from five adult trophy heads further suggest that two of the individuals who ended up as trophy heads were local, two others were non-local, and one spent his childhood in Ayacucho but lived elsewhere during adulthood (Tung and Knudson 2008). Among the child trophy heads, strontium suggests that two children were local while two others were not (Tung and Knudson 2010). These data show that the Wari raided both near and distant villages.

Apart from trophy heads, offerings of large intentionally broken urns and face-neck jars were placed on the floor of temples, patios, rooms, and in pits below floors (Cook 1984-1985; Isbell and Cook 2002; Ochatoma and Cabrera 2002). These broken vessels were oversized (> 1 m in height) or regular in size; most were decorated with polychrome motifs but some were plain. The decorated jars depicted important individuals (probably male) wearing tunics, the Front-Face Deity, profile attendants, and mythical animals.

Some ceramic offerings included only one or two broken vessels, but most offerings included several vessels (Isbell 2001; Isbell and Cook 2002). Some vessels appear to have been broken *in situ* while others may have been broken elsewhere and then carried to their final destination. In all cases these ceramic offerings were covered with fine sediment. The smashing of ceramic vessels was probably part of important ceremonies at Conchopata, including termination rituals that preceded the abandonment of certain rooms and buildings (Isbell 2007). Before being broken and deposited these vessels may have contained chicha that was used in feasts to entertain followers; this hypothesis needs to be confirmed or rejected with residue analyses.

In addition to residences, temples, and offerings, numerous burials were found at Conchopata (Isbell 2001, 2004; Tung and Cook 2006). Burials could include one or several flexed individuals. In the case of the latter, Tung and Cook (2006) reported three burials from Conchopata where the individuals in each tomb shared skeletal genetic traits, suggesting that each tomb represented a family or kin group. Some men and women had suffered cranial trauma, but the presence of wounds on the posterior part of the skull in addition to the absence of parry fractures on their ulnae suggest that these injuries were not the result of warfare (Tung

2007a), or that they were attacked from behind or while their arms were tied. Strontium isotope analyses on five adults further indicate that these individuals had spent their whole life in the Ayacucho region (Tung and Knudson 2008).

Although not as impressive as those from Wari, the burials from Conchopata show a lot of variability and suggest differences in social status (Isbell 2001, 2004). The simplest interments were pits with no grave goods that were covered with earth or a flat stone; these probably contained the remains of commoners. Stone-lined cists occasionally contained grave goods and were covered with stone lids; these lids sometimes included an opening through which the descendants may have given offerings to the deceased. Other individuals were buried in cavities dug into bedrock after passing through house floors. These tombs always contained grave goods and small holes above the tomb may have allowed the descendants to give offerings to their ancestors. The last type of burial from Conchopata was the most elaborate and probably held the remains of elites. In this type of interment, individuals were buried with several grave goods in a stone-lined cist; on top of the cist or right next to it was an offering house that guarded the access to the opening through which descendants could make offerings to their ancestors. In addition to these different types of interments, high status infants and children were buried separately in what appears to be benches (Tung and Cook 2006).

Marayniyoq

Apart from Conchopata, several other sites in the Ayacucho area have Wari architecture, pottery, and burials. These sites were involved in productive activities that could have benefited the Wari state. North of the city of Wari, the site of Marayniyoq included a chicha production facility (Valdez et al. 2010; Valdez and Valdez 2009). There, archaeologists have found several grinding stones used to grind *jora* (germinated maize kernels) as well as numerous fragments of large pottery vessels that were likely used to store grains, ferment chicha, and transport liquids. Associated with these items were spindle whorls, suggesting that women probably prepared chicha and spun fiber in this area. Considering that Marayniyoq is only two or three km away from Wari and that this facility could produce large quantities of chicha, Valdez and colleagues conclude that chicha production at this settlement may have been supervised or even controlled by Wari state officials (Valdez et al. 2010).

Several of the burial types identified at Conchopata have been recognized at Marayniyoq and at other Wari settlements in the Ayacucho Valley (Valdez et al. 2001, 2002,

2006). Other settlements with similar burials include Pesoqoypata and Seqllas about 15 km north of Wari. At these three sites, stone-lined cists and rectangular burial chambers featured small openings that could have allowed individuals to give offerings to their ancestors, much like they did at Conchopata.

Azángaro

Fifteen km northwest of Wari is the settlement of Azángaro in the Huanta Valley (Figure 2.1) (Anders 1989, 1991). Azángaro was occupied for about 100 years in the Late Middle Horizon. The site is located in an irrigated valley bottom at 2390 m. Two irrigation canals associated with the plain and the enclosure at the site suggest that the plain was irrigated during the Middle Horizon. The presence of agricultural terraces around the site further indicates that the area produced substantial quantities of maize and other crops. Located near a snow-capped mountain that could have been important in prehistoric times, Azángaro could also have served ceremonial purposes.

The site contains a walled rectangular enclosure measuring 7.5 ha. The enclosure was divided into three sectors and included rectangular and trapezoidal patio groups, rectangular conjoined rooms, and irregular room clusters and patios. There was only one narrow entrance to the enclosure and traffic within each sector of the enclosure (and from one sector to another) was restricted. Variability in the size of rooms of the same type suggests that different rotating labor crews could have built the enclosure or that its construction was not tightly supervised (Anders 1991:187-189).

Considering that the irregular rooms and patios of the enclosure are typical of local (i.e., Huanta Valley) pre-Wari architecture and that Wari polychrome pottery is rare at the site, Anders believes that most of the population living at Azángaro was local. She argues that Wari "authorities placed local lords from the Huanta Valley in charge of Azangaro" (Anders 1991:187). If this were the case, it would suggest that local populations had considerable latitude in operating the facility and that not all "Wari" sites were occupied by people from Wari. In addition to housing local leaders, Azángaro could have been the home of lower-level authorities, a permanent population of commoners, and a group of rotating, temporary *mit'a* laborers (Anders 1989, 1991). Anders (1991:192) estimates that at any one time, the site would have housed 100 permanent residents in addition to 18-54 temporary occupants.

Artifact inventories from different sectors of the site suggest that its inhabitants were not specialized but instead practiced a wide range of domestic activities (Anders 1991:190). Considering that Azángaro is located in an agriculturally productive zone, the enclosure "may have functioned as a supervisory station for individuals overseeing irrigation and cultivation of the plain" (Anders 1991:167). Like Jargampata (see below), the people living at Azángaro could have provided different crops to the Wari capital.

Figure 2.1. The city of Wari and other Middle Horizon sites in central and northern Peru.

Jargampata

About 25 km east of Wari is the site of Jargampata, located near a valley bottom at 2500 m (Figure 2.1) (Isbell 1977). The settlement is close to a large flat plain that is easily irrigated and could have yielded considerable quantities of maize during the Middle Horizon. Isbell (1977:10-11, 52-56) argues that in addition to feeding the local population, maize production

probably generated surpluses that could have been sent to the city of Wari on llama caravans. The state would have used this surplus to feed the specialists living at the capital.

It is unclear whether Wari officials lived at Jargampata and how the state actually controlled maize production. No definitive storage facilities were identified at Jargampata. Only a small two-room building within a rectangular enclosure could have served for storage, but its small size suggests that it could only have stored a small harvest. Apart from this small building, the rectangular enclosure included benches, rooms, and galleries. Its construction was a planned effort that would have necessitated a large labor force. Isbell interprets this enclosure as a public or administrative building where people would have consumed large amounts of food and drink. Like the Inka (e.g., Morris 1982; Morris and Thompson 1985:81-96; Murra 1980:121-122; Rostworowski 1977:240-244), such feasts would have been organized by the leaders of the government as reciprocity for labor exaction (Isbell 1977:35-42; 1984). However, how work was organized at the site and whether the results of that work were appropriated by a ruling elite still need to be demonstrated.

In addition to this building, Jargampata included residential enclosures, one of which was excavated by Isbell (1977). This enclosure was composed of a courtyard and several agglutinated rooms and corridors that housed a number of families. Unlike the city of Wari, residential enclosures at Jargampata were not built at one moment in a planned effort but over a long period with rooms added when necessary.

Wari polychrome pottery represented a small fraction (less than 5%) of the pottery from Jargampata (Isbell 1977). In addition to Wari pottery, some Wari motifs were emulated on local ceramics (Isbell and Schreiber 1978:384). Other imports included spoons in the Cajamarca Cursive style and the prestigious *Spondylus* shell from the warm waters of Ecuador. Participation in the Wari state seems to have allowed the local population to access long-distance exchange networks and obtain exotic goods.

Wari's Heartland

Settlement patterns and data from a sample of sites in the Ayacucho region suggest that during the Middle Horizon the city of Wari was the head of a state and was supported by an integrated heartland. Agricultural production in the heartland seems to have exceeded local needs, suggesting that surpluses could have been sent to Wari on llama caravans. These surpluses could have been used to support the numerous specialists living at the capital.

For the people who lived in the heartland, the relationship with Wari state officials was not one-way: they paid tribute but also obtained Wari goods and exotic prestige items. The presence of local architecture and pottery in the heartland coupled with the generally low proportion of Wari polychrome pottery in local assemblages further suggest that although local populations participated in the Wari state, they were able to maintain some of their local traditions. This pattern was even more pronounced outside the Ayacucho heartland.

Wari Style outside the Heartland

In the Early Middle Horizon, Wari material culture started to appear at settlements beyond the Ayacucho region. Wari polychrome pottery and architecture typical of the city of Wari were found at sites far from the capital. The presence of this material culture outside the Wari heartland has been explained in various ways by different archaeologists (see Chapter 1). At one extreme, some suggest that Wari conquered and incorporated most of Peru during the Middle Horizon; at the other extreme, some argue that Wari was merely one state interacting with other states. Here I review the data at the root of this debate.

The Northern Highlands
Honcopampa and the Callejón de Huaylas

Located approximately 550 km north of the city of Wari at 3500 m, the site of Honcopampa in the Callejón de Huaylas has often been characterized as a Wari provincial administrative center (Figure 2.1) (e.g., Isbell 1989; Lau 2002; Schreiber 1992). Very little work has been conducted at the site, however, and available data suggest that most of the settlement was built and occupied by the local population. Radiocarbon dates indicate that this occupation took place during the Early Middle Horizon (Isbell 1989).

Honcopampa was divided into three sectors, two of which include *chullpas* (Isbell 1989, 1991). These *chullpas* were multi-story mortuary buildings that were divided into several burial chambers and could be accessed through several doorways. Smaller *chullpas* were also built on the hillsides surrounding the site. *Chullpas* were not part of the Wari burial architecture and have never been found in the Wari heartland; instead, they are typical of the Callejón de

Huaylas (Paredes et al. 2001; Ponte 2001; Schreiber 1992:99). The local population living at Honcopampa and its surroundings probably built these *chullpas* to bury their dead.

The third sector of Honcopampa contained two D-shaped buildings and several patio groups. These patio groups were different from those at Wari. For example, the ones at Honcopampa had a central entrance with door jambs and a large lintel, and the entrance was linked to a corridor leading to the central patio (Isbell 1989, 1991). Galleries were probably not multi-storied (no corbels) and in each patio group one of the lateral galleries was always larger than the three others. In addition, patio groups at Honcopampa do not show a cellular organization like those at Wari and other Wari settlements (Isbell 1989, 1991). Instead, each patio group was separated from the others and followed the topography.

All buildings at Honcopampa (*chullpas*, patio groups, and D-shaped buildings) were built with masonry of the "block-and-spall" type (Isbell 1989, 1991), where large rectangular stones alternate with small flat stone slabs. This construction technique was not typical of Wari but was common in the northern highlands (e.g., Lau 2002). In addition, local pottery was abundant at the site while Wari pottery was rare (Isbell 1989, 1991). According to Isbell's description, another style of pottery decorated with press-molded motifs is also reminiscent of Middle Horizon post-Moche north coast pottery (Bélisle 2008).

Based on preliminary work conducted at the site, Honcopampa mostly included local architecture, pottery, and burials and thus seems to have been built and occupied by the local population. The only Wari-style buildings at the site are the two D-shaped structures. More work at Honcopampa should provide interesting data on the interactions between the Callejón de Huaylas and the Ayacucho Basin during the Early Middle Horizon. Some people from Wari could have stayed or lived at Honcopampa, but additional research is needed to verify it.

Outside Honcopampa, Ponte (2001) describes villages that display very little change from the Early Intermediate to the Middle Horizon. Wari pottery only appeared in burials (*chullpas*) along with local vessels and north coast ceramics. Paredes and colleagues (2001) also found *chullpas* that contained pots in the local style, ceramics from the north and central coasts, and very few Wari vessels. At the site of Chinchawas, Lau (2002) reported economic prosperity and continuity of ancestor veneration rituals during the Early Middle Horizon. C*hullpas* were first built at Chinchawas during the Late Middle Horizon and suggest a change in mortuary practices. These *chullpas* were constructed in the local architectural style and contained local (Recuay) as well as imported pottery that included north coast press-molded wares, "Wari

Norteño," (north coast pottery that included Wari elements) and central coast Nievería bottles (Lau 2002:292).

Data from the Callejón de Huaylas suggest that local villages did undergo some changes during the Middle Horizon, but these do not seem to be related to incorporation into the Wari state. Local populations maintained several of their traditions and continued to interact with several groups, including but not limited to Wari. People from Wari or from sites affiliated with the Wari state could have visited the area from time to time, but current data do not support a Wari conquest and domination of the region. Instead, trade and emulation seem to explain much of what we see in the Callejón de Huaylas.

Viracochapampa and Huamachuco

Further north and 700 km from the city of Wari, the site of Viracochapampa in the Huamachucho region is often cited as a Wari provincial center on the northern frontier of the Wari state (Figure 2.1) (e.g., Isbell 1997; Isbell and Schreiber 1978; Lumbreras 1974; Schreiber 1992). Viracochapampa contains monumental architecture and building types that appear at other Wari sites; however, research conducted at Viracochapampa and elsewhere in Huamachuco has shown that Viracochapampa was built very early in the Middle Horizon in the local architectural style. As such, the architectural tradition of the Huamachuco region seems to have been a source of inspiration for Wari architecture (J. Topic 1991, 2009; Topic and Topic 2001, 2010). Wari peoples seem to have traveled to Huamachuco, and emulated and borrowed from the local tradition.

Settlement patterns indicate that in the period preceding the Middle Horizon (Early Huamachuco phase, AD 300-600), the people of Huamachuco occupied small residential villages and larger settlements with monumental architecture (J. Topic 2009). The largest of these sites was Marcahuamachuco, covering 240 ha on top of a plateau overlooking the valley. The site was occupied from AD 300 or 400 until the end of the Middle Horizon. In the northern sector of the site were long multi-story galleries that contained the remains of domestic occupation (J. Topic 2009; T. Topic 2009; Topic and Topic 2010). These galleries were curvilinear or circular and included a patio with rectangular houses around it. Some galleries were larger and more elaborate than others, suggesting ranking. Each gallery appears to have housed the members of a lineage who only lived at Marcahuamachuco for part of the year to participate in rituals related to their ancestors. These rituals were conducted in rectangular niched halls in the southern part of the site. Like the domestic galleries, the niched halls also varied in size and

elaboration, further indicating rank differences between the lineages who built and used these halls (T. Topic 2009:249). Niched halls contained a lot of spoons, cups, and decorated pottery and their walls contained human bones, suggesting that each lineage used its niched hall "to feast in honor of their ancestors, whose bones were buried in the walls" (J. Topic 2009:221).

John Topic and Theresa Topic (J. Topic 2009; T. Topic 2009; Topic and Topic 2010) conclude that Marcahuamachuco was a seasonal residence for several lineages who feasted and honored their ancestors in niched halls. During the Early Intermediate, other large settlements in the region included terraces and rectangular multi-story galleries with plazas and patios (J. Topic 2009:221-223). The people of the Huamachuco region interacted with their neighbors and obtained various goods from them, including Cajamarca and Recuay pottery, obsidian, and *Spondylus* shell. Huamachuco pottery has not been found outside the region, but its architectural style was found in Cajamarca to the north (Topic and Topic 2010).

Marcahuamachuco continued to be occupied in the Early Middle Horizon, but excavations have recovered no Wari pottery (J. Topic 2009:226). In the same time, Viracochapampa was built. Viracochapampa was a planned, walled square settlement (J. Topic 1991, 2009; Topic and Topic 2010). Its construction was never completed and, apart from a few workers who resided at the site while they were building it, no one ever lived there. There is little pottery at Viracochapampa, none of which is Wari. Patio groups included an unroofed patio surrounded by long narrow multi-story galleries on three sides and a niched hall on the fourth side. Like the niched halls at Marcahuamachuco, the walls of these niched halls included human bones. The combination of galleries and niched halls in a single patio group was new at Viracochapampa and could reflect Wari influence, but both the galleries and the niched halls already existed in the region before the Middle Horizon (at Marcahuamachuco, for example).

John Topic (2009:226-227) suggests that local leaders living at a nearby settlement, Cerro Sazón, could have sponsored the construction of Viracochapampa. Marcahuamachuco was becoming a very important ritual site but was not in the territory controlled by the elites of Cerro Sazón. The construction of Viracochapampa in their territory could have been an effort to provide access to a new ritual location where the elites of Cerro Sazón could sanctify or legitimize themselves. At Cerro Sazón, most pottery was local but scarce Wari pottery was found in two buildings used to store meat and brew chicha. Cerro Sazón could have housed some of the workers who built Viracochapampa, providing them with meat and chicha that was served in fancy pottery vessels. The building of Viracochapampa thus appears to have been a

local effort that was "probably meant to replace Marcahuamachuco as a center for lineage-based ancestor worship" (J. Topic 2009:226). This plan was only partially realized and Viracochapampa was never completed.

In addition to Cerro Sazón, some Wari pottery was found at Cerro Amaru, an important water shrine that was built in the period preceding the Middle Horizon (J. Topic 2009; Topic and Topic 2010). Cerro Amaru contained three wells with abundant offerings as well as circular structures used to store maize. A funerary structure with several burials contained exotic items, including pottery from Cajamarca and the coast, Wari pottery, obsidian, and *Spondylus* shell. The presence of Wari pottery at Cerro Amaru may suggest that Wari individuals participated in rituals associated with the shrine, or that local people who had access to Wari pottery and other exotic items made offerings to the shrine.

Evidence strongly suggests that the Wari did not conquer, control, or dominate Huamachuco. The niched halls, so often cited as a hallmark of Wari architecture, were in use well before the Middle Horizon in Huamachuco, indicating that the Wari borrowed this form and included it in their architecture, rather than the reverse (J. Topic 1991; Topic and Topic 2010). The people of Huamachuco certainly interacted with Wari, but there is no evidence that this interaction was organized in asymmetrical terms. Instead, the contexts in which Wari material culture appeared in Huamachuco suggest "activities of traders and of religious pilgrims visiting the Cerro Amaru shrine" (T. Topic 2009:244). As Topic and Topic (2010:208) conclude, the "interaction with Wari reflects an active exchange of raw materials, finished goods, and spatial, organizational, and cosmological concepts."

The North and Central Coast

Early attempts to explain the presence of Wari and Wari-influenced pottery (sometimes called Tiahuanaco or Tiahuanacoid in early and mid-20th century literature) on the north and central coast of Peru relied on the conquest model. These early scholars argued that the Wari expanded, invaded, conquered, and consolidated their power over the north and central coast during the Middle Horizon (Collier 1955; Ford 1949; Kosok 1965; Kroeber 1930; Lumbreras 1974; McEwan 1990; Menzel 1964, 1968, 1977; Proulx 1968, 1973; Schaedel 1951, 1966, 1993; Strong and Evans 1952; Stumer 1956).

More research in these coastal valleys over the last decades has clearly shown that the Wari never conquered or inhabited the region. During the Middle Horizon, both the north and

central coasts were ruled by indigenous polities. On the north coast, numerous radiocarbon dates indicate that the Southern Mochica state continued to exist until AD 800 (Chapdelaine 2010a, 2010b). After the decline of Mochica, the Black-White-Red state based in the Casma Valley ruled over most of the territory formerly controlled by the Southern Mochica state (Wilson 1988, 1995). In the northern Mochica territory, several Mochica states also continued to exist well into the Middle Horizon before the emergence of Sicán in the Late Middle Horizon (Castillo 2001; Chapdelaine 2010a; Shimada 1994).

In addition to political continuity, there is strong continuity in local settlement patterns, architecture, and material culture on the north coast throughout the Middle Horizon (Bawden 1982, 1983, 1994, 1996, 2001; Bélisle 2008; Donnan and Mackey 1978; Mackey 1982, 1983; T. Topic 1982, 1991; Wilson 1988, 1995). Wari material culture is quite rare. There are no Wari sites and no Wari architecture, and Wari pottery appears at local sites in very limited contexts, mostly elite tombs. High-status burials contain abundant Mochica pottery in addition to a few Wari, Wari-influenced, and other exotic ceramics such as Nievería, Pachacamac, and Cajamarca (Castillo 2001; Chapdelaine 2010a; Donnan 1973; Donnan and Castillo 1994). Nievería and Pachacamac ceramics are sometimes referred to as "Wari-related styles." Nievería pottery was produced on the central coast starting at the end of the Early Intermediate and included some Wari-like motifs in addition to local (Lima region) designs. The origins of the Pachacamac style, however, remain to be defined and this pottery may have been manufactured outside the central coast (Kaulicke 2001; Marcone 2010).

On the north coast, these exotic goods along with locally-manufactured prestige items were used by Mochica elites to gain prestige and power locally. This practice was especially important at San José de Moro in the Jequetepeque Valley, 870 km northwest of Wari (Castillo 2001). There, Mochica elites were buried with prestigious local pottery and exotic goods, including Wari and Wari-influenced pottery. How the Mochica elites obtained Wari-related goods is unknown, but they could have sporadically participated in exchange networks with intermediate groups that were in contact with Wari.

On the central coast, Cajamarquilla (middle Rímac Valley, 320 km northwest of Wari) and Pachacamac (lower Lurín Valley, 310 km northwest of Wari) have often been considered Wari regional and ceremonial centers (Lumbreras 1974; Menzel 1964, 1968, 1977; see also Segura Llanos and Shimada 2010). This is mostly due to the presence of Wari and "Wari-influenced" pottery (Nievería and Pachacamac) in burials excavated decades ago (e.g., Uhle

1991) and to the planned orthogonal compounds of Cajamarquilla. However, recent research has shown that Cajamarquilla architecture is typical of the local Late Lima culture (late Early Intermediate and Early Middle Horizon) that has been documented at several other sites in the Rímac Valley (Segura Llanos and Shimada 2010:115-116). Ceramic data also suggest that Cajamarquilla was unoccupied during most of the Middle Horizon; the presence of Lima and Ychsma-period pottery indicates that Cajamarquilla was abandoned around AD 700 when the Lima state collapsed and was only reoccupied in the Late Intermediate well after the collapse of Wari.

Late Early Intermediate and Early Middle Horizon excavated contexts at Cajamarquilla contained abundant Lima material culture as well as some Nievería pottery (Marcone 2010; Segura Llanos 2001:144-169). Nievería pottery occurred alongside Lima pottery in restricted contexts such as burials, offering pits, and public buildings associated with elite feasting activities. Outside of Cajamarquilla, Nievería pottery found on the central coast only occurs in restricted contexts at large settlements with public architecture (Marcone 2010). Lima pottery, on the other hand, is present at all sites and in all contexts.

Research at Pachacamac has also shown that Wari and Wari-influenced pottery is very rare and mostly comes from burials or secondary contexts such as fill (Segura Llanos and Shimada 2010). In the Little Mud-Brick Compound at the periphery of the site, Marcone (2010:146) found only one Nievería fragment but abundant Lima pottery. This compound was associated with feasting activities, yet Wari-related pottery is virtually absent. In light of these data, it would be difficult to conclude that Pachacamac was co-opted by Wari and became a branch of Wari religion, as has been suggested (e.g., Glowacki and Malpass 2003). This idea is further challenged by the fact that Pachacamac was sparsely occupied during the Late Middle Horizon (Marcone 2010; Segura Llanos and Shimada 2010).

Southern Ayacucho

Pampas and Qaracha Valleys

South of the Wari capital, several settlements contained Wari material culture. Fifty km south of the city of Wari in the Pampas and Qaracha Valleys (Figure 2.2), Vivanco and Valdez (1993) identified 17 Middle Horizon sites based on the presence of surface remains. These settlements were established in the plain and were surrounded by agricultural terraces; their

size suggests that they housed a small population. No radiocarbon dates are available for the settlements of this region.

These sites were labeled "Wari" mostly because a few Wari polychrome (Okros, Chakipampa, Viñaque) fragments were found on the surface in addition to the more common Wamanga pottery (Vivanco and Valdez 1993). The "Wamanga style" incorporates some elements of Wari iconography and has been identified in several regions of Peru. Wherever it is found, it always seems to have been locally manufactured. However, this "style" differs from region to region as local people adopted and emulated different aspects of Wari iconography and incorporated them in a locally-made ware (Owen 2007, 2010). Consequently, the presence of Wamanga pottery alone is a poor indicator of Wari presence and control; emulation and selective borrowing often exist outside asymmetrical relationships (e.g., Stein 2002b). The people living in the Pampas and Qaracha Valleys certainly interacted with the Wari state during the Middle Horizon, but the nature of this relationship needs to be clarified through additional fieldwork and excavations.
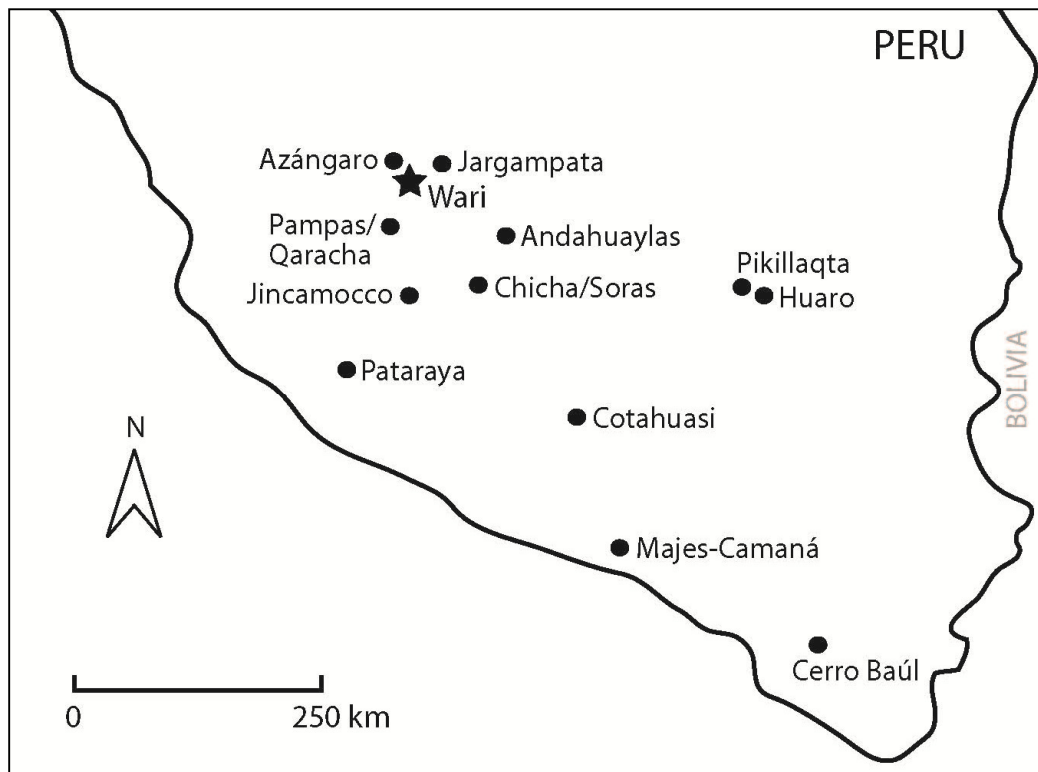
Figure 2.2. The city of Wari and other sites and regions in southern Peru occupied during the Middle Horizon.

Jincamocco and the Sondondo Valley

Further south, the Wari established a presence in the Sondondo Valley (also called Carhuarazo Valley). Unlike sites in the northern highlands, the settlement of Jincamocco seems to have been built and at least partially occupied by Wari officials (Schreiber 1987a, 1987b, 1991, 1992, 1999, 2001b, 2005). Located approximately 140 km (4-6 days on foot) from the city of Wari, Jincamocco is located on a low hill at 3300 m. Wari interests in this area could have been related to its central location between Wari and Nasca, a region with which the people of Ayacucho frequently interacted (Schreiber 2005:251-252).

Jincamocco contains a rectangular enclosure covering 3.5 ha as well as several compounds outside this enclosure, totaling an area of 15 ha (Schreiber 1987a, 1991, 1992:153). The rectangular enclosure was built in Wari style and was divided into two sectors (Schreiber 1991, 1992:171-202). The first sector was an open area that could have been used as a llama corral. The second sector was subdivided into four zones of room blocks that each contained one or more patio groups. Room blocks were separated by corridors. Wall foundations were placed in trenches, and then the walls were constructed with stones set in mortar. Most floors were of compacted earth, with a few plastered; below the floors were drainage canals. Inside each patio group was a patio that included low benches and sometimes a hearth.

The partial excavation of three patios suggests that several activities were conducted in them, including food preparation, consumption, and storage; spinning and weaving; and the production and maintenance of stone tools (Schreiber 1991, 1992:182-192, 252-256). Wari polychrome pottery was present in small numbers and local pottery was abundant. Offerings of a skull, smashed pottery vessels, and other objects on a small platform further indicate ritual activities. The low quantity of artifacts in the only excavated gallery may suggest that the galleries surrounding patios were used for storage or sleeping or were swept clean.

Outside the enclosure were several rectilinear compounds that were organized in an orthogonal plan. Since the walls of these compounds abut the perimeter wall of the enclosure, it appears that the enclosure was built first and that the compounds were added later on. Three radiocarbon dates were obtained from the enclosure (Schreiber 1992:193-194). Once calibrated, these dates span the Early and Late Middle Horizon. Schreiber (1992:256) concludes that Jincamocco was built by the Wari in the eighth century AD, housing both Wari and local people of high and low status. The site was later burned and abandoned.

In addition to excavations at Jincamocco, Katharina Schreiber (1987a, 1991, 1992:133-163, 1999, 2001b) conducted a survey of 120 km^2 in the Sondondo Valley around the site. The survey covered all areas between 2800 and 4000 m. In addition to the construction of Jincamocco, several changes occurred in the valley during the Middle Horizon. Three smaller settlements that included Wari rectangular enclosures were built. The location of these sites suggests that the Wari were growing maize and exploiting a small obsidian source (Jampatilla). An Inka road connecting the Sondondo Valley to Nasca in the east and to Wari to the north could also have been first built at that time.

In addition to these Wari enclosures, other changes occurred in the valley (Schreiber 1987a, 1991, 1992:138-144, 1999). Before the Middle Horizon, houses were round stone buildings. Most villages were located in the tuber production zone and a few others were in the transition zone between the tuber-growing zone and the higher *puna*. The location of these sites suggests that the residents of the valley subsisted on root crops, quinoa, and herding. This pattern changed at the beginning of the Middle Horizon (Schreiber 1987a, 1991, 1992:144-163, 1999). Local houses continued to be round and some villages were still occupied, but the highest sites were abandoned and new villages created. The new settlements were established at lower elevations in the maize production zone or in the transition area between the maize and tuber production zones. This change suggests that the residents of the Sondondo Valley now relied on maize in addition to tubers. Several agricultural terraces that would have been ideal for maize cultivation also seem to have been constructed during the Middle Horizon.

The Wari presence in the Sondondo Valley was substantial, and Jincamocco has often been considered a Wari administrative center (Isbell 1997; Isbell et al. 1991; Schreiber 1987a, 1987b, 1991, 1992, 1999, 2001b, 2005). Yet, we cannot demonstrate whether the changes in settlement patterns were forced by Wari or if they were local responses to changing conditions created by Wari presence. Wari state officials could have coerced the local population to resettle closer to Jincamocco; alternatively, local populations could have moved closer to the maize production zone in the hopes of increasing their own production and of participating in the important exchange network between Sondondo, Wari, and Nasca. Since no *local* village has been excavated in the Sondondo Valley, it is difficult to assess the exact nature of the relationship between the local population and the Wari. What is clear is that Wari presence did have an impact – whether direct or indirect – on the population of Sondondo.

The Chicha/Soras Valley

Thirty km east of Sondondo and close to the modern boundary between the Departments of Ayacucho and Apurimac is the Chicha/Soras Valley. Survey, mapping, and limited test pits have identified some Wari pottery at a few settlements. These sites are close to agricultural terraces that produced quinoa and maize (Meddens and Branch 2010). The region also features high-altitude *puna* where camelids could have been herded (Meddens 1991). Overall, the Middle Horizon in the Chicha/Soras Valley saw an increase in population and in the total number of sites, as well as an increase in agricultural production that "may have been related to an increase in camelid herding" (Meddens 1991:230).

Two large settlements, Yako and Chiqna Jota, included numerous circular, semi-circular, square, and irregular buildings, none of which were typical of Wari architecture. The site of Yako, however, may have contained a D-shaped building (Meddens 1991; Meddens and Branch 2010). Pottery at these two sites included Wamanga, Okros, Viñaque, and Black Decorated. A communal tomb at the neighboring cave of Charrangochayuq contained several skeletons, some of whom had Wari tapestries. Some crania had fronto-occipital deformation; so far, this type of cranial deformation has not been found on individuals who lived in the Wari heartland or at Wari colonies (Meddens and Branch 2010).

The presence of Wamanga pottery, local architecture, and individuals with fronto-occipital cranial deformation suggest that the Chicha-Soras Valley was occupied not by Wari or Wari colonists, as Meddens and Branch (2010) suggest, but rather by the local population that interacted with Wari from time to time. Individuals associated with the Wari state (perhaps living at Jincamocco) may have visited the area, traded some items, and participated in rituals in the D-shaped temple. More excavations should clarify the relationship between the population of the Chicha/Soras Valley and Wari.

The Nasca Region

Southeast of the Sondondo and Chicha/Soras Valleys is the Nasca region. Based on similarities in the Early Intermediate pottery of the Ayacucho Basin (Warpa) and Nasca (Late Nasca), it is clear that the people living in these two regions were already in contact before the Middle Horizon (Menzel 1964; Paulsen 1983; Schreiber 2005). This contact probably involved the sharing of ideas (Conlee and Schreiber 2006:98). In the Early Middle Horizon, changes in

settlement patterns and the presence of Wari sites in Nasca suggest that communities from Wari had settled there.

Settlement Patterns

Conlee (2010) and Schreiber's (1999, 2001b, 2005) survey of the southern valleys of the Nasca region covered 1500 km^2 and identified more than 1000 sites of all periods. In the Late Nasca period (AD 550-750), people aggregated in a few large villages in the middle valleys around *pukyu* (also spelled *puquios* or *pukio*). *Pukyu* are underground trenches that tap water sources and make water available for irrigation (Schreiber and Lancho Rojas 1995). Some of the Late Nasca villages were defensible and no centralized authority ruled over the region. Instead, several small polities seem to have ruled over different parts of the Nasca drainage (Schreiber 1999).

Later in the Middle Horizon, several changes occurred in the settlement pattern (Schreiber 1999). Two Wari settlements were built and most of the local population moved to the southernmost valley of the Nasca drainage, far from the two Wari settlements. A site called Huaca del Loro dominated the local settlement hierarchy and may have been the capital of a small state. The relocation of local villages in the southernmost valley during the Late Middle Horizon could indicate that the population of Nasca was avoiding Wari or was hostile to Wari presence. On the other hand, the presence of Wari pottery on the surface of some local settlements suggests some form of exchange between local people and the Wari.

Wari Sites

Two sites in the Nasca region were probably occupied by people from the Ayacucho area. As mentioned above, both of these settlements were far from local villages. The first site, Pacheco, is known for its offering deposit of Wari polychrome pottery (Menzel 1964:22-24; Schreiber 2001b, 2005). The pottery included hundreds of oversized and regular-sized urns, tumblers, face-neck jars, and modeled llama figurines of the Robles Moqo style. These vessels were intentionally smashed and buried in subterranean rectangular adobe chambers. A lot of speculation has surrounded Pacheco, but since most of the site was destroyed several decades ago and no excavation took place outside of the offering deposit, the nature and role of Pacheco remain unclear.

The second Wari settlement in the Nasca region is the site of Pataraya (Schreiber 1999, 2001b, 2005). Pataraya is located in the upper valley (1325 m) near agricultural terraces that could have been used to grow coca and cotton. The site contains a small Wari enclosure that

included four patio groups and two large rooms. Around this enclosure were 16 round houses whose architecture departed from coastal traditions. Around Pataraya were semi-subterranean tombs that were intrusive to the Nasca region (Schreiber 2001b). Pataraya was also close to a road that linked it to Jincamocco in the Sondondo Valley (Schreiber 2005).

Burial Practices and Migration Patterns

During the Middle Horizon a few local mortuary practices changed, while some traditions that had been in place since the beginning of the Early Intermediate remained unchanged. Conlee (2010) examined burials from two local villages in the southern valleys of the Nasca drainage. Burials that carried on local traditions included one seated and flexed individual buried with local pottery in a pit inside a house. New types of burials, presumably reserved for the elite, included circular and rectangular above-ground structures; these contained sumptuary goods, textiles, local pottery, and sometimes Wari polychrome pottery. As opposed to the Early Intermediate burials, the ones dating to the Middle Horizon contained several individuals, some of which were in mummy bundles.

Strontium isotope analysis from the bones and teeth of these Early Intermediate, Middle Horizon, and Late Intermediate burials further indicates that most individuals were born in the Nasca region and lived there before their death (Conlee 2010). One Middle Horizon individual buried in the local style was from Nasca, while a woman and a child buried in an elite above-ground structure were not born in Nasca but were living there before their death. At the moment it is impossible to know where these two individuals originally came from, but as strontium analyses become more common we may be able to compare the strontium value of these individuals with the strontium signature of different regions. Conlee (2010:109) concludes that foreigners were indeed present in Nasca during the Middle Horizon, perhaps Wari peoples who had alliances with "local elites who benefited from the relationship through acquisition of material goods such as fine pottery, *Spondylus*, and metal artifacts."

The Nature of Wari Presence in Nasca

The presence of two Wari sites in the Nasca region as well as changes in the local settlement pattern suggest that the Wari did settle in Nasca and their presence affected local communities. It is less clear, however, what the Wari were doing in Nasca and what their relationship was with locals. The presence of Wari items at local villages points to some form of exchange, but the fact that Pataraya was somewhat isolated in the upper valley seem to suggest that the Wari were not there to *control* people. Based on the data available, it is more likely

that the Wari were in Nasca to gain access to lands where cotton and coca could be grown, two crops that do not grow in the highlands. The exchange of products, pottery, ideas, and perhaps marriage partners between the Wari colony and local communities benefited the elites (Conlee and Schreiber 2006), both local and Wari, and at their death these elites were buried in special tombs. Future excavations of Middle Horizon houses and other domestic contexts in the Nasca region will provide interesting data on the nature of the relationship between local communities and the Wari.

Arequipa

Cotahuasi

Southeast of Nasca is the Cotahuasi Valley, approximately 275 km from the city of Wari. Like Nasca, the Middle Horizon was a period of change in Cotahuasi, but evidence suggests that there was no Wari presence in the valley (Jennings 2006a, 2010a:47). Before the Middle Horizon, the people of Cotahuasi resided in small scattered villages. During the Middle Horizon, this pattern changed; people started to live in large villages and population increased. Agricultural production intensified due to the introduction of terraces, social hierarchy appeared, and interregional exchange increased to a scale not seen before. However, no single settlement seems to have dominated the valley (Jennings 2006a, 2010a:42-43).

These changes were accompanied by changes in the local material culture (Jennings 2006a, 2010a:44-46). The people living in Cotahuasi started to imitate Wari pottery during the Early Middle Horizon, but the emulation of Wari iconography became much more widespread during the Late Middle Horizon. Local potters started to produce Wari-style pottery (Qosqopa) that was used in different contexts at all sites of the Cotahuasi Valley. This Wari-inspired pottery combined elements of both local and Wari iconographic repertoires to create a new style. Metal objects and textiles also show Wari elements.

In spite of this widespread Wari influence on the local material culture, very little direct exchange seems to have taken place between Cotahuasinos and people affiliated with the Wari state (Jennings 2010a:42-44). Indeed, very few items found at Cotahuasi villages were manufactured in the Wari heartland or at other Wari sites outside Cotahuasi. Petrographic analyses indicate that Wari-influenced pottery was made locally and that Wari polychrome pottery from the Wari heartland only rarely made its way to Cotahuasi (Jennings 2010a:44). On the other hand, the circulation of Cotahuasi obsidian (from the Alca source) intensified and

started to appear at the city of Wari and other Middle Horizon sites (Burger et al. 2000; see also Chapters 5-8).

Apart from these changes, other elements of Cotahuasi society remained relatively unchanged during the Middle Horizon (Jennings 2006a:356-358). Cotahuasinos continued to be buried in the same cemeteries and in the same types of burials. One new element was the *chullpa,* but such burial structure was common in other parts of Arequipa and reflects regional interaction instead of Wari influence. Cotahuasinos also continued to make offerings of *placas pintadas* or painted tablets throughout the Middle Horizon (see the Majes-Camaná section).

One village, Tenahaha, seems to have dominated the ritual landscape of the valley (Jennings 2010a). This 4 ha settlement was located in the valley bottom near an important exchange route. Its ritual space could hold a larger group of people than that living at the site, suggesting that Tenahaha was a gathering place for followers living at different settlements throughout the valley (Jennings 2010a:48). The site also contained a large number of burials, suggesting that Tenahaha was "a major ceremonial center and necropolis for the valley" (Jennings 2010a:50).

Evidence from the Cotahuasi Valley suggests that during the Middle Horizon its inhabitants participated in interregional exchange networks and incorporated elements of the material culture (and possibly belief system) of their exchange partners, including the Wari. This interaction was not unidirectional, and obsidian from Cotahuasi was used in several regions of Peru. The valley was inhabited by indigenous populations, both commoners and elites, who probably competed for the appropriation of new prestigious symbols. As Jennings (2010a:46) concludes, Wari material culture and ideas seem to have played a role "in the negotiation of new social roles in the valley" during the Middle Horizon.

Majes-Camaná Valley

South of Cotahuasi is the Majes-Camaná Valley, approximately 370 km from the city of Wari. Majes refers to the middle valley while Camaná corresponds to the coastal portion of the same valley. The situation in the Majes-Camaná Valley during the Middle Horizon seems to have been analogous to that of Cotahuasi: there was no Wari occupation, but indigenous groups incorporated Wari motifs in locally-made pottery in addition to procuring a few Wari exotic vessels.

About half of the Majes-Camaná Valley has been surveyed (García and Bustamante 1990; Owen 2010). A total of 22 villages, cemeteries, and camps (out of an unspecified total

number of sites) have Wari pottery on the surface. In addition to this survey, excavations were conducted at the residential village of Beringa and at the cemetery of La Real in the Majes Valley (Owen 2007, 2010; Tung 2007a, 2007b; Tung and Owen 2006). Test pits were also excavated at Sonay in the Camaná Valley (Malpass 2002).

Ceramics recovered from these sites indicate that "Wari" pottery mostly corresponds to the locally-manufactured, widely-distributed Wamanga style; this style incorporated some Wari elements (Owen 2007, 2010). Wari polychrome pottery (Chakipampa, Okros, and Viñaque) that could have been imported from the heartland was very rare at the Majes-Camaná Valley sites. In addition, the utilitarian pottery recovered in this region was different from that in the Wari heartland (Owen 2010), suggesting that people living in this valley during the Middle Horizon were indigenous populations who imitated Wari pottery and occasionally obtained a few Wari vessels.

Beringa was an Early Middle Horizon village that was occupied by commoners and local elites (Owen 2007, 2010; Tung 2007b). Artifact inventories suggest that the residents of Beringa were involved in textile production, agriculture, and fishing. The construction of the site does not seem to have been planned and the village contained no orthogonal architecture. Houses were built with stone foundations and wattle-and-daub walls and included domestic pottery in addition to the locally-manufactured, Wari-inspired Wamanga ceramics. Exotic Wari polychrome pottery (Chakipampa, Okros, and a few Viñaque) represented less than 0.2% of the ceramic assemblage at Beringa (Owen 2007), and obsidian points were not made in the Wari style (Tung and Owen 2006:445).

Houses at Beringa contained offerings and burials. Offerings included small rectangular or circular stones painted with different motifs and sometimes decorated with shell beads or metal pieces. These *placas pintadas* or painted tablets were typical of the Arequipa region (Tung 2007b). Burials included seated and flexed individuals placed in mummy bundles (Tung 2007b). Cranial deformation (fronto-occipital) seems to represent a style typical of the coast and middle valley, one that has not been found at Conchopata in the Wari heartland (Tung and Owen 2006:447). The study of cranial trauma on the Beringa skeletons shows that head wounds were the result of inter-personal violence and that both men and women were attacked. Coupled with the presence of parry fractures on some ulnae, this pattern suggests that these individuals were the victims of raiding. Considering that Wari people do not seem to have been

living in the valley, Tung concludes that violent conflicts probably involved the people of Beringa and neighboring groups (Tung 2007a; Tung and Owen 2006).

Apart from Beringa, Tung (2007a) excavated a mortuary cave at the nearby Early Middle Horizon ceremonial site of La Real. This cave included tombs of local elites buried with various grave goods, including Wari pottery. A wooden snuff tablet with Tiwanaku iconography was recovered at the site by a local professor, but its context is not known (García and Bustamante 1990). Cranial trauma here was different from that at Beringa. At La Real, more men had head wounds and most of their wounds were not fatal. Tung (2007a:952; Tung and Owen 2006) suggests that this pattern could reflect non-lethal, ritual fights or combats in which elite men could display their prowess.

Closer to the coast in the Camaná Valley was the site of Sonay where Malpass (2002) excavated a few test pits (5 m^2). Apart from Inka-period structures, Malpass reports a rectangular building with a clay floor and plastered walls that he interprets as a Wari administrative compound. The compound is rectangular, but the internal division of rooms is not typical of Wari. In addition, very little Wari pottery was recovered (4 fragments) and most of it was associated with a residential occupation below the compound. Most of the pottery associated with the floor of the compound was Inka or non-diagnostic. Two AMS dates from the occupation below the floor indicate that the compound was built after the Middle Horizon (cal AD 940±30 and cal AD 1000±50). The Middle Horizon occupation of Sonay seems to predate the construction of the rectangular compound, but more than 5 m^2 of excavation will be necessary to determine its nature.

The data from the Majes-Camaná Valley suggest that Wari impact was limited during the Middle Horizon. Continuities in the local architecture, domestic pottery, and ritual practices suggest that indigenous populations built and occupied several villages throughout the valley. They did adopt some elements of Wari iconography and integrated them into their pottery style, but they obtained few Wari polychrome vessels. Along with other prestige goods, the emulation of Wari pottery could have served local elites in a context of regional competition, where each family or lineage displayed its connections to long-distance exchange networks.

Moquegua

Further southeast is the Moquegua Valley and the Wari settlements of Cerro Baúl and Cerro Mejía, some 570 km south of the city of Wari. In addition to local populations, the Wari

shared the Moquegua Valley with another contemporaneous state, Tiwanaku. Most Tiwanaku settlements were located in the middle valley (1000-1500 m) where large flat fields could be irrigated and claimed for agriculture (Moseley et al. 1991). Tiwanaku villages were not fortified and their proximity to the *altiplano* suggests that colonists from the Titicaca region first came to Moquegua to exploit complementary ecological zones (Goldstein 2005).

The Wari, in contrast, occupied fortified hilltops in the upper valley (2000-2500 m). Wari colonists had to build an extensive high-elevation irrigation canal to bring water to the terraces on the hill slopes and the valley bottom. This canal could irrigate 324 ha of land and could have supported approximately 2000 individuals (Moseley et al. 2005; Williams 2001; Williams and Nash 2002). The Wari state could have established a colony in Moquegua to extract stones and minerals such as lapis lazuli and copper, as well as to interact with Tiwanaku (Moseley et al. 1991, 2005). Elites resided on the summit of three neighboring hills (Cerro Baúl, Cerro Mejía, and Cerro Petroglifo), while lower status families lived in smaller houses on the hillsides of these three hills (Moseley et al. 2005; Williams and Nash 2002).

Cerro Baúl

The Wari site of Cerro Baúl was established on top of a mesa overlooking the valley 600 m below. The summit of Cerro Baúl was divided into different sectors of monumental masonry architecture, while several modest houses were built on terraces on the eastern slope of the hill. The summit and its monumental core were delimited by a monumental wall and fortifications and could only be reached by one path (Moseley et al. 1991; Williams and Nash 2002).

Cerro Baúl was occupied throughout the Middle Horizon. Its monumental core was built in two phases. The first construction phase occurred in the Early Middle Horizon between AD 600 and 685; the second phase was a remodeling that took place in the Late Middle Horizon between AD 780 and 990 (Williams 2001). To build their structures, the Wari quarried stone on the summit of Cerro Baúl itself but they had to bring clay (for mortar and plaster), water, and grass (for thatching) from the valley, a task that necessitated a considerable effort considering the 600 m-climb to the summit of the hill.

The monumental architecture on top of Cerro Baúl contained (1) a residential sector of small dwellings of craft specialists, an elite palace with a reception plaza, and a pottery workshop; (2) a ceremonial sector with a D-shaped temple and a brewery; (3) another sector with a D-shaped temple, large plazas, and several patio groups that contained two-story galleries and storage rooms; and (4) two other sectors with a raised platform, a plaza, and a

compound enclosing a large boulder (Moseley et al. 2005; Williams 2001; Williams and Nash 2002). These structures contained several styles of Wari pottery (mainly Chakipampa and Okros), exotic pottery from Nasca and Cajamarca, and several Wari-style obsidian projectile points. Other exotic items included *Spondylus* shell and a copper plaque from Argentina. Despite the proximity of the Tiwanaku colony to Cerro Baúl, Tiwanaku items were "conspicuously absent" at the site (Moseley et al. 2005:17271).

The analysis of plant and animal remains indicates that those who lived on the summit of Cerro Baúl had access to resources that were absent or rare at other Wari sites in Moquegua, including coca, chicha *de molle*, guinea pigs, camelids, and a variety of birds and marine fish (Moseley et al. 2005). Several of the structures including the palace and the brewery also contained whole or broken *qiru*, cups, and urns as well as camelid, marine fish, and other animal bones in an ash or sand layer on the floor. These were probably offerings left there as part of a feast and termination ritual upon the abandonment of the site (Moseley et al. 2005; Williams 2001).

Cerro Mejía

Immediately in front of Cerro Baúl is Cerro Mejía. This settlement was only occupied during the Early Middle Horizon (Moseley et al. 2005). Like Cerro Baúl, elite structures were built on the summit while lower-status houses were built on terraces down slope. Each lower-status residence housed one or more families and contained an open patio and at least one roofed room. These houses were grouped into six different neighborhoods on the slope of Cerro Mejía that faces Cerro Bául (Nash and Williams 2009).

The summit of Cerro Mejía was surrounded by a monumental wall and could be reached by a large staircase. This monumental wall may have had defensive purposes, but may also have divided different social classes (elites on the summit and non-elites on the slopes) or separated ceremonial and mundane activities (Williams and Nash 2002). The summit contained a central plaza surrounded by platforms. Around this plaza were two elite residences that contained a central patio surrounded by roofed rectangular rooms on three or four sides. One such elite residence contained a kitchen with three hearths and four additional areas to boil liquids, suggesting that its residents were involved in large-scale cooking and hosting guests. Other structures such as workshops and irregular multi-family dwellings were dispersed on the summit of the site. These buildings contained decorated pottery, obsidian, and a kind of blue stone that was apparently used to make beads (Moseley et al. 2005; Nash and Williams 2009; Williams and

Nash 2002). The presence of plazas on the summit of Cerro Mejía could indicate that people gathered there, perhaps during feasts involving the consumption of meat and chicha (Nash and Williams 2009).

Cerro Petroglifo

On the other side of Cerro Mejía is another hill, Cerro Petroglifo. This hill could be reached from Cerro Mejía through a break in the monumental wall surrounding Mejía's summit. The summit of Cerro Petroglifo contained stone architecture that could either represent "modest orthogonal architecture" or the foundations of perishable structures (Williams and Nash 2002:253). The northern slope of Cerro Petroglifo contained domestic terraces and a staircase that led to the fields on the valley bottom.

Cerro Trapiche

The site of Cerro Trapiche was established on the slopes and peak of a hill in the middle valley near Huaracane (local) and Tiwanaku villages. Based mostly on ceramic evidence, Green and Goldstein (2010) argue that Cerro Trapiche was occupied by both Wari and local populations. The ceremonial sector of the site included Wari-style cists, a trapezoidal plaza, and a rectangular building interpreted as a brewery. This sector contained local utilitarian pottery as well as Wari serving vessels. The ceremonial sector was built around an earlier Huaracane elite cemetery, which Green and Goldstein (2010:31) see as a "deliberate appropriation of the locally sacred space [… that] could signal a Wari effort to legitimize their presence by taking hostage the ritual space of local ancestors." Wari personnel could have offered chicha to local populations in an effort to form alliances and gain followers.

The residential sector of Cerro Trapiche was concentrated on terraces (Green and Goldstein 2010:29-30). Local Huaracane pottery, Wari utilitarian vessels, and Wari decorated bowls on these terraces point to various domestic activities where Wari families could have coexisted with local families. The summit of Cerro Trapiche was fortified and separated from the rest of the settlement by a moat and wall. Wari masonry architecture and Wari utilitarian pottery and fineware suggest that the summit could have been an elite residential sector occupied by Wari colonists (Green and Goldstein 2010:30).

As Green and Goldstein (2010:22) argue, "the important research at Bául, Mejía, and the surrounding sites suggests an impressive, yet rather isolated, position of Wari colonists in the valley." If, as Green and Goldstein argue, Wari peoples did live at Cerro Trapiche, it could suggest that at least some Wari people were interacting and forming alliances with local elites.

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Alternatively, local elites could have appropriated Wari symbols and adopted a Wari political or social identity that potentially brought them prestige and authority in the eyes of the local population.

Andahuaylas

In the highlands, approximately 110 km southeast of the city of Wari, is Andahuaylas. Andahuaylas lies on the road between Ayacucho and Cusco; Cusco is 150 km further east (as the bird flies). Located at 2900 m, Andahuaylas is surrounded by good maize lands. In a 300 km^2 full-coverage systematic survey of the region, Bauer and his team (2010:65-71) found no Wari sites and no Wari architecture, but identified Wari pottery (mostly Viñaque) alongside local pottery at 66 settlements. In addition to Wari pottery, some Wari-influenced pottery was also produced locally.

During the Middle Horizon no site seems to have dominated the region (Bauer et al. 2010:57-71). Settlement patterns continued from the previous period, where the establishment of a large number of villages near *kichwa* lands suggests that subsistence was already focused on maize. Middle Horizon settlement patterns show continued emphasis on maize, but no agricultural terraces were built in the region. Some small villages were abandoned over time, but overall the Middle Horizon "did not bring major changes to the subsistence or settlement patterns" (Bauer et al. 2010:68).

Available data suggest that the Wari did not occupy Andahuaylas. Local populations obtained Wari pottery, either directly from Wari peoples (maybe on their way to Cusco?) or indirectly through intermediate groups. Extensive excavations could provide interesting data on the contexts of Wari pottery and information on the nature of Wari "influence" on the local populations of Andahuaylas.

Wari Expansion

Looking at the broad distribution of Wari material culture and architecture throughout Peru, one might conclude that the Wari state expanded widely and incorporated most of the highlands and coastal valleys during the Middle Horizon. Wari items were found far away from the Wari capital indeed. Ancient states and empires are, by definition, expansive, but (1) they

expand for different reasons, (2) they adopt strategies that vary from region to region and through time, (3) they are not always interested in controlling local populations, (4) their impact is diverse and highly uneven, and (5) local societies respond differently to intruding polities (see Chapter 1). As a result, the presence of a state's material culture is insufficient to demonstrate political control over a region. Multiple lines of evidence are needed.

To fully appreciate the Wari state (or any other state), it is crucial to consider the *contexts* in which Wari items, architecture, and settlements appeared during the Middle Horizon. A more complete understanding will emerge if Wari sites are inserted into regional settlement patterns, and if Wari material culture is quantified (rather than noting its presence/absence), its contexts of use specified (activities), and its relationship with local material culture analyzed (physical and stylistic similarity). The study of Wari cannot be limited to large Wari sites in different regions, but should include the villages and towns of local populations that came into contact with Wari.

Taking these factors into consideration, it is clear that the nature of Wari presence and its impact on local populations were highly uneven from one region to another during the Middle Horizon. In some areas such as the north coast, continuity in local settlement patterns, architecture, and material culture indicate that Wari did not occupy or control the region. Wari items were limited to a few pots in the burials of local elites, suggesting that Mochica and later elites controlled the long-distance exchange of prestige goods. In Cotahuasi and Majes, local populations procured and emulated Wari items, which likely benefited competing lineages in a context of increasing interregional exchange. In cases like Cotahuasi and Majes, even if Wari colonists do not seem to have occupied or controlled the region, Wari could nonetheless have "created ripples of tensions, competition, opportunities to negotiate economic advantages and prestige, [and] chances to appropriate and manipulate ideological and symbolic capital" (Tung and Owen 2006:449).

In other cases the Wari built colonies, suggesting direct contact with local populations. These colonies have often been labeled "regional administrative centers," but control over local populations should be demonstrated rather than asserted. In some areas such as Huamachuco, the Wari established symmetrical exchange relationships with local populations; local elites obtained Wari goods, while the Wari participated in local rituals and adopted elements of the local architecture. In other regions such as Moquegua, the Wari built fortified settlements on hilltops, indicating that the Wari were preoccupied with defense and, as such, could have had a

marginal rather than controlling position in the upper valley. In still other areas such as Nasca, the Wari established themselves in complementary ecological zones far from local settlements, suggesting little contact with local populations. In this case, Wari's main motivation could have been limited to gaining access to lower lands and to resources that did not grow in the Ayacucho heartland. Finally, closer to home in the Sondondo Valley the Wari not only built a colony but also affected local populations who established villages in new locations.

From this analysis, the Wari state stands out not as a monolithic polity, but as a dynamic state whose rulers and populations had diverse motivations and strategies. These motivations and strategies varied across space but certainly through time too, although additional data are needed to evaluate these temporal shifts with more precision. From this variability through space and time emerged the debate between "Wari as a powerful empire" and "Wari as one interacting state among others" (see Chapter 1). Archaeologists working in a region heavily affected by Wari tend to see Wari as a conquering empire, while those who work in an area little affected by Wari tend to see Wari as one state among others. In fact, both interpretations may be valid in particular times and places. The Wari state was certainly experienced differently in different regions, whether an area was under Wari control or not. Rather than perpetuating a debate that maintains such a simplistic dichotomy ("empire" vs. "not an empire"), it would be more constructive to understand the *causes* of that variability.

The data presented in this chapter show that most of our knowledge of Wari is based on large Wari installations. Very rarely have scholars looked at excavated contexts from *local* settlements to understand the impact of Wari from the local populations' perspective. The large Wari enclosures have often been labeled "regional administrative centers," but this would only be true if Wari had established *control* over an area and needed to administer it. Because very few data were obtained from the villages and towns of those who came into contact with the Wari or who were allegedly under the control of Wari, it is very difficult to see Wari settlements as administrative centers. In most cases, Wari settlements look more like intrusive colonies than the seat of integrated provinces.

The upcoming chapters present the evidence from the Cusco region. There, research has focused not only on the Wari colony itself, but also on the regional settlement system and on one village occupied during the Middle Horizon, Ak'awillay. Data from Cusco provide unique regional and local contexts for understanding the Wari colonists.

Chapter 3

FAR FROM THE HEARTLAND: WARI IN CUSCO

The Wari colony in Cusco is often used as the case study *par excellence* to show how Wari authorities exacted local labor to build impressive administrative facilities, transformed the local landscape into highly productive maize-growing lands, and controlled local communities and resources 300 km away from their homeland. These reconstructions of Wari dominance are based on data recovered at the large site of Pikillaqta and at a cluster of Wari residential and ceremonial settlements called the Huaro Archaeological Complex. In this chapter I present the data collected at these Wari settlements, but first I introduce the economic activities practiced by the inhabitants of Cusco and the environment and resources that the Wari colonists encountered upon their arrival in the area.

The Cusco Region

The Cusco region is very diverse and its environment ranges from cold high-altitude grasslands to the warm and luxuriant tropical forest. A wide range of resources can be procured in the area and its inhabitants practice an equally diverse set of economic activities. Despite this diversity meteorological conditions are unpredictable from year to year, and the people of Cusco developed different risk-buffering strategies to ensure their survival.

From* Puna *to* Selva*: Ecological Zones and Resources

The Cusco region contains several ecological zones that are mostly determined by elevation (Covey 2006:37-46). Elevation determines temperature and rainfall, which in turn affect the vegetation and animals available in each zone. Resource availability largely influences

the types of economic activities practiced in each zone (Covey 2006:37-46; Gade 1975; Parsons et al. 2000:11-14). Because of the nature of the terrain in the highlands, different ecological zones can sometimes be reached within a short distance. For example, a single mountain slope can include 3 different zones and be exploited for a wide range of agricultural products (Figure 3.1).
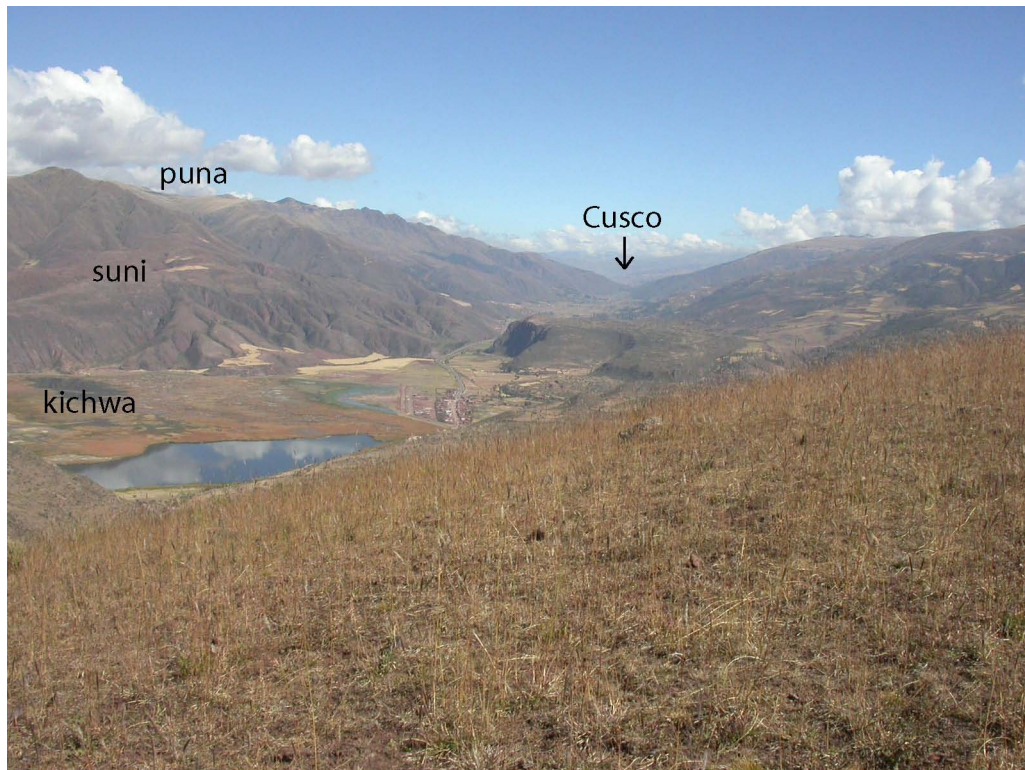
Figure 3.1. In the Cusco region, different ecological zones can be reached within a short distance. In the Lucre Basin for example, a single mountain slope and piedmont include three different zones (*kichwa*, *suni*, and *puna*) that are exploited for a variety of agricultural products.

Within each zone temperature fluctuates diurnally; days are warm while nights are cool or cold (Gade 1975; Parsons et al. 2000; Winterhalder 1993). In contrast, precipitation fluctuates seasonally and the year is divided into a dry season (June to August) and a rainy season (November to April). Both temperature and rainfall shape the activities of the agricultural calendar. For example, in the area surrounding Ak'awillay (3400-3500 m) sowing usually occurs in September and October before the heavy rains of the rainy season. Harvest takes place in May and June before the nightly frosts of the dry season; when frosts come, it is time to prepare dehydrated potatoes (see below). Occasional changes in temperatures can

move up or down the elevational limits of each zone by up to 250 m (Winterhalder 1993). These changes affect economic activities; farmers may have to exploit other plants and herders may need to move their flocks.

The *cordillera* (> 4700 m) comprises high mountain peaks and glaciers. In the past the snow-capped mountains were worshipped and celebrated; today people continue to make offerings to the *Apus* (sacred mountain spirits) and to organize pilgrimages to glaciers. These rituals bring together families from the whole region, but apart from the important interactions and exchanges that take place during such rituals, the *cordillera* is of no economic use.

Unlike the *cordillera,* the *puna* (3850-4700 m) and its high plateaus and rolling hills is the seat of many economic activities. The upper part of the *puna* (4200-4700 m) is too elevated for agriculture but its grasslands provide good pasture for camelids (and other Old World animals). Grasses like *ichu* are resistant to frost and drought; in addition to be good forage for camelids, *ichu* is used as thatch and to make adobes, ropes, and baskets (Gade 1975:143). The lower *puna* (3850-4200 m) is also used for camelid herding as well as for the cultivation of quinoa, *kañiwa*, and frost-resistant potatoes and tubers such as *oca*, *ullucu*, and *añu* (also called *mashwa*). Most fields are dry-farmed and soil quality is preserved through crop rotation and fallow.

Quinoa and *kañiwa* are pseudocereals that grow well in high altitude environments and need little attention (Figure 3.2). Their stalks are dried and threshed with sticks. All parts of the plant are used: the seeds are boiled in soups, ground into dough, or used to brew chicha; the leaves are eaten in salads; and the ashes of burned stalks are mixed with lime and rolled into balls (*llipta*) that are chewed with coca leaves to extract their alkaloids (Gade 1975:153-156).

Potatoes and other tubers can be eaten fresh or dehydrated, and their foliage and stalks are used as fuel and to feed animals. Fresh potatoes are stored for up to 8-10 months in storage bins; in pits dug into the ground on top of a layer of straw, maize leaves, or *muña* (an aromatic herb that protects the potatoes from insects) (Gade 1975:210); or in a separate building close to the farmer's house. When dehydrated, potatoes and other tubers can be preserved for up to 20 years (Mamani 1978:238). Dehydrated potatoes are prepared during the dry season when temperatures are the lowest and night frosts are common. To prepare c*h'uñu*, farmers spread their potatoes on the ground at night to freeze them; in the morning, they tramp on the potatoes with their bare feet to squeeze the water out. This operation is repeated for approximately two weeks and the result is a small, hard black potato. To prepare *muraya* or white *ch'uñu*, farmers spread their potatoes on the ground on a cold night and then place them

in running water (in bags or *costales*) for three to four weeks. Next they spread out the

potatoes and expose them to night frosts for a week, covering them during day time to prevent

the potatoes from blackening. Finally, the farmers tramp on the potatoes with their bare feet

and let them dry in the sun for up to two weeks. The result is a small, hard white potato.

Ch'uñu and *muraya* are stored in ceramic vessels (*ollas*), bags, or storage bins with quinoa or

muña stalks, straw, some salt, and sometimes palm leaves and dried hot peppers (*ajíes*) to

protect the tubers against humidity and insects (Mamani 1978).

Figure 3.2. Quinoa is grown in the lower *puna* (3850-4200 m) and *suni* (3500-3850 m).

The herders and farmers living in the *puna* obtain a variety of agricultural products

through exchange with people living in lower-altitude villages. The *suni* or upper *kichwa* zone

(3500-3850 m) consists of narrow intermontane valleys and lower ridges. This ecological zone is

used for the cultivation of potatoes and tubers (consumed fresh or dehydrated), quinoa, *kañiwa,*

kiwicha (amaranth), and a bean called *tarwi* (Lupine) (Figure 3.3). These crops are a good source

of protein. In addition to these native crops, Old World crops such as wheat, barley, and broad

beans are also grown today. Like the *puna*, most lands in the *suni* are dry-farmed. Although

rare in the *suni* today, llamas were herded in this zone and at even lower altitudes in the past (Finucane 2004; Shimada and Shimada 1985; Topic et al. 1987).

Figure 3.3. *Tarwi* is a bean that is mostly cultivated in the *suni* (3500-3850 m).

The *kichwa* zone (2700-3500 m) consists of valley bottoms and low slopes. These areas are less exposed to night frosts and are reserved for the production of maize. Maize can be boiled, dried and ground, parched, popped, or brewed into *chicha de jora* (maize beer). In addition to the kernels, the other parts of the plant are used: the fresh stalk is chewed for its sweet juice; the dried stalk and leaves are fed to the animals; cobs and husks are used as fuel; and husks are used to wrap food and fill mattresses (Gade 1975:128-129). Unlike the *puna* and *suni*, most lands in the lower *kichwa* are irrigated. In Cusco the Sacred Valley around Urubamba and the basins between the city of Cusco and the Wari sites of Pikillaqta and Huaro are part of the *kichwa* ecological zone, while the hills around these basins and valley are part of the *suni* and *puna* (Figure 3.4).

The remaining ecological zones are warmer and wetter than the previous zones. The *ceja de montaña* (2700-1500 m) consists of steep ridges and narrow valleys on the eastern slopes of the Andes. This zone is moist and contains a lot of vegetation. The *ceja de montaña* is

used for the production of fruits and the cultivation of sweet potatoes, coca, and chili peppers. In Cusco the areas around Vilcabamba, Lares, and Paucartambo are part of this zone (Figure 3.4) (Covey 2006:44; Gade 1975).

Figure 3.4. The Department of Cusco showing modern towns, the Wari colony (Pikillaqta and Huaro), and Ak'awillay.

The *montaña* and *selva* are tropical lowlands. These zones produce coca, tropical fruits,

peanuts, sweet potatoes, and manioc; other products include honey, colorful bird feathers, and

gold. In Cusco the valley around Santa Teresa (close to Machu Picchu), Quillabamba, and further

north are part of these zones, as well as the area north of Paucartambo (Figure 3.4). These

zones have not been thoroughly explored archaeologically due to their very dense vegetation

and poor preservation.

Risk-Buffering Strategies

To ensure the quality of soils, farmers rotate crops from year to year, let some fields in

fallow for a few years, and add fertilizer to their fields (*wanu*, manure, plant ashes, and today

chemicals). Despite these measures, temperature and rainfall vary from year to year and are

unpredictable; drought, hail, and frost can be devastating for crops (Covey 2006:40-53; Gade

1975; Parsons et al. 2000:15-25; Winterhalder 1993; Zimmerer 1996). Farmers developed

several strategies to manage risks and reduce the dramatic consequences of these fluctuations

in agricultural productivity.

The most common strategy is for a family to diversify its crops. Each family grows a

variety of products in different ecological zones and cultivates fields in different areas of each

zone to prevent total crop failure. Each field within a zone can also be planted with several

crops. The rationale behind this practice is that if one crop or plot fails, at least some of the

other crops and fields will probably succeed. In addition, the crops of different ecological zones

may be harvested at different moments, providing fresh produce over a longer period. The

practice of having fields in different ecological zones is probably an ancient practice dating back

to before the Spanish conquest (Murra 1972).

Another risk management strategy is the production of surpluses in the form of

dehydrated potatoes. *Ch'uñu*, *muraya*, and other freeze-dried tubers preserve for years and can

be eaten when harvests are less productive. Maize can also be kept for several months when

parched or toasted and kept as *kancha*; it can later be ground and kept as flour. Camelid meat

can also preserve for months when dehydrated (*ch'arki*).

Another important strategy to prevent famine and ensure a balanced diet is the

development and maintenance of relationships with people living in other ecological zones

(Flores Ochoa 1985). Farmers and herders alike maintain such relationships with kin,

compadres, and friends. For example, *ch'arki* and potatoes (whether fresh or dehydrated) are

often exchanged for maize, fruit, firewood, and coca. In other instances, merchants or the producers themselves carry goods from one ecological zone to another on the back of their animals and exchange their products for those available in the area they visit. Today, in addition to these exchanges daily or weekly markets facilitate the procurement of a variety of items.

Other Resources

Apart from camelids and plants, the people living in the Cusco region have access to several other resources. In forested areas people can hunt deer; at all altitudes they can capture birds and *viscachas* (rodent) (Figure 3.5). Families also raise guinea pigs that they eat on special occasions or use in healing and divinatory rituals. Today guinea pigs are usually kept in the kitchen (a building separate from the main house) or in a special pen designed for them (*cuyera*). These wild and domesticated animals (as well as other Old World animals) are a source of protein.

Figure 3.5. A *viscacha* on a pile of stones at Machu Picchu.

In addition to sources of food, several types of stone are available in the Cusco region. These include andesite, laminated andesite, slate, quartzite, sandstone, limestone, rhyolite,

chert, schist, and granite (Carlotto et al. 1996; Mendívil and Dávila 1994). These stones were used to make tools for a variety of purposes, including agricultural activities, hunting, food processing and preparation, and crafts. Obsidian was also used to make projectile points and other tools with sharp edges. There is no obsidian source in Cusco but the closest known sources are located in the neighboring Department of Arequipa at Alca and Chivay (Burger et al. 2000). The presence of obsidian in archaeological contexts in Cusco indicates that the people of Cusco were in contact with groups from the surrounding regions well before the Middle Horizon.

The Wari Colony in Cusco

The Wari state established two clusters of settlements in the Cusco region (see Figure 3.4). In the Lucre Basin 30 km southeast of the city of Cusco, the Wari built Pikillaqta and a network of irrigation canals, aqueducts, and agricultural terraces. About 12 km further southeast in the Huaro Valley, the Wari built residential sites and temples and buried their dead in cemeteries.

The Wari settlements are located on the valley floor or on low hills immediately above the valley floor along the Vilcanota River. All Wari sites are in the *kichwa* zone where maize is grown, and the mountains surrounding the valley floor are *suni* lands where a variety of potatoes, tubers, and quinoa are cultivated. In addition to plant resources, the Wari could presumably rely on fish from the Vilcanota River and from lakes near each settlement cluster. The Lucre Basin and Huaro Valley are also located in a corridor leading to other ecological zones; to the north is the *ceja de montaña*, *montaña*, and *selva* of the Paucartambo region, and to the southeast is the *puna* of the *altiplano*. The *altiplano* was occupied by polities controlling the Titicaca Basin, i.e. Tiwanaku in the Middle Horizon.

Wari Interests in Cusco

Despite the region's agropastoral potential, it is unlikely that this was the primary reason for Wari presence in Cusco. Once established in Cusco, Wari colonists surely exploited their new environment and grew a variety of crops. However, the environment of Cusco is similar to that of Ayacucho and similar products were already available around the Wari capital

and in its surrounding heartland. In addition, inefficient transport over long distances in the Andes makes it improbable that the Wari shipped large quantities of subsistence-related products back to their capital in Ayacucho over 300 km away (see Chapter 1). If Wari colonists would have come to Cusco to grow maize, they would have established farming estates in the Sacred Valley, the region's most fertile maize lands. These maize lands are very close to Pikillaqta, yet the absence of Wari settlements or even Wari pottery in that area (see Chapter 4) suggests that maize was not the primary reason for Wari presence in Cusco.

Instead, the Wari could have wished to gain access to the coca grown in the neighboring Paucartambo region (see Figure 3.4) (Bauer 2004:66). Today, the modern road linking Paucartambo to Cusco passes by Pikillaqta; another road links Paucartambo to Urcos next to the Huaro Valley. Trails also link the areas around the Wari sites to Paucartambo, and these roads and trails could have considerable antiquity.

Based on the location of the Wari colony in a natural corridor that ultimately leads to the Titicaca Basin, it is also possible that the Wari established a colony in Cusco to gain access to the caravans entering the Titicaca Basin. The Wari colony in Cusco is the south easternmost locale of Wari presence and might have served as an exchange node with Tiwanaku (Bauer 2004:62, 66; McEwan 2005a:164; Schreiber 1992:270).

Wari Strategies in Cusco

Continuity in settlement patterns suggests that Wari presence in Cusco was not the result of a violent enterprise. From the pre-Middle Horizon to the Middle Horizon the people of Cusco occupied the same villages in the same ecological zones; they did not massively abandon villages or areas and did not build defensible settlements (see Chapter 4). In addition, the presence of some Wari pottery at local villages and of local pottery at Huaro and Pikillaqta shows that local populations and Wari colonists did not try to avoid each other but were in contact (see below). Although more data are needed, the available evidence suggests that the Wari colonists used diplomacy to forge alliances with local elites. These alliances could have involved gift-giving, exchange, attendance to feasts and ceremonies, and intermarriage.

The Huaro Archaeological Complex

The Huaro Archaeological Complex is a group of residential settlements, temples, and cemeteries near the modern town of Urcos (Figure 3.6). Although no radiocarbon dates are

available from Huaro, Glowacki (2002) and McEwan (Glowacki and McEwan 2002) believe that the Wari first settled there and later started to build Pikillaqta from Huaro. Based on evidence indicating that (1) the Huaro sites were occupied intensively over a long period and (2) the Huaro cluster included different kinds of settlements (domestic, ceremonial, and mortuary) that could have served all the needs of a colony, Glowacki (2002) and McEwan (Glowacki and McEwan 2002) argue that the Huaro Archaeological Complex was the main center of Wari activities throughout the Middle Horizon.
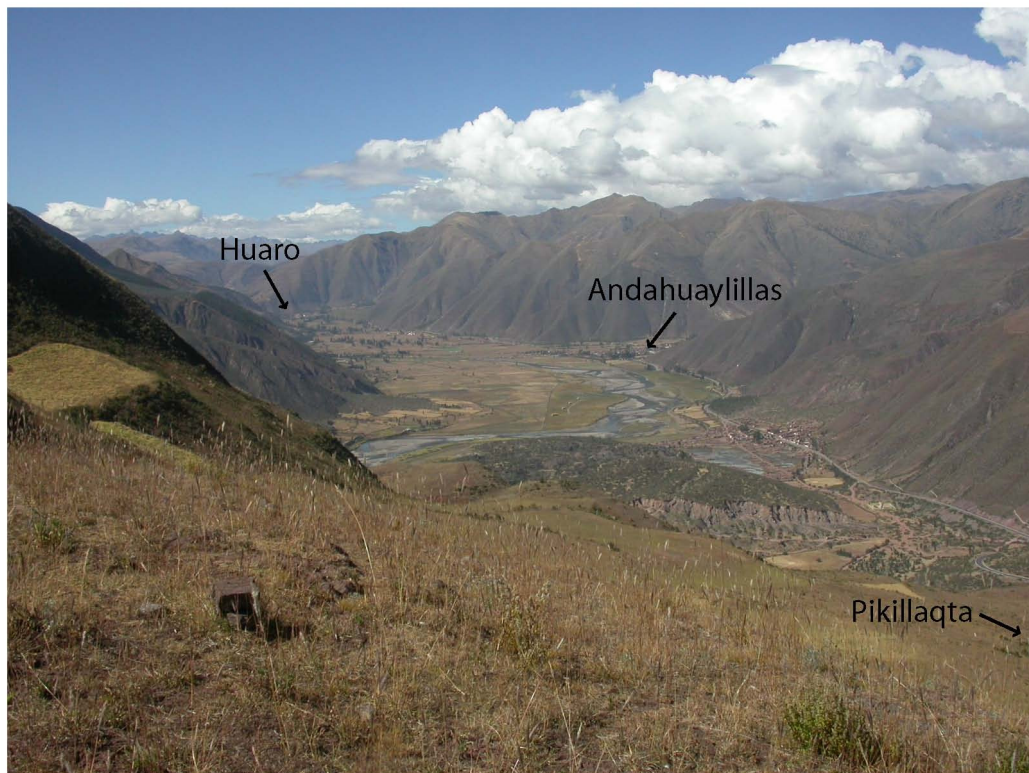
Figure 3.6. The valley between Huaro and Pikillaqta.

Glowacki (2002; Glowacki and McEwan 2002) conducted reconnaissance and exploratory excavations at five sites in the Huaro Valley. Few data have been published in detail, but the available data suggests an extensive occupation. Glowacki (2002:273-276) argues that Qoripata (9 ha) was an administrative site. It included finely built patio groups with plastered floors and walls as well as a room with a slate floor that likely served as an entrance leading to a reception area. This reception room contained a water fountain and a canal, both made of slate. Interestingly, stone flooring was also present at Azángaro close to the city of Wari and at Cerro Baúl (Anders 1991; Williams 2001). Excavations at Qoripata produced two

elite tombs beneath occupation floors. Two females were buried with Wari polychrome vessels and copper and bone objects. Other items recovered at Qoripata included ceramic drinking vessels, pieces of *Spondylus* shell, copper snuff spoons, and a bone snuff tube. Pottery styles suggest that the Wari occupied Qoripata early on in the Middle Horizon, before they started to build Pikillaqta. At Qoripata, Wari elites would have sponsored feasts as a form of reciprocity for local labor exaction. Qoripata was abandoned suddenly and burned. Glowacki (2002:282) concludes that Qoripata was the Wari administrative center of the Huaro Valley, but the exact nature of the "administrative" activities that took place at the site still needs to be defined.

Hatun Cotuyoc (9 ha) is a large domestic site "that likely housed the Huaro agricultural labor force" (Glowacki 2002:272). According to Glowacki (2002:272), it is "by far the largest intact provincial Huari domestic site known." It is interesting to note that it is similar in size to Ak'awillay. Hatun Cotuyoc included poorly built rectangular rooms with slate floors and abundant utilitarian pottery. One room contained a cist burial covered with a piece of slate. In addition, a kitchen contained a stone hearth and a guinea pig pen (*cuyera*). Pottery found at this site suggests that the Wari occupied Hatun Cotuyoc early on in the Middle Horizon.

Work at the site of Cotocotuyoc (45 ha) revealed several domestic structures and patio groups built in the Wari style (Glowacki 2002:271-272). One patio group contained tombs covered with slate lids under its floor. The patio groups also contained abundant pottery, including a style only found at this site as well as some Wari, local, and later Late Intermediate (AD 1000-1400) Lucre pottery. These data suggest that Cotocotuyoc was occupied in the Late Middle Horizon and perhaps after the abandonment of most Wari settlements in Huaro and Lucre.

At Kanincunca (7.5 ha), Glowacki (2002:270-271) found only one building. This building was a small pyramid with a platform and plastered structures on top. Glowacki interprets this building as a temple. Its architecture, however, is apparently "atypical of Huari architecture" and could indicate Tiwanaku influence (Glowacki 2002:271), although no map or photograph was included in the publication. Finally, reconnaissance at a fifth site, Capillaniyoc, suggests the presence of a cemetery and several temples (Glowacki 2002:276).

In addition to the preliminary work at these five sites, Zapata (1995, 1997) conducted excavations at the Wari cemetery of Batán Urqu. On top of a low hill, the Wari built a thick stone wall that formed a rectangular area of 33 m x 89 m. Zapata excavated over 40 burials

containing at least 88 individuals in one area of this cemetery. Burials were located in the perimeter wall itself or in the rectangular enclosure created by this wall.

In the perimeter wall, stone-lined tombs were rectangular or semi-circular and contained between 1 and 16 individuals. Rectangular tombs were built as an integral part of the wall, perhaps as niches, and seem to predate the semi-circular tombs. The semi-circular tombs were built from the top-down in the middle part of the wall after the wall had already been constructed. The rectangular and semi-circular tombs all date to the Middle Horizon and all individuals were buried in a seated flexed position. Most tombs contained a few ceramic vessels and sometimes guinea pig bones.

In the rectangular enclosure, Zapata excavated six burial platforms. Each platform contained several cist burials and unlined pits covered by rectangular chambers. Circular cists were stone-lined and covered with a stone slab or smaller flat stones. Less frequently, a ring of stones had been placed around the mouth of the tomb. Inside the cist tombs, the bodies were placed on top of flat stones or directly on bedrock. The rectangular chambers covering these cists were close to the surface and most had been looted and destroyed; the kind of material that originally covered these chambers is unknown.

In the burial platforms inside the rectangular enclosure of the cemetery, body position depended on tomb type. Individuals in the cists were seated and flexed, while those in the unlined pits and rectangular chambers were semi-flexed and on their side. Almost all individuals were buried with ceramic vessels of different Middle Horizon styles, including Wari, Araway, Qotakalli, "Tiwanaku-related" (Muyu Urqu?) and other unspecified styles (see Chapter 4 for a description of the local styles) (Zapata 1997:203-204). Some individuals also had metal objects, camelid offerings, and *Spondylus*, lapis lazuli, and turquoise beads. Offerings of camelid bones were placed between the different burial platforms of the enclosure.

The highest-status burial recovered at Batán Urqu was located in the rectangular enclosure of the cemetery. The tomb consisted of a 4.5 m deep stone-lined cist. This burial was looted in the recent past and only a small number of objects were recovered in it. These included a gold llama figurine, four small gold balls, *Spondylus* pieces, turquoise beads, and a piece of textile.

Pikillaqta

Pikillaqta (in Quechua, *piki*-flea and *llaqta*-town) was built on a series of low rolling hills at an elevation of 3250 m. The site was first briefly explored and investigated by Rowe (1956), Harth-Terré (1959), and Sanders (1973), and later excavated by McEwan and his team (McEwan 1987, 1989, 1991, 1996, 2005d [ed.]). Most of the architecture at Pikillaqta is concentrated in a rectangular enclosure measuring 745 by 630 m, or 47 ha (McEwan and Couture 2005). Outside of this rectangular enclosure is a series of *canchones* that could have served as corrals. The total area occupied by the main enclosure and the corrals is close to 2 km^2 (188 ha) and their construction would have necessitated the labor of many workers over several years (McEwan 2005b). However, it is important to note that most sectors of the site were never occupied and their construction was never completed. The actual area occupied at any one time would have been significantly smaller than 2 km^2.
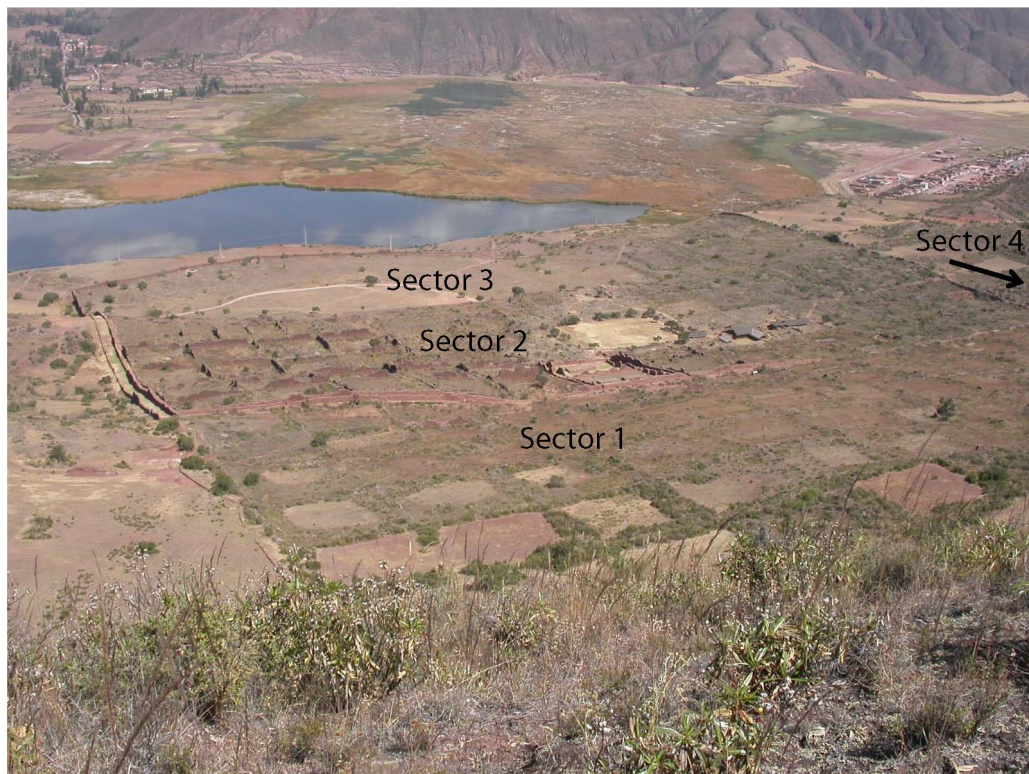
Figure 3.7. The Wari site of Pikillaqta viewed from the north, showing the different sectors of the main rectangular enclosure. In front of the site (in the upper part of the photograph) is the Lucre Basin.

The main rectangular enclosure was organized in a grid plan and comprised densely packed structures divided into four sectors (Figure 3.7) (McEwan 2005c; McEwan and Couture 2005). Some structures were separated by alleys or streets. Sector 1 comprised 81 rectangular patio groups (compounds with long narrow rooms around a central patio). It appears that the Wari never occupied this sector and never finished its construction.

Sector 2, where McEwan and his team concentrated their excavations, included 124 rectangular patio groups and niched halls (Figure 3.8). The Wari remodeled this sector several times, suggesting that it was occupied over a long period. The patio groups had plastered floors and walls and included hearths, middens, and doorways. Most patio groups also contained staircases and had a second and a third story (Figure 3.9). These upper stories are not preserved but are indicated by rows of stones projecting from the walls. Each row of stone supported a wooden beam that was placed along the wall; smaller wooden beams were then placed perpendicularly on top of these larger beams to create the floor. The floor was then covered with clay and plaster (McEwan 2005b:71).

Figure 3.8. Sector 2, Pikillaqta. Buildings still stand several meters high and most buildings had second and sometimes third stories.

Figure 3.9. Sector 2, Pikillaqta. Several buildings show evidence for second and third stories, as indicated by the rows of stones projecting from the walls shown here.

The niched halls of Sector 2 included trapezoidal niches and plastered floors, walls, and offering pits. These pits were located in the corners of the niched halls and contained human skulls, camelid bones, and *Spondylus* shell. McEwan (2005a) argues that the patio groups were used for feasting and the niched halls for ancestor worship.

Sector 3 corresponded to a large open area with 12 rectangular patio groups and niched halls on two opposite sides. Like Sector 1, it appears that the Wari never occupied Sector 3 and never completed its construction.

Sector 4 comprised six large but empty rectangular enclosures and 501 small conjoined rooms with doorways (Figure 3.10). In these small rooms the excavators found domestic trash, some human bones, and hearths. Because of the presence of trash and ash in them, McEwan (2005c) concludes that these small rooms were used for ritual purposes. Most scholars, however, believe that these small rooms were storage spaces (e.g., Bauer 2004:61; Harth-Terré 1959; Isbell 1987; Sanders 1973). It is possible that these rooms were storage spaces that were later used as dumps or, alternatively, that they temporarily housed the laborers who built and worked at Pikillaqta.
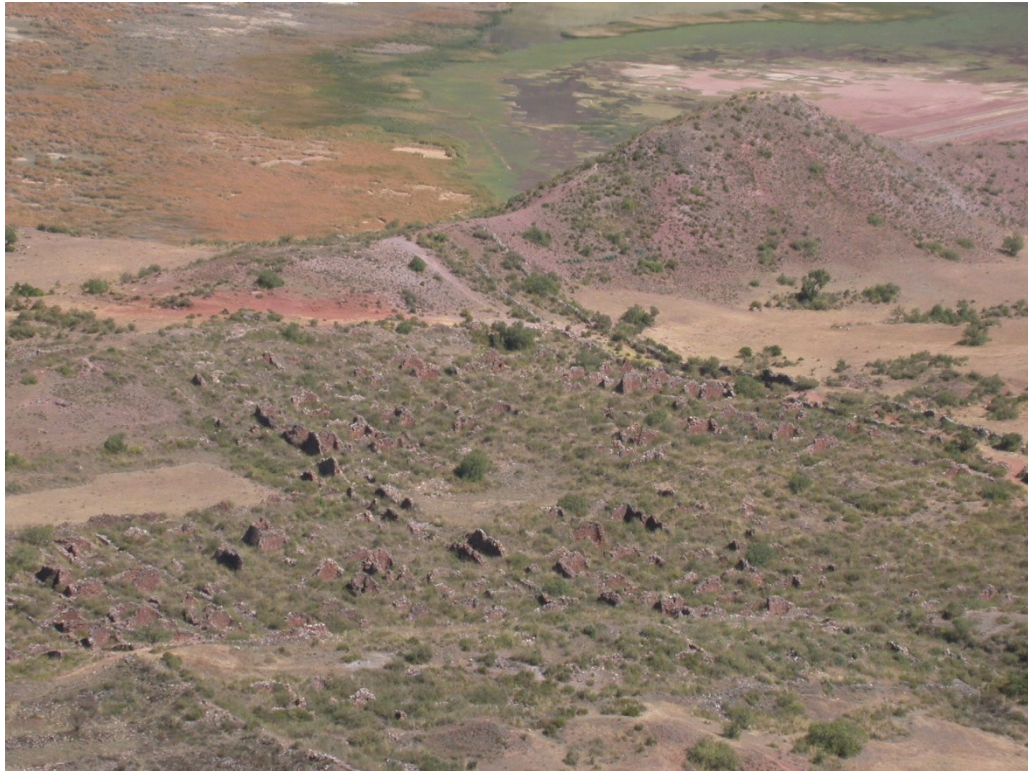
Figure 3.10. Sector 4 of Pikillaqta, showing the small conjoined rooms.

Pottery found at Pikillaqta included several styles (Glowacki 1996, 2005a). The Wari style Okros was by far the most common, representing almost 60% of the ceramic assemblage. Other Wari styles present at Pikillaqta included plainware pottery, Chakipampa, and very small numbers of Viñaque, Robles Moqo, and Black Decorated. Instrumental Neutron Activation Analysis (INAA) indicates that most Wari pottery found at Pikillaqta was produced in the Cusco region, but that some Chakipampa fineware was imported from the Wari capital (Glowacki 2005a:112).

About 10% of the ceramic assemblage from Pikillaqta corresponded to the local styles of the Cusco region (Araway, Qotakalli, and Waru; see Chapter 4 for a description of these styles). Glowacki (2005a:108) also reports a "Tiwanaku-influenced" fragment, but no illustration is available. Other non-local and non-Wari styles present at Pikillaqta included Nasca (south-central coast) and Cajamarca (northern highlands).

Based on the architecture, features, and material culture recovered at the site, McEwan (2005a) argues that Pikillaqta served a ceremonial and administrative function. No one would have lived permanently at the site. Instead, Wari officials would have feasted with their subjects in the patio groups, and during these feasts Wari officials would have given orders to their subjects and listened to their reports. These feasts would have functioned as reciprocity for labor exaction. This interpretation of the patio group as a non-residential theater for ritual performance departs from most understandings of Wari patio groups. Most scholars believe that patio groups were elite residential compounds that were used from time to time to host guests and feasts (e.g., Brewster-Wray 1989; Isbell 1984-1985, 1987, 1989, 1997, 2009; Isbell et al. 1991; Sanders 1973; see Chapter 2).

McEwan (2005a) further claims that the Wari worshipped their most important ancestors in the niched halls of the site. The presence of niches and offering pits with human bones in these halls seems to support this idea. This practice was also common in Huamachuco, where different lineages of the region honored their ancestors in niched halls. Niched halls may have been implemented in Cusco after the Wari had seen them in Huamachuco (J. Topic 1991; Topic and Topic 2010; see Chapter 2).

McEwan (2005a) argues that the small conjoined rooms would have stored the mummies of the local lineages' ancestors, partly to honor them and partly to exercise control over the local population. It is important to note, however, that this idea of *wak'a* capture is heavily based on direct analogy with the Inka (e.g., Rowe 1967:63, 1982:109). More excavation is needed to see if the Wari actually had mummies (see Isbell 2004 for a counterargument) and whether or not they kept local mummies hostage as the Inka did.

The Lucre Basin

In addition to building Pikillaqta, the Wari heavily transformed the surrounding Lucre Basin (Figure 3.11). There, they occupied smaller settlements and constructed a large network of stone canals and reservoirs (McEwan 1984; Valencia Zegarra 2005). The canals drained Pikillaqta and provided water to the site, in addition to irrigate the alluvial fan and the agricultural terraces of the Lucre Basin. The agricultural terraces included empty rectangular areas that Valencia Zegarra (2005:95) interprets as maize drying areas. Altogether, the Wari could count on a cultivable area of approximately 572 ha in the Lucre Basin.
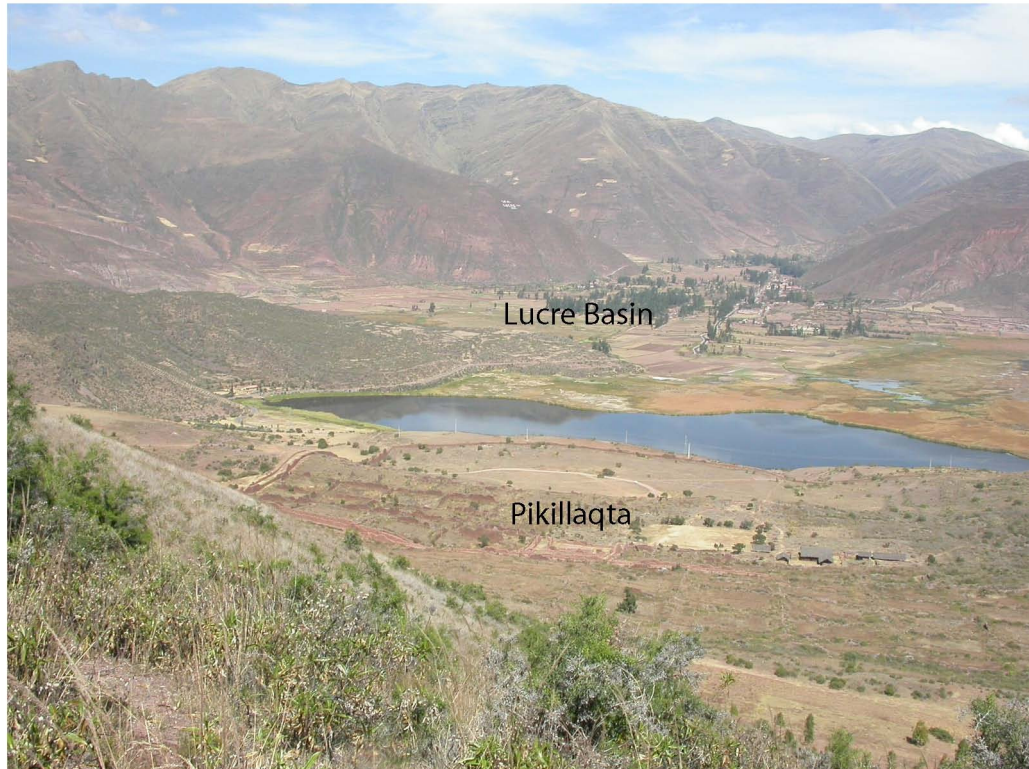
Figure 3.11. The Lucre Basin in front of Pikillaqta. The Wari heavily transformed the basin by constructing drainage and irrigation canals, reservoirs, and agricultural terraces.

Dating Wari Presence in Cusco

The Wari arrived to Cusco early in the Middle Horizon. No radiocarbon dates are available from Huaro, but calibrated dates from Pikillaqta indicate that the Wari were already established in the area and had built at least parts of Pikillaqta by AD 650 and perhaps even earlier (Glowacki 2005b:116; Glowacki and McEwan 2002). The latest radiocarbon dates from Pikillaqta suggest that the site continued to be occupied during the second half of the Middle Horizon (AD 800-1000) or even until around AD 1100 (Glowacki 2005b:116). Most dates from Pikillaqta cluster in the 7th-9th century AD, however, and this period seems to correspond to the main Wari occupation at Pikillaqta. The site was finally sacked, burned, and abandoned.

Due to the absence of dates from the Huaro Archaeological Complex, the dating of Wari occupation at these sites is based on Wari ceramic chronology. In spite of the problems with Menzel's sequence of four Middle Horizon epochs based on a seriation of Wari pottery, Glowacki (2005a:103-105) argues that the pottery found at the Huaro Archaeological Complex and Pikillaqta demonstrates that the Wari arrived to Cusco early in the Middle Horizon. Close to 60% of the pottery recovered at Pikillaqta belonged to the Wari style Okros, which is thought to

correspond to the earliest phases of the Middle Horizon (Glowacki 2005a:103-105). The later ceramic style usually associated with Wari expansion in other regions of Peru, Viñaque, is almost absent at Pikillaqta (less than 1% of the ceramic assemblage). Ceramic evidence from Huaro suggests that the Huaro Archaeological Complex was occupied even earlier than Pikillaqta (the exact nature of this evidence is not clear; see Glowacki 2002; Glowacki and McEwan 2002). The presence of Viñaque and Late Intermediate Lucre pottery at Huaro sites could also suggest that the Wari occupied Huaro during a longer period than Pikillaqta. These hypotheses remain to be tested with radiocarbon dating.

The Role of Wari in the Cusco Region

From their reconnaissance and excavations at Huaro and Pikillaqta, McEwan (2005a) and Glowacki (2002; Glowacki and McEwan 2002) conclude that the Wari directly controlled the Cusco region. They argue that the Wari imposed their own administrative structure on the region instead of using the local infrastructure. They base their argument on (1) the similarity between Wari pottery from Cusco and Ayacucho; (2) the architectural similarities between Huaro, Pikillaqta, and other known Wari sites; (3) the low quantity of local pottery found at Huaro and Pikillaqta, which they believe suggests "una incorporación limitada de personal local del Cuzco en las actividades políticas wari" (a limited participation of local personnel in Wari political activities); and (4) the similarities between the administrative activities conducted at Huaro and Pikillaqta and at Wari (Glowacki and McEwan 2002:42).

These four points, however, do not demonstrate that the Wari controlled the Cusco region. Instead, they demonstrate a strong relationship between the Wari settlements in Cusco and the Wari capital in Ayacucho. A Wari colony did exist in Cusco. Wari colonists built several settlements in a style that is reminiscent of the architecture found at the city of Wari; they produced and used Wari pottery, including Wari utilitarian wares; they transformed their surrounding environment into productive maize-growing lands; and they buried their dead in tombs similar to those of the Wari heartland. However, whether the Wari engaged in asymmetrical relationships with the people of Cusco and effectively controlled the region still needs to be demonstrated.

The investigation of Huaro and Pikillaqta, although essential, is a "top-down" perspective on Wari presence in Cusco. The need for administration and the impact of Wari have to be assessed with data collected *outside* the Wari colony. *Administrative* centers would

only be necessary if Cusco was incorporated into the Wari state. It is only by investigating the people who were allegedly under Wari control that we will understand the kinds of relationships that developed between these two groups during the Middle Horizon.

Chapter 4

WARI IMPACT OUTSIDE THE WARI COLONY

Data from the Huaro Archaeological Complex and Pikillaqta provide valuable insights on Wari interests in the Cusco region and on the relationships between Wari colonists and their homeland in Ayacucho. As seen in the architecture, pottery, stone tools, and burials, it is safe to say that Wari colonists maintained a strong Wari identity. However, the strategies employed by the Wari in Cusco and the kinds of relationships that they developed with local populations remain unclear. Whether the Wari sites in Huaro and Lucre were part of a trading enclave or an imperial province that controlled local groups and resources can only be assessed if we also have data from local settlements. In this chapter I present data from outside the Wari colony. Before introducing local settlement patterns and the village of Ak'awillay, I briefly describe the regional ceramic sequence and the pottery styles in use before and during Wari presence.

Regional Chronology and Ceramic Sequence

The chronology of the Cusco region is based on (1) a ceramic sequence developed from stratigraphic excavations and (2) a series of radiocarbon/AMS dates (see Chapters 5-8; see also Bauer 1999:155-156, 2004; Bauer and Jones 2003:35-37; Covey 2006:246-247; Davis 2010:456-458; Glowacki 2005b). Some ceramic styles span more than one period, showing a lack of correspondence between most local developments and the pan-Central Andean Intermediates and Horizons (Figure 4.1). During the Middle Horizon, however, two pottery styles were used and exchanged widely: (1) Wari and (2) a locally produced Wari-inspired style called Araway. These two styles were confined to the Middle Horizon and help us distinguishing pre-Middle Horizon and Middle Horizon settlements.
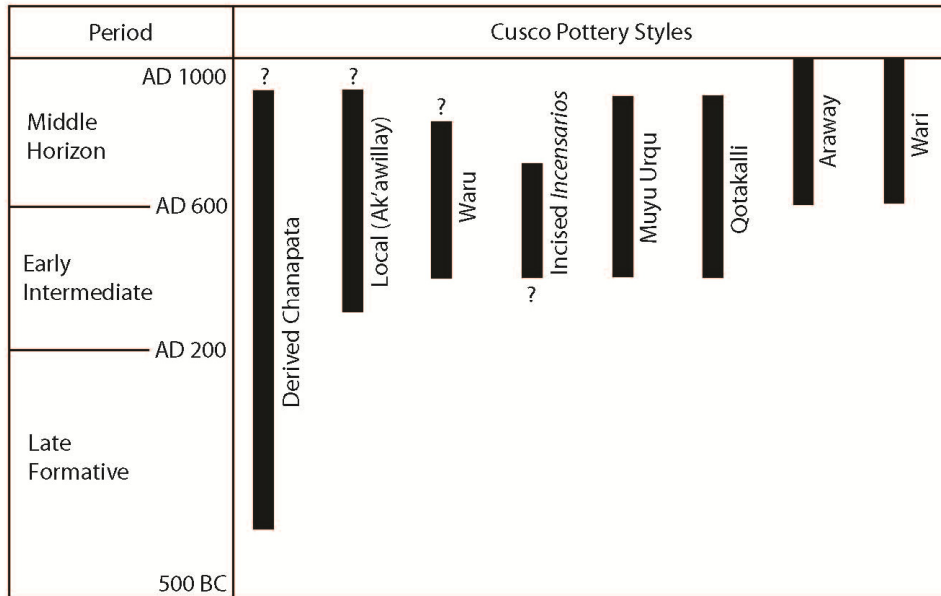
Figure 4.1. Cusco ceramic sequence based on results from Ak'awillay and previous work in Cusco.
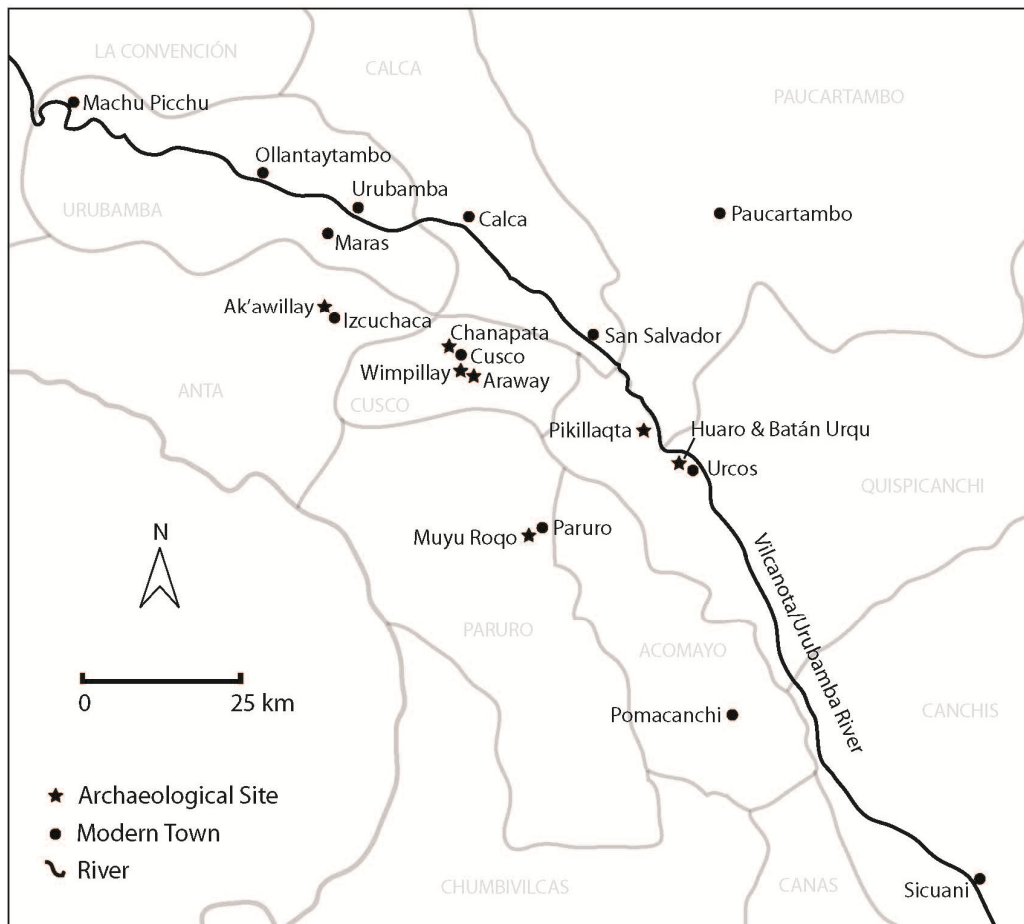
Figure 4.2. The Cusco region showing archaeological sites and modern towns mentioned in the text. In the background are the provinces of the Department of Cusco.

Pottery styles are described below (see Appendix A for more details). Their distribution in the Cusco region and their chronological affiliations are based on my work at Ak'awillay and on previous research in Cusco (Figure 4.2). Wari pottery has been described in detail elsewhere (e.g., Glowacki 1996; Knobloch 1983; Menzel 1964) and will not be described here.
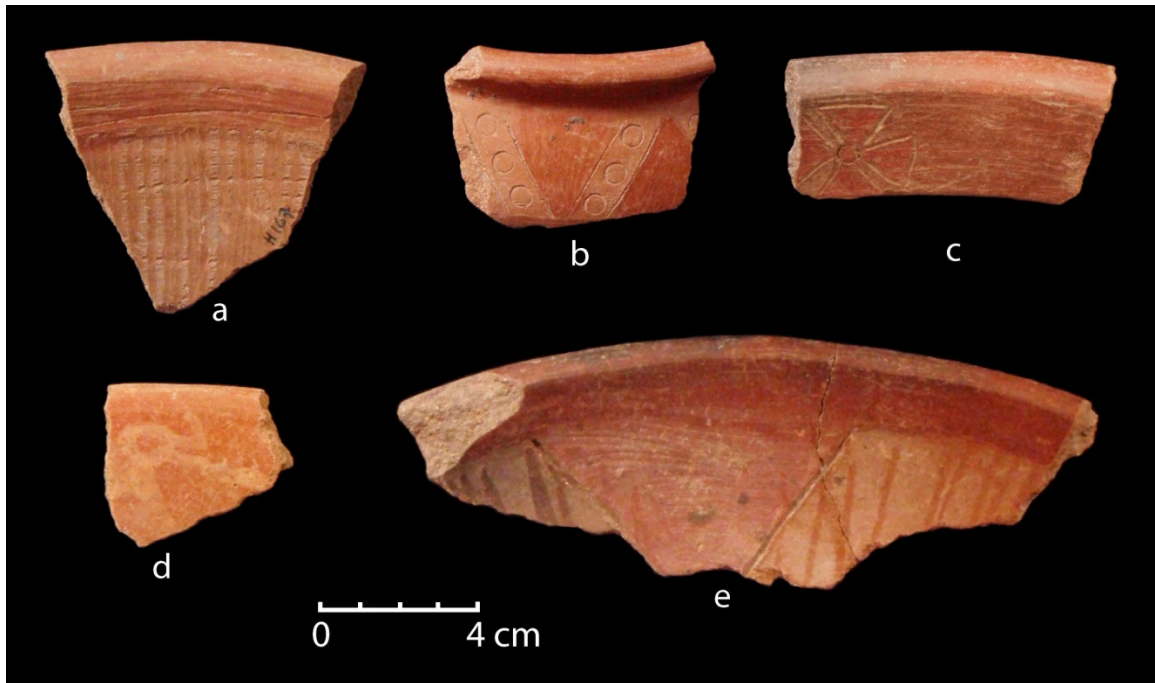
Figure 4.3. Decorated Derived Chanapata pottery: (a) pattern burnished; (b) incised and punctated; (c) painted-incised; (d) painted; and (e) combination of decorative techniques. All fragments are from Ak'awillay.

Derived Chanapata

Derived Chanapata pottery (Figure 4.3) was first produced in the Late Formative, probably starting around 400 BC (Bauer 1999:125; Davis 2010:456-458). Derived Chanapata pottery was widely distributed throughout the Cusco region (Bauer 1999:123-125, 2004:41-44; Bélisle and Covey 2010; Davis 2010; Rowe 1944, 1956; Zapata 1998). Archaeologists have used Derived Chanapata as a diagnostic style confined to the Late Formative, but the abundance of this style in later contexts at Ak'awillay indicates that it continued to be used and produced in subsequent periods. Some changes were introduced to Derived Chanapata pottery over time (the decrease in painted motifs, for example), but overall the Derived Chanapata pottery found in later periods at Ak'awillay shows strong continuity with Late Formative Derived Chanapata and is markedly different from all Early Intermediate and Middle Horizon styles. In these later

periods Derived Chanapata pottery was mostly used as a domestic ware alongside the fancier polychrome styles of the Early Intermediate and Middle Horizon.

Derived Chanapata pottery is a thick, resistant ware that was used for a variety of purposes. Shapes include large open bowls and plates for communal servings of food; small restricted bowls for individual servings of food and beverages; ollas for cooking; neckless ollas for cooking and storing goods; and jars and lids for serving and storing liquids. All vessels have thickened rims. Derived Chanapata pottery is often undecorated, but some decorated vessels are pattern burnished, red slipped, incised and punctated, painted-incised, or painted.

Local (Ak'awillay)

Local decorated and undecorated pottery was found at Ak'awillay (Figure 4.4; see Chapters 5-8). It was probably produced at Ak'awillay or in the surrounding Xaquixaguana Plain. Local pottery first appeared in the Early Intermediate and its use continued during the Middle Horizon. Simple motifs were crudely painted in black or red on a natural background. Vessel shapes include bowls, cups, ollas, neckless ollas, jars, and plates. Like Derived Chanapata, local pottery was used for all household needs. Vessel walls were thicker than those of the fancier styles described below, although not as thick as Derived Chanapata vessels. The local style may have replaced Derived Chanapata pottery in later periods.

Figure 4.4. Local decorated pottery from Ak'awillay. Simple motifs are painted in black or red on a natural background.

Figure 4.5. Waru pottery. Simple red motifs are painted on a natural or white-slipped surface. All fragments are from Ak'awillay.

Waru

Until recently this style (Figure 4.5) was little known and its dating was uncertain. Rowe (1944:19-20) first identified Waru at the site of Chanapata in the Cusco Basin (see Figure 4.2) and named it "Carmenca Red on White." During his excavations at Batán Urqu in the early 1950s, Manuel Chávez found more specimens of this style that he named Waru (Rowe 1956:142). Waru pottery was tentatively dated to the Early Intermediate. More recently, Glowacki (1996:247-250; 2005a:108) identified Waru pottery at Pikillaqta and believes it dates to the Middle Horizon. Bauer (1999:151) also found examples of what he calls "shallow bowls" in his survey of the Paruro area to the south of the Cusco Basin, and Covey and his team discovered Waru pottery in the survey of the Xaquixaguana Plain to the northwest of the Cusco Basin. Findings from Ak'awillay indicate that Waru was first produced in the Early Intermediate and continued to be used during the Early Middle Horizon.

All Waru vessels are small bowls that were probably used for individual servings of food and beverages. Rowe (1944:19-20) is the only one to have reported jars from his Chanapata collection. All Waru specimens are decorated with simple red motifs roughly painted on a natural or white-slipped surface.

Incised **Incensarios**

Incised ceremonial burners (Figure 4.6) have been found between the Cusco region and the Lake Titicaca Basin. The incense burners from the southern Titicaca Basin are part of the

Figure 4.6. Incised *Incensarios*: body sherds, rim fragment, and puma head. All fragments are from Ak'awillay.

Qeya style dating to approximately AD 100 to 500 (Bauer and Stanish 2001:90-92; Janusek 1994:100; Stanish 2003:139; Young-Sánchez 2004:38). Chávez (1985) believes that those found in Cusco were manufactured there but represent an early Tiwanaku influence on the region. In their excavations at Peqokaypata in the Cusco Basin, Bauer and Jones (2003:57) obtained a carbon sample associated with these incised burners. The date (1422 ± 51 BP, or AD 530-700) places this style at the end of the Early Intermediate and beginning of the Middle Horizon. The low frequency of these incised burners in Middle Horizon contexts at Ak'awillay (1 rim and a few body sherds) may indicate that they were used mainly during the Early Intermediate.

Muyu Urqu

Muyu Urqu pottery (Figure 4.7) has been identified throughout the Cusco region (Bauer 1989, 1999, 2004:50-51; Bauer and Jones 2003; Bélisle and Covey 2010; Espinoza Martínez 1983; Torres Poblete 1989; Zapata 1997, 1998) and was named by Bauer (1989, 1999:78-81) after the site where it was most common in his Paruro survey. Based on decoration and vessel morphology, Bauer (1999:84-85) believes that Muyu Urqu was a locally-made (i.e., Cusco) pottery style related to late Tiwanaku; it would have been produced in the late Early Intermediate and Middle Horizon when the Tiwanaku state expanded outside the Lake Titicaca

Basin. Data from Ak'awillay confirm that this style was produced during these periods, and its production continued after the Wari arrived in Cusco.

Muyu Urqu is a fine polychrome ware. Surfaces are highly polished and black, white, and orange motifs are painted on a dark red background. Vessel forms include small restricted bowls, cups, and *qiru[1]*, suggesting that Muyu Urqu pottery was used for individual servings of food and drink. This style may have been reserved for special occasions and ceremonies.

Figure 4.7. Muyu Urqu pottery. Black, white, and orange geometric motifs are painted on a dark red background. All fragments are from Ak'awillay.

Qotakalli

Qotakalli pottery (Figure 4.8) was abundant throughout the Cusco region (Barreda Murillo 1982; Bauer 1999:70-75, 2004:47-54; Bauer and Jones 2003:45; Bélisle and Covey 2010;

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[1] A *qiru* is a special kind of cup usually associated with chicha drinking. In the archaeological literature, the Quechua word *qiru* is sometimes spelled *kero*. This is incorrect since in Quechua "*kero*" (or *kiru*) means tooth.

Figure 4.8. Qotakalli pottery. Black (upper row) or black and red (lower row) geometric motifs are finely painted on a cream background. All fragments are from Ak'awillay.

Covey 2006:59-68; Espinoza Martínez 1983; Torres Poblete 1989) and was found at Wari sites in the Huaro Valley (Glowacki 2002:279), in Wari contexts at Pikillaqta (Glowacki 1996:212-216, 2005a:106-107), and in Wari burials at Batán Urqu (Zapata 1997; Bauer 1999:73). Qotakalli was first produced in the Early Intermediate and continued to be used during the Middle Horizon. It was the main pottery style in the Cusco region when the Wari arrived and its production was not interrupted by Wari presence.

Based on survey data, Qotakalli was most abundant in the Cusco Basin. Outside the basin its density decreased, suggesting that Qotakalli pottery was produced in the Cusco Basin and then exchanged or traded outside (Bauer 1999:73-75; Covey 2006:63-68). Groups outside the Cusco Basin not only obtained Qotakalli vessels but also imitated this ware and produced their own Qotakalli vessels locally (see Chapters 6-8).

Qotakalli is another fine ware. Black, red, or black and red geometric motifs are finely painted on a cream background. Black and red-on-cream specimens are the finest, and their motifs were generally made with thinner lines than those of the black-on-cream or red-on-

cream varieties. Qotakalli vessel shapes include jars that were used for storing and serving and small restricted bowls and cups used for individual servings of food and drink. Like Muyu Urqu, Qotakalli vessels may have been reserved for special occasions and ceremonies.

Araway

Araway pottery (Figure 4.9) takes its name from a site in the Cusco Basin where Torres Poblete (1989) first discovered it (see Figure 4.2). This style was then identified throughout the Cusco region (Bauer 1999, 2004; Bauer and Jones 2003:38; Bélisle and Covey 2010; Covey 2006:74-78; Espinoza Martínez 1983; Glowacki 1996:199-207, 2002, 2005a; Torres Poblete 1989; Zapata 1997). According to Instrumental Neutron Activation Analysis, Araway pottery was produced from local clays (Glowacki 2005a:112). Its production was restricted to the Middle Horizon. Decoration included black and red geometric motifs painted on a cream background and often organized in rectangular panels. Vessel shapes include bowls and cups that were probably used for individual servings of food and beverage and jars for storing liquids.
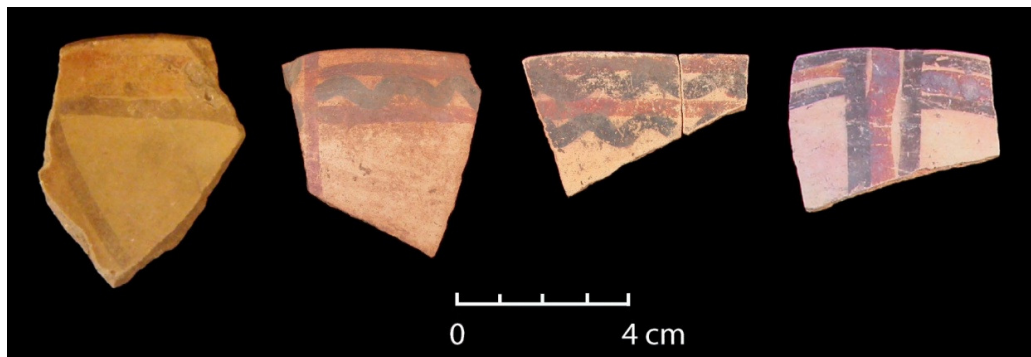
Figure 4.9. Araway pottery. Black and red geometric motifs are painted on a cream background. Fragments are from Ak'awillay and neighboring sites in the Xaquixaguana Plain.

Some disagreement exists concerning Araway. Bauer (1999:62) believes Araway to be a Wari-related style that is "influenced by Wari ceramics but do not directly imitate them." Glowacki (1996:204-207, 2005a:106, 112), on the other hand, believes Araway to be a Wari style made by Wari in Cusco and calls it Araway/Wamanga or Wamanga. At Ak'awillay, Araway appears early on, suggesting that it was locally produced soon after the Wari were established in Cusco. The fact that Araway vessel shapes are common in other local styles produced before the Middle Horizon and that typical Wari shapes are absent from Araway inventories suggest that Araway was influenced by Wari but produced by local populations. In addition, Araway

pottery is rare at Pikillaqta; it constitutes 5.5% of the assemblage, which is similar to the proportion of Qotakalli pottery (4.5%) (see Glowacki 2005a:106-107).

Wari Impact at the Regional Level: Settlement Pattern Studies

During the last two decades, Brian Bauer and R. Alan Covey conducted several intensive, systematic full-coverage surveys outside the Wari colony (Figure 4.10; see also Figure 4.2) (Bauer 1992, 1999, 2004; Bélisle and Covey 2010; Covey 2006; Covey et al. 2008). They walked over an area of 2000 km^2 and identified more than 2000 archaeological sites of all periods. They concentrated their efforts in the Cusco Basin (the modern city of Cusco and the surrounding valley and hills), the Chit'apampa Basin (between Cusco and the Vilcanota River), the Vilcanota-Urubamba Valley and its side valleys (from San Salvador in the east to Yanahuara between Urubamba and Ollantaytambo in the west), the Paruro region (to the south of the city of Cusco), and the Xaquixaguana Plain and Maras-Chinchero area (to the west of the city of Cusco).

These surveys, along with some test excavations at a few sites, provided important information on settlement patterns in the Cusco region outside the Wari colony. The surveys all used the same methodology; teams of 3-5 archaeologists walked in parallel lines 50 m apart, covering all terrain not too steep for walking. They registered every archaeological site they discovered, collecting a sample of diagnostic pottery and taking detailed notes on the surrounding environment and the location and nature of the remains.

Data generated by these surveys provide an important tool to evaluate the impact of the Wari state at the regional level. By comparing the pre-Middle Horizon (Early Intermediate) and Middle Horizon settlement patterns in different parts of the Cusco region, it is possible to detect any significant change in settlement location, site clustering, settlement hierarchy, and pottery style distributions following Wari arrival in the area. Changes that occurred *before* the arrival of the Wari (i.e. in the Early Intermediate) were not related to Wari colonization, but any changes that occurred during the Middle Horizon were contemporaneous with the Wari colony and could reveal the nature of Wari impact on local communities.
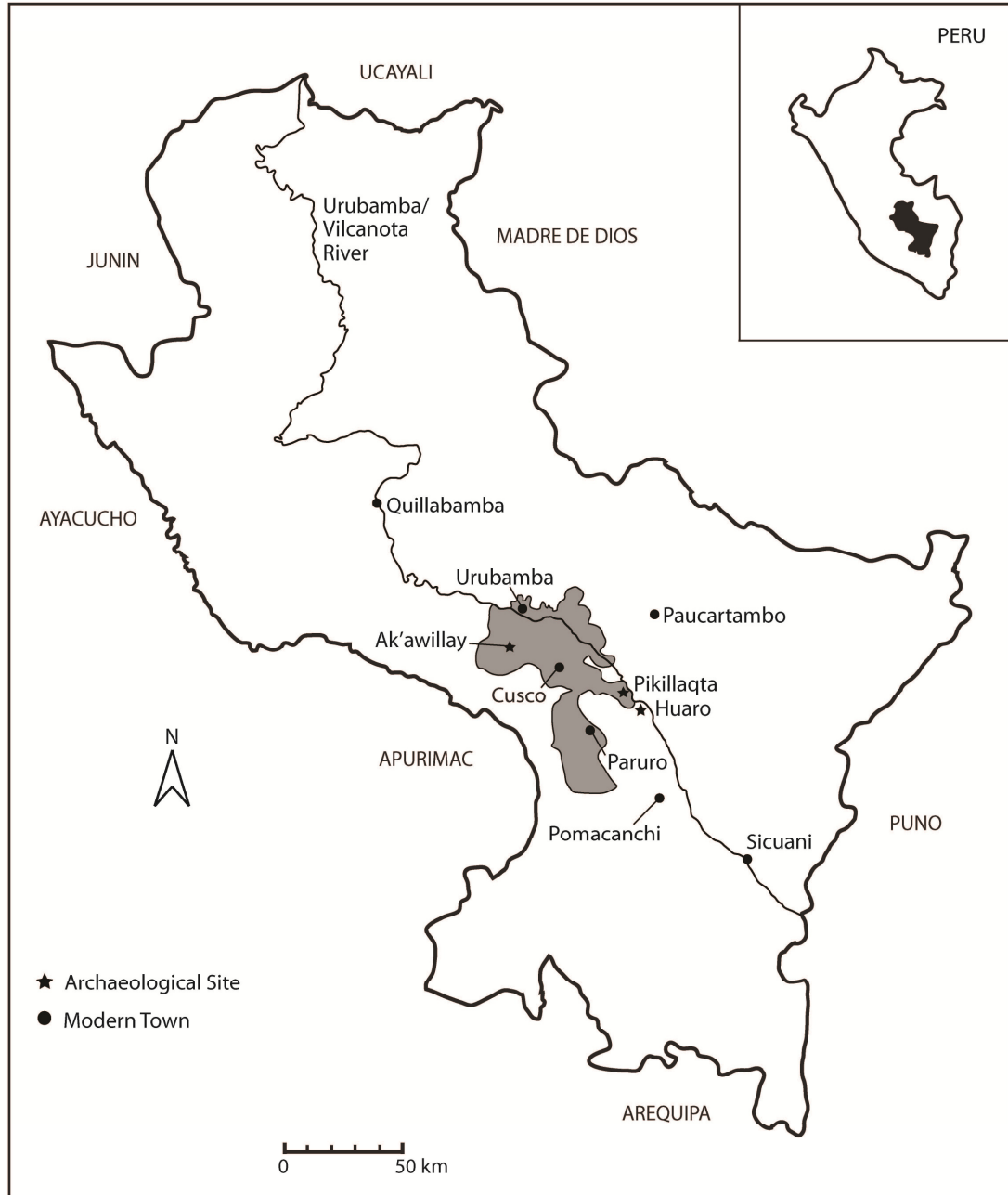
Figure 4.10. The Department of Cusco, showing the area of over 2000 km^2 that was systematically surveyed (gray). More than 2000 archaeological sites of all periods were discovered over the last two decades.

In a scenario involving strong and disruptive Wari impact on local populations, Middle Horizon settlement patterns would reveal changes in settlement location. In areas incorporated into the Wari state, Middle Horizon settlements were associated with intensified maize agricultural production. Several scholars have shown that Wari activities involved feasting and the consumption of chicha (see Chapter 2; e.g., Isbell 1977, 1984, 1984-1985; Moseley

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1992:218-223; Moseley et al. 2005). If the Cusco region was incorporated into the Wari political economy, we would expect to see a settlement shift to lower maize-producing lands (*kichwa*) during the Middle Horizon. *Suni* sites would be abandoned and new site clusters would appear. If local settlements were already located in the *kichwa* zone before Wari arrival, we would still see the emergence of irrigation canals and agricultural terraces to intensify agricultural production during the Middle Horizon.

An increase in settlement hierarchy during the Middle Horizon could also suggest that the Wari established new centers above the local site hierarchy to collect tribute and supervise local populations. The Wari could also have worked from an established local center; if this were the case, this site would likely have increased considerably in size to support a larger population and meet Wari state demands. Alternatively, local settlement hierarchies could have been suppressed if Wari authorities wished to undermine the authority of local leaders or if they resettled populations in smaller villages to prevent unified resistance against their rule.

Wari presence in Cusco could also have altered the distribution of pottery and other items throughout the region. Some villages might include Wari architecture, Wari pottery and stone tools, or Wari-managed goods and products (obsidian, *Spondylus*, and perhaps coca). Local exchange networks could be disrupted and replaced by Wari-managed or Wari-controlled networks.

If the Wari tried to conquer the people of Cusco, settlement patterns could also provide evidence for conflict and resistance. Early in the Middle Horizon, settlements could have been located on hilltops for visibility and defense in an attempt at resisting incorporation into the Wari state. Later in the Middle Horizon, if resistance had failed, we would see a shift away from hilltops to lower and more open areas as local populations cultivated maize (for tribute) in a less violent regional political climate imposed by the Wari.

Cusco before the Middle Horizon

The Cusco Basin

In the Cusco Basin, the Early Intermediate was a time of changing settlement patterns (Bauer 2004:52-54). Former Late Formative hilltop sites were abandoned for lower valley slopes just above the valley floor, where the best agricultural lands were located. These new Early Intermediate sites were located below 3500 m in the maize-growing *kichwa* zone. This shift in site location suggests that local populations were starting to rely more heavily on maize and less

on a mixed economy. A decrease in regional conflicts could have allowed people to live in less defensible settlements.

The Early Intermediate settlement hierarchy in the Cusco Basin indicates the presence of a chiefly polity (Bauer 2004:52). However, instead of concentrating at only one large site, the Early Intermediate elites were living in a cluster of several villages. These data on settlement hierarchy and on the shift in settlement location may suggest that Early Intermediate local leaders became involved in maize production to provide chicha to their followers.

Based on settlement patterns and on the distribution of Qotakalli ceramics outside the Cusco Basin, the Cusco polity probably influenced or even controlled some groups to the north (up to the Vilcanota River) and to the south (Paruro). The Cusco Basin polity's "power was most likely limited to the east and west by similarly large chiefdoms in the Plain of Anta [Xaquixaguana Plain] and the Lucre Basin" (Bauer 2004:54). Data from the Xaquixaguana Plain support this idea (see below).

The Chit'apampa Basin and the Vilcanota-Urubamba Valley

Similar to the Cusco Basin, the Early Intermediate in the Chit'apampa Basin and Vilcanota-Urubamba Valley was a time of change (Covey 2006:60-67). Large nucleated Formative villages on hilltops were abandoned for more dispersed villages at lower elevations. The Early Intermediate villages were established near valley bottoms in open and non-defensible areas and were close to water sources in the maize-growing *kichwa* zone. These new site locations are consistent with new farming needs and a decreased preoccupation for defense.

In addition to these new site locations, the three-tiered Formative settlement hierarchy in the Chit'apampa Basin and Vilcanota-Urubamba Valley disappeared during the Early Intermediate. As Covey argues (2006:66-67), these changes in Early Intermediate settlement patterns point to the incorporation of the Chit'apampa Basin into the Cusco Basin polity. The new settlement pattern "may have been a response to tributary demands from Cusco […] in a safer political environment" (Covey 2006:67).

The distribution of Qotakalli pottery in the area also indicates strong relationships with the Cusco Basin during the Early Intermediate. Qotakalli pottery was abundant in the Chit'apampa Basin south of the Vilcanota River but much rarer north of the river. The Cusco Basin polity likely incorporated the Chit'apampa Basin, but probably did not control other areas farther north that were beyond a half day's walk from Cusco (Covey 2006:63-67).

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The Paruro Region

In Paruro, most sites with Qotakalli pottery were north of the Apurimac River in the area closest to the Cusco Basin (Bauer 1999:73-75). Although the best agricultural lands of the Paruro region are located further south, there were fewer sites with Qotakalli pottery; there, Bauer found sites with a local pottery style called Ccoipa (Bauer 1999:78-79). The northern part of the Paruro region could have been under the control of the Cusco Basin polity during the Early Intermediate (Covey 2006:68); the southern area, however, is well beyond a half day's walk from Cusco and was probably outside the area controlled by the Cusco Basin polity.

The Xaquixaguana Plain and Maras-Chinchero Area

In the Xaquixaguana Plain and Maras-Chinchero area, settlement pattern data are consistent with those of the other surveyed areas in Cusco. The Early Intermediate was associated with a shift in settlement pattern and a shift away from hilltops (Bélisle and Covey 2010). Several Formative sites in the *suni* or tuber-producing zone were abandoned, and the majority of Early Intermediate sites were established in the lower *kichwa* zone where maize could be cultivated. The whole area around Lake Huaypo – a *suni* zone in the central portion of the survey region that was heavily occupied during the Formative – was completely abandoned during the Early Intermediate (see Figure 4.12). Like the other surveyed areas, the abandonment of Lake Huaypo and of the *suni* zone likely represent an effort to redirect economic activities toward maize agriculture during the Early Intermediate.

The abandonment of the area around Lake Huaypo created two clusters of settlement: (1) a northern cluster with small dispersed sites around Maras and (2) a more heavily occupied cluster in the Xaquixaguana Plain to the south. The southern cluster was dominated by Ak'awillay, the largest Early Intermediate village of the Xaquixaguana Plain. Ak'awillay was also the site with the highest diversity of pottery styles (Qotakalli, Muyu Urqu, Waru, and Incised *Incensarios*), suggesting that its elites maintained an active exchange network with different parts of the Cusco region. The elites at Ak'awillay could have redistributed some of this decorated pottery to people living in smaller settlements in the Xaquixaguana Plain and, to a lesser extent, in the Maras-Chinchero area. An active exchange network linking the Cusco Basin, the Xaquixaguana Plain, and the Maras-Chinchero area was thus already in place in the Early Intermediate. All of these data suggest that Ak'awillay was at the top of a chiefly polity during the Early Intermediate.

Cusco during the Middle Horizon

The Cusco Basin

Early Intermediate settlement patterns of the Cusco Basin continued into the Middle Horizon (Bauer 2004:64-69). The smallest Early Intermediate hamlets were abandoned, but people continued to live in the same Early Intermediate villages near good maize lands. The same settlement hierarchy also prevailed during the Middle Horizon, suggesting that the Cusco Basin polity continued to rule over the region.

In addition to this continuity of settlement patterns between the Early Intermediate and the Middle Horizon, Bauer (2004:64) did not locate any Wari architecture in the Cusco Basin. Wari pottery was also rare; where present, it was always associated with local ceramic styles and local architecture (Bauer and Jones 2003). The local Araway style was much more abundant than Wari pottery (Bauer 2004:64-65). Cusco elites (the closest to the Wari colony) could have organized or funded its production and redistributed it to other areas of the Cusco region.

It is clear that the Wari did not establish a secondary Wari administrative settlement in the Cusco Basin. Moreover, most changes in the settlement patterns of the area occurred *before* the arrival of the Wari in the region. Bauer (2004:66) concludes that "[t]here is no evidence of a radical reorganization of the social landscape with the arrival of the Wari." The Middle Horizon in the Cusco Basin was not a time of disruptive change, but one of continuity.

The Chit'apampa Basin and the Vilcanota-Urubamba Valley

Like the Cusco Basin, the Early Intermediate settlement patterns of the Chit'apampa Basin and Vilcanota-Urubamba Valley continued into the Middle Horizon (Covey 2006:74-78). Small Early Intermediate hamlets were abandoned, but most villages continued to be occupied during the Middle Horizon. There were no changes in settlement location or settlement hierarchy in the area. Most changes in the settlement patterns of the Chit'apampa Basin and Vilcanota-Urubamba Valley thus occurred *before* Wari arrival, and the Middle Horizon was a period of continuity.

In addition to settlement continuity, Covey and colleagues (Covey 2006:74-75; Covey et al. 2008) found no Wari architecture and almost no Wari pottery at the Middle Horizon sites of the Chit'apampa Basin and Vilcanota-Urubamba Valley. Instead, these sites contained local and Cusco Basin pottery as well as another style possibly from Paucartambo to the northeast. If the Wari had an economic interest in the Cusco region (outside the Huaro Valley and Lucre Basin), it is likely that they would have intensively occupied the Vilcanota Valley to exploit its prime maize

lands. Instead, the area of the Vilcanota Valley that is closest to Pikillaqta was occupied by independent villages that were neither under the control of the Cusco Basin polity (they were too far away) nor Wari.

The Paruro Region

Bauer found no Wari pottery at most Middle Horizon settlements in Paruro and a very small number of Wari pottery fragments at eight Middle Horizon sites (Bauer 1999:63-64, 67, 70-71). Most of these sites with Wari pottery were around the town of Paruro, north of the Apurimac River and only 20 km southwest of the Lucre Basin. Bauer found one small site, Muyu Roqo, with abundant Wari pottery (see Figure 4.2). Test excavations at Muyu Roqo, also close to the town of Paruro, revealed abundant Wari Okros-style pottery and camelid bones. Most pottery fragments from Muyu Roqo correspond to fineware (84%), including a large proportion of drinking vessels and bowls. Evidence from pottery coupled with the large quantity of camelid bones recovered during excavation suggests that eating and drinking were important activities at the site. Bauer concludes that Muyu Roqo was probably a ritual site during the Middle Horizon (Bauer 1999:63-66). Its relationship to Pikillaqta and Huaro remains to be evaluated.

The Xaquixaguana Plain and Maras-Chinchero Area

The Xaquixaguana Plain is an important area to test the impact of Wari colonists in Cusco. An important Inka road linking Cusco to Chinchaysuyu passed through the Xaquixaguana Plain. If, as suggested by earlier scholars (Hyslop 1984:270-274; Lumbreras 1974:162-163; Regal 1936:6-7; Schreiber 1984), the Inka remodeled old trails and roads for their own llama caravans and the consolidation of their empire, the road passing through the Xaquixaguana Plain was perhaps already in use during the Middle Horizon. The Wari could have used this road to travel to and from their capital in Ayacucho. If this were the case, we might see more Wari influence in the Xaquixaguana region than in other parts of Cusco.

Survey data suggest that it was not the case. Like the other surveyed areas of the Cusco region, the Middle Horizon in the Xaquixaguana Plain and Maras-Chinchero area shows continuity in settlement patterns from the Early Intermediate (Bélisle and Covey 2010). Sites continued to be organized in two clusters and people continued to prefer the *kichwa* zone. Most Middle Horizon sites were already occupied in the previous period, especially those in the southern cluster. If Wari had had a strong impact on the Xaquixaguana region, the area closest to the Lucre Basin and Huaro Valley, i.e. the southern cluster, would show a disruption of settlement patterns during the Middle Horizon.

During the Middle Horizon, Ak'awillay remained at the top of the settlement hierarchy in the southern cluster and its elites continued to obtain pottery from outside the Xaquixaguana Plain. Sites closest to Ak'awillay contained Cusco-Basin pottery (Araway as well as Qotakalli and Muyu Urqu) while sites further away had little or none, suggesting that the elites of Ak'awillay continued to control the distribution of decorated pottery during the Middle Horizon. Continuity in settlement patterns and the stability of exchange networks suggest that the Wari had a weak impact on the Xaquixaguana Plain and Maras-Chinchero area.

Survey of the Xaquixaguana Plain and Maras-Chinchero area did not locate any Wari architecture. Very little Wari pottery was found at only two sites, including Ak'awillay. In addition to the continuity outlined above, the scarcity of Wari items in the Xaquixaguana region suggests that the Wari either (1) did not passed through the Xaquixaguana Plain on their way to and from the Lucre Basin and Huaro Valley, or (2) passed through but were not interested in forming relations with anyone there.

Other Areas in Cusco

Outside of the systematically surveyed areas, archaeologists have reported Wari material culture at a few additional sites. Chávez (1984-1985) reports a Wari Chakipampa canteen flask from a looted burial in the area of Pomacanchi (see Figure 4.10). He also describes several metal objects from Pomacanchi, but he is uncertain whether these belong to the Wari or Tiwanaku style. Chávez (1988:34) also found a "provincial" Wari-style *qiru* in the *puna* of the province of Chumbivilcas south of Paruro (see Figure 4.2). He reports that this *qiru* also shows some Tiwanaku influence. In the province of Espinar to the southeast of Chumbivilcas, Meddens (1989) explored the site of Tajra Chullo where he found "Viñaque-like pottery" in the form of cups and bowls on the surface (Meddens 1989:155).

During a reconnaissance around Sicuani to the southeast of Cusco (see Figure 4.10), Rowe (1956:144) identified some Wari pottery at the sites of Yanamancha and Suyu. Bauer (2004:63, based on a personal communication with Bill Sillar and Emily Dean in 1999) also reports "numerous sites that contain Wari-style materials" around Raqchi close to Sicuani. These sites apparently also include altiplano-related pottery. Future research in the Sicuani area will provide very interesting data on the interaction between the local populations and the Wari and Tiwanaku states.

All of these finds outside the Wari colony and outside the systematically surveyed area seem to be isolated. These Wari-style objects all came from the surface or from looted

materials, and they often display a mixture of Wari and Tiwanaku stylistic influences. More systematic research is needed to the south and southeast of the Huaro Valley, but at present nothing suggests the presence of a Wari settlement. Some Wari or Wari-like items appeared at local villages along with material culture from other areas of the Andes.

The Role of Wari in the Cusco Region

Data from the systematic surveys provide a very different picture of Middle Horizon Cusco than the one offered by the Wari colony of the Huaro Valley and Lucre Basin. Survey of over 2000 km^2 shows that Wari impact was very limited outside the Wari colony. Most changes in the settlement patterns of the region occurred in the Early Intermediate *before* the Wari arrived. During this period, local populations abandoned hilltop sites for lower, non-defensible locations close to maize-producing lands. Chiefly polities developed in the Cusco Basin and in the Xaquixaguana Plain, and these polities exchanged products with each other, probably built alliances and intermarried, and perhaps competed with each other.

This situation persisted during the Middle Horizon, and there were very few changes in settlement location, clustering, and hierarchy. No Wari site or Wari architecture was identified outside the Huaro Valley and Lucre Basin. Wari influence was limited to Araway pottery and very few Wari ceramics at local sites. The arrival of the Wari in the Cusco region did not interrupt local and regional exchange networks, and local populations continued to use the same exchange networks that had been in place since at least the Early Intermediate. Instead of Wari, the Cusco Basin polity seems to have affected the region much more heavily during both the Early Intermediate and the Middle Horizon.

Survey data thus suggest that the Wari colonists did not have a strong impact outside of their colony. Wari impact could have been felt more heavily to the east of the Huaro Valley, but this remains to be verified with survey and excavations. The Wari disrupted the political, economic, and religious life of the Lucre Basin and Huaro Valley, but outside of that area the Wari do not seem to have controlled the resources or the local populations of Cusco. Local groups might have sporadically participated in Wari rituals and building projects in exchange for food and drink, but evidence suggests that the Wari would have accessed this labor by establishing alliances with local elites who remained in control of their respective polities.

The regional data presented here strongly suggest that most of the Cusco region was not incorporated into the Wari state during the Middle Horizon, and that the Wari operated in a

limited area between the Lucre Basin and Huaro Valley. Regional surveys, however, do not provide detailed contextual data on individual houses. To verify whether there were other Middle Horizon changes among the local population that could not be detected at the regional level and from surveys, I conducted excavations at the largest Middle Horizon village of the Xaquixaguana Plain, Ak'awillay.

Wari Impact at the Household Level: The Village of Ak'awillay

The village of Ak'awillay is located on a low hill overlooking the surrounding Xaquixaguana Plain or Plain of Anta (Figure 4.11). The region is characterized by a flat plain (average elevation is 3320 m) surrounded by low rolling hills (3400-3600 m) to the north and high mountains (3750->4000 m) to the south. The plain itself is in the *kichwa* zone and includes the towns of Pucyura, Izcuchaca, Anta, Huarocondo, Zurite, and Ancahuasi (Figure 4.12).
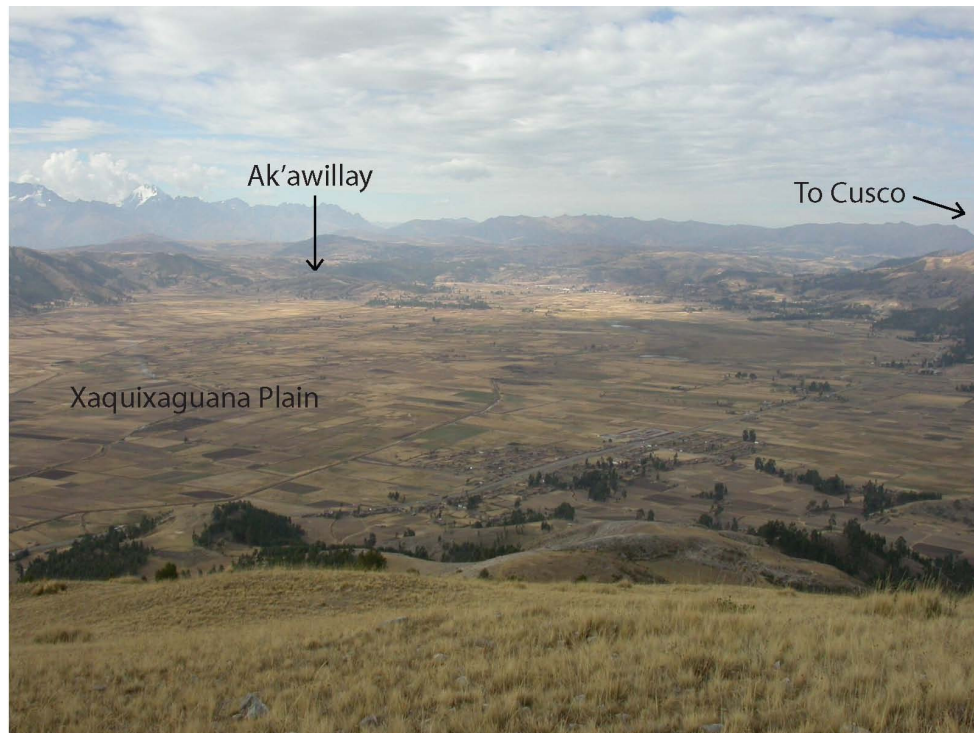
Figure 4.11. Ak'awillay and the Xaquixaguana Plain viewed from nearby mountains.
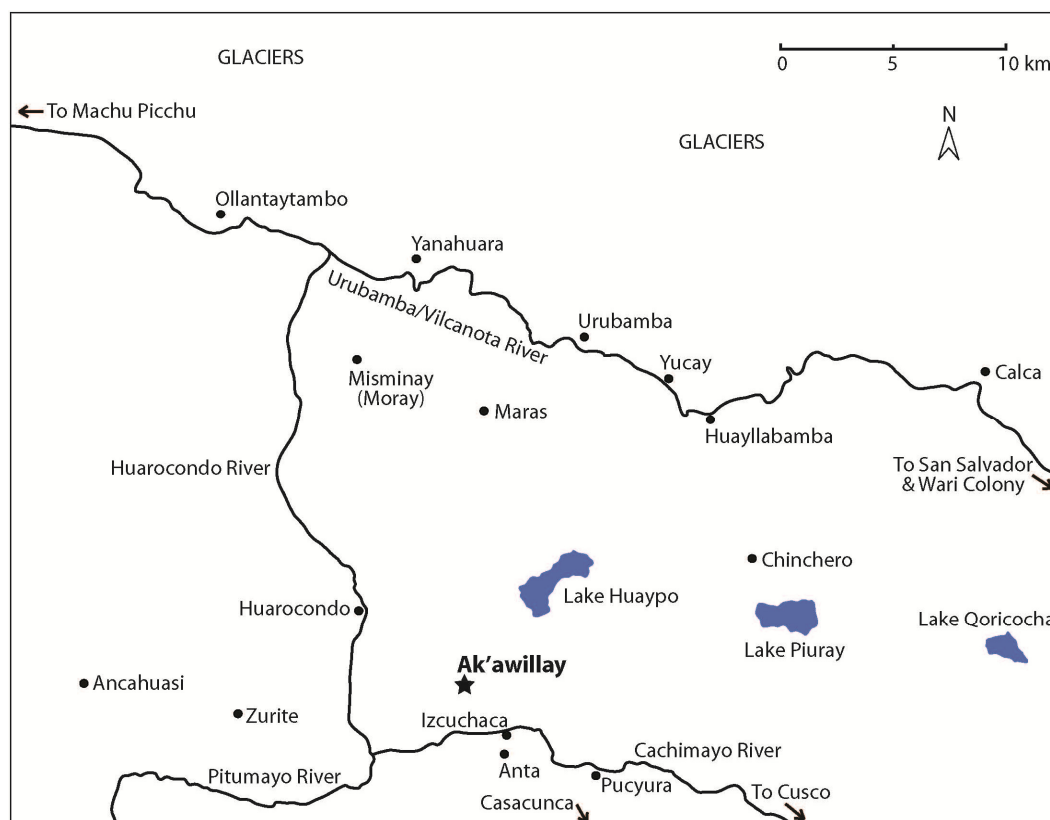
Figure 4.12. The Xaquixaguana Region showing the location of Ak'awillay, lakes and rivers, and modern towns mentioned in the text.

Excavations at Ak'awillay generated detailed and fine-grained information on the architecture, material culture, household activities, and public and mortuary ritual of the most important village of the Xaquixaguana Plain polity. Excavations of pre-Middle Horizon and Middle Horizon contexts revealed if there were changes at the household level from one period to the other that could not be detected by the regional surveys. Before presenting these results, the following sections introduce Ak'awillay and the methodology employed at the site.

Environmental Setting and Resources

The Xaquixaguana Plain extends to the east, south, and west of Ak'awillay. To the south and west is where the Inka road passed on its way to Chinchaysuyu (Figure 4.13). Today, the road to Abancay, Ayacucho, and Lima goes through the plain. Most of the area between 3320 and 3400 m (*kichwa*) is now used to grow maize and Old World crops such as broad beans, peas, wheat, and barley. Some lower sectors of the plain are marshy and agriculture is not always possible in these areas.
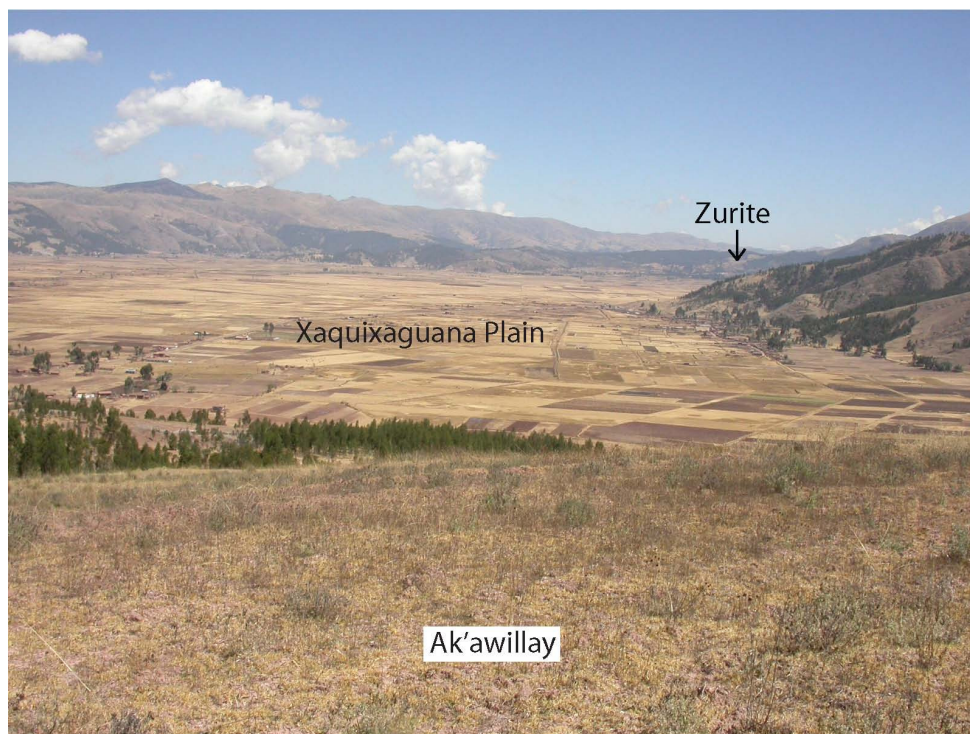
Figure 4.13. The view of the Xaquixaguana Plain looking west from the hilltop at Ak'awillay. The town of Zurite is visible to the west.
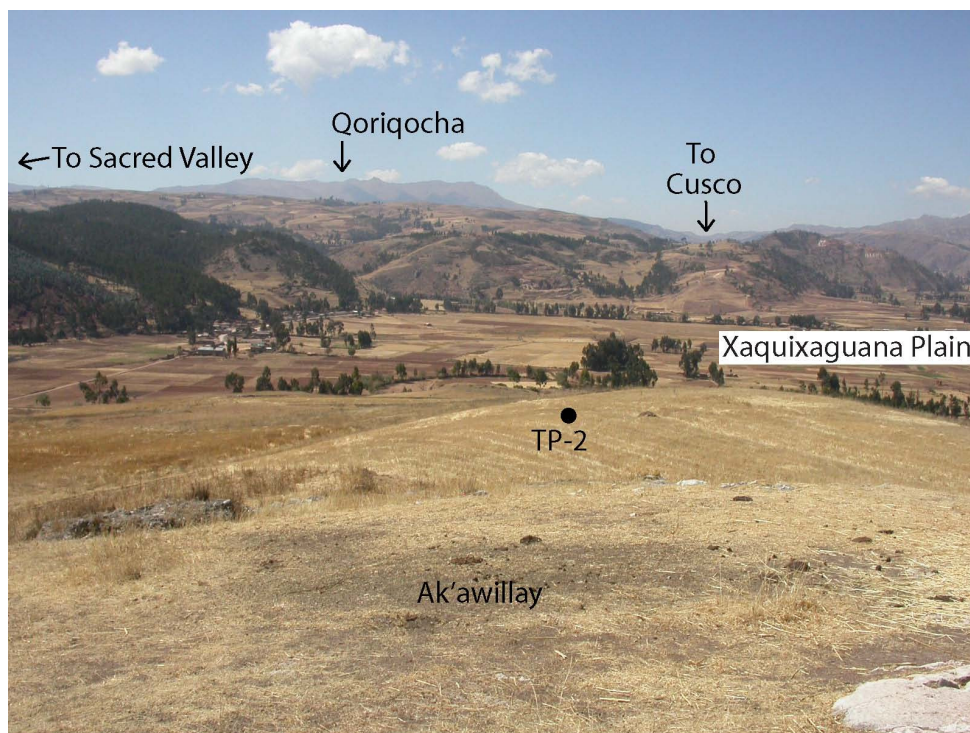
Figure 4.14. The view of the Xaquixaguana Plain looking east from the hilltop at Ak'awillay. The rolling hills (*suni*) and the Qoriqocha *puna* are visible to the east, and the entrance to the Cusco Basin is visible to the southeast.

A series of higher rolling hills (*suni*) appear to the east of Ak'awillay, where tubers (potato, *oca*, *ulluku*, etc.), quinoa, and Old World crops such as broad beans, peas, wheat, and barley are grown (Figure 4.14). The high plateau of the Qoriqocha *puna* is located farther to the east. This *puna* was used by the Inka to herd camelids and local herders still keep llamas and alpacas there (Covey 2006:40-41). The entrance to the Cusco Basin (Ticatica) is visible to the southeast, and on clear days the sacred glacier Ausangate appears in the same direction behind Ticatica.
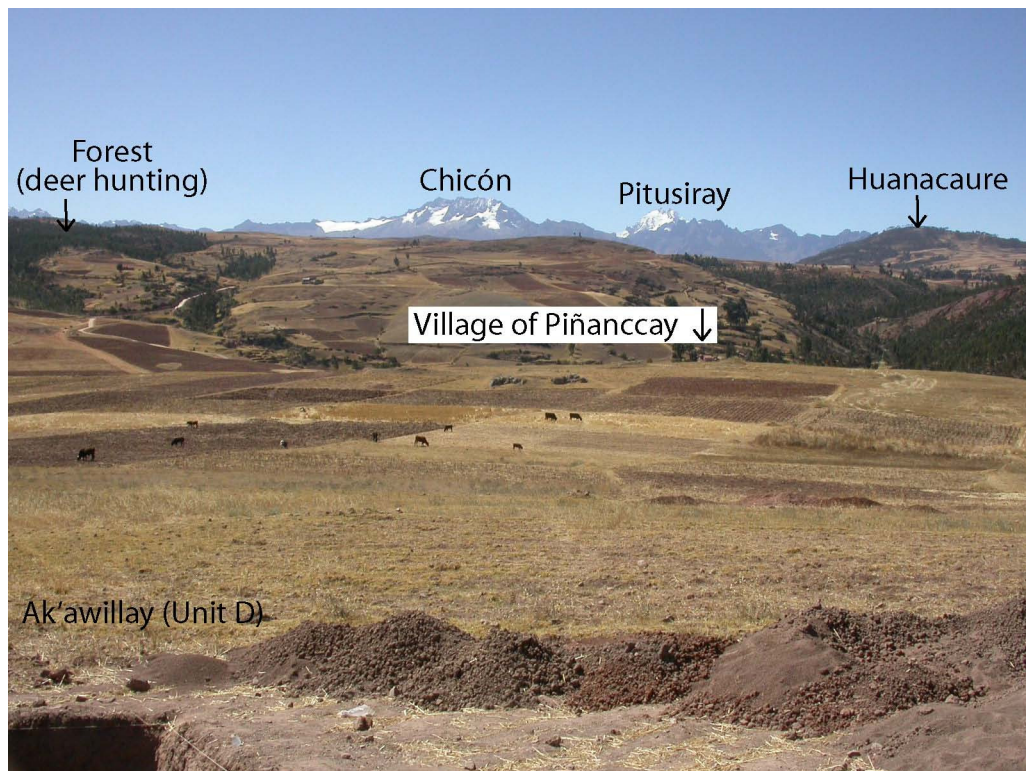
Figure 4.15. The view north and northeast of Ak'awillay from Unit D. The modern community of Piñanccay is located at the foothill of Ak'awillay. To the north of Piñanccay is a series of *suni* agricultural lands and small forests. Further north is Huanacaure (Lake Huaypo) and finally the Sacred Valley at the foot of the sacred glaciers Chicón and Pitusiray.

To the north and northeast of Ak'awillay is the modern community of Piñanccay, composed of approximately 60 families living mostly from agriculture, and occasionally from wages in Izcuchaca and as luggage carriers on the touristic trail to Machu Picchu (Figure 4.15). To the north of Piñanccay is another series of higher rolling hills mostly used for agriculture (*suni*). Deer hunting also used to be conducted in nearby forests. Behind the hill of Huanacaure

is Lake Huaypo (4.5 km from Ak'awillay), and at the foot of the sacred glaciers Chicón and Pitusiray is the Sacred Valley (16 km from Ak'awillay).

The site of Ak'awillay itself is located in a transition zone between the *kichwa* and the *suni*. Elevation varies between 3475 and 3505 m, which represent the upper limit of maize cultivation. In the past the hill was occupied and cultivation probably took place at the foothill of Ak'awillay. Today the land of Ak'awillay is divided among several communities, including Piñanccay on the northern side where the excavation took place. The members of these communities use the area to grow potatoes, quinoa, and Old World crops (broad beans, peas, wheat, and barley). Agriculture depends on rainfall and there is no irrigation canal on the hill. The planting season usually runs from September to November depending on the first rains, and harvest takes place from April through July. Once the crops are harvested, the fields are used to pasture animals (see Figure 4.15). Maize is not grown on the hill of Ak'awillay because of its elevation (higher risk of freezing) and the lack of irrigation canals; it is grown around the village of Piñanccay at approximately 3360-3400 m using modern and prehispanic canals.

There are no camelids in the immediate vicinity of Ak'awillay today, but people from the nearby Casacunca *puna* (see Figure 4.12) sporadically pass by Ak'awillay accompanied by their llamas. These people load their llamas with tubers (potato, *oca*, *ulluku*, etc.) and camelid meat and walk a few hours to get to the Xaquixaguana Plain and exchange their products for *kichwa* crops in the lower-altitude villages. Apart from camelids, deer are sometimes seen today on the forested hill north of Ak'awillay (see Figure 4.15), and deer was probably available in the area in the past as well. Finally, guinea pigs are abundant today in all Piñanccay households. They are eaten on special occasions and sometimes used in divinatory rituals. They are fed vegetables grown locally and alfalfa that their owners have to procure at the nearby markets.

In addition to plant and animal resources, Ak'awillay is close to a variety of rock outcrops that could be exploited in the past to procure raw materials for the production of stone tools (Carlotto et al. 1996; Mendívil and Dávila 1994). The village of Piñanccay is near several andesite outcrops around Pucyura, Huarocondo, Zurite, and Ancahuasi (see Figure 4.12). Other andesite sources include the areas around Maras, Misminay, and Ollantaytambo.

Sandstone and limestone are present in the vicinity of Ak'awillay and at several outcrops throughout the Xaquixaguana Plain and on the rolling hills north of the site. No chert outcrop is known for the area, but since chert appears in limestone formations it may also be present at a walking distance from Ak'awillay. Gypsum (*yeso* in Spanish and *qontay* in Quechua) that may

have been used to plaster houses is present at Ak'awillay itself and is common on the hills of the

Xaquixaguana area (Carlotto et al. 1996).

Other types of stone are available in the region at a greater distance from Ak'awillay.

Slate and quartzite are present at Ollantaytambo (23 km from Ak'awillay) and farther away

around Urcos (64 km from Ak'awillay) and Paucartambo (63 km from Ak'awillay) (Carlotto et al.

1996; Mendívil and Dávila 1994). Prehistoric roads likely followed topography and distances

were probably larger, especially in the case of Paucartambo.

Small clay sources are scattered throughout the area around Ak'awillay, and ongoing

sourcing studies should reveal which sources provided local potters with clay. Soil on and

around Ak'awillay is also suitable for adobe brick making, and today the residents of Piñanccay

make their own adobes for their houses.

Occupations of Ak'awillay

There is no visible architecture preserved on Ak'awillay and surface pottery is the best

indicator of the different occupations at the site. During the survey of the Xaquixaguana Plain

directed by R. Alan Covey, a team of archaeologists conducted an intensive collection of surface

materials at Ak'awillay. They first established a 50 m grid on the surface of the site and created

80 grid points; second, they collected all diagnostic pottery and stone tools within a circle of 4 m

in diameter at every grid point.

This preliminary work at Ak'awillay provided a map of ceramic style distribution and

density throughout the site. From this map the location and extent of each occupation became

visible (Figure 4.16). The Formative component was concentrated to the south on the hilltop

and upper hillside, and the Early Intermediate and Middle Horizon occupations were located on

the hillside. The lower hillside and foothill in the northern part of the site included mostly Late

Intermediate and Inka pottery.

From this map I then selected areas for test pits and excavations (Figure 4.17). Six test

pits in the northern part of Ak'awillay (B, TP-4, TP-5, TP-6, TP-7, and TP-8, for a total of 9 m^2)

contained archaeological material only in the upper 10 cm, suggesting that surface pottery in

this area washed in from the hilltop and upper hillside and that no *in situ* occupation took place

there. An Inka and a Late Intermediate occupations seem to be concentrated around the

modern community of Piñanccay, where local villagers often find Inka pottery (sometimes

complete vessels) when they build their houses and work their fields. Additional test pits and

excavation units indicated that the Late Formative, Early Intermediate, and Middle Horizon occupations were limited to the hilltop and upper hillside (see Figure 4.17).
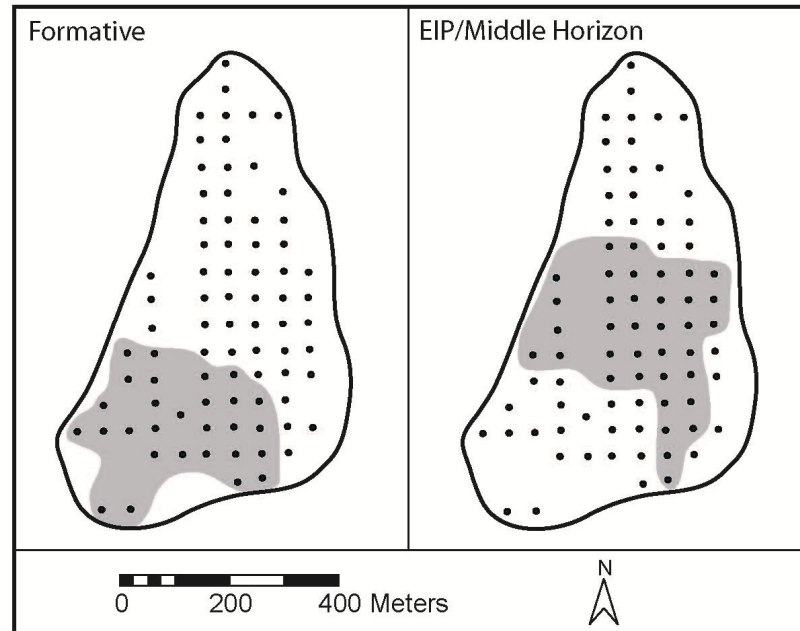
Figure 4.16. Ak'awillay showing the 80 grid points of the intensive surface collections. The shaded areas correspond to the Formative component (left) and to the Early Intermediate Period/Middle Horizon components (right).

Excavation Strategy

With the help of a team of archaeologists and local workers I excavated seven units (A, C, D, E, F, G, and H for a total of 261 m^2) and nine test pits (B and TP-1 to TP-8 for a total of 34 m^2) on the site of Ak'awillay, for a total excavated area of 295 m^2 (457 m^3; Figures 4.17 and 4.18). All units and test pits are located on the hillside, except for one test pit that was dug on the hilltop. Digging on the hilltop was limited because these lands belong to another community whose members were not involved in the project.

These locations were chosen for excavation because of the presence of specific ceramic styles on the surface. In some cases, the intensive surface collections had shown the presence of numerous fragments of Qotakalli, Muyu Urqu, and Araway pottery; these units were chosen because they would provide Middle Horizon contexts. In other cases, units corresponded to grid points with only Derived Chanapata pottery; these units were chosen because they would provide good comparative Late Formative contexts.
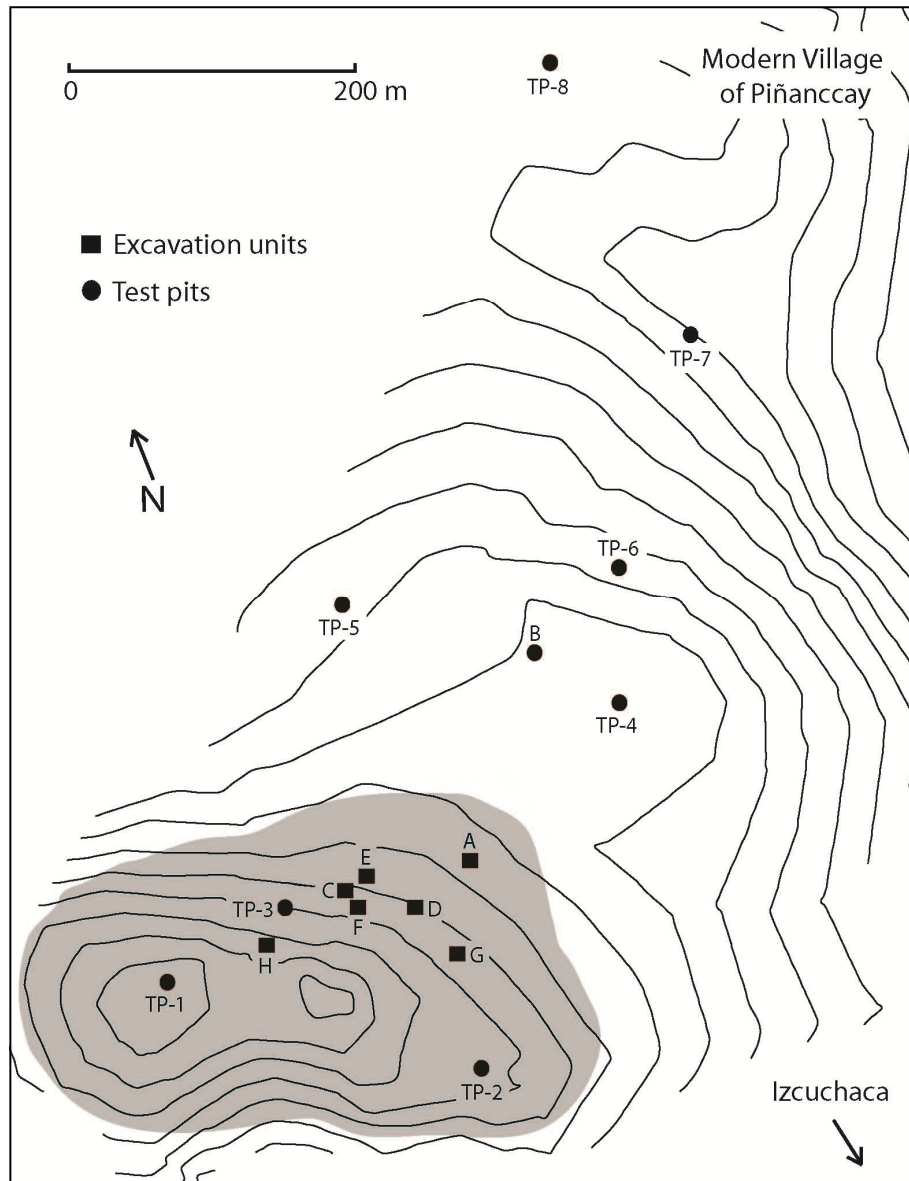
Figure 4.17. The site of Ak'awillay showing the excavation units and test pits. The shaded area corresponds to the site's approximate boundary during the Middle Horizon. Lines represent 5 m contour levels; the highest point is close to TP-1 at 3505 m.

General stratigraphy was similar from one unit to another. Every excavation started by removing a 10-20 cm thick layer of loose top soil that contained abundant eroded artifacts; these materials have been moved around by plows and were not studied in detail. The next layer consisted of semi-compact brown dirt; this layer did not include any architecture but contained artifacts that had also been moved around by plows. The next layer consisted of loose to semi-compact, brown to dark brown dirt. The thickness of this layer varied greatly from

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one unit to another. This layer included all the architecture and features that will be presented in the next chapters; the artifacts from this layer were thoroughly inventoried, analyzed, drawn, and photographed. The last layer consisted of very compact red clay that corresponded to sterile soil. This layer did not include any material and represented the end of the excavation in all units.
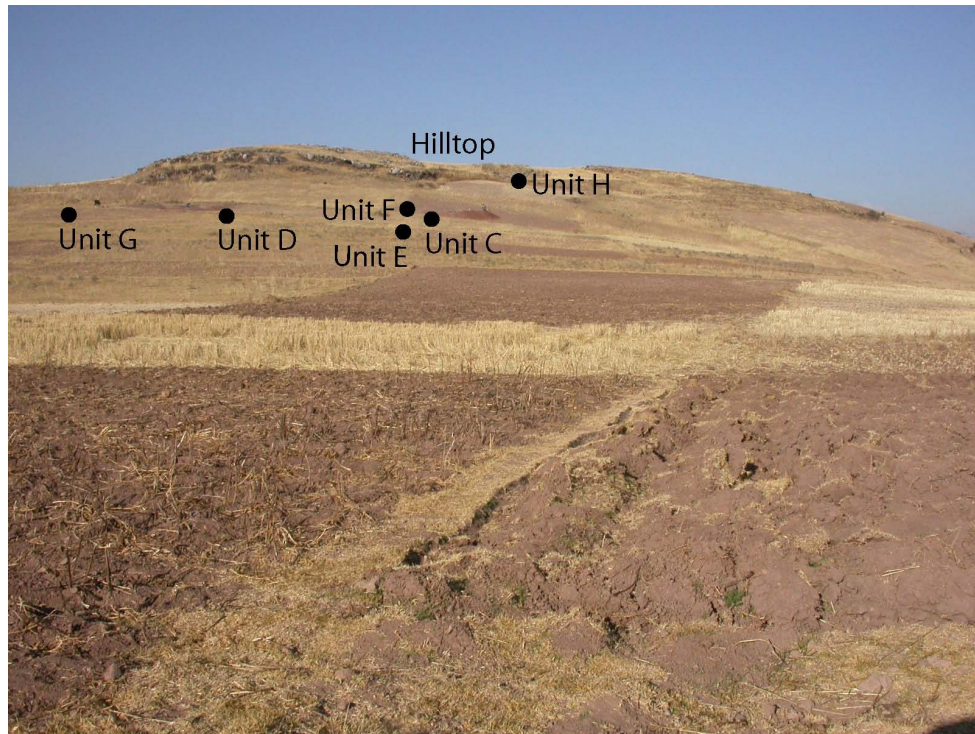
Figure 4.18. The site of Ak'awillay showing the main excavation units.

Due to the huge quantity of pottery fragments recovered during excavation, the tiniest sherds were counted, weighed, and left on the site (a total of 789,037 fragments smaller than a piece of 1 sol, a Peruvian coin the size of a Canadian or U.S. quarter). All other pottery fragments were brought back to the lab. Non-diagnostic sherds were cleaned, counted, weighed and finally reburied at the site at the end of the excavation (317,751 undecorated body sherds weighing 3.6 metric tons). Diagnostic fragments (94,141 rims, decorated body sherds, handles, and bases weighing 1.5 metric ton) were studied in detail. Apart from pottery, local geologist Ing. Ruperto Benavente Velásquez assisted in the identification of stone types, Dr. Ryan Williams at the Field Museum Elemental Analysis Facility sourced the obsidian, and Dr. Valerie Andrushko conducted the osteological analysis of the mortuary remains.

Chronology of Excavated Houses and Other Spaces

Excavations at Ak'awillay uncovered several structures dating to the Late Formative, Early Intermediate, and Middle Horizon periods (Figure 4.19). The earliest house excavated at Ak'awillay is House 1 (Late Formative; Unit H). Slightly later, the residents of Ak'awillay occupied House 2 (Late Formative; Unit G), followed by House 3 (Early Intermediate; Unit G). House 1 was then reused as a community midden in the Early Intermediate.

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┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│   │  AD 1000                                                              │
│  Middle Horizon                                                           │
│   │  AD 800       House 7                                                  │
│   │                                                                       │
│   │               House 4, House 5, House 6, Kitchen, Public Building, Cemetery │
│      AD 600                                                               │
│   │               Community Midden                                        │
│  Pre-Middle Horizon  AD 400                                               │
│   │               House 3                                                 │
│   │  AD 200                                                               │
│   │               House 2                                                 │
│   │  AD 1                                                                 │
│   │               House 1                                                 │
│      200 BC                                                               │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
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Figure 4.19. Chronological relationship of the excavated houses and other contexts at Ak'awillay.

Several contexts were occupied during the Middle Horizon. In the Early Middle Horizon the villagers of Ak'awillay built Houses 4 (Unit C), 5 (Unit F), and 6 (Unit F); occupied the kitchen (Unit D) and the public building (Unit G); and buried their dead in a small cemetery (Unit H). In the Late Middle Horizon the residents of Ak'awillay built House 7 (Unit F). The following chapters (5-8) describe each of these contexts in detail.

Chapter 5

PRE-MIDDLE HORIZON HOUSES AT AK'AWILLAY

Before the Middle Horizon, Ak'awillay was a growing village and an emerging chiefly center. Starting in the Late Formative (500 BC-AD 200) and continuing into the Early Intermediate (AD 200-600), Ak'awillay attracted individuals and families from neighboring hamlets and villages, rapidly becoming one of the largest settlements in the Xaquixaguana Plain. Its new residents built their houses on the north side of the hill while the lower areas around the hill of Ak'awillay were probably reserved for agriculture.

I excavated three pre-Middle Horizon houses and one pre-Middle Horizon midden at the site. Houses 1 and 2 correspond to the latter part of the Late Formative and House 3 dates to the Early Intermediate. The midden was a communal dump site that was in use from the end of the Late Formative until sometime during the Early Intermediate.

House 1

House 1 (Figure 5.1) was on the upper part of the hill of Ak'awillay 15 m below the summit (see Unit H on Figures 4.17 and 4.18). It had one preserved occupation floor. The villagers of Piñanccay who cultivate this hill today cannot use modern tractors in this area of Ak'awillay, suggesting that agricultural activities have not disturbed the pre-Middle Horizon contexts in the recent past.

The southern part of House 1 lay beneath a very thick layer of fill (> 1 m) and time constraints prevented me from digging it completely. In addition, during the Middle Horizon the residents of Ak'awillay placed eight graves in the fill and through the floor of House 1 (see Chapter 8); this activity destroyed the northern part of the House 1 floor. Despite these

limitations, I was able to expose an area of approximately 2.5 by 5 m (12.5 m^2) of this dwelling. Apart from the house itself, I excavated an area immediately to the northwest. There, the terrain was lower and used as a dump or area for discard by the residents of House 1.
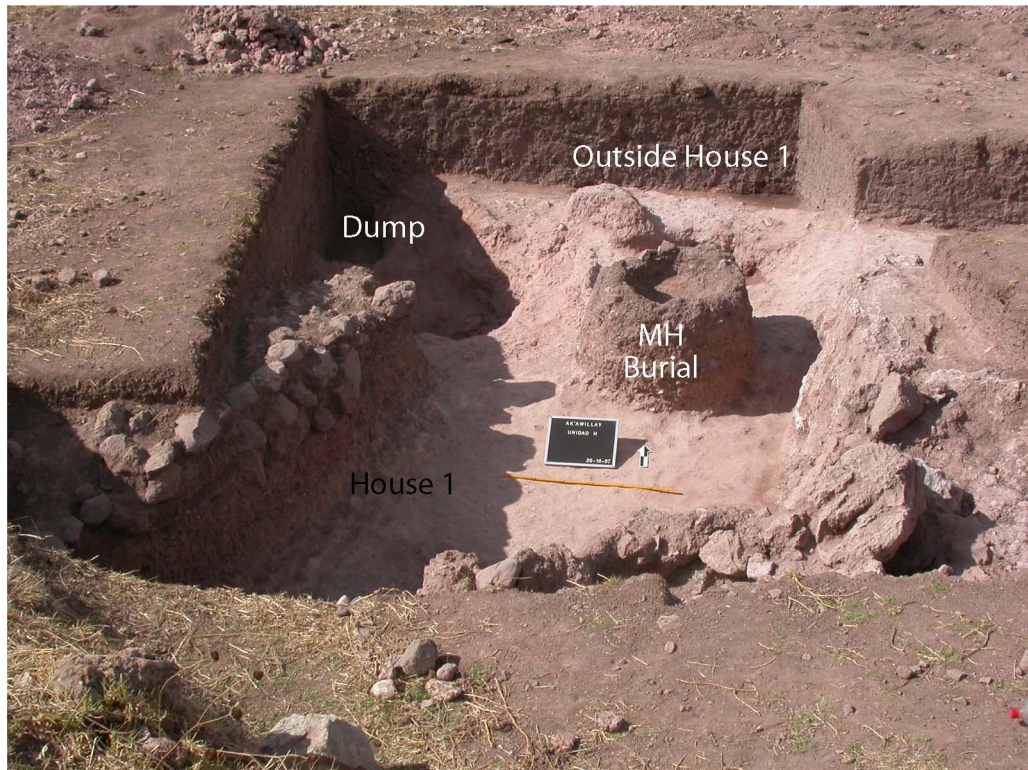
Figure 5.1. House 1, a Late Formative semi-subterranean house. This photograph was taken at the end of the excavation, showing sterile level. North is at the top.

Dating House 1

All the pottery from House 1 belonged to the Derived Chanapata style. Charcoal found in the hearth associated with the occupation floor of House 1 yielded an AMS date of 2071 ± 37 BP (sample No. AA81955; see Appendix B for more details on AMS dates from Ak'awillay). The corresponding calibrated two-sigma range is 186 BC-AD 3. This date is consistent with the Late Formative period.

Architecture and Layout

House 1 is an irregularly-shaped semi-subterranean dwelling (Figure 5.2). Its residents used a combination of techniques to build it. They first dug down on the sloping terrain of the hill and prepared a leveled floor surface just above bedrock. The vertical space between the
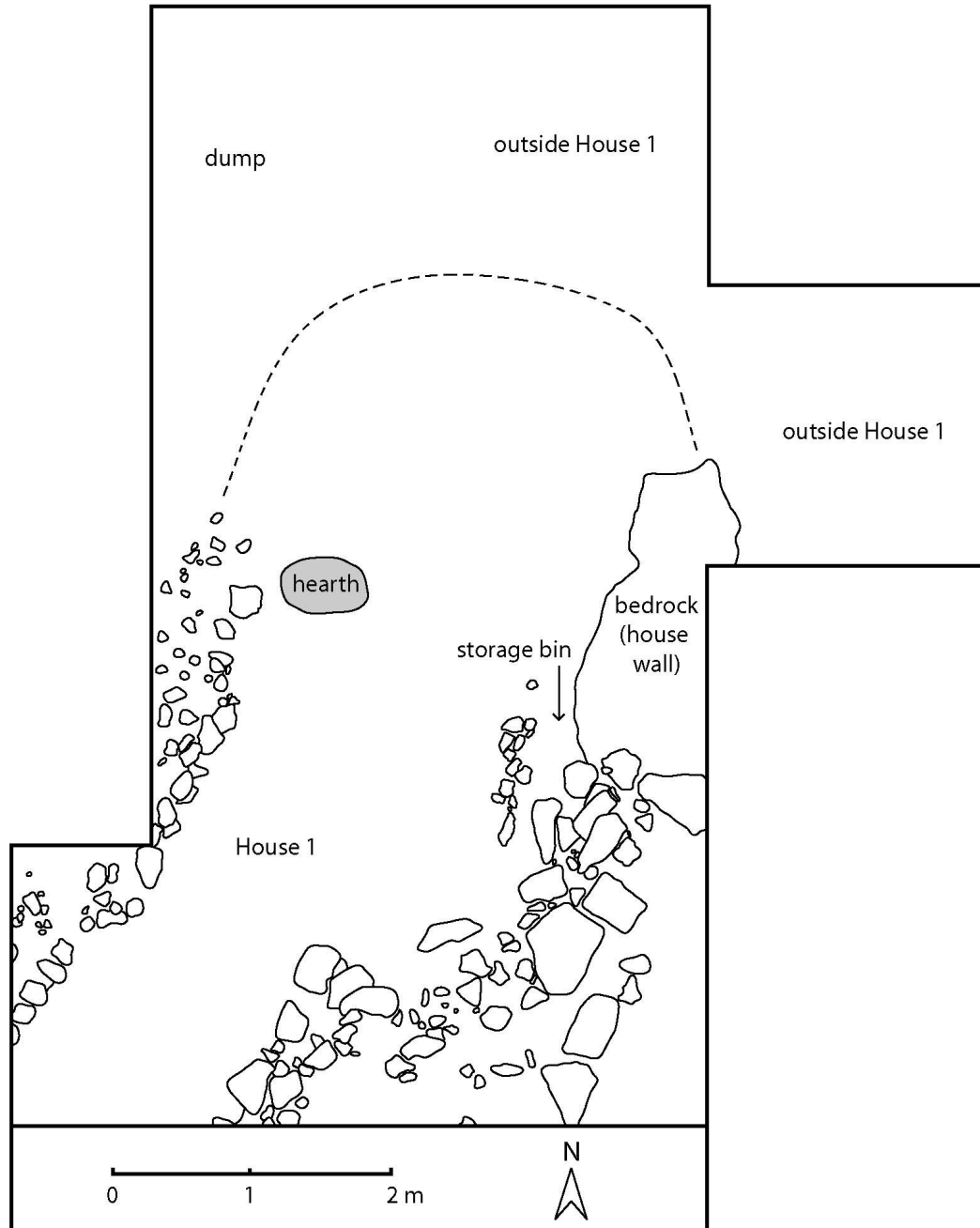
Figure 5.2. House 1, a Late Formative irregularly-shaped semi-subterranean house. The dashed line represents the approximate northern limit of House 1. We were not able to excavate the southern portion of the house because it is covered with a very thick layer of fill.

prepared floor and the surface of the terrain was used as a wall. This sunken wall was approximately 80-90 cm high and consisted of dirt on the western side and bedrock on the eastern side. Those who built this house then put one to three rows of stones on top of these natural walls (Figure 5.3). Finally, on top of these stones they could have placed cane walls and

a thatched roof or simply a thatched roof. The entrance to the house was probably on its north side, but this part was destroyed by the Middle Horizon cemetery.

Figure 5.3. The western wall of House 1, showing one to three rows of stones on top of the natural dirt wall.

House 1 contained one occupation floor that was used intensively for domestic purposes. The following section describes in detail the features and items that we recovered from this floor.

Occupation Floor

The residents of House 1 prepared their floor on top of a leveled layer of reddish clay that naturally occurred above bedrock. This layer of reddish clay contained very few artifacts that had been trampled into it. The floor itself consisted of compact brown soil. It was preserved between the western and eastern walls of the house, but was destroyed on its northern side.

On the house floor was an accumulation of loose and semi-compact brown soil that contained animal bones, pottery, and objects made of stone, ceramic, and bone. The residents of House 1 did not refloor the living surface of their house and probably swept it clean periodically. They discarded some objects in a small temporary dump immediately to the north of their house (see below), but likely tossed most of their trash in middens and abandoned pits yet to be discovered farther away from House 1. Despite the sweeping, some dirt, ash, and objects accumulated on the house floor until abandonment. Most items found on the floor, however, probably date to a period shortly before the abandonment of House 1 (e.g., Arnold 1990; Flannery and Marcus 1994:25-37; Hayden and Cannon 1983; Stahl and Zeidler 1990).

The bulk of items recovered from the floor of House 1 correspond to pottery fragments (Table 5.1). Most of the rims (72%) belong to undecorated Derived Chanapata vessels. Among these, the olla was the most common vessel form, followed by the bowls and then the jar. Also present were lids probably used to cover gourd containers and jars (lids and jars have the same mean rim diameter), neckless ollas, and plates.

Table 5.1. Inventory of pottery rims from the floor and associated features of House 1*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Derived Chanapata, undecorated	86 (24)	24 (20)	39 (13.5)	6	206 (15)	148 (11.5)	78 (15, 24)	92 (11.5)	15 (20)	27	721
Derived Chanapata, pattern burnishing	137 (25)	23 (24)			15 (18)	5	13	5	2	5	205
Derived Chanapata, polished red slip	10 (23)	1	1		1	10 (11.5)			2		25
Derived Chanapata, pattern burnishing + polished red slip	17	2								1	20
Derived Chanapata, painted-incised	3	1			1	1				1	7
Derived Chanapata, incised/punctuated	5					2					7
Derived Chanapata, other decoration	4	2									6
TOTAL Derived Chanapata, decorated	176	29	1	0	17	18	13	5	4	7	270
Other		1				1		1			3
GRAND TOTAL	262	54	40	6	223	167	91	98	19	34	994

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution). Two numbers indicate a bimodal distribution.

Among the decorated rims, pattern burnishing was by far the most common decorative technique. House 1 did not contain any vessel decorated with painted motifs; this stands in contrast with earlier Formative contexts in the region (Davis 2010; Rowe 1944). Decoration of any kind occurred mostly on bowls, which were presumably used for serving and eating. Most bowls, whether decorated or not, were large (mean rim diameter = 24 cm), but the necked and incurving bowls were smaller (mean rim diameter = 13.6 cm).

Table 5.2 presents the chipped and ground stone from House 1. The residents of House 1 used a variety of stone types to make their tools. Sandstone, quartzite, and andesite were the most common, but many other types of stone were present in smaller proportions. Chipped stone mostly consisted of unmodified flakes and débitage, and the only tool is an obsidian borer. Among the ground stone, the most common tool category was abrader, presumably used for smoothing and burnishing pottery (Figure 5.4a). Other types of ground stone included hammers, undifferentiated hand stones, and flat slabs.

Table 5.2. Inventory of chipped stone and ground stone from the floor and associated features of House 1

	Ande-site	Quart-zite	Sand-stone	Lime-stone	Rhyo-lite	Schist	Chert	Gra-nite	Obsi-dian	Other	TOTAL
borer									1		1
unmodified flakes	10	7	9	4	4		4	1		2	41
débitage		2	3	2		1		1			9
cores		1									1
TOTAL chipped stone	10	10	12	6	4	1	4	2	1	2	52
pestles								2			2
hammers	1		1					1			3
undiff. hand stones		1	2								3
flat slabs			2								2
abraders	1	1	5							1	8
TOTAL ground stone	2	2	10	0	0	0	0	3	0	1	18
GRAND TOTAL	12	12	22	6	4	1	4	5	1	3	70

Other objects found on the floor of House 1 included various ceramic items: two spoons, two discs (unknown function), one weaving shuttle (the weft yarn is held by the weaving shuttle; see Figure 5.16g-i for similar examples), five abraders, two zoomorphic figurines, four anthropomorphic figurines, and one flute (Figure 5.4b-d). Other items included a bone snuff tube, two small maize cobs, and several animal bones.

One pottery fragment had a hard, thick white deposit on its interior wall; this deposit is probably lime. Hardened lime was also found by itself and unattached to any artifact, but its shape indicates that it was once stuck to the bottom of a ceramic vessel or gourd container

(Figure 5.4e). The same hardened white substance was found in other parts of Cusco (Davis 2010:137-138) and in household contexts in the Titicaca Basin (Bermann 1994:75).
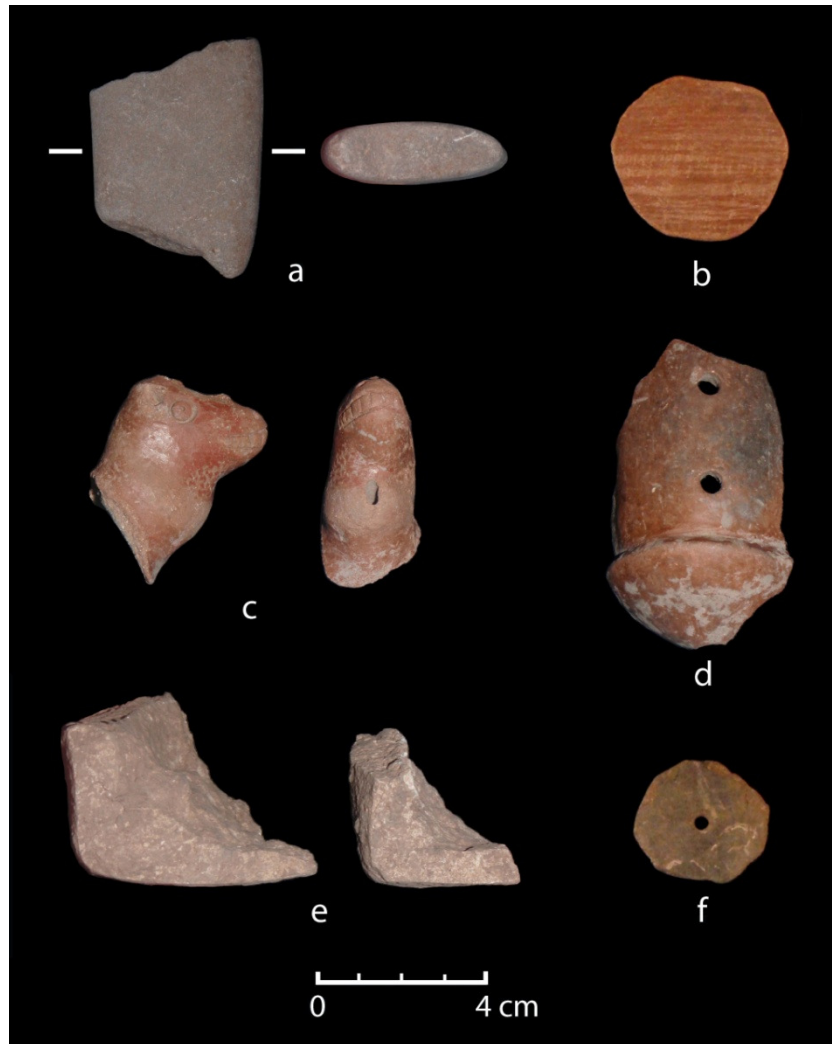
Figure 5.4. Objects from House 1: (a) a stone abrader; (b) a ceramic disc made from a pottery fragment; (c) a ceramic zoomorphic figurine (camelid); (d) a ceramic flute; (e) hardened lime that was once stuck to the bottom of a ceramic vessel or gourd container; and (f) a ceramic spindle whorl made from a pottery fragment.

Hearth

In the west central portion of House 1 we found a layer of ash mixed with some loose brown soil. This layer was 25 cm thick and corresponded to a semi-circular hearth 60 x 38 cm (see Figure 5.2). The hearth did not have a stone structure around it but did have one burned stone in its center. More ash was found along the western wall of House 1 south of the hearth;

it is possible that the residents temporarily threw out the extra ash in this sector of the house, or that they used this entire sector of their house for cooking, moving the location of the fire and cooking pots within this sector depending on their needs.

Figure 5.5. A stone zoomorphic figurine found near the hearth of House 1.

The hearth contained charcoal (including the sample that produced the AMS date), small unburned and burned stones, and burned clay. Around the hearth, we found large pottery fragments corresponding to bowls, jars, lids, ollas, and neckless ollas. Most of these fragments were undecorated. This area also contained unmodified flakes made from different kinds of stone, débitage, hand stones, a ceramic weaving shuttle, a stone zoomorphic figurine (Figure 5.5), and several animal bones.

Storage Feature

In the east central portion of House 1 we recovered a line of stones that delimited a storage feature (see Figure 5.2). One row of stones was placed along a north-south axis parallel to the eastern wall of the house. These stones created a space (of approximately 1 m long x 30 cm wide) that was close to the hearth and possibly used to store goods used in food preparation. The storage feature was filled with light brown, semi-compact dirt mixed with several objects. We recovered large fragments of bowls, ollas, jars, neckless ollas, lids, and plates. Some of the ollas have a large diameter (≥ 24 cm) and probably held a large volume of liquid or food. Stone items included unmodified flakes made from different types of stone, débitage, a pestle, and an abrader. Other items included two ceramic anthropomorphic figurines, a ceramic spindle whorl (Figure 5.4f), a chunk of unfired clay, and animal bones (including camelid vertebrae and guinea pig mandibles).

Dump

The small dump immediately to the north of House 1 was contemporaneous with the house occupation. It was a layer 47-85 cm thick that followed the slope of the terrain. This layer contained loose brown dirt, semi-compact and compact brown dirt, red and pink clay, and abundant artifacts. The diversity in soil types might be consistent with different trash disposal episodes. The residents of House 1 presumably used this outdoor area as a temporary dump to dispose of their trash; periodically, they removed large objects and took them to bigger trash disposal locations elsewhere in the village.

Items recovered in this dump were similar to the ones found in House 1. Pottery fragments (n=182) corresponded to bowls, ollas, jars, lids, neckless ollas, and plates. All belong to the Derived Chanapata style (80% undecorated), except for fragments from a local undecorated jar and a local decorated jar. Chipped stone items included unmodified flakes made from different kinds of stone, a core, and débitage. Ground stone consisted of four pestles, a hammer, and two undifferentiated hand stones. Other items from the dump included two ceramic anthropomorphic figurines, one ceramic cone (unknown function; see a similar example on Figure 6.3b), a chunk of fired clay, and a piece of quartz.

Abandonment

The AMS date from House 1 and the absence of post-Late Formative pottery styles suggest that House 1 was abandoned towards the end of the Late Formative period. After House 1 was abandoned as a dwelling, the people of Ak'awillay used this space in two different ways. First, not long after the abandonment of the dwelling, House 1 was used as a community midden to dispose of part of the village's trash (see the "Community Midden" section in this chapter). Second, the midden was abandoned and the area was reused as a small cemetery during the Middle Horizon (see Chapter 8).

House 2

House 2 was an irregularly-shaped dwelling approximately 130 m northeast of House 1 (see Unit G on Figures 4.17 and 4.18). House 2 was 2 m below the present surface of Ak'awillay and had one preserved occupation floor dating to the Late Formative period. The excavation

team found House 2 at the northern edge of a deep excavation unit that also produced House 3 (see next section) and the public building (see Chapter 8).

Dating House 2

Like House 1, all the pottery from House 2 belonged to the Derived Chanapata style. Charcoal associated with an offering placed below the floor at the moment of construction of House 2 yielded an AMS date of 1898 ± 37 BP (sample No. AA81954). The corresponding calibrated two-sigma range is AD 47-221 (96.2%) and AD 26-42 (3.8%). This date is consistent with the end of the Late Formative period.
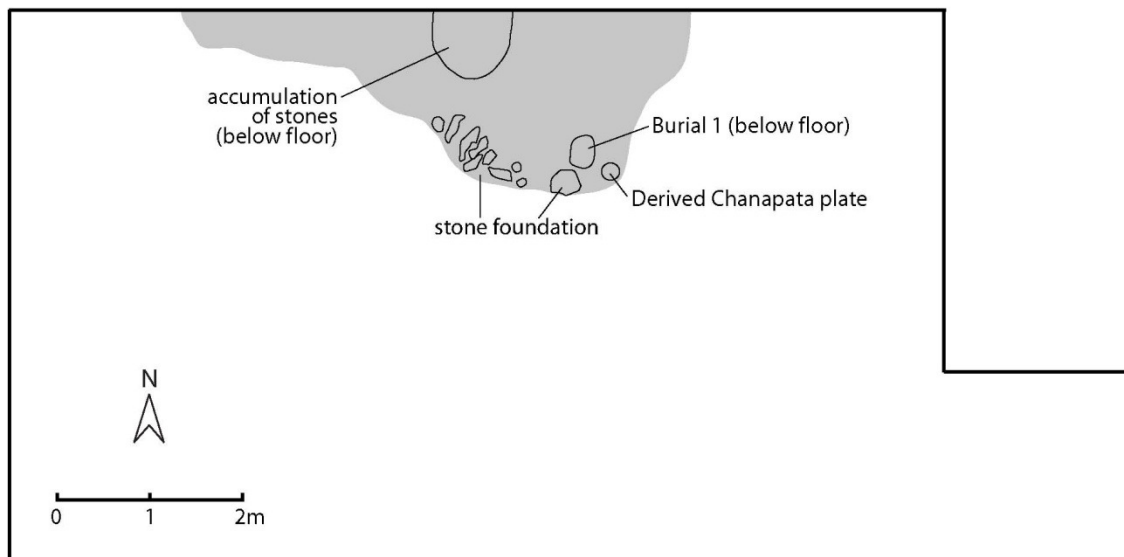
Figure 5.6. House 2 and its associated features. The shaded area shows the extent of the floor of House 2.

Architecture and Layout

House 2 had an irregular shape and measured 5 x > 2 m (Figures 5.6 and 5.7). At the moment of construction, the future residents of House 2 placed two offerings below their house floor. The first offering consisted of an accumulation of stones and the second was a burial (see next section). The residents of House 2 then buried these offerings and leveled the terrain with a thick layer (60-115 cm) of fill. This fill consisted of loose and semi-compact brown soil mixed with small stones, numerous Derived Chanapata pottery fragments, flakes and débitage, heavily used grinding stones, and broken ceramic objects.

Figure 5.7. House 2, showing sterile level, the stone foundation, and the location of the accumulation of stones buried below the floor (excavated). Stones from the foundation of House 3 appear in the bottom left. North is to the right.

Once the area was leveled, those who built House 2 then prepared a compact floor surface and added a stone foundation. During excavation we only identified foundation stones on the southern side of the dwelling, but more stones were likely present at the moment of occupation. Stones could have been reused in another building or dismantled at the moment of constructing House 3 close to House 2. The construction of House 2 was presumably completed with the erection of cane, clay, or adobe walls on top of the stone foundation.

Offerings below the Floor

Accumulation of Stones

At the probable center of House 2 the excavation team found an accumulation of stones (Figure 5.8). Stones were arranged in a circle and piled on top of each other to a height of 85 cm. These stones were mixed with dirt, Derived Chanapata pottery fragments, a utilized obsidian flake, a bone bead, bird bones, and charcoal (including the sample that produced the AMS date). Nothing was found below these stones, but perishable items such as coca leaves

and food could have been placed under the stones and not be preserved. It is unclear at the moment what the accumulation of stones represents but it was probably some kind of offering.

Figure 5.8. The accumulation of stones that was buried below the floor of House 2 as an offering: before excavation (left) and after excavation (right). Part of the feature can be observed in the northern profile of the excavation unit (right).

Burial 1

Below the floor in the southeast part of House 2 was Burial 1 (Figure 5.9) (see Appendix C for more details). This burial contained a child between 1 and 2 years of age. The child's bones were in fair condition. The skeleton was incomplete and it is impossible to know the original position and orientation of the body. This child had no dental pathology but skeletal pathologies indicate that this child was suffering from malnutrition or disease.

This child was not placed in a pit but seems to have been placed on sterile soil and buried with fill at the moment House 2 was constructed. This child may have been a member of the family that lived in this dwelling. Two fieldstones were placed to the west of the body, but the child was not associated with any offering. Fill surrounding the burial was no different from the rest of the fill below the floor of House 2 and contained semi-compact dirt mixed with Derived Chanapata pottery fragments and a small ceramic disc.

Figure 5.9. Burial 1, below the floor of House 2, contained the remains of a child between 1 and 2 years of age. Fieldstones were placed to the west of the body.

Occupation Floor

The floor of House 2, prepared directly on top of the fill and leveled surface, consisted of compact dark brown soil. We did not find any features associated with the floor in the area we excavated, but we collected a few items, described below.

Floor Activity

On the floor of House 2 was an accumulation of loose dark brown soil that contained some objects. Most of these items were pottery fragments, all of which belonged to the Derived Chanapata style (Table 5.3). Like House 1, about three-quarters of the pottery rims were undecorated. Among these, the olla and the jar were the most common vessel forms. Among the decorated rims, pattern burnishing was by far the most common decorative technique, followed by polished red slip. Decorated vessels mostly corresponded to bowls and jars, which were presumably used for serving, eating, and drinking. Like House 1, most bowls were large unrestricted vessels (mean rim diameter = 25 cm) but a few smaller, restricted bowls were also present in House 2 (mean rim diameter = 12.5 cm). One complete Derived Chanapata

plate decorated with two intersecting pattern burnished lines was found in the southeastern section of House 2 (Figure 5.10a).

Table 5.3. Inventory of pottery rims from House 2*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Derived Chanapata, undecorated	14 (24.5)	6	14 (12.5)	1	62 (16)	54 (11)	17 (16)	7	3	4	182
Derived Chanapata, pattern burnishing	27 (26)	3			3		2	1	1		37
Derived Chanapata, polished red slip	5					7				1	13
Derived Chanapata, other decoration	1	1		1		3					6
TOTAL	47	10	14	2	65	64	19	8	4	5	238

* Numbers in parentheses correspond to mean rim diameter (cm). Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).

Figure 5.10. Ceramic objects from House 2: (a) a Derived Chanapata plate decorated with two intersecting pattern burnished lines; (b) a spoon fragment; and (c) the fragment of an anthropomorphic figurine.

A limited number of stone items were found in House 2, including an andesite flake, a sandstone hammer with use wear on both ends, and a sandstone abrader. Other items included a ceramic spoon, an anthropomorphic figurine, a zoomorphic figurine, and a weaving shuttle (Figure 5.10b, c).

Abandonment

The AMS date from House 2 indicates that this dwelling was occupied towards the end of the Late Formative. The absence of Early Intermediate pottery also suggests that this house was abandoned at the very end of the Formative period or at the beginning of the Early Intermediate before painted pottery from the Cusco Basin and surrounding area appeared at Ak'awillay. Upon abandonment, the residents of House 2 left some used and broken items on the floor and probably took most of the useful items with them. House 2 was later intentionally filled with dirt and trash when the people of Ak'awillay decided to level the area to construct a public building (see Chapter 8).

House 3

House 3 lay immediately to the east of House 2 (compare Figure 5.11 with Figure 5.6; see Unit G on Figures 4.17 and 4.18). House 3 was a little higher on the hill slope and was 1.65 m below the present surface of Ak'awillay. It had one preserved occupation floor dating to the beginning of the Early Intermediate.

Dating House 3

Like Houses 1 and 2, all the pottery from House 3 corresponded to the Derived Chanapata style. However, some pottery fragments found immediately outside this dwelling belong to the local decorated and undecorated styles, which suggests that House 3 was built and occupied slightly later than House 2. House 3 was likely occupied at the beginning of the Early Intermediate when the residents of Ak'awillay were starting to produce or obtain new pottery types that would later become common.
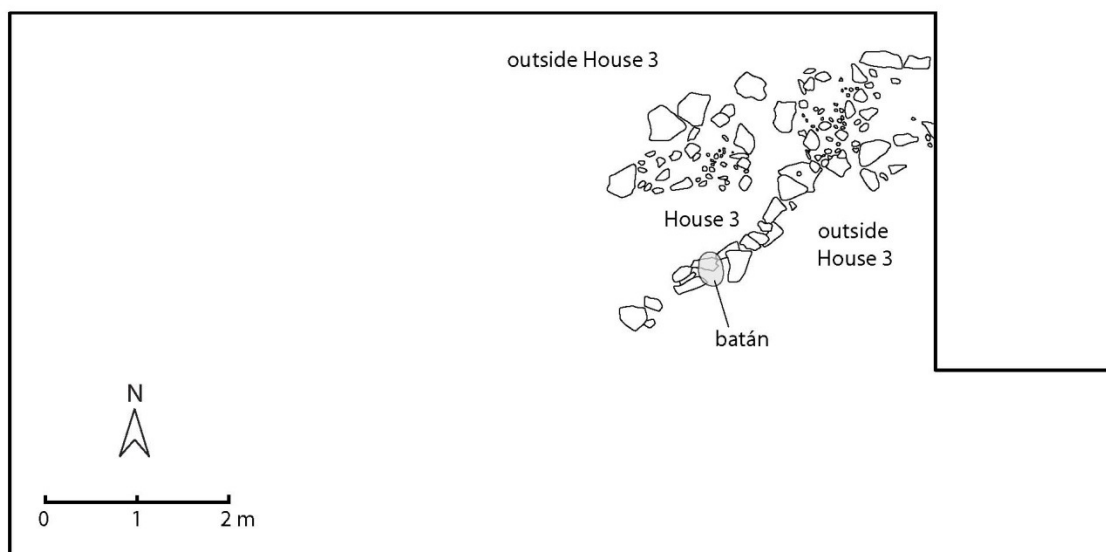
Figure 5.11. House 3.

Figure 5.12. House 3, showing the curved foundation (left) and the collapsed stones (right). North is at the bottom right.

Architecture and Layout

It is not possible to know the original shape of this dwelling because some foundation stones were dismantled in prehistory and others had collapsed (Figure 5.11). The best preserved segment of the stone foundation (to the south) is slightly curved, suggesting that House 3 may have had a circular or oval shape (Figure 5.12). The area of House 3 that we excavated is approximately 2.5 x 1.5 m.

Before building House 3, its future occupants first leveled the terrain by adding a layer of fill (30-40 cm thick) on top of the natural soil. This fill consisted of loose and semi-compact dirt mixed with pottery fragments and broken objects. They then prepared a compact floor surface and built a stone foundation. The excavation team found a piece of burnt plaster near one of the stones, suggesting that the walls of this dwelling were made of cane (or some other perishable material) and plaster.

Occupation Floor

The floor of House 3 consisted of a compact surface of brown clayey soil. We did not find any features in the area we excavated, but we did find some items that were left there upon the abandonment of the dwelling.

Table 5.4. Inventory of pottery rims from House 3*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Derived Chanapata, undecorated	5	2	5		16 (15)	17 (11)	6	9	3	3	66
Derived Chanapata, pattern burnishing	9	2			2		2	1			16
Derived Chanapata, polished red slip	3				1	1					5
Derived Chanapata, other decoration	3				1	2					6
TOTAL	20	4	5	0	20	20	8	10	3	3	93

* Numbers in parentheses correspond to mean rim diameter (cm). Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).

Floor Activity

On the floor of House 3 was an accumulation of semi-compact brown soil that contained some pottery (Table 5.4). All of the pottery rims belonged to the Derived Chanapata style, most of which are undecorated ollas and jars. Decoration, mostly pattern burnishing and polished red slip, was generally used on bowls. Most bowls, whether decorated or undecorated, were large

unrestricted vessels (mean rim diameter = 23 cm), but a few small restricted bowls (diameter between 12 and 15 cm) were also present.

On top of the southern stone foundation of House 3 we found a large grinding stone measuring 47 x 37 cm (Figure 5.13). This batán could have been left there upon the abandonment of the dwelling. No other object was found in House 3.

Figure 5.13. A large batán found on top of the southern stone foundation of House 3.

Abandonment

House 3 was built, occupied, and abandoned sometime during the first half of the Early Intermediate. Its residents left few items in their house before abandoning it. Later, at the end of the Early Intermediate or at the beginning of the Middle Horizon, the walls of the house (if still present) may have been intentionally dismantled and scattered and the space was filled with a thick layer of dirt and trash to level the terrain for the construction of a public building (see Chapter 8).

Community Midden

The community midden was close to the hilltop (see Unit H on Figures 4.17 and 4.18) and covered the entire surface of House 1 as well as the northern area outside that house. The

midden was a layer 20-67 cm thick that consisted of loose soil and ash mixed with a very large quantity of broken objects, chunks of dirt, and pieces of chalk. The items found in this midden represent a much wider range of pottery styles and objects than those from Houses 1, 2, and 3, suggesting that the midden was used not just by one family but by an entire neighborhood of Ak'awillay after House 1 had been abandoned (e.g., Flannery and Marcus 1994:29).

Dating the Community Midden

The floor and features of House 1 were covered by a very thin layer of brown soil, indicating that little time passed between the abandonment of House 1 as a dwelling and its use as a community midden. Pottery also indicates that this midden was first used at the end of the Late Formative period (i.e., only Derived Chanapata pottery occurred in the lower levels of the midden). The midden continued to be in use during the Early Intermediate after the inhabitants of Ak'awillay started to use and dispose of Qotakalli, Muyu Urqu, and Waru pottery (see Table 5.5).

Community Midden Contents

The community midden contained a large number of pottery fragments, stone items, animal bones, and ceramic and bone objects. The majority of pottery fragments were undecorated (72%) (Table 5.5). The decorated specimens represent a wider range of styles and decorative techniques than those from Houses 1, 2, and 3. Among the Derived Chanapata decorated pottery, several fragments were decorated using a combination of techniques not seen in the pre-Middle Horizon houses, such as pattern burnishing and incisions or polished red slip and incisions. The most common Derived Chanapata vessel forms from the midden were the bowls, ollas, jars, and lids; neckless ollas and plates were also present. The shape and mean rim diameter of each of these vessel categories are generally similar to those from Houses 1, 2, and 3, suggesting that ceramic vessels from all of these contexts were used for similar activities.

The midden also contained a variety of local and imported pottery styles. The local style was the most common, followed by a local imitation of Qotakalli, actual Qotakalli, Muyu Urqu, and finally Waru. The most common vessel forms for the local and imported styles were the bowls and jars. All bowls had a small rim diameter (9-13 cm) and seem to have been used for individual servings of food and drink. These new Early Intermediate bowls were similar in size to the small Derived Chanapata necked and incurving bowls that were present in low numbers in

Houses 1, 2, and 3. Interestingly, there were no local or imported ollas and neckless ollas in the midden; people from Ak'awillay probably continued to use Derived Chanapata-like vessels for cooking and other domestic purposes, and kept the fancier Qotakalli, Muyu Urqu, Waru, and local decorated wares for serving and consuming food and beverages.

Table 5.5. Inventory of pottery rims from the community midden*

	Bowls				Cups	Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.								
Derived Chanapata, undecorated	132 (24)	47 (21)	88 (13)	9		454 (15)	331 (12)	92 (15, 24)	231 (11.5)	24	45	1453
Derived Chanapata, pattern burnishing	195 (25)	35 (25)	3			35 (17)	11	7	13 (12)	2	3	304
Derived Chanapata, polished red slip	31	10	13 (12.5)			3	41 (12.5)		1		5	104
Derived Chanapata, pattern burnishing + polished red slip	22	6								1		29
Derived Chanapata, painted						1					1	2
Derived Chanapata, painted-incised	13		14 (12)	1		1	4				2	35
Derived Chanapata, incised/punctuated	3	1	5	1		3	8				2	23
Derived Chanapata, other decoration	19	3	1				2				1	26
TOTAL Derived Chanapata, decorated	283	55	36	2	0	43	66	7	14	3	14	523
Waru		1		2								3
Muyu Urqu	2	5			1							8
Qotakalli	2	6		3								11
Local Qotakalli	4	7	1	3			1				1	17
Local decorated	6	4		5			5			1	1	22
Local undecorated	8	4		6		14 (11)				1	15	48
GRAND TOTAL	437	129	125	30	1	497	417	99	245	29	76	2085

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution). Two numbers indicate a bimodal distribution.

In addition to pottery, the midden contained a variety of chipped and ground stone items (Table 5.6). Except for obsidian, most chipped stone consisted of unmodified flakes and débitage. All pieces of obsidian, on the other hand, were tools or utilized/retouched flakes (except for one piece of débitage) (Figure 5.14a-b), suggesting that obsidian was highly valued but scarce compared to other types of stone available locally. The presence of only one piece of obsidian débitage also indicates that the villagers of Ak'awillay obtained their obsidian in the

form of tools that they repaired over time, instead of obtaining blocks or cores of obsidian that they transformed into tools on the site.

Table 5.6. Inventory of chipped stone and ground stone from the community midden

	Ande-site	Lam. andesite /slate	Quart-zite	Sand-stone	Lime-stone	Rhyo-lite	Schist	Chert	Gra-nite	Obsi-dian	Other	TOTAL
projectile points										3		3
knives										1		1
utilized/ retou-ched flakes								1		7		8
unmodified flakes	12		8	6	5	2		2	5		2	42
débitage	11		8	3	4		0	2		1		29
cores	2		2					1			1	6
TOTAL chipped stone	25	0	18	9	9	2	0	6	5	12	3	90
knives		2										2
chopping tools		4										4
waste		57					1					57
pestles	5		1	10					11		1	28
hammers			3	8								11
undiff. hand stones	1		2	3					1			7
mortars				1								1
metates				4								4
flat slabs				2								2
kupana				1					1			2
abraders			1	13					1			15
TOTAL ground stone	6	63	7	42	0	0	1	0	14	0	1	134
GRAND TOTAL	31	63	25	51	9	2	1	6	19	12	4	223
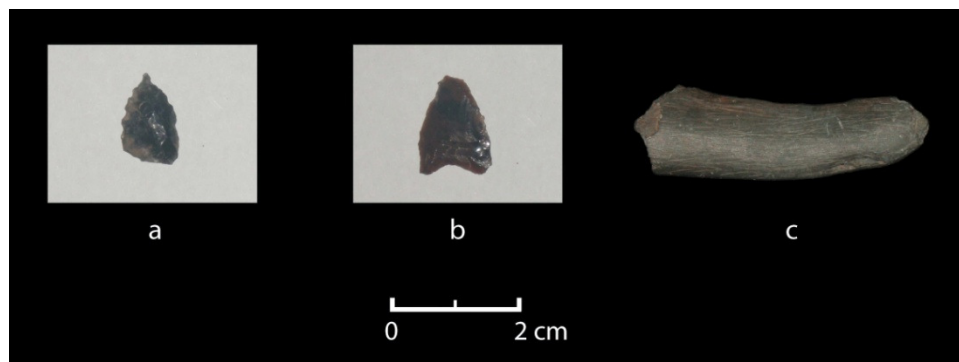
Figure 5.14. Stone items from the community midden: (a) an obsidian projectile point with a flat base; (b) an obsidian projectile point with a concave base; and (c) a ground knife made from laminated andesite.
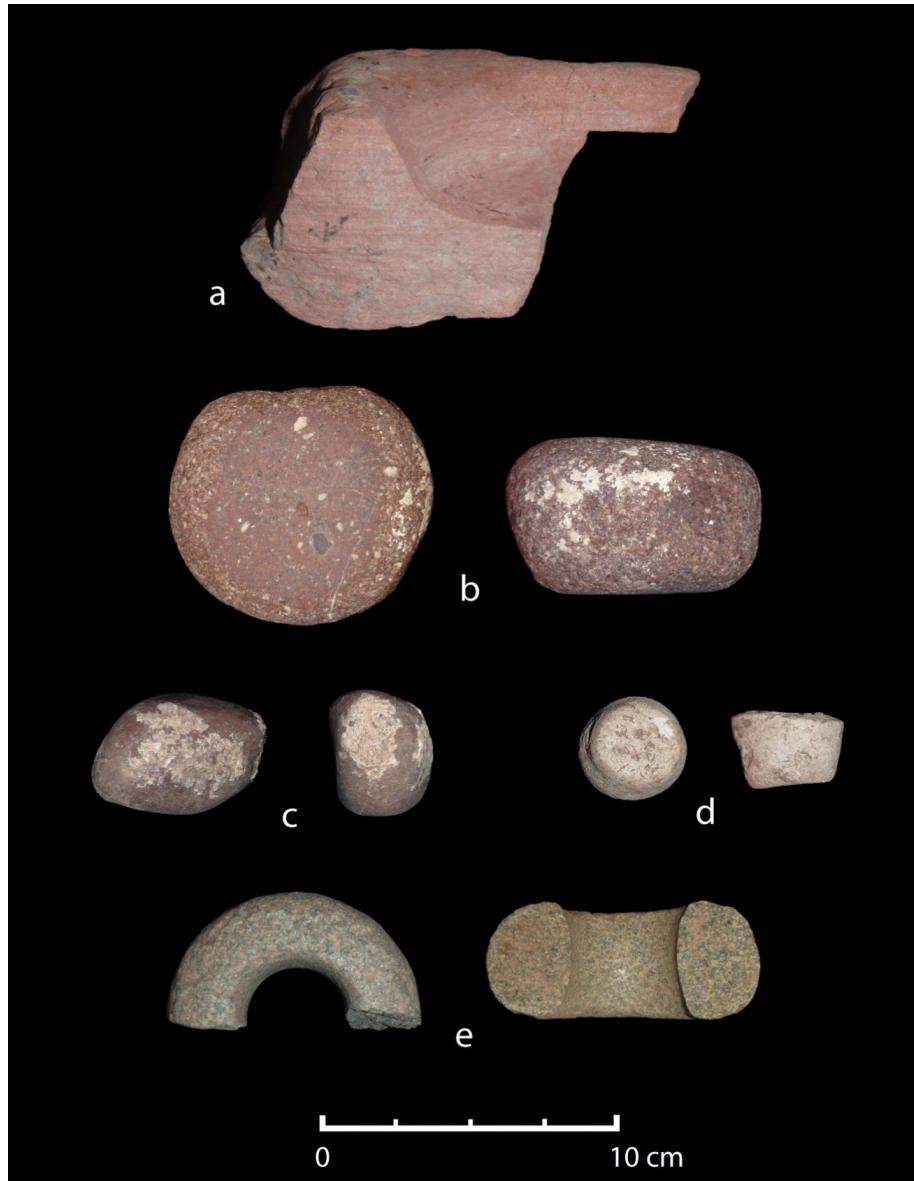
Figure 5.15. Ground stone from the community midden: (a) a broken mortar; (b) a pestle with a lime deposit on one end; (c) a pestle with a lime deposit on one end and one side; (d) hardened lime that was once stuck to the bottom of a ceramic vessel or gourd container; and (e) a *kupana* or clod breaker.

Like pottery, the ground stone recovered from the community midden represents a wider variety of objects than the ground stone from Houses 1, 2, and 3 (Figure 5.15). Hand stones included pestles, hammers, and other undifferentiated hand stones; bottom stones included a broken mortar (Figure 5.15a), metates, and flat slabs. Three pestles had a thick lime deposit on at least one end, and hardened lime was found by itself, unattached to any artifact

(Figure 5.15b-d). Other ground stone objects included a few *kupana*[1] (an agricultural tool shaped like a doughnut used to break earth clods while preparing a field for planting; Figure 5.15e), the head of a zoomorphic figurine (Figure 5.16f), and several abraders to smooth or polish pottery.
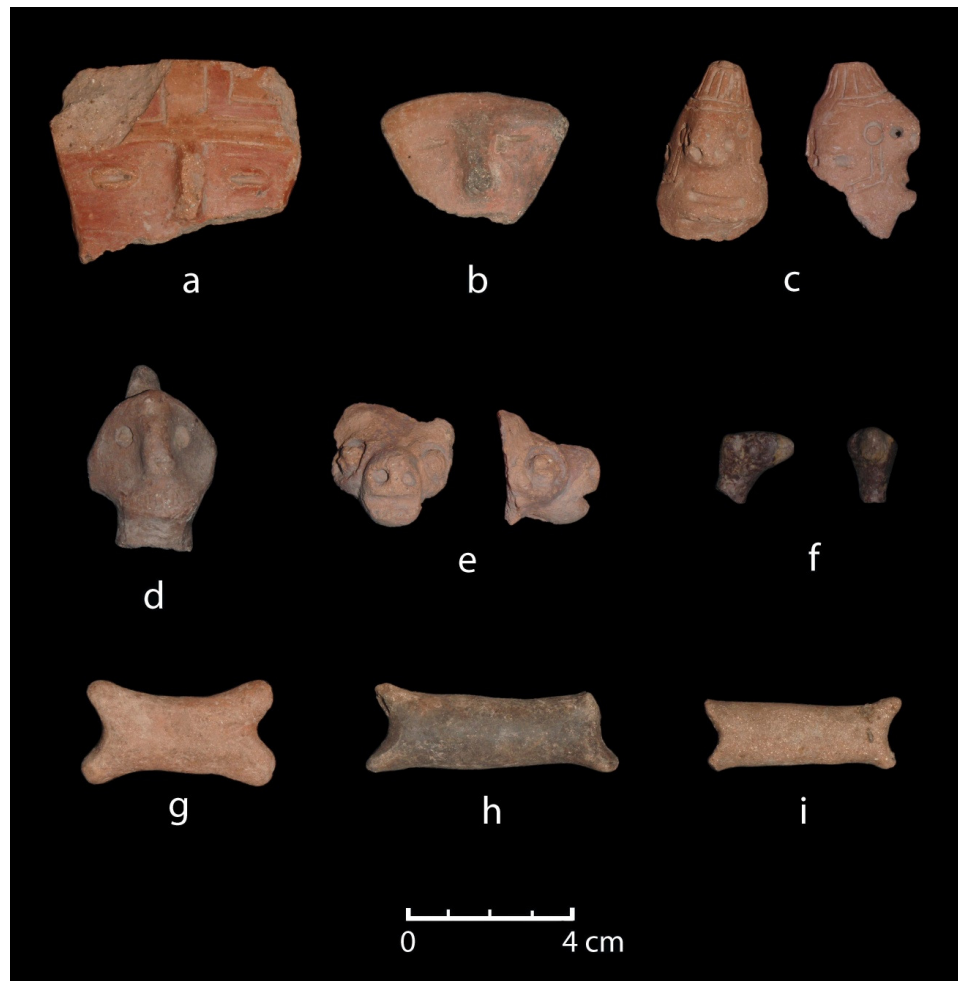
Figure 5.16. Ceramic and stone items from the community midden: (a) and (b) ceramic anthropomorphic figurines; (c) a ceramic anthropomorphic (?) figurine; (d) a ceramic figurine (ancestor?); (e) a ceramic zoomorphic figurine (camelid); (f) a stone zoomorphic figurine (camelid or deer); and (g), (h), and (i) ceramic weaving shuttles.

Most ground stone tools were made from sandstone, granite, quartzite or andesite, but two new materials started to be used during the Early Intermediate: laminated andesite and

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[1] Clod breakers have different names depending on the region. Archaeologists in Cusco call them *kupana*; other names in Cusco include *k'asuna* (Gade 1975:40), *wini* (Rivero 2005:89), and *k'urpana* (Cusco Quechua dictionary). These agricultural tools have sometimes been erroneously interpreted as weapons.

slate. Distinguishing laminated andesite from slate can be difficult for a non-geologist, so these two types of stone will be lumped together here. Laminated andesite and slate were not available in the Xaquixaguana Plain or in the Maras-Chinchero area and had to be procured through exchange with neighboring groups. Laminated andesite and slate cannot be chipped and have to be ground. These two types of stone were used to produce ground knives and chopping tools (Figure 5.14c). A large quantity of waste material resulting from this tool production was found in the midden, suggesting that these tools were manufactured at Ak'awillay.

In addition to pottery and stone items, a wide range of ceramic objects were recovered from the midden (Figure 5.16). These included ladles, spoon handles, anthropomorphic figurines, zoomorphic figurines (camelid, dog/fox, and maybe *viscacha*), spindle whorls, discs, weaving shuttles, cones, and wasters. A few broken pottery sherds were filed on two or three sides and reused, and one fragment had a thick lime crust on its interior wall. Other objects from the midden included a *ruk'i* (instrument used to separate the warp from the weft when weaving), *tupu* (cloak pin) and sewing needle in bone; a pendant (?) and two *tupu* or needles in metal; and a shell bead (Figure 5.17). Two small burned maize cobs, unfired and fired clay, and burned clods of earth were also recovered.

Figure 5.17. Other objects from the community midden: (a) a *ruk'i* made from a bone; (b) a metal plaque, perhaps a pendant; (c) a metal *tupu* or needle; and (d) a shell bead.

Abandonment

The absence of Araway and Wari pottery in the community midden suggests that it was abandoned some time during the Early Intermediate. After abandonment, a layer of compact light brown soil started to accumulate on top of the layer of trash. This space was then transformed into a small cemetery during the Middle Horizon, where the people of Ak'awillay buried 12 individuals in eight graves (see Chapter 8).

Pre-Middle Horizon Household Activities

The items and features recovered in Houses 1, 2, and 3 and in the community midden suggest that the people of Ak'awillay practiced a wide range of activities during the pre-Middle Horizon period.

Agricultural Tasks

The presence of maize cobs in the community midden indicates that the villagers of Ak'awillay cultivated and consumed maize. The lands at the foot of Ak'awillay are well-suited for maize production – they are lower in altitude (3350-3400 m) and can easily be irrigated by small, simple canals. Evidence from the community midden further indicates that farmers used stone *kupana* to prepare their fields for planting.

Hunting, herding, and husbandry

The residents of Ak'awillay complemented their plant-based diet with meat. Hunting is indicated by the presence of obsidian projectile points. This activity probably targeted deer, but birds may also have been captured and eaten. In addition to hunting, the presence of small bones on house floors suggests that the people living at the site kept (or at least consumed) guinea pigs.

Camelid bones from the houses and community midden indicate that the villagers of Ak'awillay either herded these animals themselves or obtained their meat in exchange for agricultural products from the people living in the higher *puna*. A similar exchange between the modern villages surrounding Ak'awillay and people from the neighboring Casacunca *puna* (3800 m) still takes place periodically. In these exchanges, individuals from Casacunca visit lower-altitude villages around Ak'awillay with their llamas packed with tubers and llama meat; they go from one village to another and exchange their products for maize and other items such as salt.

Food preparation

To prepare their meals, the villagers of Ak'awillay used grinding stones, chopping tools, and knives to grind, crush, and cut food. Heavy use wear on all grinding stones suggests that they were used over a long period of time before their discard. Future residue analyses should specify what food items were prepared with these tools.

Food was then cooked in ollas and neckless ollas over a fire. Some olla rim fragments have soot deposits and others do not, but the absence of complete cooking vessels made it impossible to observe the presence or absence of soot on their base and sides. As a result, it is unclear at the moment whether cooking pots were set directly in the fire (for boiling, with a clean base and soot on the sides) or rested on some stones (for frying and simmering, with soot everywhere) (Rice 1987:235). Future analyses of animal bones will look for traces of burning and could resolve the issue.

Some cooking pots had thick food residue on their interior wall, and future residue analyses should indicate what the villagers of Ak'awillay were cooking in these vessels. Maize was one item that was prepared and consumed, as indicated by the presence of burned maize cobs in the community midden. Animal bones also point to the preparation and consumption of guinea pigs, birds, camelids, deer, and other unidentified animals.

Food consumption

The villagers of Ak'awillay used ceramic ladles to serve food and ceramic spoons (and probably wooden spoons too) to eat their meals. They consumed most of their food in large open bowls (flaring and straight bowls) and plates. The large diameter of these bowls and plates may suggest that several individuals ate from the same vessel. The flaring nature of the plates and of most of the bowls is incompatible with liquid foods (such as soups), indicating that food eaten in these vessels probably took the form of thick stews or fried items.

Small restricted bowls (necked and incurving) also started to appear during the pre-Middle Horizon period. The inventory of House 1 only included a few of these bowls, but the later Houses 2 and 3 and the community midden contained a higher proportion of small bowls. The small size of these vessels suggests that they were used for individual servings of food and drink. In addition, their restricted opening is compatible with a more liquid form of food (like soups) and with beverages (like chicha).

Small restricted bowls do not appear in earlier Formative contexts in the region (Davis 2010) but are common in later Middle Horizon contexts at Ak'awillay (see Chapters 6-8) and at

other Middle Horizon sites in the Cusco region (Bauer 1999; Bauer and Jones 2003). The presence of these small bowls in Houses 1, 2, and 3 and in the community midden could indicate that vessels reserved for individual servings of food and drink were made for the first time in the region around the end of the Late Formative or the beginning of the Early Intermediate. The presence of small bowls points to a new activity and a significant change in the way people prepared, served, and consumed some of their food and beverages. These new bowls could have been related to the increased importance of chicha consumption in domestic settings, feasts, and ritual ceremonies.

Storage

The residents of Ak'awillay stored food, liquids, and other items in pottery vessels that they placed in storage bins or elsewhere in their house. They presumably used jars to store liquids and small grains (like quinoa) since these vessels have a small diameter and could be covered with lids (or ceramic discs?). A few jars were large (diameter = 17-25 cm) and probably contained a larger volume of liquids; these jars may have stored beverages such as chicha. Some neckless ollas could also be used to store liquids, food, or other items such as wool, cloth, and clay.

Crafts

The presence of wasters and ceramic and stone abraders suggests that the villagers of Ak'awillay were involved in pottery production. Abraders were presumably used to smooth, burnish, and polish the surface of ceramic vessels before firing them (Rice 1987:138). The presence of unfired and fired clay in House 1 also shows that some of the raw material used in pottery production was kept inside the house.

The residents of Ak'awillay produced, repaired, and sharpened their own stone tools, as indicated by the presence of cores, unmodified flakes, and débitage or waste. They also made spindle whorls from broken pieces of pottery and used them to spin thread; they then weaved using weaving shuttles, *ruk'i* and needles. Some needles could also have been used to make baskets and mats.

Ritual

Apart from subsistence activities and crafts, evidence from pre-Middle Horizon contexts points to several ritual practices. The two offerings below the floor of House 2 suggest that its residents practiced ritual ceremonies immediately before erecting their house. Similar rituals involving the dedication of offerings often take place today before the construction of houses

and buildings or before the beginning of new activities (such as the digging of a canal or an archaeological excavation) to ensure prosperity.

The villagers of Ak'awillay also consumed hallucinogenic drugs with bone snuff tubes and played music with flutes. Rituals involving these activities probably also involved dancing and singing. Such rituals were carried out either in the houses themselves or in a more public environment; in the latter case, people would have brought these ritual items back to their houses after the ceremonies.

The presence of figurines in the houses further suggests that certain rituals took place in the house itself. The zoomorphic figurines seem to represent camelids and other animals, and the others depict anthropomorphic beings. Figurines are often associated with ancestor rituals (e.g., Cook 1992) practiced by women in household settings.

Exchange

Before the Middle Horizon the residents of Ak'awillay obtained a number of items from outside the local area. Obsidian was not available in the Department of Cusco, and sourcing analysis indicates that the obsidian recovered from House 1 and from the community midden came from the Alca source in the Cotahuasi Valley of the northern part of the Department of Arequipa. The Alca source was heavily used throughout prehistory and its obsidian was found over large distances. In House 2, the obsidian flake associated with the accumulation of stones below the floor was sourced to Chivay, an obsidian source in the western part of the Department of Arequipa. The Chivay source has traditionally been associated with groups from the Titicaca Basin (Burger et al. 2000). The villagers of Ak'awillay could have obtained their obsidian in the form of finished tools in a number of ways, including gifts and exchange with their neighbors, kin or fictive kin living in other parts of the region or farther away.

Starting in the Early Intermediate, the people of Ak'awillay procured more items from outside the local area. In addition to obsidian tools, they obtained Qotakalli, Muyu Urqu, and Waru pottery from groups in the Cusco Basin and maybe elsewhere in the Cusco region, and procured laminated andesite and slate from outside the Xaquixaguana Plain. They were also able to acquire objects made from marine shell through long-distance exchange.

Trash disposal

The presence of a small dump immediately north of House 1 suggests that the people of Ak'awillay temporarily disposed of their trash close to their house. Most of the trash, however,

was probably dumped permanently in larger middens such as the one we excavated or in nearby *quebradas* (gullies).

Other Activities

Another activity practiced by the villagers of Ak'awillay involved the preparation of lime that left a thick white deposit on the interior walls of pottery fragments and on some grinding stones. Lime could have been obtained after burning and crushing limestone, a type of stone available locally. Lime was probably mixed with the ashes of quinoa stalks to form little balls (*llipta*) consumed to activate the alkaloids of coca leaves during ritual activities.

Chapter 6

EARLY MIDDLE HORIZON HOUSES AND SPACES AT AK'AWILLAY

The village of Ak'awillay continued to grow during the Early Middle Horizon (AD 600-800) and attracted individuals and families from smaller villages and hamlets in the Xaquixaguana Plain. Ak'awillay was by far the largest settlement in the region, reaching its peak size of approximately 10 ha. Its inhabitants continued to build their houses on the north side of the hill, reserving the lower lands at the foothill of Ak'awillay for their crops. The excavation team exposed three Early Middle Horizon houses and a kitchen.

House 4

House 4 was a circular dwelling 1.5 m below the present surface of Ak'awillay (see Unit C on Figures 4.17 and 4.18). It had two preserved occupation floors, both dating to the Early Middle Horizon.

Dating House 4

The pottery recovered on the two occupation floors of House 4 includes several Middle Horizon styles: Waru, Muyu Urqu, Qotakalli, Araway, and Local. This Middle Horizon pottery was associated with abundant Derived Chanapata pottery, which evidently continued to be utilized for cooking and storage after the Formative and Early Intermediate.

In addition to pottery, charcoal found on the second (most recent) occupation floor of House 4 yielded an AMS date of 1439 ± 37 (sample No. AA81951). The corresponding calibrated two-sigma range is AD 579-692 (98.1%) and AD 750-763 (1.9%). This date is consistent with the Early Middle Horizon.
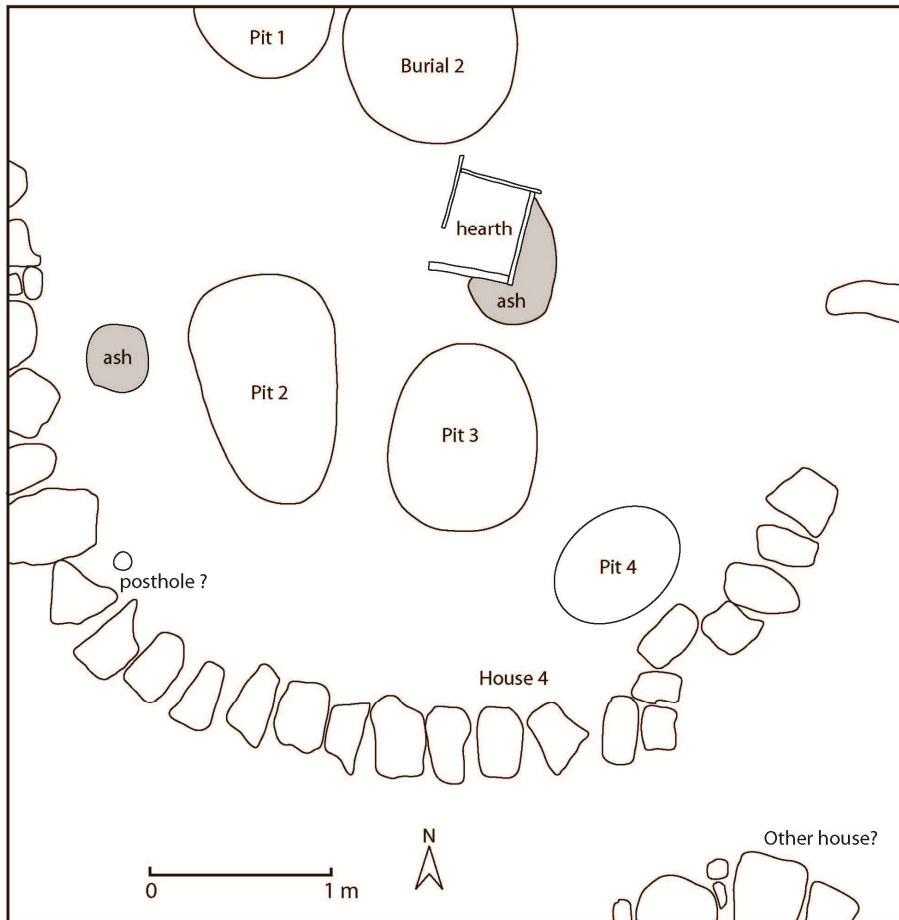
Figure 6.1. House 4 and the features associated with the first occupation floor.

Architecture and Layout

House 4 measured 5 m in diameter and had a circular stone foundation (Figure 6.1). To build this house, its residents first leveled the area. Since the terrain on the hillside of Ak'awillay presents a gentle slope (the north side is lower), they had to remove approximately 30 cm of sterile reddish clay on the south side. On the north side, they added a layer of compact dirt mixed with some trash (pottery fragments and stone débitage) on top of the natural reddish clay. These two actions provided a flat and leveled surface for the house.

After leveling the terrain, the builders of House 4 added the circular stone foundation of their dwelling. On top of these stones they may have put a row of adobes. During the excavation, we noticed a 10-cm thick layer of clayey soil around the stone foundation above the occupation floors; this layer may correspond to adobes that melted from the rain after the

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abandonment of House 4. On top of these adobes the residents of House 4 presumably built cane walls and a thatch roof, none of which were preserved.

First Occupation Floor

The residents of House 4 prepared their first floor directly on top of the leveled surface. The floor consisted of compact reddish and dark brown soil and was associated with several objects and features, described below (see Figure 6.1).

Floor Activity

On the first floor of House 4 was an accumulation of loose and semi-compact brown soil. This layer contained pottery, animal bones, and objects of ceramic, stone, and bone. Most of these items probably date to a short period before the reflooring of the house.

The pottery fragments associated with the first floor represented a variety of vessel forms and styles (Table 6.1 and Figure 6.2). The three styles imported from outside the Xaquixaguana Plain – Waru, Muyu Urqu, and Qotakalli – corresponded to bowls and cups exclusively. These bowls and cups have a much smaller mean rim diameter (10.7 cm) than the flaring Derived Chanapata bowls from the same context (20.3 cm). As mentioned in Chapter 5, the small bowls and cups were probably used for individual servings of food and beverage.

The local styles (including a local imitation of Qotakalli as well as local decorated and undecorated pottery) were represented by a wider range of vessel forms. In addition to the bowl, the olla and jar were present. These local ollas and jars were mostly undecorated. Like the imported styles, the bowls of these local styles have a small rim diameter (between 6 and 11 cm) and were likely used for individual servings of food and drink.

Derived Chanapata pottery continued to be abundant in this Middle Horizon house (73% of all rims from the first floor are Derived Chanapata) and was used alongside the local and imported styles. All vessel forms were present; this style was evidently still in use for cooking, storage, and day-to-day serving.

Table 6.1. Inventory of pottery rims from the first floor of House 4 and its associated features*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Waru		1		3						1**	5
Muyu Urqu	1	3		4						2**	10
Qotakalli	3	1		3						5**	12
Local Qotakalli		1			1						2
Local decorated		1		1		1				1	4
Local undecorated		1		3	9	4				5	22
Derived Chanapata, undecorated	16			2	26 (12.5)	28 (10)	10	11 (11)	6	16	115
Derived Chanapata, pattern burnishing	12				3	3	1			4	23
Derived Chanapata, polished red slip	2			1		3		1			7
Derived Chanapata, painted-incised	1										1
Derived Chanapata, incised/punctated	1										1
Derived Chanapata, other decoration	2					1					3
TOTAL	38	8	0	17	39	40	11	12	6	34	205

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).

** Bowls or cups (fragments are too small to distinguish).

Figure 6.2. Pottery fragments from the first occupation floor of House 4: (a) a black and red-on-white local Qotakalli body sherd; (b) a red-on-white local Qotakalli body sherd; (c) a black and red-on-white local Qotakalli body sherd; (d) a Derived Chanapata face-neck jar rim; (e) a black-on-white Qotakalli body sherd; and (f) a Muyu Urqu straight bowl or cup rim.

Among the stone tools and débitage found on the first floor of House 4, laminated andesite/slate represented the most common material (Table 6.2). There was abundant laminated andesite/slate waste as well as a borer. Other types of stone were less common in the assemblage of the first floor. Chipped tools included a small obsidian projectile point with a flat base (Figure 6.3a), two borers, and a retouched flake. The floor also contained several unmodified flakes and débitage made from different types of stone. Ground stone included a few abraders.

Table 6.2. Inventory of chipped stone and ground stone from the first floor of House 4 and its associated features

	Andesite	Lamin. andesite /slate	Quartzite	Sand-stone	Lime-stone	Rhyolite	Obsidian	Other	TOTAL
projectile points							1		1
borers	1						1		2
retouched flakes							1		1
unmodified flakes	5		7	7	4	3	1		27
débitage	2						2		4
TOTAL chipped stone	8	0	7	7	4	3	6	0	35
knives		3							3
projectile points		2							2
borers		1							1
waste		122							122
undiff. hand stones				1					1
undiff. bottom stones				1					1
abraders				3				1	4
TOTAL ground stone	0	128	0	5	0	0	0	1	134
GRAND TOTAL	8	128	7	12	4	3	6	1	169

Other objects from the first floor of House 4 included a ceramic spindle whorl, a ceramic "cone" whose function remains unknown (Figure 6.3b), a bone *tupu* (cloak pin) (Figure 6.3c), and two unmodified pieces of quartz.
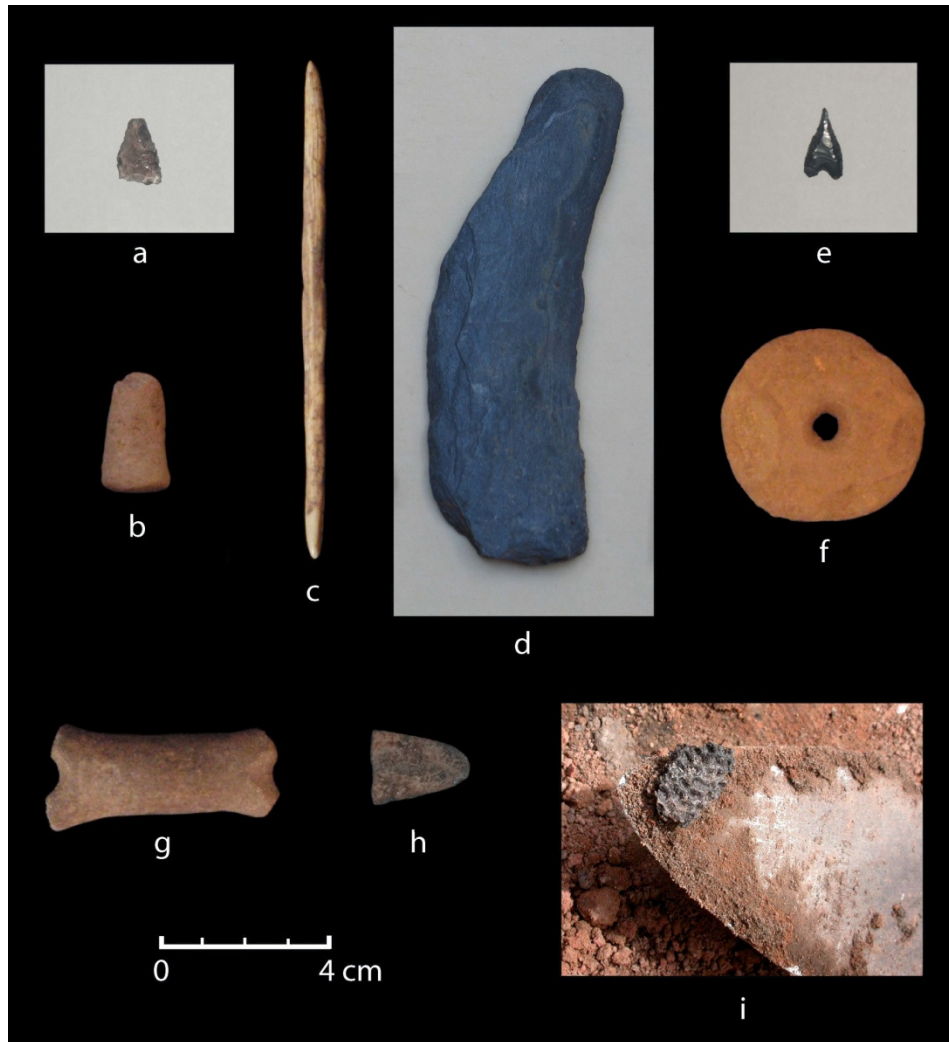
Figure 6.3. Objects from House 4: (a) an obsidian projectile point with a flat base; (b) a ceramic cone; (c) a bone *tupu*; (d) a laminated andesite/slate knife (cutting edge on the right); (e) an obsidian projectile point with a concave base; (f) a ceramic spindle whorl; (g) a ceramic weaving shuttle; (h) an unidentified piece of metal; and (i) a small piece of burned maize cob. Items a-d come from the first (lower) floor and items e-i come from the second (upper) floor.

Hearth and Ash Lenses

Near the center of House 4 we found a rectangular hearth (Figure 6.4). This hearth was made with four flat elongated stones and measured 52 x 42 cm. The hearth was still in use on the second floor of House 4, and the contents of the hearth probably date to the occupation of this later floor. A layer of ash was found around the hearth, containing a few Qotakalli, local decorated and undecorated, and Derived Chanapata pottery fragments. Another small ash lens was found in the western part of the house.

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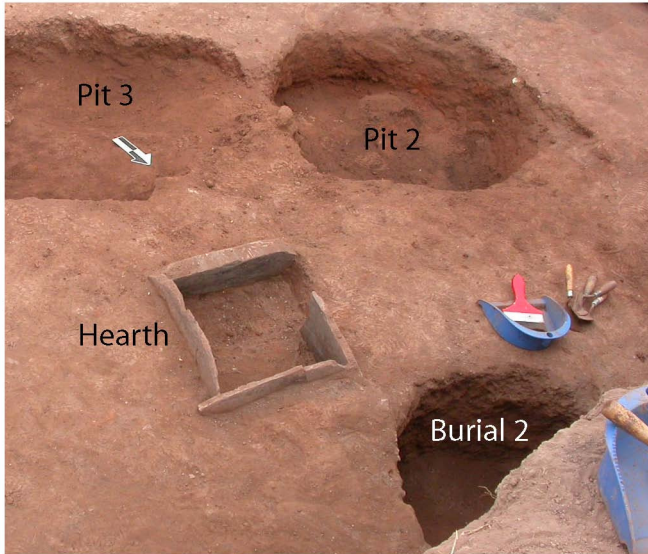
Figure 6.4. The rectangular stone hearth of House 4 (excavated). Near the hearth was Burial 2 (excavated) and Pits 2 and 3 (partially excavated).

Burial 2

Immediately north of the hearth was a pit that contained Burial 2, a woman between 26 and 35 years of age (Figure 6.5). This woman was flexed, lying on her back looking east. Her bones were in good condition and her skeleton was complete. This woman had several dental pathologies including caries, tooth loss, and abscesses. In addition, skeletal pathologies indicate that this woman was suffering from an infection in her maxilla and from joint disease in her spine and feet. She had also healed from infections in her legs and from two rib fractures.

This woman was placed in a circular pit (80 cm in diameter) dug into the ground. Stratigraphy suggests that this woman was buried at the beginning of the first floor occupation. The bottom of the pit lay on sterile reddish clay. Two fieldstones were placed close to the body, one by the head and the other by the feet. This woman was not associated with any artifact, but on top of her bones we found a mandible belonging to another individual. The burial pit was filled with loose dark brown soil mixed with Waru, Muyu Urqu, Qotakalli, local Qotakalli, local decorated, and Derived Chanapata pottery; flakes and débitage; and an unmodified piece of quartz.

Figure 6.5. Burial 2, below the first occupation floor of House 4, contained the remains of an adult woman between 26 and 35 years of age.

Pits

The first floor of House 4 was associated with four pits. Pit 1 was next to Burial 1 in the northwestern part of the house. It was not completely excavated because it partially lay outside of our excavation unit and time constraints prevented us from opening a larger area. From what was visible, Pit 1 probably had a diameter of approximately 72 cm. The size and fill consistency of this pit were similar to those of Burial 2, and the unexcavated part of Pit 1 might also contain a burial. The fill of Pit 1 included Waru, Qotakalli, local undecorated, and Derived Chanapata pottery fragments.

Pit 2 was a large oval pit in the western part of House 4. It was 125 cm long x 70 cm wide and 75 cm deep. This pit was probably used for storage. The residents of House 4 ceased to use Pit 2 and filled it at the end of the first floor occupation. The fill of Pit 2 contained numerous pottery fragments of all styles. Stone items included laminated andesite/slate knives, all of which seem to have been hafted (Figure 6.3d); laminated andesite/slate waste; unmodified flakes; and two sandstone abraders. Other items from Pit 2 were two broken anthropomorphic figurines, one ceramic cone, and two pieces of burned daub.

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Pit 3 was another large oval pit close to Pit 2 near the center of House 4. It was 100 cm long x 80 cm wide and 80 cm deep. This pit was probably also used for storage, but it is impossible to tell whether it was used at the same time as Pit 2 or before. It is clear, however, that Pit 3 was completely filled before the second floor occupation. The fill of Pit 3 contained pottery fragments in the same styles as those from Pit 2 as well as two laminated andesite/slate projectile points, laminated andesite/slate waste, unmodified flakes, and grinding stones. At the edge of Pit 3 were a local undecorated olla broken in situ and two white travertine stones (Figure 6.6). The olla had a diameter of 15 cm, a flat base, and was entirely covered with soot. The two white stones were 9 cm in diameter and did not show any use wear.

Pit 4 was a shallow oval pit or depression in the southeastern part of House 4. It was 75 cm long x 60 cm wide and 14 cm deep. The function of this pit is unknown, but it was probably too shallow for storage. Pit 4 was filled at the end of the first floor occupation; the fill contained very few Muyu Urqu and Derived Chanapata pottery fragments.

Figure 6.6. A broken undecorated olla (local style) at the edge of Pit 3, buried with two circular travertine stones.

Second Occupation Floor

Sometime during the Early Middle Horizon, the residents of House 4 filled the pits and prepared a new floor surface. This new floor sat on top of the first floor occupation without much fill in between. The hearth continued to be used and new features were added (Figure 6.7).
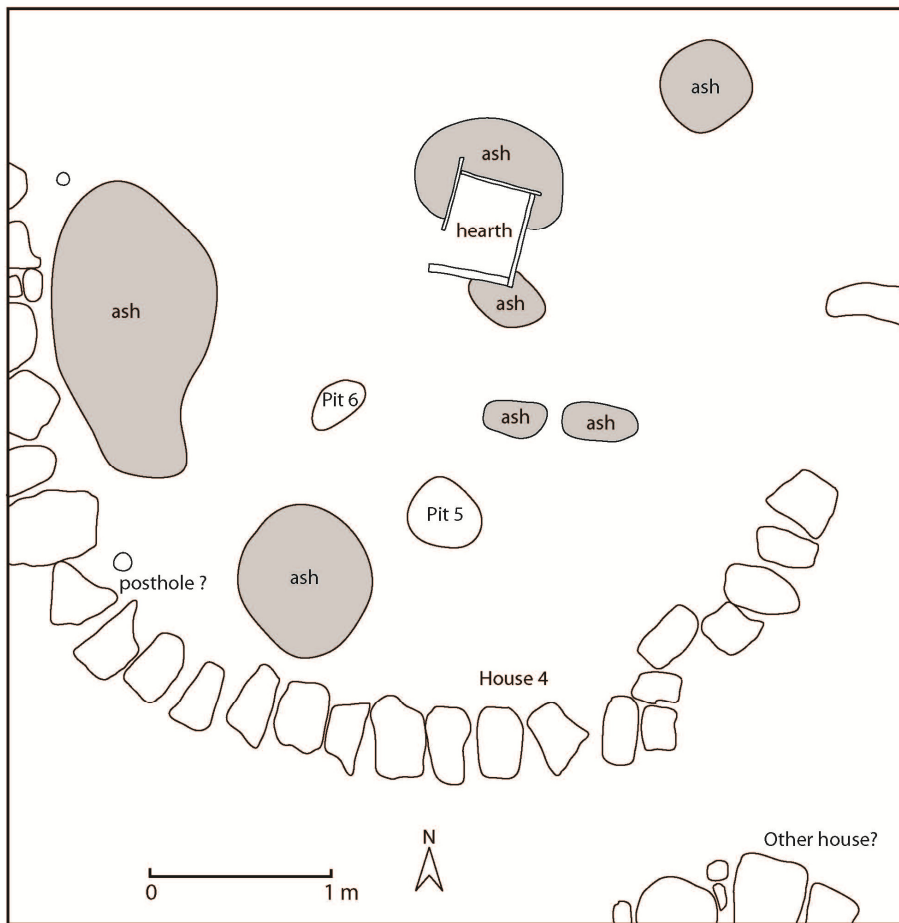
Figure 6.7. House 4 and the features associated with the second occupation floor.

Floor Activity

On the second floor of House 4 was an accumulation of loose and semi-compact brown soil mixed with ash and charcoal in places (Figure 6.8). Like the first floor, this layer contained pottery, animal bones, and objects of ceramic, stone, and bone. Most of these items probably date to a short period before the abandonment of House 4.
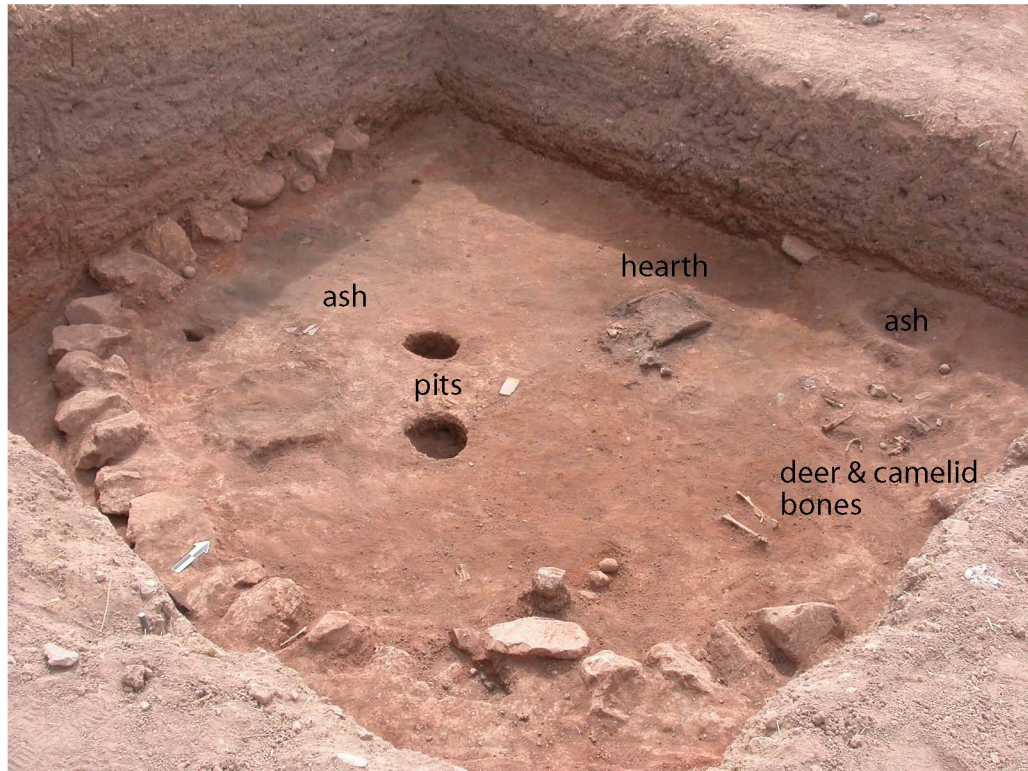
Figure 6.8. The second occupation floor of House 4, showing the hearth, ash lenses, pits, and deer and camelid bones. North is at the top right.

Like the first floor of House 4, the pottery fragments associated with the second floor included a wide range of vessel forms and styles (Table 6.3 and Figure 6.9). The imported styles – Waru, Muyu Urqu, and Qotakalli – corresponded to bowls and cups probably used for individual servings of food and drink (mean rim diameter = 11 cm). We also found an Araway body sherd associated with the charcoal sample that yielded the AMS date for House 4.

In addition to bowls, the assemblage of local pottery styles (local imitation of Qotakalli, local decorated pottery, and local undecorated pottery) included ollas and jars. The ollas were not decorated, but the jars often were. Like the imported styles, the local bowls were probably used for individual servings of food and drink (mean rim diameter = 12 cm).

As we saw with the first floor of House 4, Derived Chanapata continued to be the most common pottery style on the second floor (69% of all rims from the second floor are Derived Chanapata). Derived Chanapata was used for vessel forms rarely (if ever) represented in the imported and local styles, such as ollas, neckless ollas, lids, and plates. Derived Chanapata bowls continued to have a larger mean rim diameter (17.7 cm) than the imported and local bowls.

Table 6.3. Inventory of pottery rims from the second floor of House 4 and its associated features*

	Bowls				Cups	Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.								
Waru											1**	1
Muyu Urqu		1		3	1						5**	10
Qotakalli	4	3		5							2	14
Local Qotakalli							1				1	2
Local decorated	1			2			2					5
Local undecorated	1	5		6		3	4				1	20
Derived Chanapata, undecorated	18	2				19 (14)	12 (10)	10 (14)	7	4	11	83
Derived Chanapata, pattern burnishing	13	1					1	3	1		1	20
Derived Chanapata, polished red slip	1						4	2	2			9
Derived Chanapata, incised/punctated	1											1
Derived Chanapata, other decoration											2	2
TOTAL	39	12	0	16	1	22	24	15	10	4	24	167

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).
** Bowls or cups (fragments are too small to distinguish).
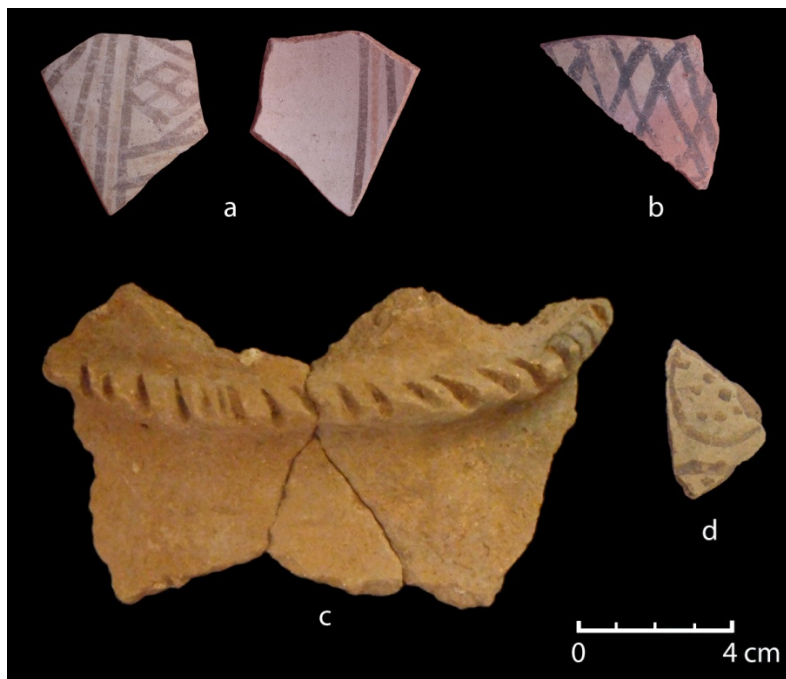
Figure 6.9. Pottery fragments from the second occupation floor of House 4: (a) a black and red-on-white Qotakalli body sherd decorated on the exterior and interior walls; (b) a black-on-white local Qotakalli rim; (c) a local shoulder fragment decorated with an appliqué and excisions; and (d) a local painted body sherd.

Stone items from the second floor showed a heavy reliance on laminated andesite/slate – 84% of all stone items were made from this material (Table 6.4). This proportion is comparable to – but a little higher than – that of the first floor, where 76% of the stone objects were made from laminated andesite/slate. On the second floor, the majority of laminated andesite/slate items were waste material resulting from tool manufacture. There were also seven knives and a chopping tool; three of the knives were likely hafted and one was blunted on one side to reduce its sharp edge for safe holding. The average size of five complete knives is 9.4 cm long x 2.6 cm wide; the blade is approximately 2 mm thick.

Table 6.4. Inventory of chipped stone and ground stone from the second floor of House 4 and its associated features

	Ande-site	Lamin. andesite /slate	Quart-zite	Sand-stone	Lime-stone	Rhyolite	Chert	Obsi-dian	Other	TOTAL
projectile points								1		1
retouched flakes								1		1
unmodified flakes	8		2	6	1		1			18
débitage			1							1
cores						1				1
TOTAL chipped stone	8	0	3	6	1	1	1	2		22
knives		7								7
chopping tools		1								1
waste		176								176
pestles				1					2*	3
hammers									2*	2
undiff. hand stones				1						1
mortars									1*	1
flat slabs									1*	1
abraders	1			1					1	3
bowls									1	1
axes									1	1
TOTAL ground stone	1	184	0	3	0	0	0	0	9	197
GRAND TOTAL	9	184	3	9	1	1	1	2	9	219

* Sandstone or granite; the objects were not washed because such action would prevent future residue analysis; thus it was not possible to distinguish between sandstone and granite.

The rest of the stone items from the second floor were made from a variety of other types of stone, of which andesite and sandstone were the most common. Chipped stone included a small obsidian projectile point with a concave base (Figure 6.3e). Apart from grinding stones and abraders, ground stone included an axe (Figure 6.10). This axe was 13 cm long x 8.5 cm wide and 1.2 cm thick, and its side notches indicate that it was once hafted.

Figure 6.10. A stone axe recovered on the second occupation floor of House 4.

Ceramic objects found on the second floor included a spindle whorl, a weaving shuttle (Figure 6.3f-g), and a cone. We also recovered one Derived Chanapata pottery fragment with a thick lime deposit and a piece of hardened lime unattached to any artifact. Another item from the second floor was an unidentified thin piece of metal (Figure 6.3h).

Hearth and Ash Lenses

During the occupation of the second floor, the residents of House 4 continued to use the same rectangular stone hearth. The hearth was filled with ash, charcoal, and dirt, which was bagged and kept for future micro-botanical analysis. The hearth was surrounded by two ash lenses. Other ash lenses approximately 10 cm thick also occurred along the house foundations, and smaller ash lenses appeared near the center of the house. One of these ash lenses yielded a small piece of burned maize cob (Figure 6.3i). The ash lens located northeast of the hearth (along what would have been the house foundation if the stones were still present) produced the charcoal sample from which I obtained the AMS date for House 4.

Pits

The second floor of House 4 was associated with two small pits. Pit 5 was a circular pit 40 cm in diameter and 30 cm deep. It was filled with loose dirt and contained a Derived

Chanapata rim, a Muyu Urqu rim, and a few non-diagnostic pottery fragments. Pit 5 could have been used for storage, but it was considerably smaller than the large pits associated with the first floor. Close to Pit 5 was Pit 6, a pit 34 cm long x 20 cm wide and 10 cm deep. It was filled with loose dirt but did not contain any artifacts.

Abandonment

Stratigraphy and the reflooring of House 4 suggest that this house was occupied for at least one generation. The AMS date from the second floor indicates that the house was occupied and abandoned sometime during the Early Middle Horizon. Upon the abandonment of their house, the residents left used and broken items on the floor and took most of the useful objects with them. This house was not reused as a midden and no other structure was built on top of it. Fill slowly covered House 4.

House 5

House 5 was a circular dwelling 2 m southeast of House 4 and 1.2 m below the present surface of Ak'awillay (see Unit F on Figures 4.17 and 4.18). It had one preserved occupation floor dating to the Early Middle Horizon.

Dating House 5

House 5 included all the Middle Horizon pottery styles – Waru, Incised *Incensario*, Muyu Urqu, Qotakalli, Araway, and Local – in addition to the more utilitarian, Derived Chanapata-like pottery. Araway pottery fragments were found in the fill below the floor of the house, suggesting that House 5 was built after the Wari arrived in Cusco and after the people of Ak'awillay started to obtain Araway pottery from the Cusco Basin.

Charcoal found on the occupation floor of House 5 yielded an AMS date of 1369 ± 42 (sample No. AA81952). The corresponding calibrated two-sigma range is AD 598-716 (93.3%) and AD 743-768 (6.7%). This date is consistent with the Early Middle Horizon.
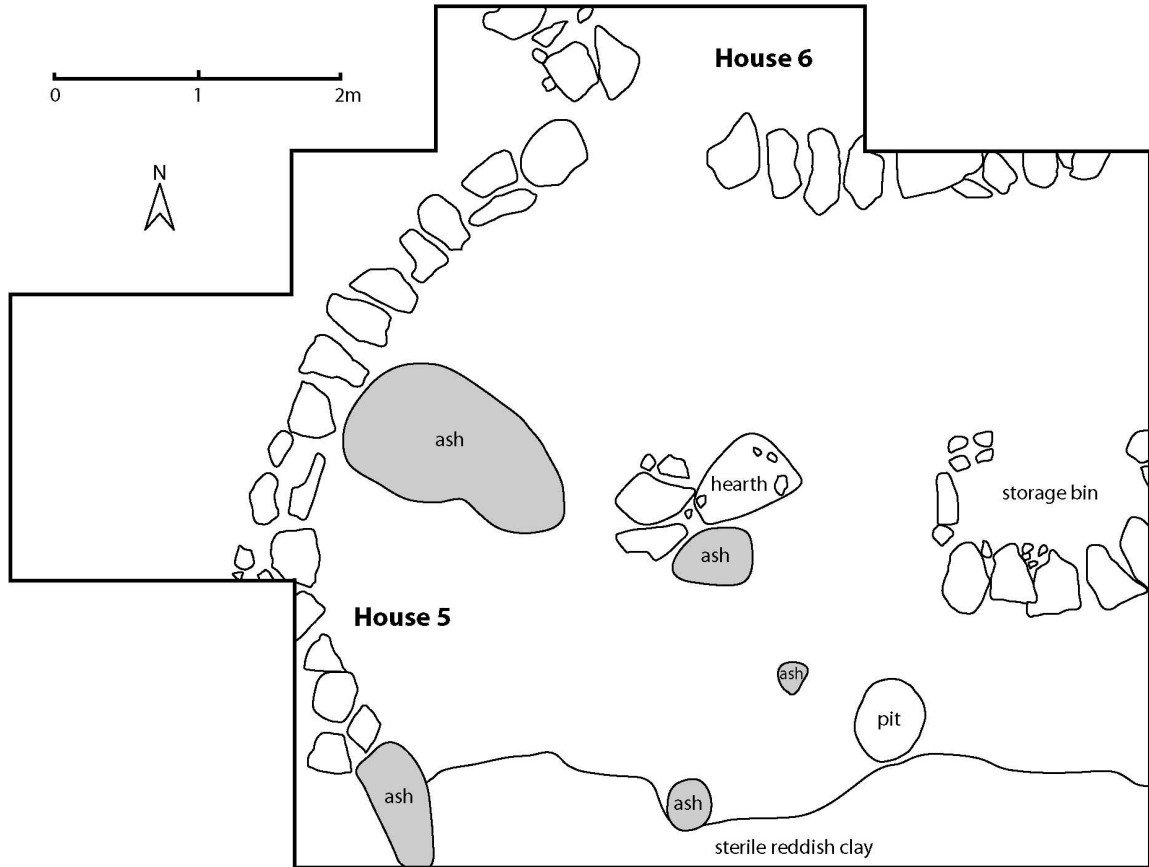
Figure 6.11. House 5 and the features associated with the occupation floor. To the north of House 5 is House 6, only partially excavated.

Architecture and Layout

House 5 had a circular shape and measured 6 x 5 m (Figure 6.11). As we saw for House 4, the residents of House 5 first had to level the terrain before building their house. They removed approximately 10 cm of sterile reddish clay on the south side and added a thick layer (25-65 cm) of fill on top of the reddish clay in the center and north side. This fill consisted of semi-compact brown soil mixed with ash; pottery fragments of the imported, local, and Derived Chanapata styles (Figure 6.12); débitage and waste (mostly laminated andesite/slate); broken ceramic objects; and burned pieces of maize cobs.

Once the area was leveled, the builders of House 5 added a stone foundation on the west side of the house (and perhaps on the east side too, but additional excavation would be needed to verify this). Additional stones were placed on the north side of the house, but these were part of the House 6 foundation. Like House 4, adobes and cane walls were probably placed on top of the foundation stones. On the south side of the house the slightly elevated

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natural reddish clay could have been used as a bench and foundation, and cane walls or adobes were likely placed directly on top of this clay.

Figure 6.12. A small local Qotakalli jar from the layer of fill that was placed to level the surface of the terrain before the construction of House 5.

Occupation Floor

The floor of House 5, prepared directly on top of the leveled surface, consisted of compact dark brown soil. This floor was associated with numerous features and items, described below (Figure 6.13).

Floor Activity

On the floor of House 5 was an accumulation of loose and semi-compact brown soil. Like House 4, the pottery fragments recovered on the floor of House 5 represented a variety of vessel forms and styles (Table 6.5 and Figure 6.14). The rims of the styles imported from outside the Xaquixaguana Plain – Muyu Urqu, Qotakalli, and Incised *Incensario* – mostly corresponded to small bowls and cups (mean rim diameter is 11 cm) used for individual servings of food and drink. Body sherds also included Waru and Araway.
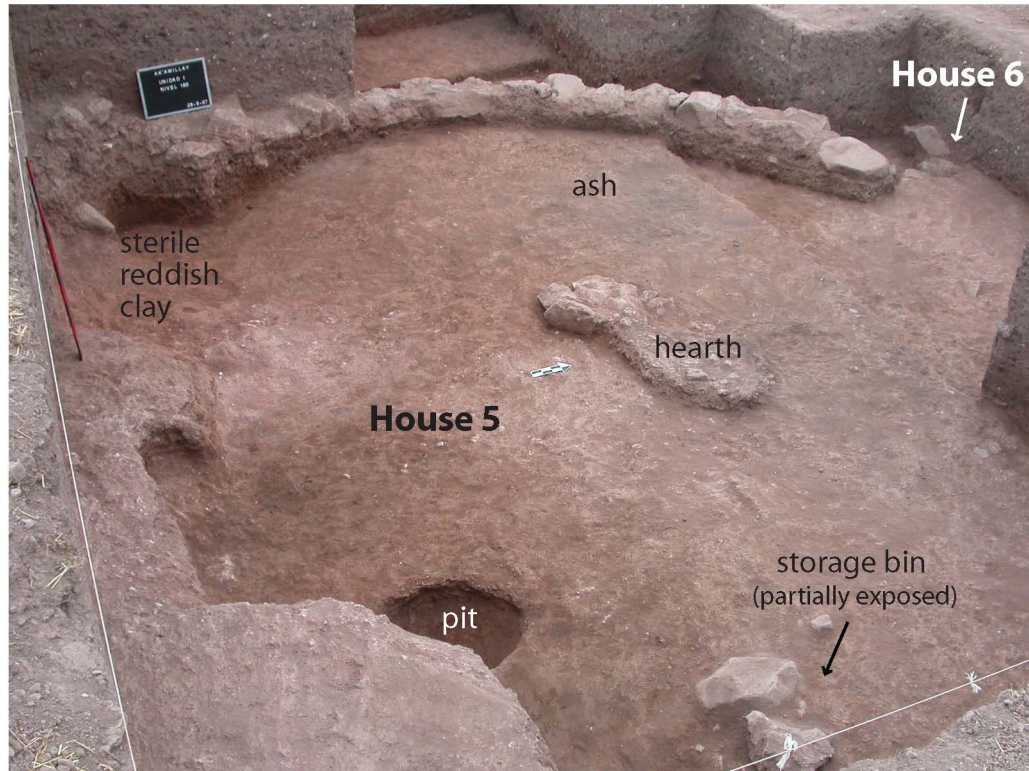
Figure 6.13. House 5, showing the stone foundation, hearth and ash lens, storage bin (only partially exposed in this photograph), and pit. The stone foundation of House 6 is visible to the right. North is at the right.

The local styles (local Qotakalli, local decorated, and local undecorated) were represented by a higher diversity of vessel forms. Like the imported styles, the bowls of the local styles have a small rim diameter (mean is 11.5 cm) and were probably used for individual servings of food and drink. Ollas and jars, mostly undecorated, were also well represented among the local styles.

As we saw for House 4, Derived Chanapata pottery continued to be abundant in House 5. However, the proportion of Derived Chanapata in House 5 was lower than that of House 4; 57% of all rims from House 5 belong to the Derived Chanapata style, as opposed to 73% and 69% for the first and second occupation floors of House 4, respectively. Derived Chanapata continued to be used for cooking, storage, and day-to-day serving alongside the fancier imported and local styles. In House 5 Derived Chanapata bowls were still larger than those of the other styles (mean rim diameter is 22 cm), except for the Derived Chanapata necked bowls that had a small rim diameter.

Table 6.5. Inventory of pottery rims from the floor and associated features of House 5*

	Bowls				Cups	Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.								
Incised *Incensario*		1										1
Muyu Urqu		9			1						3**	13
Qotakalli		2		3			1				2**	8
Local Qotakalli	2	6		1	1		3				3	16
Local decorated	2	6	1	2		1	5			2	4	23
Local undecorated	4	4		5		8	15				12	48
Derived Chanapata, undecorated	13	3	3			33 (15.5)	26 (12.6)	17 (15)	12 (10.6)	6	5	118
Derived Chanapata, pattern burnishing	11	1					1	4			1	18
Derived Chanapata, polished red slip	1						3				1	5
Derived Chanapata, other decoration		1	1									2
TOTAL	33	33	5	11	2	43	53	21	12	8	31	252

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).

** Bowls or cups (fragments are too small to distinguish).

Figure 6.14. Pottery fragments from House 5: (a) a large Derived Chanapata face-neck jar rim; (b) a Muyu Urqu straight bowl or cup rim; (c) a black and red-on-white Qotakalli incurving bowl rim; and (d) a black-on-white local Qotakalli cup rim.

Like House 4, most stone tools and débitage from the floor of House 5 were made from laminated andesite/slate (86% of all chipped and ground stone were this material) (Table 6.6). Tools made of this material included knives (probably hafted), chopping tools, blades used to sharpen other tools, and abraders. Other types of stone were much less common in House 5 and included a few flakes and débitage, a small obsidian projectile point with a concave base (Figure 6.15a), grinding stones, and a granite *kupana* (a doughnut-shaped agricultural tool used to break earth clods while preparing a field for planting).

Table 6.6. Inventory of chipped stone and ground stone from the floor and associated features of House 5

	Andesite	Lamin. andesite /slate	Quart-zite	Sand-stone	Schist	Obsidian	Granite	Other	TOTAL
projectile points						1			1
unmodified flakes	3		1	4		2		1	11
débitage	1		1						5
cores			1						1
TOTAL chipped stone	4	0	3	4	0	3	0	1	18
knives		5							5
chopping tools		2							2
sharpening blades		2							2
waste		122			3				122
pestles							1		1
undiff. hand stones				1					1
abraders		2							2
kupana							1		1
TOTAL ground stone	0	133	0	1	3	0	2	0	136
GRAND TOTAL	4	133	3	5	3	3	2	1	154

Other objects recovered on the floor of House 5 included a broken ceramic anthropomorphic figurine, a bone spindle whorl (Figure 6.15b), two bone *tupu* (cloak pins) or needles, a piece of quartz, unmodified chalk, and two pieces of lime that were once stuck to the bottom of a ceramic vessel or gourd container (Figure 6.15d).

Hearth and Ash Lenses

In the center of House 5 was a hearth measuring 70 x 45 cm. This hearth did not have stone slabs around it but it had two large stones on its west side and some small stones on its east side. These stones could have been used to support cooking pots. The hearth was filled with loose ash, a few pottery sherds, a laminated andesite/slate knife and some waste, and a decorated piece of bone (Figure 6.15c). Around the hearth and in the southern portion of the

house we found five ash lenses between 11 and 18 cm thick. These lenses contained loose ash mixed with dirt, a few pottery sherds, and some laminated andesite/slate waste.

Figure 6.15. Objects from House 5: (a) an obsidian projectile point with a concave base; (b) a spindle whorl in bone; (c) a decorated bone fragment; and (d) hardened lime that was once stuck to the bottom of a ceramic vessel or gourd container.

Storage Bin

In the eastern part of House 5 was a rectangular storage bin measuring 1.5 x 1.25 m (Figure 6.16). This feature had a stone foundation, and the stones were similar in size and shape to those of the house foundation. The bin was filled with brown dirt mixed with a few pottery fragments. The size and location of this feature suggest that it was used as a storage bin. During the excavation, one of the workers was explaining that his grandfather used to build similar storage bins (*depósitos de productos*) along the interior walls of his house. The grandfather would first build a stone foundation and then fill the interior with straw, on top of which he would store tubers and *ch'uñu*; he would then cover the crops with an aromatic herb (*muña*) that kept the insects and rodents away for several months. He stored his quinoa in large ceramic vessels next to these bins.

Pit

In the southeastern part of the house we found an oval pit measuring 60 x 50 cm. It was 22 cm deep and filled with loose ash, one pottery sherd, one flake, and one animal bone. This pit was probably used for storage and was filled with trash towards the end of the house occupation.
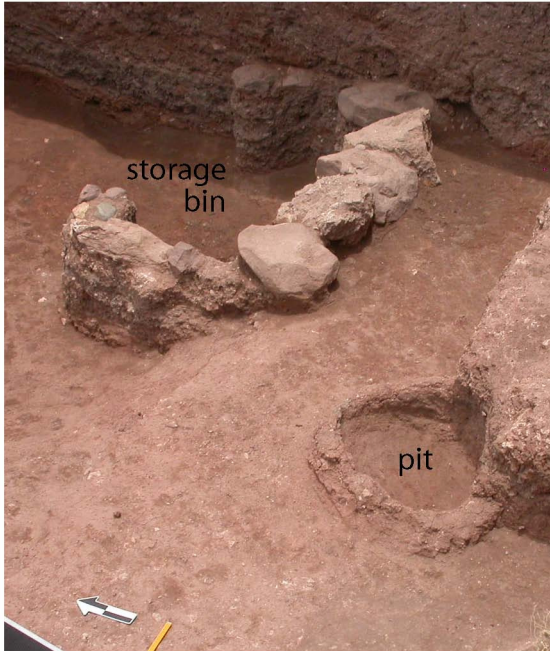
Figure 6.16. The storage bin and pit of House 5. This photograph was taken at the end of the excavation, showing sterile level; note the drop of the terrain around the storage bin and the layer of ash and dirt (in the profile) that was prepared to level the area before the construction of the house.

Abandonment

The AMS date from House 5 suggests that its residents constructed, occupied, and abandoned their house sometime during the Early Middle Horizon. House 5 was probably abandoned at around the same time as House 4. Upon abandonment, the residents of House 5 left some used and broken objects on the floor and took most of the useful items with them. Fill slowly covered the floor until a new house, House 7, was built during the Late Middle Horizon (see Chapter 7).

House 6

House 6 was a circular dwelling immediately north of House 5 and east of House 4. House 6 was 1.1 m below the present surface of Ak'awillay. Due to time constraints, the excavation team could only expose a small portion of the house and recover a limited number of items in it. Future work at the site will give priority to more excavation in this area, but a number of preliminary observations can be made regarding this dwelling.

Dating House 6

The small pottery assemblage from House 6 suggests that it was contemporary with Houses 4 and 5 and occupied during the Early Middle Horizon. The 68 diagnostic rims and body sherds included several imported Middle Horizon styles (Waru, Muyu Urqu, Qotakalli, and Araway), local styles (local Qotakalli and the local decorated and undecorated pottery), as well as Derived Chanapata. As we saw for House 5, the presence of small Araway fragments in the fill under the floor indicates that House 6 was built after the Wari arrived in Cusco and after the people of Ak'awillay started to obtain Araway pottery from the Cusco Basin.

Architecture and Layout

Like Houses 4 and 5, House 6 had a circular stone foundation (see Figure 6.11). Based on the curve of the wall that we exposed, House 6 probably measured approximately 6 m in diameter. The people of Ak'awillay built this house in the same way that they built Houses 4 and 5 – first by leveling the terrain, then by constructing the stone foundation; they probably built perishable walls on top of the stone foundation.

In the foundation of House 6 there was a space about 70 cm wide where there were no stones; this space may have been a doorway that opened onto House 5. It is unclear at this point whether House 6 was a second room of House 5 or an independent house; more excavation should resolve this issue.

Occupation Floor

The floor of House 6 consisted of compact brown soil. We did not find any features in the small area that we excavated, but we recovered a number of items. Pottery displayed the same range of vessel shapes and styles as those of Houses 4 and 5. Most of the stone items consisted of laminated andesite/slate waste, but we also found a few quartzite and chert flakes. Other objects included a ceramic spindle whorl and a bone bead. The area immediately outside the house contained an obsidian projectile point with a flat base and two pottery fragments with a thick lime deposit.

Abandonment

The proximity of House 6 to Houses 4 and 5 and the similarity in layout, construction, and contents of these three houses suggest that they were all constructed, occupied, and

abandoned during the Early Middle Horizon. Future excavation in this part of the site will expose the rest of House 6 and hopefully additional houses.

Kitchen

The kitchen was located between the Early Middle Horizon houses just described and the public building discussed in Chapter 8 (see Unit D on Figures 4.17 and 4.18). The kitchen was 50 cm below the present surface of Ak'awillay.
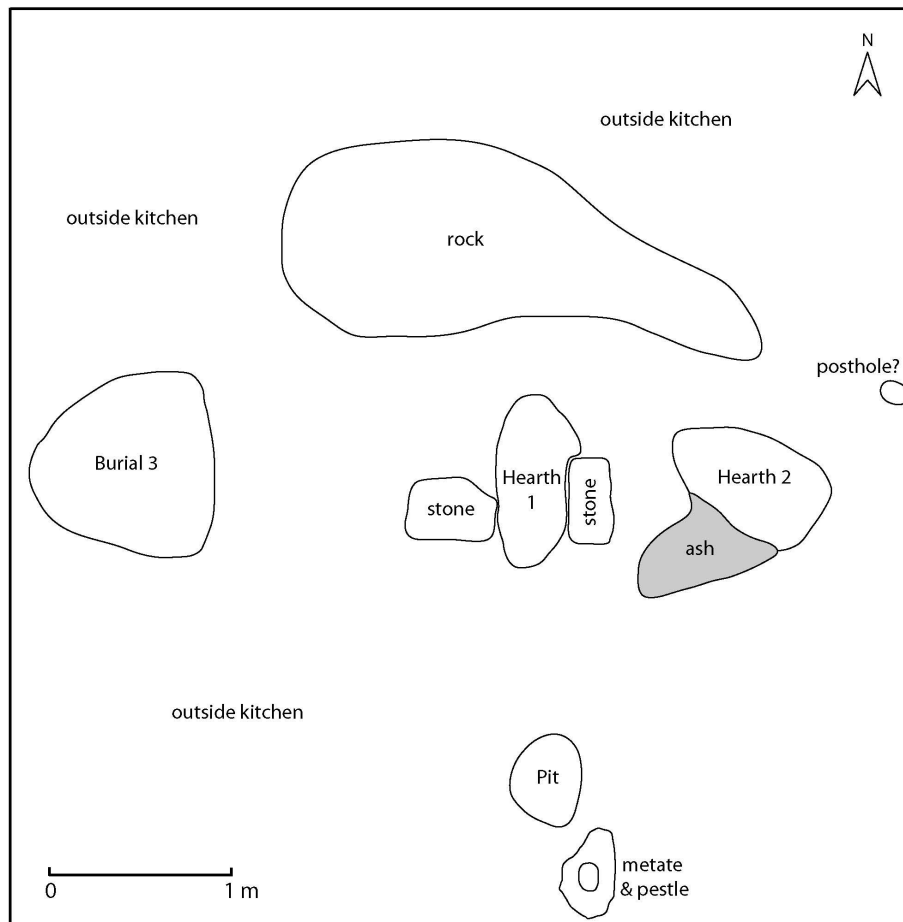
Figure 6.17. A kitchen with two hearths, a storage pit, and a metate and pestle. Burial 3 is outside the kitchen.

Dating the Kitchen

The pottery assemblage from the kitchen suggests that this space was in use in the same time as the Early Middle Horizon Houses 4, 5, and 6. Pottery included a few fragments of the Middle Horizon imported styles (Waru, Muyu Urqu, and Qotakalli), fragments of the local styles (local Qotakalli and the local decorated and undecorated pottery), as well as numerous Derived Chanapata fragments.

Layout

The kitchen did not have a stone foundation but was probably covered by a roof, as indicated by a possible posthole on the northeast side (Figure 6.17). Unlike the houses, the people who built this kitchen did not level the terrain but laid it out directly on the natural soil. The resulting occupation floor was highly uneven.

The kitchen measured 3 m x 3 m but may have extended to the east and south. To the north was a large rock that might have delimited the space. It is unclear at the moment who used this kitchen and whether it was part of a house's patio or a communal or specialized kitchen for the production of chicha, for example.

Occupation Floor

The uneven floor of the kitchen consisted of very compact brown soil and was associated with two hearths, one storage pit, and numerous items.

Floor Activity

On the floor of the kitchen was an accumulation of semi-compact and loose brown soil. Pottery fragments from this layer included a variety of vessel forms and styles (Table 6.7 and Figure 6.18a-c). The imported styles (Waru, Muyu Urqu, and Qotakalli) always occurred in the form of small bowls (mean rim diameter is 11 cm). Local ceramic styles (local Qotakalli and the local decorated and undecorated pottery) were more common in the kitchen than the imported styles and occurred in the form of small bowls (mean rim diameter is 11 cm), ollas, and jars. Derived Chanapata was by far the most common pottery in the kitchen; 78% of all rims belonged to this style. Large bowls and plates (mean rim diameter is 22 cm), ollas, jars, lids, and neckless ollas were used to prepare, cook, serve, and store foods and liquids.

Table 6.7. Inventory of pottery rims from the kitchen*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Waru		3		4							7
Muyu Urqu		1									1
Qotakalli	2	1		2							5
Local Qotakalli	2	1		2						1	6
Local decorated	1	2		2		2				3	10
Local undecorated	4	3			5	7				6	25
Derived Chanapata, undecorated	16 (20)	6	4	2	32 (14.7)	28 (11)	10	25 (11)	2	7	132
Derived Chanapata, pattern burnishing	30 (24)	2			1	2	2	1	4	2	44
Derived Chanapata, polished red slip	5					3		1		1	10
Derived Chanapata, other decoration	4	1	1			1					7
TOTAL	64	20	5	12	38	43	12	27	6	20	247

* Numbers in parentheses correspond to mean rim diameter. Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).

Figure 6.18. Ceramic and bone objects from the kitchen: (a) a Waru bowl; (b) a black-on-white local Qotakalli bowl; (c) a local jar rim and neck fragment; (d) a bone stick; (e) a ladle decorated in the local style; (f) a camelid figurine; and (g) a bone needle.

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Unlike the houses, there were very few stone items in the kitchen and only a limited number of stone types (Table 6.8). Apart from two obsidian knives, a few unmodified flakes, and some laminated andesite/slate waste, most of the stone items were grinding stones. Close to the pit, we found a pestle on top of a metate (Figure 6.19). One hammer had thick lime deposits on its two ends.

Table 6.8. Inventory of chipped stone and ground stone from the kitchen

	Andesite	Lamin. andesite /slate	Quartzite	Sandstone	Chert	Granite	Obsidian	TOTAL
knives							2	2
unmodified flakes	4		1	2				7
débitage					1			1
TOTAL chipped stone	4	0	1	2	1	0	2	10
waste		7						7
pestles	1			2		1		4
hammers				1				1
undiff. hand stones	1							1
metates				1				1
flat slab				1				1
TOTAL ground stone	2	7	0	5	0	1	0	15
GRAND TOTAL	6	7	1	7	1	1	2	25

Figure 6.19. A metate and pestle from the kitchen.

Ceramic objects recovered in the kitchen included an anthropomorphic figurine, a disc, a spoon, and four ladles (Figure 6.18e). The area surrounding the kitchen also included several other ladles. Almost all spoons and ladles were decorated in the local style. Other objects from the kitchen included a bone needle (Figure 6.18g) and a bone stick (Figure 6.18d); the latter may have been used to stir the contents of an olla while cooking.

Hearth 1

In the center of the kitchen we found an oval hearth measuring 60 x 30 cm. This hearth had two stones around it, one on each side of the hearth. One of the stones was burned (Figure 6.20). These two stones were evidently used to support cooking vessels over the fire. The hearth was filled with ash, charcoal, and a few burned pottery sherds.

Figure 6.20. One of the stones on the side of Hearth 1 was burned.

Hearth 2

To the east of Hearth 1 we found another hearth. Hearth 2 also had an oval shape but did not have any stones around it. It measured 84 x 65 cm and to its southwest was a large ash lens. Hearth 2 was filled with ash, a few pottery sherds, a pestle, a ceramic figurine representing a camelid (Figure 6.18f), a ceramic disc, and a ceramic ladle. This evidence suggests that Hearth 2 was filled with trash before the abandonment of the kitchen, while Hearth 1 could have remained in use until abandonment.

Pit

To the south of the two hearths and close to the metate and pestle was an oval pit measuring 50 x 40 cm. This pit was 63 cm deep and was probably used to store various items related to food preparation. Upon the abandonment of the kitchen, the pit was filled with loose soil and eight fragments of non-diagnostic pottery.

Burial 3

Burial 3 was located to the west of the kitchen and does not seem to have been associated with it. The burial contained the remains of a child less than one year of age (Figure 6.21). It is unclear whether this child was buried while the kitchen was in use or slightly after it was abandoned. The bones were partly disarticulated, but it seems that the individual was flexed, seated, and looking northeast. This child had no dental pathologies but suffered from malnutrition or disease. Burning on the cranium and vertebrae indicates a funerary ritual involving the burning of the child's body.

Figure 6.21. Burial 3, a child less than one year old buried in a simple circular pit to the west of the kitchen.

This child was placed in a circular pit (85 cm in diameter) dug into the ground. Three small stones were located under the bones, but the child was not associated with any offering. The fill of the burial consisted of loose soil mixed with an obsidian scraper and pottery fragments of the imported, local, and Derived Chanapata styles.

Abandonment

The material culture recovered in the kitchen suggests that it was built, used, and abandoned in the same time as the Early Middle Horizon Houses 4, 5, and 6. Upon abandonment, the people who used this space filled the hearths and the pit with trash and left some used and broken objects on the floor. Fill slowly covered the kitchen and no later structures were built in this area of Ak'awillay.

Early Middle Horizon Household Activities

The features and material culture recovered from Houses 4, 5, and 6 and from the kitchen suggest that the residents of Ak'awillay practiced a wide range of activities during the Middle Horizon. While the activities that took place in the kitchen were mostly related to the preparation, consumption, and storage of foods and liquids, those that took place in the three houses cover a whole range of other tasks and practices.

Agricultural tasks

The presence of *kupana* in the houses suggests that the people of Ak'awillay prepared fields for planting. Agricultural production included at least maize, as indicated by several burned maize cobs in the houses. Crops were probably planted on the lower foothill of Ak'awillay where there is no indication of occupation during the Middle Horizon. The stone axe recovered from House 4 and the various chopping tools could also have been used in the fields or for other activities such as cutting wood.

Hunting, herding, and husbandry

In addition to plants, the residents of Ak'awillay included meat in their diet. The presence of several projectile points in the houses suggests hunting; this activity probably targeted deer, as indicated by several deer bones on the floors. The villagers of Ak'awillay also captured birds and kept (or at least consumed) guinea pigs. Lastly, the presence of camelid

bones in the houses suggests that they either herded these animals or obtained their meat through exchange with people from the *puna*.

Food preparation

Food preparation in the houses and kitchen involved the grinding, crushing, and cutting of food, as indicated by numerous grinding stones, chopping tools, and knives. Most of these tools showed substantial use wear and some were broken, suggesting that they were used over a long period of time before their discard.

Food and liquids were then cooked in ollas and neckless ollas over a fire; bone sticks could be used to stir the contents of ceramic vessels. The presence of stones around most hearths suggests that ceramic vessels were not set directly in the fire but rested on stones. Future analyses of flotation materials and vessel residues should identify what kinds of foods were prepared in the houses and kitchen.

Food consumption

The villagers of Ak'awillay served food and liquids using ceramic spoons and ladles. They then consumed their meals and beverages in two types of vessels: first, in large unrestricted Derived Chanapata bowls and plates that were used for the communal consumption of solid foods and thick stews; and second, in small restricted bowls and cups of the imported, local, and Derived Chanapata styles that were used for individual servings of food and beverages. In Houses 4 and 5, the proportion of small bowls is high (46% and 63% of all bowls, respectively); the sample of vessels from the kitchen may not be representative of what was being prepared and served since most of the consumption probably took place outside the kitchen. The high proportion of small individual bowls and cups in the Early Middle Horizon houses seems to indicate an emphasis on the consumption of more liquid foods and beverages such as chicha and less communal or "family-style" consumption of solid foods.

Storage

The residents of Ak'awillay stored liquids and small grains like quinoa in jars that were covered with lids. They could also use neckless ollas to store food, liquids, and other items such as wool, cloth, and clay. Tubers and other solid items were stored in storage bins or in pits dug into the ground inside their house. It is unclear how maize was stored, but it may have been stored in storage bins or pits.

Crafts

In addition to subsistence activities, the villagers of Ak'awillay were involved in several crafts. The presence of abraders, used to smooth or burnish the surface of ceramic vessels before firing them, suggests pottery production. People living at the site also produced, repaired, and sharpened laminated andesite/slate tools, but few tools in other types of stones – at least inside their house. They also minimally repaired obsidian tools.

In addition to pottery and stone tools, the presence of borers suggests that the residents of Ak'awillay were drilling some materials, perhaps hides. They also made their own spindle whorls from broken pieces of pottery and animal bones and used them to spin thread; they then used this thread, weaving shuttles, and bone needles to weave. The biggest needles could also have been used to make baskets and mats.

Ritual

A few features and objects from the Early Middle Horizon contexts indicate that the residents of Ak'awillay practiced ritual ceremonies. Burial 2 was placed under the first floor of House 4 at the beginning of the house occupation. This woman may have been a member of the family living in this house. Her burial in the house rather than in the cemetery (see Chapter 8) may also suggest that she was buried there by her children and that she was a revered ancestor.

In addition to Burial 2, the olla that was broken in situ in House 4 and that was buried with two white stones may also represent a dedicatory offering to the house just before a reflooring episode. Anthropomorphic figurines found in all houses and in the kitchen further indicate that the villagers of Ak'awillay, probably women, practiced household rituals that may have involved ancestors; women could also have used zoomorphic figurines in diverse rituals practiced in the house setting.

Exchange

The residents of Ak'awillay obtained a variety of items from outside the local area during the Early Middle Horizon. They procured Qotakalli, Muyu Urqu, Waru, and Araway bowls and cups as well as incised *incensarios* from the Cusco Basin and possibly elsewhere in the Cusco region. They acquired laminated andesite/slate from outside the Xaquixaguana Plain and obsidian from outside the Department of Cusco, probably through long-distance exchange or exchange with intermediary groups. Obsidian from Houses 4, 5, and 6 and from the kitchen was sourced to three locales: Alca and Chivay in the Department of Arequipa, and Quispisisa in the Department of Ayacucho. Obsidian from the Alca and Chivay sources was present at Ak'awillay

before the Middle Horizon (see Chapter 5), but obsidian from Quispisisa was new at the site in the Early Middle Horizon. Quispisisa obsidian was associated with the expansion of the Wari state and has been found in Middle Horizon contexts throughout Peru (Burger et al. 2000). The pottery, laminated andesite/slate, and obsidian data thus suggest that during the Early Middle Horizon the people of Ak'awillay continued to participate in well-established exchange networks but also engaged in new exchange partnerships.

Trash disposal

The villagers of Ak'awillay occasionally discarded objects in the area immediately outside their houses, but they discarded most of their trash in communal dumps, abandoned houses, and nearby gullies. New construction episodes could also have been an effective way to dispose of part of the community's trash; when a new house was built or a new floor prepared, people from Ak'awillay used trash mixed with dirt to level the terrain and fill old pits.

Other Activities

Another activity occurring at Ak'awillay during the Early Middle Horizon was the crushing of heated limestone to produce lime. Lime left a thick white deposit on several pottery fragments and on grinding stones. As explained in Chapter 5, lime was probably mixed with the ashes of quinoa stalks and consumed to release the alkaloids of coca leaves at the moment of chewing.

Pendants and beads indicate that at least certain individuals at Ak'awillay were wearing necklaces and other types of jewelry. Lastly, ceramic cones from the Early Middle Horizon houses were used for activities yet to be determined.

Chapter 7

LATE MIDDLE HORIZON HOUSES AT AK'AWILLAY

The village of Ak'awillay continued to be occupied during the Late Middle Horizon (AD 800-1000), but the occupation seems to have been less extensive than that of the Early Middle Horizon. After the Early Middle Horizon houses and kitchen were abandoned, at least some residents of Ak'awillay continued to build and occupy houses on the north side of the hill. The excavation team exposed one dwelling, House 7, dating to the Late Middle Horizon.

House 7

House 7 was a circular dwelling located above House 5 and 90 cm below the present surface of Ak'awillay (see Unit F on Figures 4.17 and 4.18). We only found part of the stone foundation of House 7 (Figure 7.1). The foundation was constructed with a large number of small stones that had collapsed and dispersed, making it difficult to determine the exact limits of the house. Despite these difficulties, we found a significant number of items associated with the occupation floor and hearth of this dwelling.

Dating House 7

The material culture from House 7 dates this dwelling to the Middle Horizon. Pottery included several Middle Horizon styles (Waru, Muyu Urqu, Qotakalli, Araway, and Local) and most of the stone tools and waste were made of laminated andesite/slate. Two additional lines of evidence further indicate that House 7 was built and occupied during the Late Middle Horizon after the Early Middle Horizon houses and kitchen described in Chapter 6 had been abandoned. First, House 7 is 20 to 30 cm above House 5; the thickness of this fill shows that House 7 was built after the Early Middle Horizon Houses 5 and 6 had been abandoned for some time.

Second, the construction method used to build House 7 (discussed below) was different from that used to construct the Early Middle Horizon houses. These three lines of evidence – the material culture, the stratigraphy, and the differences in construction method – suggest that House 7 was occupied during the Middle Horizon and, more specifically, during the latter half of this period.
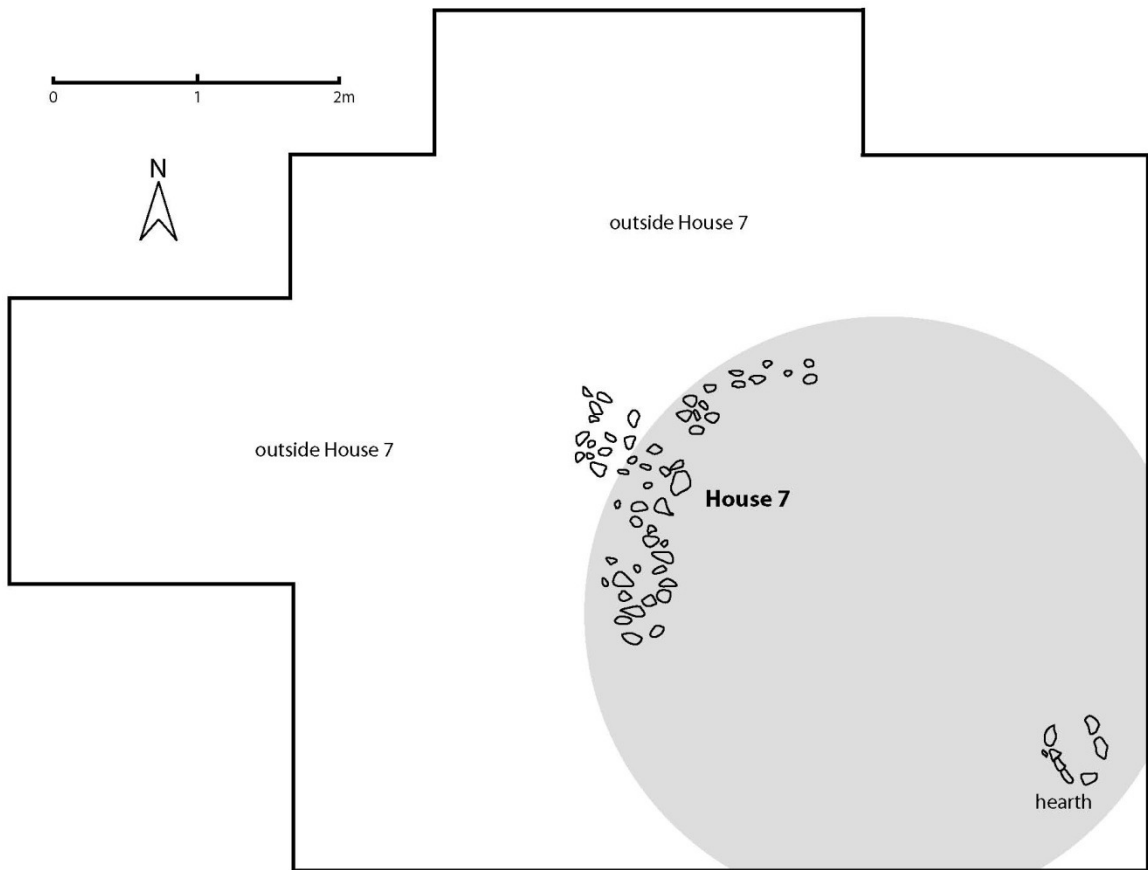
Figure 7.1. House 7 showing the stone foundation on the northwest side and the hearth in the southeast. The shaded area shows the approximate extent of House 7.

Architecture and Layout

Like the other Middle Horizon houses, House 7 had a circular stone foundation. This foundation is nonetheless different from previous ones – instead of using a small number of large stones, those who built this dwelling used a large number of small stones (see Figure 7.1).

The foundation was incomplete but based on the wall curve, House 7 probably measured approximately 4 m in diameter.

Since fill had accumulated between House 5 and House 7 and the foundation of House 7 had somewhat collapsed and dispersed, it was impossible to see whether or not the builders of House 7 first had to level the terrain with fill before constructing their house. They probably placed perishable walls on top of the stone foundation, although none was preserved.

Occupation Floor

The floor of House 7 consisted of compact brown soil. This floor was associated with a hearth and numerous items, described below.

Floor Activity

On the floor of House 7 was an accumulation of semi-compact dark brown soil. The pottery fragments found in this layer included several vessel forms and styles (Table 7.1 and Figure 7.2). Although less numerous than in the Early Middle Horizon houses, the imported styles – Waru, Muyu Urqu, and Qotakalli, as well as a few Araway body sherds – continued to occur in the form of small bowls or cups (mean rim diameter is 11 cm).

Table 7.1. Inventory of pottery rims from House 7*

	Bowls				Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.							
Waru		1		1							2
Muyu Urqu		6		1						4**	11
Qotakalli		3		2							5
Local Qotakalli	6	10		10		4				1	31
Local decorated	1	8		2		7				2	20
Local undecorated	4	2		3	3	23		3	2	17	57
Derived Chanapata, undecorated	55 (26)	21	9	1	88 (16)	64 (11.5)	38 (13.5, 21)	35 (10)	21	25	357
Derived Chanapata, pattern burnishing	44	10			5	2	9	1	1	2	74
Derived Chanapata, polished red slip	14	5				3					22
Derived Chanapata, incised/punctuated	1	1				1					3
Derived Chanapata, other decoration	3										3
TOTAL	128	67	9	20	96	104	47	39	24	51	585

* Numbers in parentheses correspond to mean rim diameter (cm). Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).   Two numbers indicate a bimodal distribution.
** Bowls or cups (fragments are too small to distinguish).

Local pottery styles were also present in House 7. The local imitation of Qotakalli and the local decorated pottery mostly included small bowls (mean rim diameter is 13 cm) but also some jars, while the local undecorated pottery included a wide variety of vessel forms. Like all the other houses at Ak'awillay, House 7 also included a significant amount of Derived Chanapata pottery (78.5% of all rims from House 7 are Derived Chanapata). Apart from the few small necked and incurving bowls, all Derived Chanapata bowls have a large rim diameter (mean is 26 cm) and were probably used for communal servings of food. Other Derived Chanapata vessel forms like the olla, jar, neckless olla, lid, and plate were also present in House 7.

Figure 7.2. Pottery fragments from House 7: (a) a Muyu Urqu body sherd; (b) a black and red-on-white Qotakalli body sherd; (c) a black-on-white local Qotakalli bowl rim decorated on the exterior and interior walls; and (d) a black and red-on-white local Qotakalli face-neck jar rim.

Table 7.2. Inventory of chipped stone and ground stone from House 7

	Ande-site	Lamin. andesite /slate	Quart-zite	Sand-stone	Lime-stone	Rhyo-lite	Schist	Chert	Gra-nite	Obsi-dian	Other	TOTAL
scrapers										1		1
utilized/retouched flakes	1		4	1								6
unmodified flakes	8		1	4	2	2		1		1	1	20
débitage	3		2					1		1		7
TOTAL chipped stone	12	0	7	5	2	2	0	2	0	3	1	34
sharpening blades			1									1
waste		193					2					195
pestles				2					1			3
undiff. hand stones				3								3
metates									1			1
undiff. bottom stones				1								1
abraders		1		2								3
TOTAL ground stone	0	194	1	8	0	0	2	0	2	0	0	207
GRAND TOTAL	12	194	8	13	2	2	2	2	2	3	1	241

As we saw for the Early Middle Horizon houses, the most common type of stone recovered in House 7 was laminated andesite/slate; 80.5% of all chipped and ground stone from this dwelling was made on this material (Table 7.2). There was a wide variety of other types of stone in House 7 but those were much less common. Stone tools included a scraper, a sharpening blade, an abrader, and various grinding stones.

The floor of House 7 also included various ceramic objects: a spoon, a ladle, four anthropomorphic figurines, four weaving shuttles, and a waster. We also found a burned maize cob and five pieces of unmodified quartz.

Hearth

Near what was probably the eastern side of the house we found an oval hearth (Figure 7.3). This hearth measured 46 x 38 cm and was made with small stones and mortar. The stones facing the interior of the hearth were burned. The hearth contained ash mixed with a few pottery sherds and a small burned maize cob.

Figure 7.3. The hearth from House 7 (excavated).

Abandonment

The evidence presented above suggests that House 7 was occupied and abandoned during the Late Middle Horizon. Before House 7 was completely covered with fill, the stones of its foundation were partly dismantled and dispersed. The area was then completely abandoned and no other houses were built in this part of Ak'awillay.

Late Middle Horizon Household Activities

The objects and hearth recovered in House 7 suggest that the residents of Ak'awillay practiced a wide range of activities during the Late Middle Horizon.

Agricultural tasks

The presence of burned maize cobs indicates that the residents of House 7 consumed maize. Like the residents of Ak'awillay during the previous periods, those living at the site during the Late Middle Horizon probably cultivated this crop at the foot of Ak'awillay, where lands are lower in altitude and easily irrigated by small canals.

Food preparation

As we saw for the previous houses, the residents of House 7 used grinding stones to grind and crush food. Most grinding stones showed heavy wear, suggesting they were used for a long period of time before they were left in the house upon abandonment. Two broken laminated andesite/slate knives were also found in the area immediately outside the house, and its residents probably used them to cut food and other items. Food was then cooked in ollas and neckless ollas over the fire. These vessels were probably not set directly in the fire but rested on the stones placed on each side of the hearth. Smaller vessels could have rested on stones put inside the hearth.

Food consumption

People living in House 7 used ceramic ladles and spoons to serve and eat food, and they consumed their meals and beverages in bowls, cups, and plates. Unlike the Early Middle Horizon houses, only one third (33%) of the bowls from House 7 had a small rim diameter and were used for the consumption of beverages (perhaps chicha) and individual servings of food. Most bowls were large and, like the plates, were used for larger servings of food where several individuals could eat solid foods and thick stews from the same vessel. This pattern is more

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consistent with the pre-Middle Horizon period than with the Early Middle Horizon contexts at Ak'awillay. This change could be due to a transformation of eating and drinking activities; alternatively, it could reflect a decrease in imported vessels. Additional excavations of Late Middle Horizon contexts could provide more information on this pattern.

Storage

The residents of House 7 could store liquids and small grains like quinoa in jars that were covered with lids. Neckless ollas could also be used to store food, liquids, and other items such as wool, cloth, and clay.

Crafts

The presence of one ceramic waster as well as three abraders used to smooth and polish ceramic vessels before firing suggest that the residents of House 7 were involved in pottery production. They also produced, repaired, and sharpened laminated andesite/slate tools, as indicated by the abundant waste in this material. The residents of House 7 procured several other types of stone, but these were only worked occasionally inside the house. In addition to these activities, the occupants of House 7 weaved with the help of shuttles.

Ritual

Apart from subsistence and craft activities, the four broken anthropomorphic figurines suggest that people living in House 7 practiced household rituals that may have involved ancestors. One figurine had a small hole on its head for suspension, and figurines may have been kept and stored that way.

Exchange

The villagers of Ak'awillay procured various items from outside the local area during the Late Middle Horizon. They obtained a small number of Waru, Muyu Urqu, Qotakalli, and Araway pottery from the Cusco Basin and possibly elsewhere in the Cusco region. In addition, they procured laminated andesite/slate from outside the Xaquixaguana Plain and obsidian from outside the Department of Cusco, probably through long-distance exchange or exchange with intermediary groups. The obsidian from House 7 and its immediate vicinity was sourced to two locales: Alca in the Department of Arequipa and an unknown source. The evidence from pottery, laminated andesite/slate, and obsidian suggests that the people of Ak'awillay continued to participate in several exchange networks during the Late Middle Horizon.

Trash disposal

Small items were occasionally discarded in the area immediately surrounding House 7. Most trash, however, was probably disposed of in nearby gullies or in communal dumps and abandoned houses elsewhere at the site.

Chapter 8

PUBLIC AND MORTUARY RITUAL AT AK'AWILLAY

The village of Ak'awillay reached its peak during the Middle Horizon when numerous individuals and families from neighboring settlements moved and settled at the site. As described in Chapters 5 to 7, people living at Ak'awillay were involved in a variety of household tasks and activities, from subsistence-related chores and crafts to ritual and long-distance exchange. The villagers of Ak'awillay occasionally placed dedicatory offerings and human burials below house floors; more often, women probably practiced household rituals using figurines that may have embodied ancestors. The villagers of Ak'awillay may have practiced these rituals to maintain contact with their ancestors and to ensure the prosperity and fertility of their households.

In addition to these rituals that took place inside the house, the people of Ak'awillay conducted extra-household ritual activities in two areas of their village: (1) a public building and (2) a cemetery. Both of these areas were in use during the Middle Horizon. Members of different families met in the public building to attend feasts and ceremonies; in the cemetery family members buried their dead, sometimes after having partially burned their remains.

The Middle Horizon Public Building (Structure A)

Structure A (Figure 8.1) was built on top of the pre-Middle Horizon Houses 2 and 3, to the southeast of the Middle Horizon houses (Houses 4-7) and the kitchen described in the previous chapters (see Unit G on Figures 4.17 and 4.18). The building's size, construction method, lack of domestic features, and inventory of items suggest that the people of Ak'awillay used this space to conduct public ritual activities.

Dating Structure A

Pottery from Structure A included a large variety of Middle Horizon styles, namely Waru, Wari, Muyu Urqu, Qotakalli, and Local. Small Araway fragments were also present in the fill below the floor of the building. The ceramic evidence suggests that the people of Ak'awillay built and used this public structure after the Wari arrived in Cusco and established relationships with local groups.

In addition to pottery, charcoal from Structure A yielded an AMS date of 1413 ± 36 (sample No. AA81953). The corresponding calibrated two-sigma range is AD 575-666. This piece of charcoal was embedded in the wall of the building and probably dates the construction of the structure. This date is consistent with the Early Middle Horizon.

Figure 8.1. Structure A, showing the floor surface, the stone foundation, and a possible pit.

Architecture and Layout

Structure A was circular and had a diameter of 11 m (Figure 8.2). The techniques used to construct it were similar to those used to build the houses, but the construction of Structure A required more resources, time, and effort than the houses. Structure A is also the only

building excavated so far at Ak'awillay that contained clear evidence of several courses of superimposed adobe bricks.

The foundation and walls of Structure A were built using a combination of small stones, large stones, and adobes. Before building the foundation, the residents of Ak'awillay first had to procure these materials. They could have obtained reddish clayey soil for the manufacture of adobes from the same area that would later hold the public building. During my excavation, the team found a large borrow pit under the floor that was dug into a layer of sterile reddish clay (Figure 8.3). The residents of Ak'awillay could have extracted this soil to prepare adobes that would then be used in the construction of Structure A. The borrow pit was filled with ash, dirt, and trash.
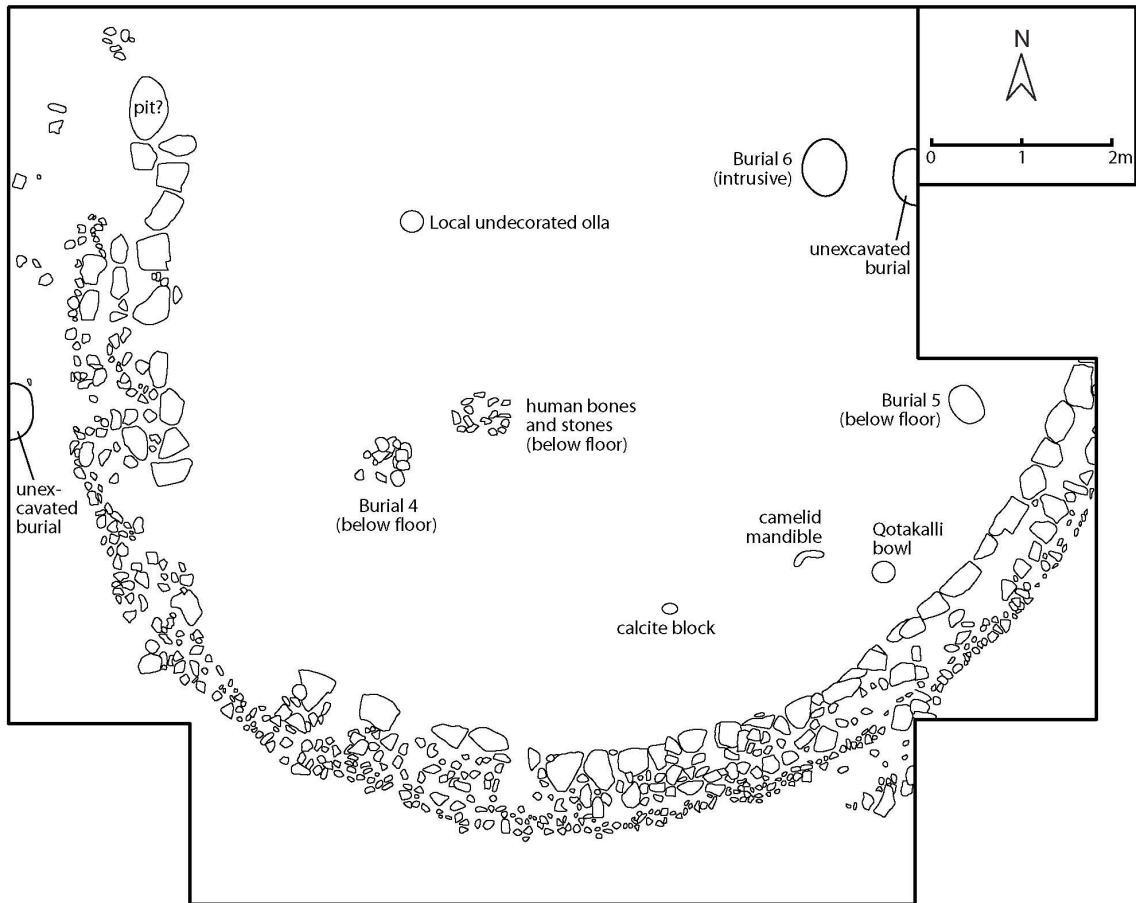
Figure 8.2. Structure A, showing the stone foundation, features and items found on the floor, the two burials below the floor (Burials 4 and 5), and the burials that were placed there after the abandonment of the public building (Burial 6 and two unexcavated burials).

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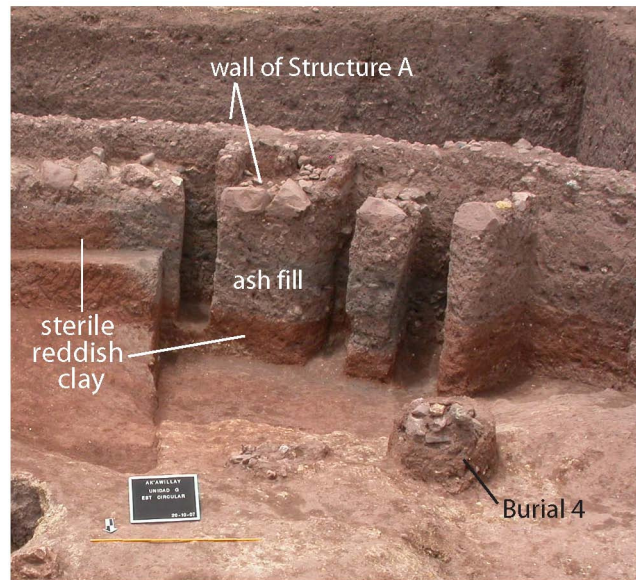
Figure 8.3. The borrow pit that was dug into the layer of sterile reddish clay to procure material for adobes. This pit was then filled with ash, dirt, and trash.

Once the construction materials had been secured, those who built Structure A placed two burials on the sterile soil (Burials 4 and 5; see next section). They then covered these burials and added a layer of fill (between 33 and 113 cm thick) on the slope of the hill to level the terrain. This layer of fill provided a flat and regular surface for the structure. The fill contained ash, loose and semi-compact brown and dark brown dirt, and a large quantity of broken objects. These items included abundant pottery of all shapes and styles; broken stone tools, flakes, and débitage made from different types of stone; laminated andesite/slate waste and tools; broken and heavily used grinding stones; broken ceramic and stone objects (spoons and ladles, anthropomorphic and zoomorphic figurines, spindle whorls, discs, weaving shuttles, and cones); broken bone, shell, and metal objects; animal bones and burnt macrobotanical remains; pieces of quartz; and hardened pieces of lime and pottery fragments with hardened lime stuck to their interior walls. The diversity of items from this layer of fill suggests that trash was taken from neighboring communal dumps or that each individual or family was responsible for contributing materials that would be used to level the surface of the hill.
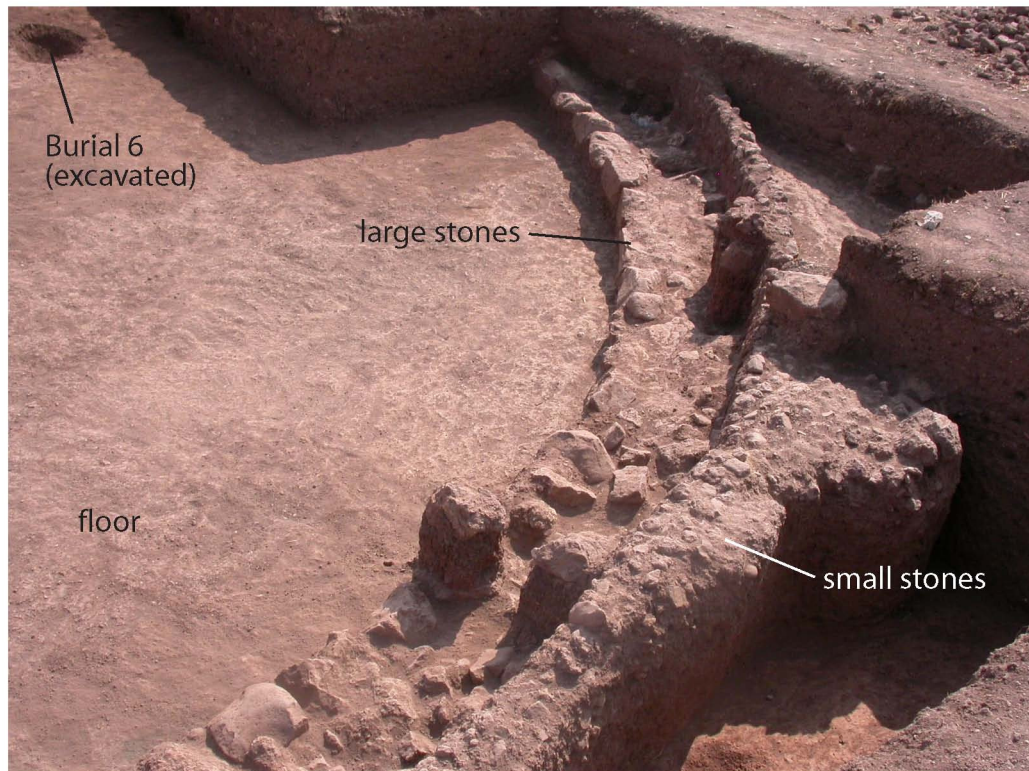
Figure 8.4. The foundation of Structure A, showing the large stones (interior) and the small stones (exterior). Adobes (excavated) covered the course of large stones.

Once the area was leveled, those who built Structure A prepared a compact floor surface and erected the foundation of the building (Figure 8.4). They first placed a course of large stones on the leveled surface, which they then covered with three or more courses of rectangular adobes. During my excavation these adobes had melted but were still observable in the profile (Figure 8.5). On the exterior of the structure, the builders then added a layer of dirt up to the summit of the adobe wall. The final step was to cover this outside fill with three to four courses of small stones. As a result, the floor of Structure A was sunken (40-50 cm below the outside surface) and the large stones and adobes were not visible from the outside of the public building. It is unknown whether this building was walled with cane or covered with a roof.
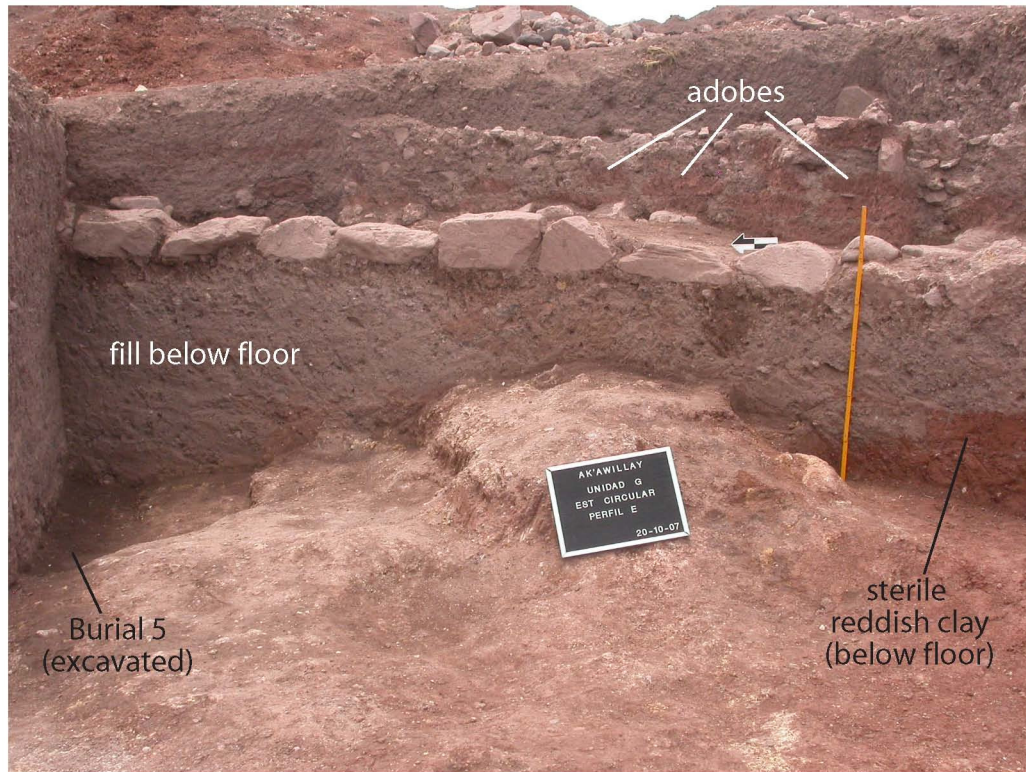
Figure 8.5. The adobes that covered the course of large stones are visible in the profile. The floor surface was immediately below the large stones. Below the floor was a thick layer of fill on top of the natural sterile soil.

Dedicatory Offerings to Structure A

Two human burials were placed on bedrock right before the area occupied by the future Structure A was filled and leveled. These two burials could have been offerings dedicated to this important public structure. The practice of placing human and other offerings below buildings during their construction or between floors during renovation episodes already existed at Ak'awillay (see Chapters 5 and 6) and was widespread in the pre-Columbian Andes and elsewhere (e.g., Bermann 1994:162; Cabrera Castro et al. 1991; Isbell et al. 1991; Isbell and Vranich 2004; Manzanilla 1992; Manzanilla and Woodard 1990; Marcus and Flannery 1996:127-128, 186-188; Sugiyama 2004:113-116). Such offerings are generally interpreted as dedications to propitiate, thank, or request certain things from ancestors or from supernatural beings associated with the structure.

Burial 4

Burial 4 contained a child less than a year old. Poor bone preservation made it impossible to observe the position of the body, but enough bones were present to suggest that

it was looking northeast. No dental or skeletal pathologies were noted. Significant burning of all the bones indicates that this child's body was burned before being buried.

Figure 8.6. Burial 4, below the floor of Structure A, contained a child less than a year old. This photograph shows the unexcavated cist tomb covered with a large stone (left), the excavated tomb (center), and the two stones (at the bottom of the tomb) on which the bones were laid (right).

This child was placed in a simple cist tomb (Figure 8.6). The cist (55 x 42 cm) was built with three to four courses of stones placed directly on bedrock and was covered with a large stone. The bones were placed on top of two stones that were at the bottom of the cist. The child was not associated with any offering. Immediately to the northeast of this cist tomb were a few scattered human bones mixed with stones (see Figure 8.2).

Burial 5

Six meters to the east of Burial 4 was Burial 5. Burial 5 contained the remains of a woman between 26 and 35 years of age (Figure 8.7). She was flexed, lying on her back looking southeast. Her bones were in poor condition and several bones were missing. This woman had lost a few teeth before her death and was suffering from joint disease in her spine and hand. She had healed from rib and vertebra fractures.

This woman was not placed in a prepared pit but simply laid on sterile soil and buried with the same fill material that had been used to level the area during the construction of Structure A. The fill immediately around the bones contained broken pieces of Derived Chanapata and Middle Horizon pottery.

Figure 8.7. Burial 5, below the floor of Structure A, contained the remains of a woman between 26 and 35 years of age.

Occupation Floor

The floor of Structure A consisted of compact brown soil. Compared to the houses previously described, the floor of Structure A was kept clean and most artifacts were concentrated along the wall. The floor was not associated with any features, except for a possible pit (see Figure 8.2).

Floor Activity

On the floor of Structure A was an accumulation of loose and semi-compact brown soil. This layer contained objects and several animal bones. Among the pottery, half of the rims represented the imported and local styles (Table 8.1 and Figure 8.8). This proportion is higher than that of the houses. The rims of the imported styles (Waru, Muyu Urqu, Wari, and Qotakalli) and of the local imitation of Qotakalli included bowls and cups. These bowls and cups had a small rim diameter (mean = 12 cm) and were used for individual servings of food and drink. On the floor close to the southern wall of the building the excavation team found a Wari bowl or cup fragment (Figure 8.8c) and a complete black-on-white Qotakalli bowl with a tripod

base (Figure 8.9). We also found a broken Muyu Urqu *qiru* on top of the southern wall of the

building (Figure 8.10).

Table 8.1. Inventory of pottery rims from the floor of Structure A*

	Bowls				Cups	Ollas	Jars	Neckless Ollas	Lids	Plates	Inde-term.	TOTAL
	flaring	straight	necked	incurv.								
Waru				1								1
Muyu Urqu		5		8	2						6**	21
Wari											1**	1
Qotakalli	2	2		6							4**	14
Local Qotakalli	15 (12)	27 (11.5)		25 (13)	1		4				2	74
Local decorated	9	4	1	14 (12)	1		11 (12)				6	46
Local undecorated	15 (13)	9		13 (11)		42 (16)	48 (13)	6		1	7	141
Derived Chanapata, undecorated	34 (25)	7	13 (12)	1		63 (15.5)	70 (12)	36 (17)	15 (11)	11	6	256
Derived Chanapata, pattern burnishing	19 (28)	5				7	1	1		2		35
Derived Chanapata, polished red slip	7	2				1	4			1		15
Derived Chanapata, other decoration	6	1		1								8
TOTAL	107	62	14	69	4	113	138	43	15	15	32	612

* Numbers in parentheses correspond to mean rim diameter (cm). Mean rim diameter is not specified when the sample was too small (n < 10) or when there was too much variation in the sample (not a normal distribution).
** Bowls or cups (fragments are too small to distinguish).

Local decorated and undecorated vessels were also represented by small bowls (mean rim diameter = 12.7 cm), but other types of vessels, mostly ollas and jars, were present. Near the center of Structure A we found an almost complete undecorated olla in the local style (Figure 8.11). This olla had no traces of soot and was perhaps used to store food or other items.

Derived Chanapata vessel fragments formed the other half of the pottery assemblage from the floor of Structure A. Derived Chanapata ollas, jars and lids, and neckless ollas continued to be used alongside the local styles. Although some small necked and incurving bowls were present (mean rim diameter = 13 cm), plates and most bowls (flaring and straight) were large (mean rim diameter = 25 cm), suggesting that most Derived Chanapata bowls and plates were used for communal servings of solid food or thick stews.
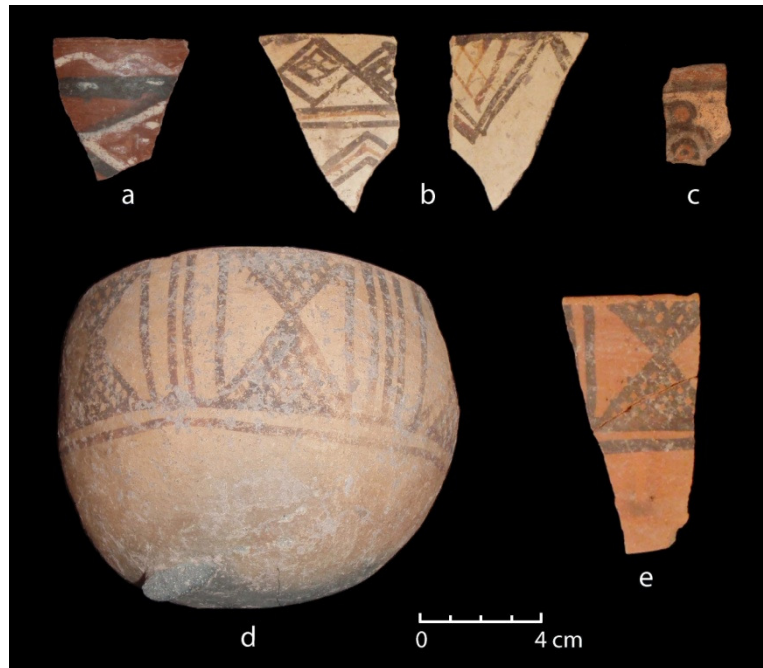
Figure 8.8. Pottery fragments from Structure A: (a) a Muyu Urqu straight bowl rim; (b) a black and red-on-white Qotakalli straight bowl rim decorated on the interior and exterior; (c) a Wari bowl or cup rim; (d) a red-on-white local Qotakalli incurving bowl rim; and (e) a black-on-orange local Qotakalli straight bowl rim.

Figure 8.9. A complete black-on-white Qotakalli bowl with geometric motifs and a tripod base. Rim diameter is 13 cm.

Figure 8.10. A Muyu Urqu *qiru* found on top of Structure A's wall. Rim diameter is 16 cm.

Figure 8.11. An undecorated olla in the local style with a flat base and two vertical flat handles.

Like the Middle Horizon houses, most stone tools and débitage from Structure A were made of laminated andesite/slate; 88% of all chipped and ground stone from the floor were made of this material (Table 8.2). Tools made of this material included knives (probably hafted), chopping tools, a notched tool, and a sharpening blade. Most laminated andesite/slate, however, was waste material.

Table 8.2. Inventory of chipped stone and ground stone from the floor of Structure A

	Ande-site	Lamin. andesite /slate	Quart-zite	Sand-stone	Lime-stone	Rhyo-lite	Schist	Chert	Granite	Obsi-dian	TOTAL
knives										5	
projectile points										2	
scrapers	1										1
borers								1			1
utilized/retouched flakes	3		2					2		7	7
unmodified flakes	40		5	16	5	2		3	5	5	76
débitage	2		1	1	1						5
TOTAL chipped stone	46	0	8	17	6	2	0	6	5	19	90
knives		4									4
chopping tools		6									6
knives or chopping tools		3									3
notched tools		1									1
sharpening blades		1									1
waste		702					1				703
undiff. hand stones				2							2
abraders	2			1							3
kupana	1										1
TOTAL ground stone	3	717	0	3	0	0	1	0	0	0	724
GRAND TOTAL	49	717	8	20	6	2	1	6	5	19	814

There was a large variety of other stones in Structure A, but each of these was much less common than laminated andesite/slate. Items made of these other kinds of stone included unmodified and retouched flakes, and most tools were made of obsidian. Very little débitage was found in Structure A, and a very limited number of ground stone was recovered, including three abraders, two hand stones, and one *kupana* (clod breaker).

A variety of other items were found on the floor of Structure A (Figure 8.12). Ceramic objects included a spoon, two ladles, three spindle whorls, and three discs. These items were found along the stone foundation and could have been lost or forgotten there. Objects made of bone included a *ruk'i* (weaving tool), a snuff tube for the ingestion of hallucinogenic drugs, a fragment of what may have been a flute, and two needles or *tupu* (cloak pins). We also recovered a fragment of marine shell that could have been a bead or pendant; other pieces of

marine shell found at the site had small holes in them, presumably for suspension or attachment to cloth.

Figure 8.12. Objects from Structure A: (a) a ceramic spindle whorl; (b) a ceramic spoon; (c) a bone *ruk'i* (weaving tool); (d) a bone snuff tube for the ingestion of hallucinogenic drugs; and (e) a bone fragment that may have been part of a flute.

Structure A also contained four pieces of white hardened lime, a pottery fragment with lime stuck to its interior wall, and three pieces of quartz. In the southern part of the building the excavation team found a block of what seems to be calcite (Figure 8.13). It is a unique find at Ak'awillay and the nature of the activities involving this type of material is not known.

Pit

In the northwestern corner of the excavation unit we found a possible pit (see Figure 8.2). The pit had an oval shape and measured 68 x 48 cm and was 47 cm deep. It was filled with loose soil and ash mixed with pottery sherds and laminated andesite/slate waste. Its location was somewhat unusual: if contemporary with Structure A, it would have been embedded in the building's stone foundation. This pit could have stored materials involved in ceremonies or temporarily house the bones of ancestors. Alternatively, the pit could have been dug after Structure A had been abandoned, perhaps as an intrusive burial pit that was never used.

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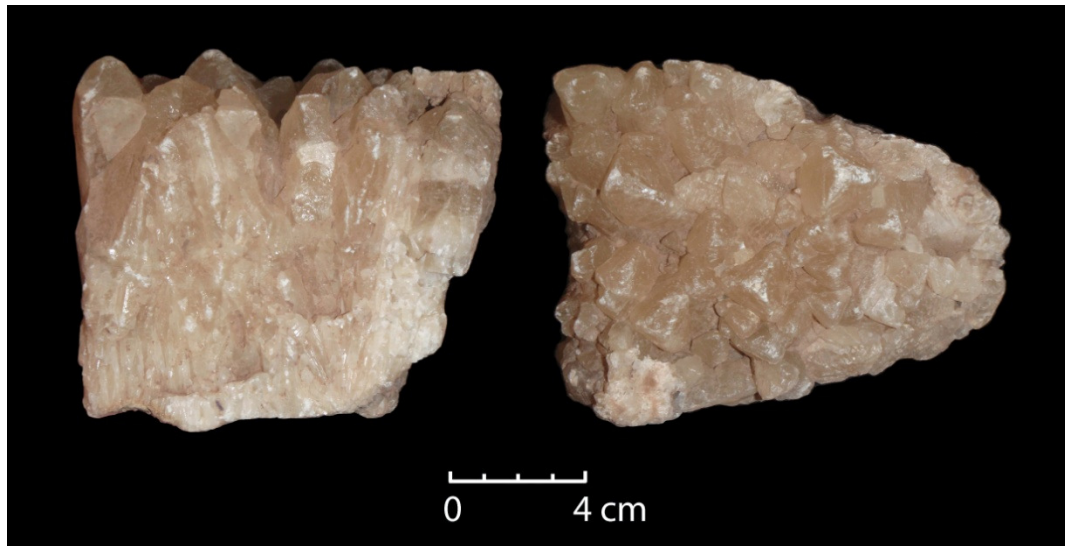
Figure 8.13. A block of calcite from Structure A: side view (left) and top view (right).

Abandonment

Structure A was abandoned sometime during the Middle Horizon. The building may have been ritually sealed after a Muyu Urqu *qiru* was smashed against its wall and some intact items were left on its floor. Among these items were the Qotakalli bowl that we found face-down close to the wall and the undecorated olla (local style) in the center of the structure (see Figures 8.9 and 8.11).

Soon after the cessation of activities in Structure A, a few individuals were buried in this space (see Figure 8.2). There was very little fill covering the floor of the building when these individuals were buried, suggesting that very little time had passed between the abandonment of the building and these interments. The excavation team excavated one of these burials.

Burial 6

Burial 6 contained the remains of a child between 1 and 2 years of age (Figure 8.14, left). It was not possible to observe the position of the body due to poor bone preservation, but the overall arrangement of the bones suggests that the individual was looking east. No dental or skeletal pathologies were noted, but signs of burning on all the bones suggest a funerary ritual involving the burning of the body.

This child was placed in an oval pit (66 x 46 cm) dug into the floor of Structure A. Six stones were then placed around the body (Figure 8.14, center) and one additional stone covered the burial (Figure 8.14, right). The bottom and interior surface of these stones were burned,

suggesting that the burning of the body may have taken place here. The child was not buried with any offerings.

Figure 8.14. Burial 6, intrusive to Structure A, contained the remains of a child between 1 and 2 years of age (left). This child's body was surrounded by stones (middle), which were then covered with a large stone (right).

Activities Associated with Structure A

Several lines of evidence indicate that the people who had access to Structure A conducted a range of activities that were different from the ones carried out in the neighboring houses: (1) the construction of this building required an organized labor force that invested a large amount of time, effort, and resources; (2) two burials were dedicated to this structure; (3) there were no domestic features such as hearths or ash lenses; (4) the floor of the building was kept relatively clean; (5) the artifacts recovered in the structure were different (in types and in proportion) from those found in the houses; and (6) a Muyu Urqu *qiru* was ritually broken against the building's wall at its abandonment. These lines of evidence suggest that Structure A was a public building where people could perform and participate in ritual ceremonies, eat and drink, and perhaps discuss issues related to the community.

Ritual

The presence of two burials below the floor of Structure A suggests that its construction was itself embedded in ritual ceremonies. During its period of use, people consumed hallucinogenic drugs with snuff tubes, played music with flutes, and probably sang and danced. The area immediately outside the public building contained additional fragments of snuff tubes and flutes that may have been discarded when they could no longer be used. Hardened pieces of lime also suggest that coca chewing accompanied these rituals. Interestingly, we did not find any figurines in Structure A, suggesting that these were reserved for household rituals. Lastly,

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the abandonment of Structure A was ritually marked by the smashing of a highly polished and decorated Muyu Urqu *qiru* against its wall. This practice was common in the Andes and was associated with the sealing and abandonment of public structures and ritual spaces (e.g., Cook 1984-1985; Isbell 1972, 1984-1985, 2007, 2009; Isbell and Cook 2002; Marcone 2010; Moseley et al. 2005; Ochatoma and Cabrera 2002; Segura Llanos 2001:144-169; Williams 2001).

Food consumption

The presence of numerous bowls, plates, spoons, and ladles indicates that people consumed food and drink in the public building. However, the near absence of grinding stones and the absence of hearths and ash (and storage facilities?) suggest that food and drink were prepared and stored elsewhere. Ollas, neckless ollas, and jars full of food and drink were probably brought to the building and their contents were then served in bowls, plates, and cups. Some solid foods were apparently consumed communally in large open bowls and plates, while other items and beverages were served in small bowls and cups.

Crafts

The presence of a few stone tools and waste, spindle whorls, *ruk'i*, and possible needles on the floor of Structure A suggests craft production. Spinning and weaving involving women from different households could have been occasionally performed here. How this work was organized and how the finished products were used are questions that remain to be answered.

Exchange

Several items involved in the activities conducted at the public building had to be procured from outside the site. People from Ak'awillay obtained Qotakalli, Muyu Urqu, and Waru pottery from the Cusco Basin and possibly elsewhere in the region; they also procured Wari pottery from the Wari colonies or through intermediaries in the Cusco Basin. The imported vessels from Structure A are among the finest examples at Ak'awillay and evidently played an important role in the ritual activities that took place in this structure.

Among the stone items, the people of Ak'awillay acquired laminated andesite/slate from exchange partners outside the Xaquixaguana Plain and obsidian from long-distance exchange networks. Structure A contained obsidian from two sources – Alca and Chivay, both in the Department of Arequipa. The area immediately outside the building (which was probably used for the temporary disposal of trash) also contained obsidian from Quispisisa (Department of Ayacucho) and from an unknown source in addition to Alca and Chivay.

Lastly, a third type of material, marine shell, had to be procured from long-distance exchange partners. The pottery, stone, and shell evidence thus indicates that the people from Ak'awillay were connected to local and regional exchange networks during the Early Middle Horizon. These exotic items and the far-flung relationships that they represented played an important role in the activities of Structure A, and may have been crucial in elevating the status of a few individuals or families.

The Middle Horizon Cemetery

During the Middle Horizon the area surrounding the summit of Ak'awillay was used as a cemetery. This area is between 10 and 20 m higher than the Middle Horizon residential area on the hillside. The summit of Ak'awillay is flat and surrounded by small rocky cliffs on the northeast and east sides. The villagers of Ak'awillay buried their dead in two types of burials: (1) in tombs carved into these cliffs and (2) in pit burials a few meters north of the cliff tombs.

Tombs Carved into Cliffs

The residents of Ak'awillay created niches by digging into the cliffs surrounding the summit of the hill (Figure 8.15). These niches varied in size; the small ones probably contained the remains of only one individual, while the larger ones may have held several. These funerary niches were rectangular, circular, or oval.

All the tombs carved into the cliff face were looted in the past and only a few human bones remain today, making excavation not possible in this sector of the site. There are no pottery vessels or fragments left in these tombs, but I tentatively date this part of the cemetery to the Middle Horizon. The absence of a later occupation on the upper hill of Ak'awillay and the presence of several Middle Horizon pit burials near the base of the cliff face suggest a similar date for the cliff tombs. The cliff tombs represent a higher investment of energy than the pit burials in front of them; if the tombs carved into the cliffs and the pit burials were contemporaneous, the people of Ak'awillay could have buried individuals of higher status in the cliff tombs and those of lower status in the pit burials below. This hypothesis remains to be tested.
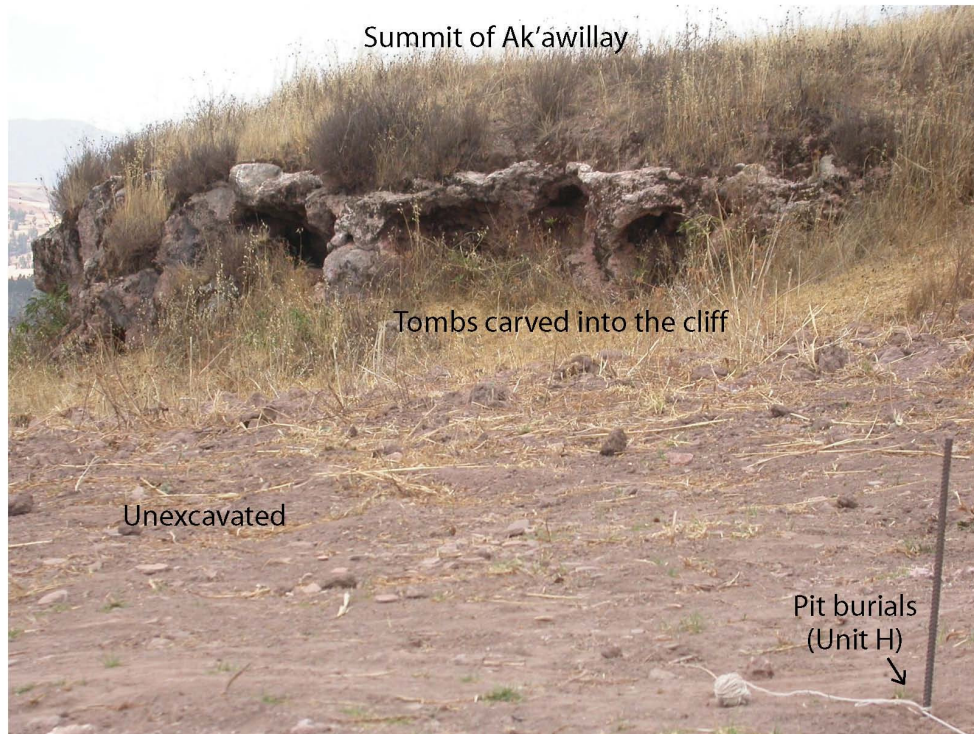
Figure 8.15. The area surrounding the summit of Ak'awillay was used as a cemetery during the Middle Horizon. The people of Ak'awillay buried their dead in tombs carved into cliffs and in pit burials at the base of the cliff face.

Pit Burials

At the base of the cliff face the people of Ak'awillay buried their dead in pits. Before becoming a cemetery, this area of Ak'awillay (see Unit H on Figures 4.17 and 4.18) had been used as a community midden and before that as a house (see Chapter 5). The excavation of 38 m^2 in this area exposed eight graves containing 12 individuals (Figure 8.16). Additional burials are probably present to the east and west of our excavation, but these will have to be discovered during future excavations.

Dating the Pit Burials

There is no AMS date available for the pit burials and none of these burials contained ceramic offerings. Several lines of evidence, however, indicate that all these burials date to the Middle Horizon. First, the burials all appeared above or intruded into the Early Intermediate community midden and Late Formative House 1; the cemetery cannot pre-date the Middle Horizon. Second, the main occupation at Ak'awillay belongs to the Early Middle Horizon. There were very few burials below house floors during this period, and the villagers of Ak'awillay probably used this space to bury their dead. Third, no later occupation is known on the upper

hillside of Ak'awillay, suggesting that the cemetery does not post-date the Middle Horizon. We did not find any Late Intermediate (AD 1000-1400) or Late Horizon (AD 1400-1532) pottery in the fill of the burials or between them.
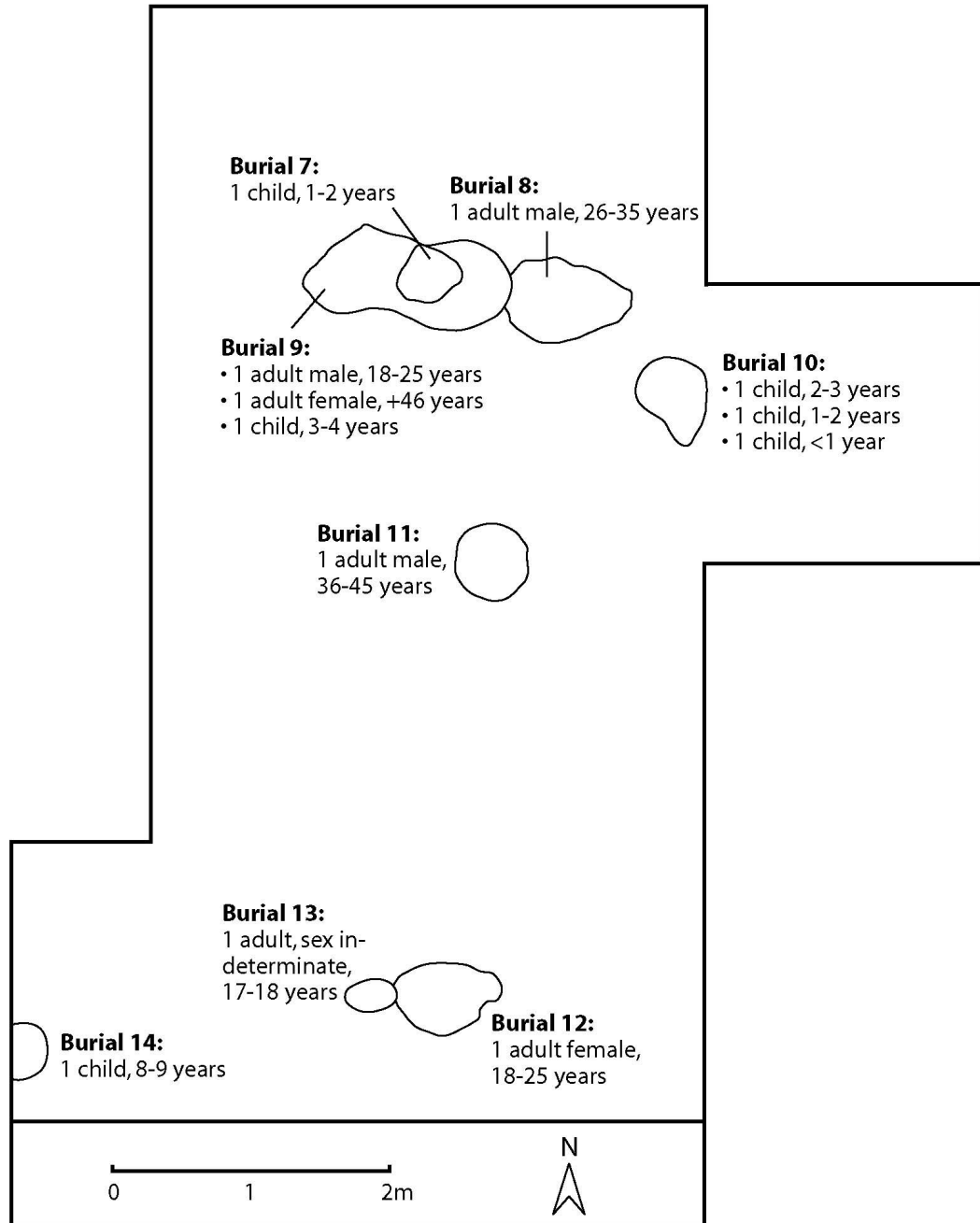
Figure 8.16. The Middle Horizon cemetery, showing the location, sex, and age of the individuals in each pit burial.

Layout

The burials do not seem to be spatially arranged in any particular way (see Figure 8.16). There were four burials in the northern part of the excavation unit (Burials 7, 8, 9, and 10), one in the middle (Burial 11), and three in the south (Burials 12, 13, and 14). The burials at each of these three locations do not show similarities in terms of age and sex and their heads did not face the same direction. For example, the individuals of Burials 7, 8, 9, and 10 are male and female, represent all age groups, and were facing different directions. In the case of a burial that included more than one individual, however, all were facing the same direction.

The main characteristics of each burial appear in Table 8.3 (see also Appendix C for more details). Physical anthropologist Dr. Valerie Andrushko performed the osteological analysis of all the human remains from Ak'awillay. Each burial is described below.

Table 8.3. Main characteristics of pit burials from the Middle Horizon cemetery at Ak'awillay

Burial #	# of in-dividuals	Sex*	Age*	Direction head was facing	Bone burning*	Burial type	Offering
7	1	--	1-2	north	yes	simple pit	none
8	1	M	26-35	southeast	yes	simple pit	none
9	3	M	18-25	northwest	no	pit surrounded by stones	none
		F	> 46	northwest	no		none
		--	3-4	northwest	no		bird (?)
10	3	--	0-1	?	no	simple pit	none
		--	1-2	?	no		none
		--	2-3	south	no		none
11	1	M	36-45	east	yes	pit surrounded by stones	none
12	1	F	18-25	northeast	no	simple pit (surrounding stones belong to house wall)	none
13	1	--	17-18	?	yes	no pit	none
14	1	--	8-9	east	no	pit surrounded by stones	none

* Data provided by Dr. Valerie Andrushko.

Burial 7

Burial 7 contained a child between 1 and 2 years of age (Figure 8.17). The individual was flexed and placed on his/her left side looking north. Preservation of the bones was fair. No dental pathology was noted, but skeletal data indicate malnutrition or disease. Significant burning of the bones suggests a funerary ritual involving the burning of the body.

Figure 8.17. Burial 7, a child between 1 and 2 years of age in a simple circular pit.

The child was placed in a simple circular pit (52 x 45 cm) dug into the ground. No offering was associated with the body. This child was covered with compact brown soil mixed with a few Derived Chanapata pottery fragments and a broken hand stone. Sometime later Burial 7 was covered with Burial 9 containing a child, a young man, and an older woman (see below).

Burial 8

Burial 8 contained one adult man between 26 and 35 years of age (Figure 8.18). This individual was flexed and lay on his back looking southeast. Preservation of the bones was good and all bones were present except for the cranium. This man showed various dental pathologies as well as skeletal pathologies indicating bacterial infections, joint disease, and trauma. Trauma included healed fractures to a clavicle, ulna, rib, metacarpal, finger, and foot. Like Burial 7, burning of some of the bones suggests a funerary ritual involving the burning of the body.

The man was placed in a simple oval pit (90 x 55 cm) dug into the ground. The body was not associated with any offering. The pit was filled with compact brown soil mixed with a few Derived Chanapata pottery fragments and laminated andesite/slate waste.

Figure 8.18. Burial 8 in two different stages of excavation. This adult male between 26 and 35 years of age was buried in a simple oval pit without his cranium.

Burial 9

Burial 9 contained three individuals (Figure 8.19). The easternmost individual was an adult man between 18 and 25 years of age. He was flexed and seated, looking northwest. Bone preservation was good, but his cranium was missing and some bones were disarticulated. This man had various dental pathologies and skeletal data indicate he was suffering from infections.

The second individual in Burial 9 (in the middle) was an adult woman older than 46 years of age. Like the man next to her, she was flexed, seated, and looking northwest. Her bones were well preserved and her skeleton was complete. She was buried with four adult teeth that did not belong to her as well as a bone from an infant's foot. She had several dental pathologies and had lost 18 teeth during the course of her life. Skeletal pathologies also indicate that she was suffering from a chronic ear infection, infections in her arms and legs, and joint disease. She had a healed rib fracture, but her infections suggest her health was not good.

The westernmost individual in Burial 9 was a child between 3 and 4 years of age. Like the man and woman in this burial, the child was flexed, seated, and looking northwest. Bone preservation was good and all bones were present. No dental or skeletal pathology was noted.
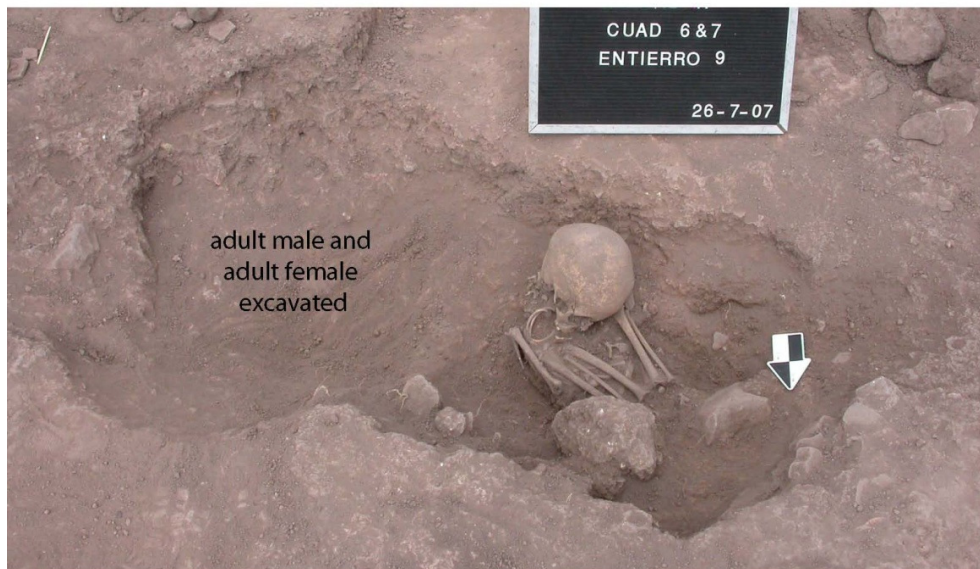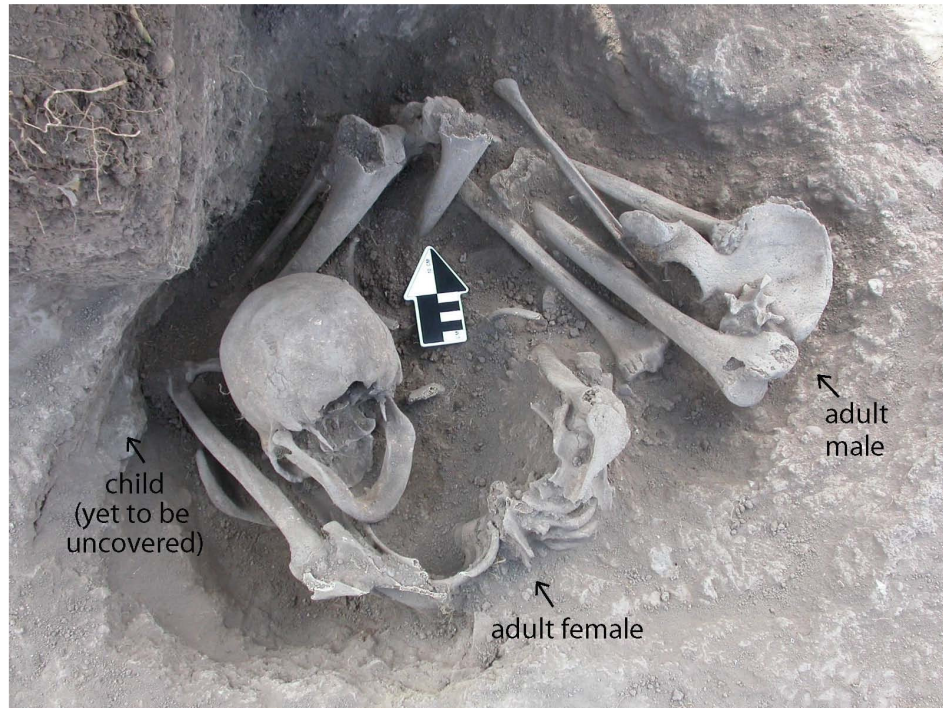
Figure 8.19. Burial 9, showing the adult male and adult female (above) and the child (below). These three individuals were buried in a large oval pit surrounded by stones to the north and west.

The three individuals in Burial 9 were placed side by side in an oval pit (150 x 66 cm) dug into the ground above Burial 7. Stones surrounded the skeletons to the north and west, and additional stones were placed on top of the bones (Figure 8.20). The man and woman were not associated with any offering, but the child may have been buried with a small animal (bird?) on

his/her left side. This animal skeleton was at the edge of the burial pit, outside the area delimited by stones. Red powder, possibly ochre, was found between the woman and the child. The fill of Burial 9 consisted of loose dirt mixed with ash, chunks of burned earth, Derived Chanapata and local pottery fragments, débitage, and an abrader.
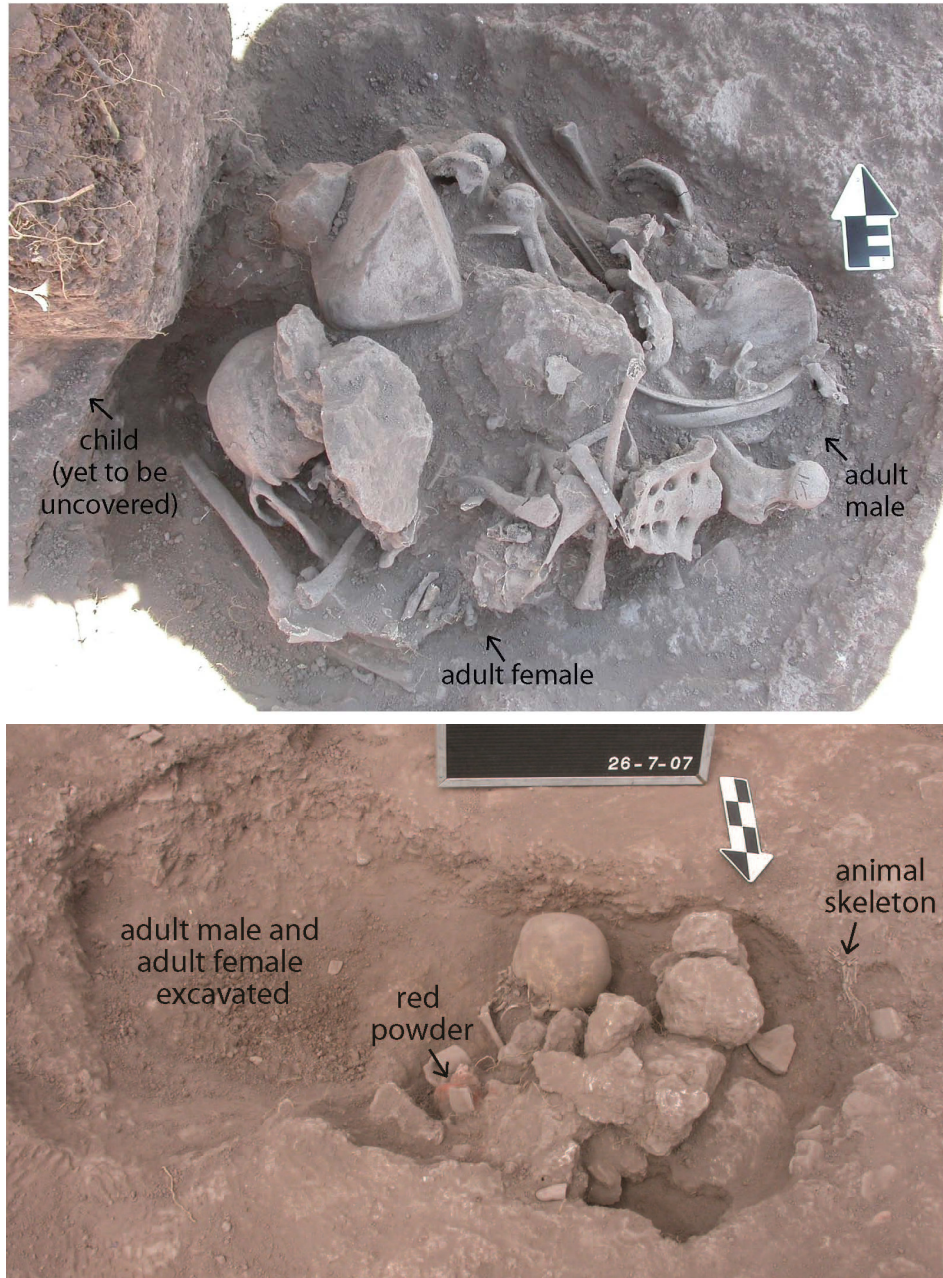
Figure 8.20. Burial 9 at the beginning of the excavation, showing the stones around and on top of the three skeletons. The child (below) may have been buried with a small animal. Red powder was found between the female and the child.

Burial 10

Burial 10 also contained three individuals (Figure 8.21). The southernmost individual was a child between 2 and 3 years of age. The body was flexed, seated, and looking south. Bone preservation was fair and the skeleton was complete except for most of the feet and some fingers. No dental or skeletal pathology was noted.

The bones of the two other individuals were poorly preserved and it was not possible to determine the position of their bodies. Both were children. The first child was between 1 and 2 years of age and the second was less than a year old. Their skeletons were incomplete but no dental or skeletal pathology was noted on either individual.
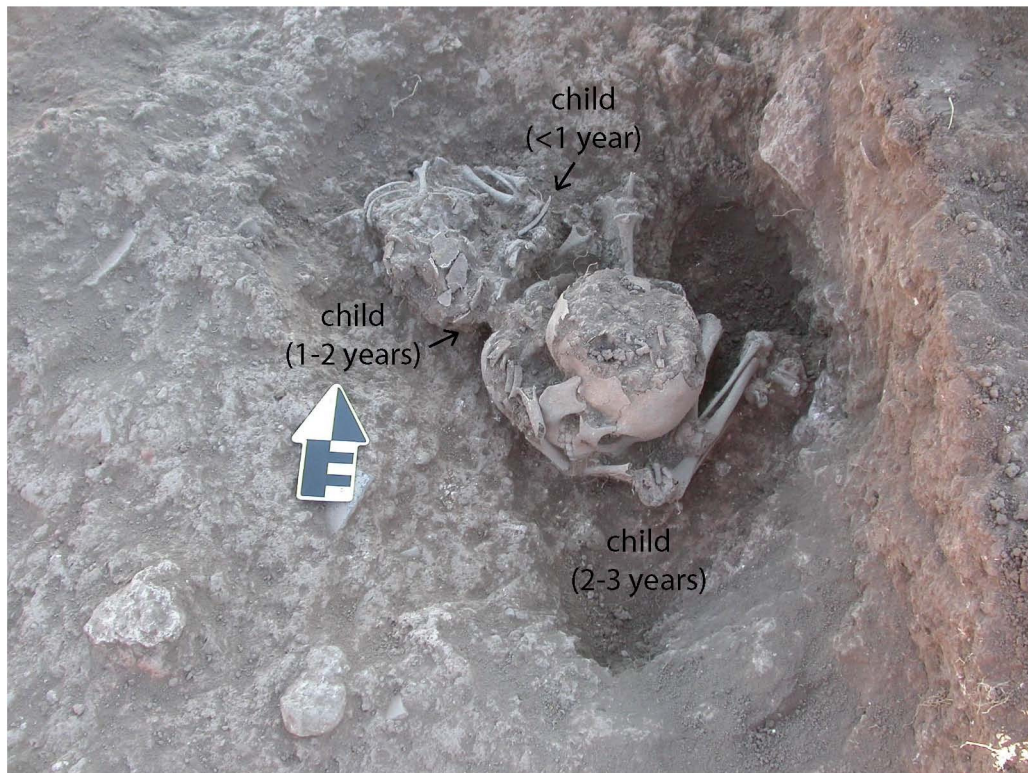
Figure 8.21. Burial 10, three children buried side by side in a simple circular pit.

These three children were buried side by side in a simple circular pit (54 x 48 cm) dug into the ground. They were not associated with any offering and were covered with brown soil and ash mixed with Derived Chanapata, Qotakalli, Muyu Urqu, and local pottery fragments, flakes and débitage, broken hand stones, hardened lime, a broken figurine, and a broken bone needle or *tupu* (cloak pin).

Burial 11

Burial 11 contained one adult man between 36 and 45 years of age (Figure 8.22). He was flexed and lay on his back looking east. Preservation of the bones was fair but some bones were missing. This man had dental pathologies but no skeletal pathology. Like Burials 7 and 8, significant burning suggests a funerary ritual involving the burning of the body.

Figure 8.22. Burial 11, an adult male between 36 and 45 years of age in a circular pit surrounded by stones.

This man was placed in a circular pit dug into the ground (66 cm in diameter). Stones surrounded the skeleton on all sides and additional stones were placed on top of the bones (except the cranium). This man was not associated with any offering. The fill of Burial 11 consisted of loose brown soil and ash mixed with a few Derived Chanapata pottery fragments and a broken figurine.

Burial 12

Burial 12 contained an adult woman between 18 and 25 years of age (Figure 8.23). She was flexed, seated, and looking northeast. Her bones were well preserved and her skeleton was complete except for one leg. She was buried with three children's bones (vertebra, rib fragment, and metacarpal). This woman had several dental pathologies as well as skeletal

pathologies indicating malnutrition or disease. She is the only individual in the Ak'awillay sample to display cranial deformation (fronto-occipital compression, also called tabular erect modification).

Figure 8.23. Burial 12 in two different stages of excavation. This adult female between 18 and 25 years of age is the only individual from Ak'awillay to display cranial deformation, in this case fronto-occipital compression (also called tabular erect modification).

This woman was placed in an oval pit (84 x 60 cm) directly on top of the eastern wall of House 1. The stones surrounding her body belong to that wall. Like the other burials, she was not buried with any offering. The fill of Burial 12 consisted of loose brown soil and ash mixed with a few Derived Chanapata pottery fragments.

Burial 13

Burial 13 contained a young adult between 17 and 18 years of age (Figure 8.24). The bones were in poor condition and the skeleton was very incomplete. Given that the body was close to the surface, the incompleteness of the skeleton could be due to modern disturbance; it could also be a case of secondary burial in which several bones were not included at the time of re-interment. No skeletal pathology was noted on the few bones present, but evidence of burning on some of the bones suggests a funerary ritual involving the burning of the body.

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Figure 8.24. Burial 13, a very incomplete set of remains of a teenager or young adult between 17 and 18 years of age.

The body was not placed in a pit but surrounded by compact brown soil and a number of broken objects. This suggests that the skeleton was simply deposited where it was found, along with other broken items; this may have been a secondary burial. The objects found around the body included a large number of Derived Chanapata, Qotakalli, and local pottery fragments; laminated andesite/slate waste as well as chert and quartzite flakes and débitage; a ceramic disc; and a pottery fragment with a lime crust.

Burial 14

Burial 14 included a child between 8 and 9 years of age (Figure 8.25). This child was flexed and lay on his/her back. If the skull had been present, the individual would have been looking east. The bones were in a fair state of preservation. The cranium, a few vertebrae, a clavicle and scapula, bones of the feet, and most bones from one leg were absent. In addition, the bones were disturbed and some vertebrae appeared on top of the ribs and scapula. No skeletal pathology was noted.

Figure 8.25. Burial 14, a child between 8 and 9 years of age. The skeleton was surrounded by a ring of stones and additional stones were found on top of the body.

This child was placed in a circular pit (52 cm in diameter) dug into the ground. The skeleton was surrounded by a ring of stones on the east side, and more stones were probably located on the west side as well. Some stones were also found on top of the body. Like the previous burials, this child was not associated with any offering. The fill of Burial 14 consisted of loose brown dirt mixed with a few Derived Chanapata and local pottery fragments and a broken ceramic spoon.

Other Burials

Burial 15

Burial 15 was located in a small excavation unit northeast of the kitchen and Structure A (see Unit A on Figure 4.17). This unit was not associated with any architecture or other feature. The burial contained one adult man between 36 and 45 years of age (Figure 8.26). He was flexed, seated, and looking south. His bones were poorly preserved. This man had several dental pathologies as well as skeletal pathologies indicating he was suffering from infections in

his leg and from a joint disease. He had healed from a cranial fracture and previous infection. Like several individuals from the cemetery, significant burning of this man's bones suggests a funerary ritual involving the burning of his body.

Figure 8.26. Burial 15, an adult male between 36 and 45 years of age buried in a pit surrounded by large stones.

This man was placed in a circular pit (43 cm in diameter) dug into sterile soil. He was surrounded by four stones and one additional large stone was placed on his abdomen. This man was not associated with any offering. The fill of the burial consisted of compact brown and reddish soil mixed with few Derived Chanapata and local pottery fragments, a quartzite projectile point, and a sandstone abrader.

Mortuary Ritual Activities

The burials from the cemetery and from other contexts at Ak'awillay suggest that the people living at the site practiced a number of activities related to the dead.

Choosing Burial Location

The dead could be buried in the cemetery, below house floors, below the public building, or in what appears to be random locations not associated with buildings or other burials. Why certain people were buried in the cemetery while others were buried in houses or

served as dedicatory offerings is unclear at the moment. There is no relationship between burial location and age, sex, position of the body, or burial type; every location contained the burials of men, women, and children whose bodies were positioned and oriented differently and placed in different types of tombs. As suggested earlier, within the cemetery the choice of cliff tombs vs. pit burials may have been related to social status. The decision to bury the dead in the cemetery vs. elsewhere could have been the choice of the deceased's family or could have depended on the deceased's status, occupation, or some other factor.

Preparing the Grave

The villagers of Ak'awillay buried their dead in simple pits dug into the ground or in pits surrounded by stones. On rare occasions they placed the deceased directly on the ground without preparing a pit or in a cist tomb. The deceased were flexed and seated or flexed and put on their back or side. The bodies were facing different directions, suggesting that the orientation of the body was unimportant for the people of Ak'awillay. The last phase of the interment ritual probably consisted in covering the dead with a layer of dirt. Most bones did not seem to have moved significantly since burial, suggesting that the deceased were not left to rest in empty spaces but in pits completely filled with soil (Duday et al. 1990).

Burying the Dead Soon After Death

A few individuals appear to have been buried immediately after death (Burials 2, 9, and 12). Primary burials are indicated by the completeness of the skeleton and the presence of articulated bones. The presence of small bones such as those of the hand and foot are also suggestive of primary burials since these bones are often forgotten or left behind when individuals are reburied in secondary burials (Duday et al. 1990). Burial 2 under the floor of House 4 was complete and articulated and was not disturbed at a later date. In the cemetery, the woman and child in Burial 9 were complete and articulated; Burial 12 was also articulated and complete except for a missing femur and tibia, which may indicate that Burial 12 was reopened and a few bones taken to be kept or reburied elsewhere.

Burning the Dead before Burial

In eight cases the deceased were burned before they were buried. In some instances, individuals were partially burned and only a few bones such as the cranium and vertebrae or the mandible and pelvis showed signs of burning (Burials 3, 8, 11, and 13). In these cases, it is unclear whether only certain parts of dismembered individuals were burned or if only certain parts of the body came in touch with a small fire. In other cases, the dead were completely

burned and all bones showed signs of burning (Burials 4, 6, 7, and 15). Burning the body could occasionally take place at the burial location itself, as suggested by the burned stones around Burial 6.

There is no relationship between burning the body and burial location; the eight individuals who were burned were buried in different locations throughout the site. There could be a relationship between burning and sex; none of the deceased women in the Ak'awillay sample were burned and, of all eight individuals who were partially or completely burned, three were men and five were children (boys?). A larger sample of burials will be needed to verify this apparent pattern.

Reburying the Dead

Several burials from Ak'awillay correspond to secondary interments (Burials 1, 5, 10, and 14). Secondary burials are cases in which the deceased were not buried in their final resting place immediately after death, but first lost their flesh elsewhere (intentionally or not). Some of the most informative lines of evidence in identifying secondary burials are (1) the absence of several bones that is not due to differential bone preservation and (2) the absence of an articulated skeleton that is not due to taphonomic processes (Duday et al. 1990). In addition to the 8 individuals who were partially or completely burned before being buried, six additional individuals (in 4 burials) were first buried elsewhere and then reburied where we found them. Their skeletons were very incomplete and some were not articulated.

Reopening Graves

In addition to secondary burials, it appears that some graves in the cemetery were reopened and certain bones taken to be kept or reburied elsewhere. In two cases (Burial 8 and the man in Burial 9) the cranium was missing and in one case (Burial 12) two long bones were missing. These bones could have been taken sometime after these individuals had been buried, although it is also possible that the bones were separated from the rest of the body right before burial. In the case of Burials 2 and 9, two women were buried with a few children's bones and other adult bones that could have come from older graves that were reopened at the time of burying these women. The reopening of graves implies that the people of Ak'awillay marked the location of their burials with objects or stones placed on the surface of the cemetery. The practice of reopening graves may have been more widespread at Ak'awillay, but it is difficult to distinguish the reopening of graves from secondary burials since both entail incomplete skeletons.

Health, Nutrition, and Violence

The age, pathological, and trauma data from the 19 skeletons recovered at Ak'awillay provide information on the health and living conditions of the people living in this village during the Middle Horizon (only one burial, Burial 1, is from a Late Formative context). The presence of nine children (47% of all buried skeletons at Ak'awillay) below the age of 4 suggests high child mortality, while the presence of only one individual older than 46 years of age suggests short life expectancy.

Eight individuals (of 16 observable) had dental pathologies including tooth loss, caries, abscesses, enamel hypoplasia, and other conditions (see Appendix C). Almost all individuals also had one or more skeletal pathologies resulting from malnutrition or disease, infections, or joint disease (such as arthritis). One old adult woman (Burial 9) had an unusual combination of several of these pathologies. All of the pathologies noted on the skeletons from Ak'awillay suggest poor overall health, nutritional deficiencies, and infections related to population aggregation and poor sanitary conditions (Steckel et al. 2002).

In addition to dental and skeletal pathologies, five adults had suffered from bone fractures. These fractures were healed or in the process of healing. Fractured bones included the cranium, clavicles, ribs, vertebrae, long bones, hands, and feet. One man (Burial 8) had suffered from six different fractures. These traumas are indicative of accidents or violent conflict (Walker 1989). Inter-village warfare and raiding could explain some of these traumas.

Chapter 9

THE COMMUNITY OF AK'AWILLAY AND THE CUSCO REGION THROUGH TIME

To evaluate the impact of Wari expansion in Cusco, I adopted a "bottom-up" approach to study one community occupied both before and during the Middle Horizon. I excavated houses and other domestic spaces, a public building, and several burials. To see how the villagers of Ak'awillay were affected by the presence of nearby Wari colonies, I will compare pre-Middle Horizon contexts with Middle Horizon contexts at Ak'awillay and elsewhere in the Cusco region. A look at both continuity and change will reveal local dynamics and responses to larger regional processes.

Houses and Household Activities

Ak'awillay

The villagers of Ak'awillay practiced similar activities from the Late Formative to the Middle Horizon. Some changes did appear at Ak'awillay, but most of these changes occurred in the Early Intermediate *before* Wari colonists arrived in the region. A few changes occurred in the Early Middle Horizon, but these changes are best explained by increased participation in regional and interregional exchange and not by incorporation into the Wari state and the loss of local autonomy.

Architecture and Layout

The architecture, layout, construction methods, and features of the houses at Ak'awillay show strong continuity from the pre-Wari period to the Middle Horizon. House shape changed somewhat through time – in the Late Formative, houses had an irregular shape; in the Early Intermediate, houses started to have semi-circular walls; and during the Middle Horizon, houses became circular. This change, however, is more likely the result of in situ evolution than the

product of outside influence or imposed change. No rectangular house or patio group typical of Wari settlements was found at Ak'awillay.

In addition to the in situ evolution of house shape, the villagers of Ak'awillay built all of their houses in the same way. They first leveled the terrain, after which they prepared a compact dirt floor and added a stone foundation. Except for House 1 that was sunken, the villagers of Ak'awillay presumably completed their houses with cane walls (or possibly adobes, although none remains today) and thatched roofs.

Household Activities

From the Late Formative to the Middle Horizon, the houses at Ak'awillay contained similar features, suggesting that similar activities took place inside the house. All houses contained a hearth, ash lenses, or evidence that cooking was occurring in the house itself (at least during the rainy season). Houses from different time periods contained storage features such as pits and bins, indicating that people stored products and items inside their house. The people of Ak'awillay also buried human and non-human offerings below house floors during the Late Formative, and this tradition continued into the Middle Horizon.

The items left behind also suggest that most activities practiced during the pre-Wari period continued to be practiced during the Middle Horizon. The villagers of Ak'awillay planted and harvested maize (and certainly other crops), hunted deer and raised guinea pigs, herded camelids (or obtained camelid meat from others), prepared and cooked food, produced pottery and stone tools, spun thread and wove, consumed coca and hallucinogenic drugs, played music, practiced rituals involving figurines, wore jewelry, and disposed of their trash temporarily around their house and permanently in middens and gullies.

Despite continuity in most household activities, a few practices changed through time. These changes were related to food consumption and to the production and procurement of certain items. In the Late Formative, the villagers of Ak'awillay consumed most of their food communally in family-sized bowls and plates (Table 9.1). Starting in the Early Intermediate, the villagers of Ak'awillay consumed some of their food and beverage in small, individual bowls and cups; during the Early Middle Horizon, more than half of the bowls were small individual vessels. In the Late Middle Horizon, eating and drinking in small bowls and cups seems to have decreased to a level similar to Early Intermediate patterns, although the lower number of small bowls in Late Middle Horizon contexts could also be due to the reduced frequency of imported vessels (Qotakalli and Muyu Urqu).

Table 9.1. Comparison of vessel forms and pottery styles from Late Formative, Early Intermediate (EIP), Early Middle Horizon, and Late Middle Horizon domestic contexts at Ak'awillay (%)

		Late Formative Houses 1, 2	EIP House 3, Midden	Early MH Kitchen	Early MH Houses 4, 5, 6	Late MH House 7
Vessel forms	small bowl/cup	5.03	9.64	14.98	21.86	12.99
	large bowl/plate	32.14	26.31	28.34	18.71	30.09
	olla	23.38	23.74	15.38	16.67	16.41
	neckless olla	8.93	4.91	4.86	7.55	8.03
	jar	18.75	20.06	17.41	18.55	17.78
	lid	8.60	11.71	10.93	5.34	6.67
	other	3.17	3.63	8.10	11.32	8.03
	TOTAL	100.00	100.00	100.00	100.00	100.00
Pottery styles	Incised *Incensario*	0	0	0	0.15	0
	Waru	0	0.14	2.83	0.94	0.34
	Muyu Urqu	0	0.37	0.41	5.19	1.88
	Qotakalli	0	0.50	2.02	5.35	0.86
	Local Qotakalli	0	0.78	2.43	3.46	5.30
	Local decorated	0.08	1.01	4.05	5.35	3.42
	Local undecorated	0.16	2.20	10.12	14.31	9.74
	Derived Chanapata	99.76	95.00	78.14	65.25	78.46
	TOTAL	100.00	100.00	100.00	100.00	100.00

In the Early Intermediate and Middle Horizon, the residents of Ak'awillay procured some of these small bowls and cups from the Cusco Basin (Waru, Muyu Urqu, and Qotakalli) while producing others locally (local Qotakalli, local decorated, and local undecorated) (Table 9.1). The locally-made pots mostly imitated the imported bowls and cups, and these vessel shapes were different from the earlier Derived Chanapata pots produced locally. The procurement and production of new pottery styles was an important change during the Early Intermediate; during the Late Formative, the villagers of Ak'awillay had produced all of their pottery locally, and all pottery (except for 3 fragments) was made in the same Derived Chanapata style that had been dominating the region for a few centuries. The importation of pottery from the Cusco Basin and the production of new styles became even more important during the Early Middle Horizon, when Derived Chanapata-like pottery formed only 65% of the assemblage as opposed to 99.8% in the Late Formative and 95% in the Early Intermediate.

The imported vessels and the new locally-produced pots of the Early Intermediate and Middle Horizon were primarily used for the individual consumption of food and beverages. These small restricted bowls and cups, so different from the large open Derived Chanapata bowls and plates, suggest two important changes in the household economy: (1) food was prepared and served differently, allowing for more liquid meals, and (2) beverages like chicha

became more important during the Early Intermediate and Middle Horizon. Drinking chicha

could have been central to the development and maintenance of key relationships between

different families as some communities in the Cusco region were becoming more important

than others. The exchange of pottery between the Xaquixaguana Plain and the Cusco Basin

could also indicate the development or intensification of relationships between select families

starting in the Early Intermediate.

In addition to pottery, the villagers of Ak'awillay started to procure new stone materials

over time. During the Late Formative, the villagers of Ak'awillay used a variety of locally-

available materials to produce chipped and ground stone tools. Sandstone, andesite, and

quartzite were the most important types of stone, but several others were used in smaller

frequencies (Table 9.2). Most stone tools were chipped, and the presence of cores, flakes, and

débitage in houses indicates that some tools (except for obsidian tools) were made and repaired

in the house itself.

Table 9.2. Comparison of stone materials from Late Formative, Early Intermediate (EIP),
Early Middle Horizon, and Late Middle Horizon domestic contexts at Ak'awillay (%)

	Late Formative Houses 1, 2	EIP House 3, Midden	Early MH Kitchen*	Early MH Houses 4, 5, 6	Late MH House 7
andesite	17.81	13.90	24.00	3.78	4.98
lamin. andesite/slate	0	28.25	28.00	82.19	80.50
quartzite	16.44	11.21	4.00	2.34	3.32
sandstone	32.87	22.87	28.00	5.03	5.39
limestone	8.22	4.04	0	0.90	0.83
rhyolite	5.48	0.90	0	0.72	0.83
schist	1.37	0.45	0	0.54	0.83
chert	5.48	2.69	4.00	0.18	0.83
granite	6.85	8.52	4.00	0.36	0.83
obsidian	1.37	5.38	8.00	1.98	1.24
other	4.11	1.79	0	1.98	0.42
TOTAL	100.00	100.00	100.00	100.00	100.00

* This sample contains only 25 pieces of stone.

During the Early Intermediate the villagers of Ak'awillay started to obtain stone

materials from outside the Xaquixaguana Plain. Laminated andesite/slate first appeared in this

period and clearly became the most important type of stone during the Middle Horizon. The

residents of Ak'awillay probably obtained laminated andesite/slate from sources or groups

based along the Urubamba-Vilcanota River to the north, northwest, and east of the

Xaquixaguana Plain (see Figure 4.12). During the Middle Horizon an overwhelming majority

(>80%) of stone items was made from laminated andesite/slate; the other types of stone were much less common, except for sandstone which was used to produce grinding stones.

The residents of Ak'awillay produced and repaired their laminated andesite/slate tools in their house, leaving a lot of small pieces of debris behind. Because laminated andesite/slate has to be ground instead of chipped, the types of stone tools produced also changed during the Early Intermediate and Middle Horizon. Most tools were knives and chopping tools that were probably used for a variety of domestic tasks.

In addition to pottery and laminated andesite/slate, obsidian was also procured through exchange. The houses, community midden, kitchen, and public building did not contain obsidian débitage, suggesting that the people of Ak'awillay produced these tools elsewhere or, more likely, obtained obsidian in the form of finished tools. Obsidian tools were probably procured through regional or long-distance exchange networks. In the Late Formative and Early Intermediate, obsidian came from Alca and Chivay, two obsidian sources in Arequipa (Table 9.3). In the Early Middle Horizon, obsidian came from Alca and Chivay in addition to two new sources: Quispisisa in Ayacucho and an unknown source. Late Middle Horizon contexts also contained obsidian from Alca, Chivay, and an unknown source, but none from Quispisisa.

Table 9.3. Comparison of obsidian sources* from pre-Middle Horizon, Early Middle Horizon, and Late Middle Horizon contexts at Ak'awillay (%)

	pre-MH**	Early MH	Late MH
Alca	95.24	78.30	81.25
Chivay	4.76	11.32	12.50
Quispisisa	0	8.49	0
Unknown	0	1.89	6.25
TOTAL	100.00	100.00	100.00

* Sourcing data provided by Dr. Ryan Williams and the Field Museum Elemental Analysis Facility
** Late Formative and Early Intermediate contexts are combined due to the small sample from Late Formative contexts.

Use of obsidian sources in the Andes has traditionally been linked to different groups who could have controlled both the access to the source and the distribution of its obsidian. The provenience of obsidian items found at an archaeological site can indicate the existence of exchange relationships between the people of various regions. In the case of Ak'awillay, obsidian tools were sourced to three known locales. The Alca source is located in the Cotahuasi

Valley of the Department of Arequipa. Alca obsidian was widely used throughout prehistory and was found in several regions of Peru. Before identifying its source, Alca obsidian was referred to as "the Cusco type" because of its predominance in the Cusco region in all periods (Burger et al. 2000). It is therefore no surprise that most of the obsidian from Ak'awillay was sourced to Alca. The population of Ak'awillay probably obtained Alca obsidian through exchange with families living near this quarry (approximately 210 km from Ak'awillay) or with people living between Alca and Cusco.

The Chivay source is located in the Colca Valley of the Department of Arequipa, approximately 150 km southeast of Alca. Before locating its source, Chivay obsidian was referred to as "the Puno type" because it was mainly found in the Puno region and Titicaca Basin throughout prehistory (Burger et al. 2000). Groups from this region may have controlled the procurement and distribution of Chivay obsidian. The presence of some Chivay obsidian in pre-Middle Horizon contexts at Ak'awillay indicate that people from the Xaquixaguana Plain were in touch with people from the Titicaca Basin or with intermediaries living around Sicuani/La Raya (see Figure 4.2). The presence of Muyu Urqu pottery – which was possibly inspired by Tiwanaku pottery – also suggests some relationship between Ak'awillay and the Titicaca Basin in the late Early Intermediate and Middle Horizon.

Before my excavations at Ak'awillay, the presence of Chivay obsidian had not been documented in Middle Horizon contexts in the Cusco region. Based on data available at the time, Burger and colleagues (2000) had argued that all Middle Horizon obsidian from the Cusco region had been obtained from Quispisisa, Alca, and other sources possibly located in the neighboring regions of Chumbivilcas in Cusco and Andahuaylas in Apurimac. In Burger and colleagues' words, no "Titicaca-related obsidian" was ever found in "Wari territory" (Burger et al. 2000). Findings from Ak'awillay suggest that the Wari did not disrupt or control obsidian procurement patterns in the entire Cusco region; local communities were able to maintain exchange relationships with groups based in the Titicaca Basin.

The Quispisisa source is in the Department of Ayacucho and its obsidian was used in several areas of Peru during the Middle Horizon. Quispisisa obsidian is generally associated with Wari expansion or exchange with Wari caravans. The villagers of Ak'awillay probably obtained Quispisisa obsidian from the Wari colonists of the Huaro Valley and Lucre Basin. Earlier sourcing studies established that the majority of obsidian from Pikillaqta came from the Quispisisa source (Burger et al. 2000).

Obsidian data suggest that the villagers of Ak'awillay were diversifying their exchange networks during the Early Middle Horizon, multiplying the opportunities for exchange. They were in contact with groups in Arequipa (Alca), others in the Titicaca Basin (Chivay), the Wari colonists in Huaro and Lucre (Quispisisa), and other groups elsewhere (unknown source). Alternatively, the people of Ak'awillay could have obtained obsidian from intermediary groups around the Xaquixaguana Plain who had a more direct contact with these other regions. Their exchange partners in the Cusco Basin and elsewhere could have started to participate in new exchange networks, trading with Ak'awillay the objects they had procured elsewhere. Obsidian is traceable to its original source, but unlike pottery, the people who used the obsidian were not necessarily aware of or interested in its origins.

Other Houses in Cusco

Pre-Middle Horizon Houses

At the site of Batán Urqu near Huaro, Zapata (1998) conducted extensive excavations and uncovered four Formative circular houses in addition to the Middle Horizon cemetery (described in Chapter 3). The presence of Derived Chanapata pottery, the absence of later styles, and a radiocarbon date indicate that these houses were occupied during the Late Formative. The houses had a stone foundation, walls of semi-compact reddish clay, and possibly posts to support a thatched roof. The interior diameter of these houses was between 2.5 and 2.8 m. In the center of each house was a hearth with some stones that could have supported cooking pots. House floors contained many items, including pottery fragments, stone tools, bone tools, and food remains.

Closer to Ak'awillay in the Xaquixaguana Plain, Allison Davis (2010) excavated Late Formative (400-100 BC) contexts at the site of Yuthu. In the earliest levels dating to approximately the 4th century BC were two semi-subterranean houses. These houses were dug 90 cm into the sterile soil and had an irregular or oval shape. They had vertical walls and were probably roofed with thatch. One house included a hearth, storage pits, and trampled surfaces, while the other was closely associated with an outdoor space that contained these types of features (Davis 2010:116-144). Slightly later in the Formative, another house was built in the same sector of the site but differed from the semi-subterranean houses. This later house was built above ground and had a stone foundation. Its walls were presumably built with clay or mud. The house was not completely excavated, but the presence of a straight wall suggests that

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the house may have been rectangular or trapezoidal (Davis 2010:399). This house also contained trampled surfaces and a hearth, and a nearby outdoor cooking area contemporary with the dwelling.

Items recovered from these three houses and from other contexts at Yuthu included Chanapata pottery (plain, pattern burnished, incised, painted, painted-incised, and fragments with modeled decorations), stone tools and débitage, bone tools, and a variety of other objects, several of which are similar to those found at Ak'awillay (Davis 2010: 41-103). Interestingly, the Chanapata bowls recovered at Yuthu are all of the large type; there were no small individual bowls like those from later contexts at Ak'awillay. At Yuthu, the most common stone material in terms of both count and weight was quartzite. In terms of count, quartzite was followed by obsidian and sandstone, and slate formed 4.91% of the assemblage; in terms of weight, quartzite was followed by sandstone and andesite, and slate formed only 0.46% of the assemblage.

Middle Horizon Houses

Outside Ak'awillay, only a handful of Middle Horizon houses have been identified and partially excavated. After completing the systematic survey of the Cusco Basin, Brian Bauer dug several test pits at three Early Intermediate and Middle Horizon sites (Bauer and Jones 2003). The occupation of these sites was dated with more than 15 radiocarbon samples. At the site of Tankarpata (3 ha), Bauer recovered a trash pit and architecture dated to the end of the Early Intermediate and the Middle Horizon. The architecture included a wall with a red clay floor and a series of additional walls associated with a paved area and shallow pits. These contexts contained Qotakalli, Muyu Urqu, Araway, and some Wari pottery fragments, as well as stone knives similar to those found at Ak'awillay. The shape of these structures is not specified.

At the site of Pukakancha (1 ha), Bauer exposed a midden that included Araway, Qotakalli, and Wamanga pottery, as well as stone knives. This midden and other test pits were dated to the Early and Late Middle Horizon. The architecture recovered at the third site dug by Bauer, Peqokaypata, was not domestic and is described in the following section.

In addition to these sites, Nilo Torres Poblete (1989) excavated two test pits at the residential village of Araway in the *kichwa* zone of the Cusco Basin (see Figure 4.2). The site of Araway gave its name to the pottery style that was first discovered there. No radiocarbon dates are available from these excavations, but pottery suggests that Araway was first occupied during

the Middle Horizon (Qotakalli, Araway, and Wari pottery) and continued to be occupied in the Late Intermediate (Killki) and Late Horizon (Inka).

Limited test pits (10 m^2) at Araway exposed parts of a Middle Horizon rectangular structure. This building, probably a house, was constructed with two rows of stones set in mortar, and its floor was made with a layer of compacted earth. Inside the house were Qotakalli, Araway, and Wari pottery fragments, as well as stone tools and debris that included slate hoes, instruments to polish pottery, obsidian projectile points, and grinding stones. Torres Poblete (1989:78-79) also recovered a bone object that looks like the snuff tubes found at Ak'awillay (see Figure 8.12).

Continuity and Change

The houses from Ak'awillay and other villages in the Cusco region show considerable continuity through time. House shapes evolved locally and similar raw materials and techniques were used to build them. The houses at Ak'awillay and elsewhere also contained similar items. For example, the Late Formative houses at Ak'awillay and Yuthu included similar pottery and mostly lacked small bowls and laminated andesite/slate tools, which appeared at Ak'awillay in the Early Intermediate.

People continued to live at Ak'awillay during the Middle Horizon. Instead of starting to build rectangular houses and patio groups similar to those at the Wari colony of Huaro and Pikillaqta, the villagers of Ak'awillay continued local traditions. They also continued to import Cusco Basin pottery, to eat and drink from small individual bowls, and to produce laminated andesite/slate tools. All of these items were documented at other Middle Horizon sites in the Cusco Basin, suggesting that the families living at Ak'awillay continued to participate in the local exchange network that had emerged in the Early Intermediate, if not earlier. One thing that did change at Ak'awillay during the Middle Horizon was the procurement of tools made from Wari-related obsidian from Quispisisa, whose presence at Ak'awillay is best explained by contact with the Wari colonists established in Cusco.

Public/Ceremonial Architecture

Other Public/Ceremonial Buildings in Cusco

There was no pre-Middle Horizon public or ceremonial structure excavated at Ak'awillay, but buildings exposed elsewhere in the Cusco region provide interesting parallels. At the site of Chanapata in the Cusco Basin, Rowe (1944:13-15) dug a trench (10 x 2 m) in which he identified part of a semi-subterranean structure. The wall of this structure was built with field stones with no apparent mortar. The wall was 90 cm high and the floor was prepared with a layer of sandy loam on top of packed clay. The fill of this building contained Chanapata pottery fragments only, suggesting that the building's use dates to the Formative period. The nature of this building cannot be identified with certainty, but the fact that it is sunken suggests that it was used for ritual or assembly. Many other semi-subterranean ceremonial buildings dating to the Formative or even earlier on the coast have been identified in other parts of Peru and Bolivia (e.g., Burger 1992; Hastorf 2008; Janusek 2004; Moseley 1985).

At Batán Urqu, Zapata (1998) reported two Formative rectangular semi-subterranean plazas. The first had curved corners and was reached by a small stone stairway; the second was delimited by two retaining walls built with small stones and mortar. More excavation in these semi-subterranean plazas could provide interesting data on the nature of the activities that took place there.

At the site of Muyu Urqu in the Cusco Basin, Zapata (1998) also excavated a Formative semi-subterranean temple. The temple was on a platform atop a terraced hill. Its walls were built with stones placed on bedrock or on a layer of compact fill. The floor was 1.2 m below the surface and was leveled and trampled. The northern and southern walls of the temple included a bench, and in the center of the temple was a rectangular altar surrounded by several offering pits containing camelid bones, some of which had been burned in situ. Zapata (1998:332) concludes that this temple was probably used for important rituals during the Late Formative.

At Yuthu, Davis (2010:276-395) also exposed part of a sunken ceremonial structure. To build it, the residents of Yuthu first leveled a natural hill and prepared a platform. The sunken structure was then constructed on top of this platform. The sunken structure was unroofed and delimited by retaining walls, a stone-faced bench, and a stone-lined canal. The canal was oriented towards an important glacier or *Apu* that may have played a role in rituals performed in the sunken structure. This canal was later abandoned when a new one was built; the new canal

was oriented towards another *Apu* and may indicate changes in ritual practices or village dynamics. The sunken structure was later buried and abandoned, and a new structure was constructed above it. This new structure may also have been ceremonial and was built with mud foundations.

In the Cusco Basin, the site of Peqokaypata (0.6 ha) was first occupied in the Formative but peaked in the Early Intermediate and beginning of the Middle Horizon (Bauer and Jones 2003). Pottery found in these later contexts included Qotakalli, Muyu Urqu, and *Incised Incensarios*. Bauer and Jones recovered two sets of structures dating to the last half of the Early Intermediate and beginning of the Middle Horizon; these structures did not seem to be domestic. The first set was a group of two low mounds built around a plaza; the second was a circular structure built beside a large retaining wall. In both cases, the residents of Peqokaypata had "plac[ed] fill behind retaining walls of fieldstone in order to create an elevated occupation surface" (Bauer and Jones 2003:13).

Continuity and Change

The Middle Horizon public building (Structure A) excavated at Ak'awillay shares several features with earlier ceremonial buildings in the Cusco region. To build some of these structures, including the one at Ak'awillay, people first leveled the terrain to create a flat surface. Considering the size of these buildings, this task probably necessitated the participation of several members of the community. On this flat surface people then constructed a semi-subterranean enclosure with fieldstones. All of these buildings appear to have been used for rituals or gatherings.

An interesting difference between the public building at Ak'awillay and the earlier ones is their shape; Structure A at Ak'awillay was circular while the others seem to have been rectangular. Wari temples were circular or D-shaped, but it would be difficult to see Ak'awillay's circular building as a result of Wari influence since there are no known circular or D-shaped temples at Huaro or Pikillaqta. The reasons behind this apparent change from rectangular to circular ceremonial buildings need to be investigated further, but it is more plausible to see Ak'awillay's public building as a product of local traditions than as a result of Wari presence. The public building at Ak'awillay is similar to earlier and contemporary houses at the site; the method of construction, the materials used, and the shape of the building were similar to houses, although it was much larger and sunken.

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Mortuary Ritual

Pre-Middle Horizon Burials and Cemeteries

At the site of Chanapata, Rowe (1944:13-14) excavated four human burials dating to the Formative. All burials contained one seated flexed individual, although in two cases the skeletons had fallen forward or on their side. The skeletons were placed in circular pits facing different directions and none was buried with offerings. In one case the skull was covered with a large flat stone and in two other cases the skull was covered with one stone while the rest of the body was covered with several stones. The earliest of the four burials at Chanapata contained three stones at the bottom and one additional stone covering the feet. The skull of one adult male had lesions of an unspecified nature.

At Batán Urqu, Zapata (1998) excavated three burials dating to the Formative. Each burial contained one to three individuals. The bodies were buried in a flexed position, either seated or on their back, and were facing different directions. Two individuals buried side by side in the same burial had offerings; the first was buried with five beads and the second with a pottery vessel. Another individual was buried with a copper necklace. The bodies were placed in circular stone-lined cists or in pits surrounded by a few stones. One cist included a stone at the bottom and another one on top, similar to Burial 4 under the floor of Structure A at Ak'awillay.

At Muyu Urqu, Zapata (1998) excavated eight additional burials associated with Chanapata pottery. These burials were found in one of the terraces surrounding the hill and sunken temple described earlier. Each interment contained one to two individuals who were flexed and on their back or side. Like at Chanapata and Batán Urqu, the individuals were facing different directions; stones surrounded or covered these skeletons.

At Yuthu, Davis (2010) excavated several Late Formative burials that contained a total of 27 individuals. The burials were found in both the domestic and ceremonial sectors of the site. Each burial included the bones of one or several skeletons in a flexed position on their back or side. Like the interments at the other sites described above, the bodies were facing different directions and none had offerings. The skeletons were placed in pits that were sometimes surrounded by stones. Cranial modification and skeletal trauma were common, and bones had often been burned.

A careful analysis of the Yuthu skeletal remains in the field ("*anthropologie de terrain"*) and in the lab led Davis to suggest that while some interments reflect primary burials, others correspond to secondary burials. In the case of the latter, whole bodies or parts of skeletons were buried in their final resting place some time after their death once tissue had decayed; two men and a child also seemed to have been mummified before being buried. Further examination of the human burials from Ak'awillay may provide interesting comparisons on mortuary behaviors.

Middle Horizon Burials and Cemeteries

Very few Middle Horizon burials have been excavated outside Ak'awillay and the Wari colony. At the site of Araway in the Cusco Basin, Torres Poblete (1989) excavated one Middle Horizon burial. This burial included two individuals who were seated and flexed looking east. The two individuals seem to have been wrapped in cloth and were not buried with any offerings. They were placed on sterile ground outside a rectangular house and their bodies were covered with stones.

Continuity and Change

A look at Formative and Middle Horizon burials excavated in other parts of the Cusco region shows several similarities with those recovered at Ak'awillay. The dead were placed under house floors or close to houses, buried in cemeteries, or closely associated with public buildings. In addition, the position of the body, the absence of a uniform direction in which the bodies were facing, and the absence of offerings (in most cases) are all similar. Most individuals were buried in cists or in circular pits that were sometimes surrounded or covered with stones. Some individuals, at least at Ak'awillay and Yuthu, were burned and others represent secondary burials.

Although it may reflect differences in status rather than a lack of Wari influence, none of the burials at Ak'awillay were as fancy as those from Huaro or Batán Urqu. It will be interesting in the future to see if there were burials at Ak'awillay that reflect differences in status, and if so, whether those of higher status contain Wari pottery.

Ak'awillay and the Cusco Region through Time

Ak'awillay was occupied over a long period of time, and both continuity and change are visible in the archaeological record. The architecture, layout, features, and material culture of the houses, public building, and burials show significant continuity over time and space. Despite this continuity, some innovations appeared over time and the villagers of Ak'awillay introduced new items and emulated others.

Most of the changes recorded at Ak'awillay occurred in the Early Intermediate *before* the arrival of Wari colonists in the Cusco region. The villagers of Ak'awillay started to eat food and consume beverages (presumably chicha) in small restricted vessels, obtained new pottery vessels from the Cusco Basin and surrounding areas, and procured laminated andesite/slate from outside the Xaquixaguana Plain. These new items changed the ways in which people prepared, cooked, and consumed their meals; feasted; produced pots and stone tools; and interacted with their neighbors. Elsewhere in the Xaquixaguana Plain, families were building villages close to maize lands. At the regional level, multi-village or chiefly polities emerged for the first time.

During the Middle Horizon families continued to live close to maize lands and multi-village polities continued to dominate the regional landscape. The people of Ak'awillay also carried on the same activities as they had been practicing since the Early Intermediate. For them, the transition from the Early Intermediate to the Middle Horizon was not a period of drastic change but one marked by continuity. One thing that did change at Ak'awillay during the Middle Horizon was the opportunity for exchange with a new trading partner: Wari. From the Wari colonists the people of Ak'awillay obtained a few pieces of obsidian and, very rarely, Wari pots. This exchange could have been complemented with perishable goods that did not preserve in the archaeological record (e.g., coca, feathers, food) or with other kinds of relationships (feasting, intermarriage, etc.).

Considering (1) the significant continuity of local traditions at Ak'awillay through time, (2) the stability of regional exchange networks during the Middle Horizon, and (3) continuity in regional settlement patterns and chiefly polities, the few Wari items that were introduced at Ak'awillay during the Middle Horizon are best explained by the development of trade and other symmetrical relationships with Wari colonists. How these relationships were organized remains to be investigated, but what is clear is that the people of Ak'awillay selectively incorporated

these and many other imported items into their domestic and ceremonial activities. For them,

Wari presence was a way to gain, rather than lose, new opportunities.

Chapter 10

WARI IMPACT IN CUSCO

Wari studies have been dominated by "top-down" approaches that focus on the Wari capital and large settlements outside its heartland. Although essential for understanding the Wari state and state expansion strategies, these approaches have neglected those who were affected by Wari intrusion – the local communities. The study of Ak'awillay through time has revealed both continuity and change, and more importantly, it has shown that only a small part of this change can be explained by Wari presence. The villagers of Ak'awillay were involved in many activities and exchange networks before the arrival of Wari colonists, none of which were interrupted after the Wari colonists settled in Cusco during the Early Middle Horizon.

The case of Ak'awillay shows the importance of the use of multiple lines of evidence in assessing the presence, nature, and impact of an expansionist state. Pots are not people, and expansion is not always the expansion of political control. Ak'awillay in the Cusco region may be one case where state colonists, like other early states worldwide, co-existed with local populations without dominating them.

Minimal Wari Impact at Ak'awillay

The families who lived at the village of Ak'awillay during the Middle Horizon were little affected by the presence of Wari colonists in the Huaro Valley and Lucre Basin. They continued to practice the same kinds of domestic and ritual activities as they had before and used similar pots, tools, and paraphernalia as before. They rarely procured Wari items and these were limited to decorated pottery and obsidian. Wari objects were not the only imported items at Ak'awillay nor were they the most common; the people of Ak'awillay frequently obtained

pottery from the Cusco Basin, stone from other areas outside the Xaquixaguana Plain, and obsidian from regions farther away. They also procured marine shell (for jewelry) from the coast, hallucinogenic snuff from the Amazon, and probably many other perishable items from other ecological zones such as coca, ají, and tropical bird feathers.

At Ak'awillay Wari drinking vessels were limited to the public building, suggesting that Wari *qiru* were used to drink chicha in gatherings and feasts. These gatherings also involved food, music, hallucinogenic drugs, and probably singing and dancing. Who was allowed to participate in these ceremonies is unknown, but these feasts may have emerged in a context of increasing social inequalities and the appearance of the first multi-village or chiefly polities during the Early Intermediate. Scholars studying similar societies elsewhere in the world have shown that in addition to controlling villages other than their own, the leaders of such societies organized large public ceremonies and often had greater access to long-distance exchange networks, prestige goods, and strategic resources (e.g., Anderson 1990; Drennan 1995; Drennan and Peterson 2006; Earle 1987, 1991; Helms 1979; Junker et al. 1994).

The exotic goods and esoteric knowledge obtained from these interactions enhance the prestige or status of certain people or certain families in the local communities (Goldstein 2000). Different lineages display exotic goods to compete with one another, and leaders use these goods "to consolidate power on the local scene" or, in other words, "to separate elites from commoners across local social space" (Goldstein 2000:356). In this sense exotic goods are an indicator of local dynamics, not necessarily a measure of state control on local communities. Foreign or nonlocal goods are incorporated into a community and used in ways that reinforce local values; competing lineages or local leaders use these goods to enhance and legitimize their prestige at home and to differentiate themselves from the other members of their own community (Earle 1987, 1991; Helms 1979; Junker et al. 1994).

At Ak'awillay the increasing participation in a regional exchange network during the Early Intermediate could have been a way for prominent families to accumulate resources and prestige. During the Middle Horizon they maintained access to exotic resources through trading partners not tied to Wari. Wari presence also provided new opportunities for the people of Ak'awillay, including expanded access to new commodities, prestige goods, and ideas. Although state expansion often disrupts the lives of local communities, in certain cases like Ak'awillay local groups manipulated interaction for their own benefit (see also Castillo Butters 2001; Goldstein 2000; Helms 1979; Jennings 2010a; Junker et al. 1994). Interaction with Wari

colonists and access to their network of far-flung exchange partners provided local individuals and families with new products and ideas.

Research at Ak'awillay suggests that the Wari state did not tightly control all the communities of the Cusco region. Some communities continued to live as they had and indeed appear to have gained economic benefits from the nearby Wari settlements. Nonetheless, Wari was certainly not the main source of prestige for competing families at Ak'awillay; the organization of large feasts, marriage alliances, and the procurement of resources and exotic goods from long-standing exchange partners, for example, were probably more important. As Marcone (2010) recently observed, it is imperative to emphasize these local processes of development, economic intensification, and political centralization if we are to move away from Wari-centric interpretations of culture change.

The Wari colonists were not the only state officials with whom the communities of the Cusco region were interacting; the presence of a pottery style inspired by Tiwanaku (Muyu Urqu) and of Chivay obsidian suggests that relationships with people living in the Titicaca Basin were even more important, at least during the Early Middle Horizon. Future research should clarify the nature of the relationship between Cusco and the Titicaca Basin, and more excavation of Late Middle Horizon contexts in Cusco should provide interesting data on how and if this relationship changed after Wari colonists had been in Cusco for some time.

Wari Impact in the Cusco Region

Excavations at Ak'awillay and regional systematic surveys outside the Wari colony have shown that the centralized, "top-down" approach to understanding Wari state expansion in Cusco is very incomplete. Research at Huaro and Pikillaqta has exaggerated Wari impact in the region, focusing on the grandeur of the ruins and its intrusive character. Although Pikillaqta is indeed impressive and does depart from local traditions, the only way to evaluate the impact of Wari outside their colony is to conduct fieldwork outside the colony.

The "bottom-up" approach provides a quite different perspective of Wari in Cusco than that obtained from the study of large Wari sites alone. For some communities like Ak'awillay life went on virtually unchanged. Some communities obtained a few Wari items, others emulated Wari pottery, and many procured even more items produced locally by non-Wari populations.

The people of Cusco did interact with Wari colonists, but available evidence suggests that this interaction was not structured in asymmetrical terms. Local communities may have participated in rituals at Pikillaqta from time to time, just like Wari colonists could have participated in feasts organized by local ruling families. Local leaders could have called their followers to work periodically on Wari projects, using this deployment of labor to display their own authority vis-à-vis both Wari colonists and competing local elites.

Wari interests in Cusco probably lay in the procurement of resources from lower altitudes and access to trade routes, especially with the Titicaca Basin further southeast. There is no evidence for a military conquest of Cusco; in fact, there is no evidence for conquest at all. The establishment of Wari colonists in Cusco was probably a lengthy process, yet local families continued to live in undefended villages close to maize lands for the entire duration of the Middle Horizon. Wari colonists may have had bigger plans for Cusco, but those never seem to have been realized.

Scholars who believe in a strong Wari empire argue that the Wari built large settlements in areas characterized by non-complex societies that lacked the necessary infrastructure to rule (see Chapter 1). Data from regional systematic surveys suggest the presence of complex polities in the Cusco region before the arrival of Wari. Data from Ak'awillay also show that the Wari did not control all the populations of Cusco. Why, then, did Wari colonists build such large settlements in Huaro and Lucre? Wari colonists may have built these large settlements in the hope that they could interact with local polities (and have a venue to perform rituals of generosity and reciprocity) and tap into the existing regional networks controlled by these polities.

Wari State Expansion

The data gathered in Cusco outside the Wari colony stress the importance of the "bottom-up" approach to complement our understanding of expanding polities. The city of Wari appears to have been the head of a state during the Middle Horizon, but the nature of its settlements in distant places like Cusco needs to be revised. Outside its heartland in the Department of Ayacucho, Wari sites look more like enclaves or colonies that facilitated the extraction of resources and the development of key relationships than like provincial

administrative centers that controlled resources and dominated populations. Wari sites (like Pikillaqta and Cerro Baúl), unlike local villages, were defensible.

In this sense, Wari may have been more similar to other early states like Teotihuacán or Uruk than to the later Inka empire. Early states are different from later ones in terms of complexity, organization, extent, and resources. Teotihuacán ruled over the Basin of Mexico during the Classic period from AD 200 to 600 (Parsons 1974; Sanders et al. 1979). Teotihuacán was a large city (20 km^2) with monumental architecture, different neighborhoods of elite and commoner residences, and many craft specialists (Braswell 2003a). Outside its heartland Teotihuacán items, particularly Thin Orange pottery and obsidian blades, were found in distant places throughout Mesoamerica. Teotihuacán developed relationships with several other polities, including Monte Albán in Oaxaca (Marcus and Flannery 1996); Maya states in the lowlands of Mexico, highlands of Guatemala, and surrounding regions; and other polities on the Gulf Coast.

Work at Teotihuacán and in the surrounding Basin of Mexico in the 1960s and 1970s led to what Pendergast (2003:235) calls "Teotihuacanomania" – most archaeologists saw Teotihuacán as the source of other Mesoamerican polities' political and cultural development. For example, in the highlands of Guatemala early work at Kaminaljuyú led scholars to conclude that some Teotihuacanos were living at the site (Sanders and Michels 1977). At Kaminaljuyú most buildings were made in the local style, but a few buildings used the *talud-tablero* style and contained pottery from Teotihuacán. These Teotihuacán and Teotihuacán-related items and features were interpreted as evidence for the presence of Teotihuacanos at Kaminaljuyú. In some models, Teotihuacán state officials colonized and conquered the Maya area, incorporating these lesser states into an expanding Central Mexican empire (see Braswell 2003a). In other models, Teotihuacanos lived in enclaves at existing Maya sites without exerting political control over a region; Teotihuacán enclaves would have been "ports of trade" for accessing different products and resources (Brown 1977).

Further research in the Maya area has reevaluated these Teotihuacán-centric models (see Braswell 2003a and Marcus 2003 for summaries). Several scholars have shown that the emergence of the first Maya states predated interaction with Teotihuacán, indicating that Maya state formation was not the result of Central Mexican influence. In addition, the *talud-tablero* style did not first appear at Teotihuacán but was present in other areas of Mexico (Puebla, Tlaxcala, and others) *before* the Classic period, suggesting that its introduction in the Maya area

was not necessarily the result of interaction with Teotihuacán (Laporte 2003). The presence at Maya sites of Teotihuacán portable items such as pottery and obsidian and of local copies of Teotihuacán items is best explained by *local* processes, not by foreign conquest and colonialism. For example, in many cases Maya elites seem to have appropriated prestigious Central Mexican symbols and incorporated them into local ritual activities. Teotihuacán items were not the only imported goods at Maya sites, and Maya elites were interacting with many other regions of Mesoamerica during the Classic period (see Marcus 2003). Maya items were also found at Teotihuacán, indicating that interaction was multi-directional and visits were reciprocal (Taube 2003). To be sure, the nature and frequency of relationships between the Maya and Teotihuacanos (as well as individuals from other regions) varied through space and time, and some relationships may have been direct while others involved intermediaries (Marcus 2003).

At Kaminaljuyú, local elites emulated Teotihuacán symbols (the "warrior cult" for example) and pottery, in addition to procuring some pottery and obsidian from Teotihuacán (Braswell 2003b). These items were only found in elite burials, and analyses of tooth enamel indicate that the individuals buried with these objects were born in the area of Kaminaljuyú. *Talud-tablero* architecture at Kaminaljuyú was different from that of Teotihuacán, and no Teotihuacán items or copies were recovered in domestic contexts. These data do not support the presence of a Teotihuacán enclave at Kaminaljuyú. Instead, the elites of Kaminaljuyú seem to have displayed Teotihuacán goods and symbols as well as their local copies to reinforce their position and increase their prestige locally. Alternatively, Teotihuacán goods and copies could have been used in restricted elite ritual settings as part of a "pan-Mesoamerican cult" focusing on warfare and deities (Braswell 2003b:139). Maya elites could have obtained Teotihuacán goods during pilgrimages to Central Mexico; participation in these rituals and pilgrimages could have increased the "social distance" between Maya elites and commoners (Braswell 2003b:141).

Outside the Maya area in regions such as Veracruz on the Gulf Coast, the presence of some Teotihuacán objects has also traditionally been interpreted as evidence for political domination. Teotihuacán would have been interested in the area for its tropical lowland products like cotton, colorful bird feathers, and cacao. However, further research in the area has shown that Teotihuacán probably did not control the Gulf Coast (Stark and Curet 1994). In the Mixtequilla region of Veracruz, the Classic period saw no changes in settlement patterns, very little green obsidian (generally associated with Teotihuacán), and very few Teotihuacán imports. Instead, Teotihuacán pottery styles were emulated and reinterpreted locally.

Mixtequilla developed its own material culture that appeared at Teotihuacán, suggesting a two-way exchange between the Gulf Coast and the Basin of Mexico.

Stark and Curet (1994) argue that although Teotihuacán enjoyed considerable prestige in Mesoamerica during the Classic period, it is more likely that the Mixtequilla region was politically independent and that its elites made alliances with those at Teotihuacán. If Teotihuacán did exercise some form of political control over the area, it was probably indirect and very short-lived. As Stark and Curet (1994:283) caution, "Teotihuacan had social and political bases for unusual prestige in Mesoamerica, and there is a risk in assuming that the dissemination of Teotihuacan-linked styles necessarily implies an economic relationship and that economic relations necessarily imply domination by Teotihuacan." Teotihuacán is a good example of how the distribution of material culture (Central Mexican, in this case) was once interpreted as evidence for conquest and colonialism. New research in Mesoamerica showed that these early reconstructions have greatly exaggerated the role of Teotihuacán in local developments during the Classic period. Teotihuacán's prestige was certainly far-flung, but its political control was probably limited to regions surrounding the capital city in Central Mexico.

In Mesopotamia, Uruk states of the fourth millennium BC established several enclaves and colonies in regions far from their capital. The Uruk states were probably much less complex than Wari and Teotihuacán, but I use this case study to show that state colonies do not always control local polities. Uruk enclaves and colonies were probably created to control trade routes and gain access to certain resources such as copper (Stein 2005). Uruk colonies were distinct from local settlements in their use of Uruk architecture, pottery, and administrative items such as seals and clay tablets. At Hacınebi in Turkey, for example, Uruk colonists seem to have co-existed with local populations without exerting political or economic control (Stein 1998, 2002b, 2005). The local population maintained its traditions, material culture, and access to its trade network, and does not seem to have provided the Uruk colonists with tribute, food, or crafts.

Like Teotihuacán, Uruk, and many other states, Wari rulers did not control all the land and resources between their distant colonies and the capital, nor did Wari colonists dominate all local populations or control local politics and economies. Wari settlements in distant regions such as Cusco were intrusive and distinct from local settlements, but the lack of change at the local level following the arrival of Wari suggests a colony or enclave, not a province. Colonies do not always control their host societies and often depend on them to procure key resources; alliances with local leaders would have been crucial.

Wari and Inka

Being an early state, Wari may be more comparable to other early states elsewhere than to the later, much more complex Inka state. Of course, the fact that both the Wari and Inka states developed in the Andean highlands implies that they adapted to similar conditions and shared many aspects of their culture. The Inka did build on its predecessors and some aspects of the Inka state do seem to date back to much earlier periods. For example, the documentation of several *qiru* in Wari and Tiwanaku buildings has demonstrated the importance of chicha drinking and reciprocity in the administration of early Andean states. The presence of makers' marks on adobes used to build large pyramids on the north coast has also shown that labor tribute predated the Inka.

Other aspects of Inka state administration seem unique to the Inka. For example, the existence of a Wari "imperial road system" still needs to be demonstrated. Scholars have often argued that Inka roads passed through Pikillaqta and Viracochapampa, suggesting that the roads were built earlier by the Wari as part of their imperial highway. However, this is not correct; in fact, the Inka road does not pass through Pikillaqta or Viracochapampa but 200-300 m away from these sites (Hyslop 1984:273). In addition, the existence of pre-Inka (even Middle Horizon) roads does not necessarily mean that they were built by the Wari. A recurrent association of sites with roads is necessary to understand who originally built these roads.

Some Wari scholars have based their interpretations of the Wari state on Inka analogy. Although potentially productive, Inka analogy should not be used uncritically; one needs to demonstrate the relevance of Inka analogy for a particular case study. As Bermann (1994:253) has already noted, "we must not assume that the Inca polity represented the only kind of state to exist prior to the arrival of Europeans. The Inca state should not be used as the standard against which to measure or define other prehispanic political formations." It would be more interesting to discover what strategies the Wari developed than to impose the Inka model on the past. After all, the Wari state was *not* the Inka state writ small.

Appendix A

POTTERY FROM AK'AWILLAY

The following description of ceramic styles is based on attributes that I quantified on Ak'awillay rims (n = 20,456 rims). For each style, some attributes such as wall thickness and paste type could differ in other parts of Cusco due to multiple production centers. Other elements like decorative techniques, motifs, and vessel forms, however, are similar throughout the region (compare, for example, with Bauer 1999; Bauer and Jones 2003; Barreda Murillo 1982; Glowacki 1996, 2005a; Rowe 1944; Yábar Moreno 1972).

Derived Chanapata

(rims, n = 15,749). Most Derived Chanapata pottery had a brown, reddish brown or red paste (75%). Other paste colors included brownish orange (15%) and black or gray (10%). Almost all fragments had medium or medium-to-coarse inclusions (99%), and fragments with fine inclusions were nearly absent (1%). I identified two main paste types based on temper: (1) a paste with abundant white, non-plastic inclusions that are probably quartz, mixed with matte black inclusions that may be crushed stone (55%); and (2) a paste with occasional red inclusions or crushed pottery sherds (grog), in addition to the characteristics of type 1 (45%). Derived Chanapata pottery was mostly oxidized (96%), and only 4% was fired in a reducing atmosphere. Two thirds of the oxidized specimens, however, were not fully fired and are gray in the middle.

One quarter of Derived Chanapata rims were decorated (24%). The most common decorative technique was pattern burnishing (65% of Derived Chanapata decorated rims; 16% of all Derived Chanapata rims). This technique consists of burnishing thin parallel (and sometimes perpendicular) lines on a smoothed surface (see Figure 4.3a). This technique was mostly used

on the interior surface of bowls, lids, and plates but also on the exterior surface of ollas, jars, and neckless ollas.

The second most common decorative technique on Derived Chanapata ceramics was polished red slip (18.6% of Derived Chanapata decorated rims; 4.5% of all Derived Chanapata rims). This technique consists of polishing the entire surface of a vessel and applying red slip on it. The polish was well made and gives a shiny look to the pottery, although brush marks are sometimes still visible. Red slip was mostly used on the interior and/or exterior surface of bowls and on the exterior surface of jars. Red slip was sometimes combined with pattern burnishing (5% of Derived Chanapata decorated rims; 1.2% of all Derived Chanapata rims). The most common location of such a combination was on the interior surface of bowls, where the rim was slipped and the interior body pattern burnished.

Other decorative techniques were much less common on Derived Chanapata pottery; each represented less than 4% of this style's decorated rims. Painted-incised is a technique that combined incised motifs with red paint (see Figure 4.3c). Incised motifs included bands, triangles, steps, pluses, and flowers. Other motifs may have existed but the fragmentary nature of most pieces made it impossible to recognize. The motif delimited by the incisions was filled with red paint and sometimes polished. This decoration was mostly used on the interior rim of bowls and on the exterior shoulder of necked bowls.

Incisions and punctations were sometimes used alone and represented another decorative technique. Motifs were often incomplete and impossible to identify, but identifiable motifs included straight and zigzagging lines, chevrons, steps, circles, and plants. Incisions mostly appeared on the inside or outside of bowls and on the exterior surface of jars.

Paint could be used by itself to decorate Derived Chanapata pots but represented a very rare decorative technique in the Ak'awillay collection. Rowe (1944:17-18) had originally called this type Pacalla-mocco White on Red and Pacalla-mocco Red on Buff after the name of the site where he first found it near the town of Maras (see Figure 4.12). Motifs were generally painted on a polished surface and included parallel straight lines, zigzagging lines, circles with or without a dot inside, pluses and/or flowers, and an animal, most likely a camelid. Painted decoration almost exclusively appeared on the interior rim of bowls and plates. A minor portion of Derived Chanapata rims from the Ak'awillay collection combined two or three of the decorative techniques described above.

Derived Chanapata pottery included several vessel forms. The most common was the bowl (34% of Derived Chanapata identifiable rims; 33% of all Derived Chanapata rims). Among bowls, the open flaring bowl was by far the most frequent type (Figure A.1). These bowls had an average minimal diameter[1] of 25 cm. They had a thickened lip and a straight wall, although a few specimens had a convex or concave wall. Wall thickness varied between 6 and 11 mm. Some vessels had a vertical flat handle attached to the lip. Flaring bowls were generally polished on the exterior while on the interior the rim was polished but the body and bottom were smoothed.
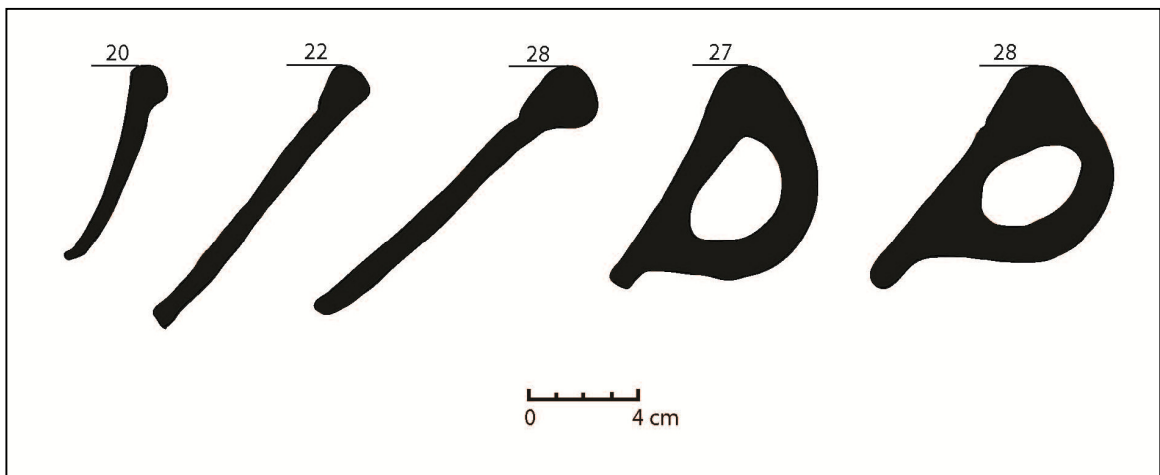
Figure A.1. Derived Chanapata flaring bowls. These bowls often have large strap handles. Numbers refer to vessel diameter in cm.

Forty-one percent of the flaring bowls were plain. The others were decorated on the interior: 42% were pattern burnished, 7% were red slipped, and the rest were painted-incised, incised, painted (white on red), or had a combination of two or three decorative techniques. The interior rim was often separated from the body by a straight incised line (Figure A.1, see the 2nd, 3rd, and 5th bowls). In these cases the rim was polished and slipped red, and the body was pattern burnished. The great majority of flaring bowls had no soot; this suggests that these vessels were not used for cooking but for serving food. The relatively large diameter of these bowls indicates that they were not used to serve individual servings of food and drink; rather, food was most likely served to several individuals who could eat from the same bowl.

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[1] Derived Chanapata rims were sometimes too small to calculate the exact diameter; in these cases, the minimal diameter was calculated.

The next type of bowl, not nearly as common as the flaring bowl, was the straight bowl. The orientation of the rim is straight as opposed to flared or incurved. Similar in size to the flaring bowls, straight bowls had an average minimal diameter of 24 cm. They had a thickened lip and a straight or sometimes convex wall between 6 and 9 mm thick. A small fraction had a vertical flat handle attached to the lip. Like the flaring bowl, most straight bowls were polished on the outside; on the interior the rim was polished, but the body and bottom were smoothed. Half (49%) of the straight bowls were plain; the rest were decorated on the inside: 35% were pattern burnished, 9% were red slipped, and the rest were painted-incised, incised, or had a combination of two or three decorative techniques. Almost no straight bowls had soot and these vessels were probably used for serving purposes. The large diameter of straight bowls also suggests that they were used to serve food to several persons.
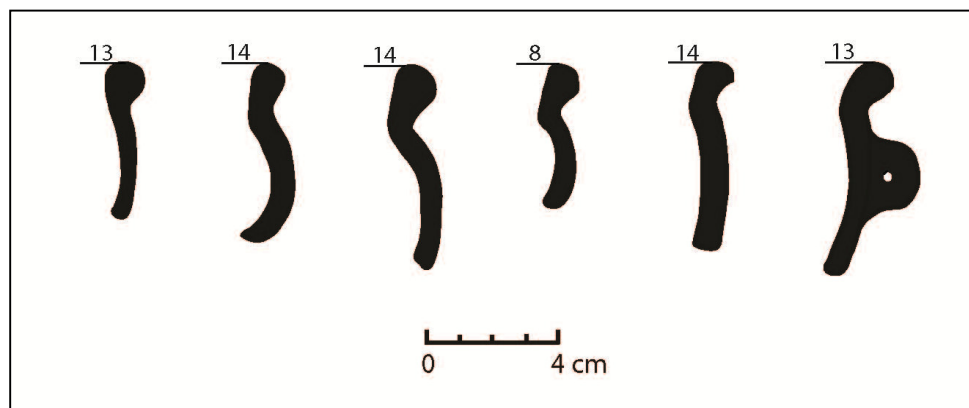
Figure A.2. Derived Chanapata small necked bowls. These bowls sometimes have lug handles.

Another type of bowl was the necked bowl (Figure A.2). These bowls had a short flaring neck and were smaller than the other types of bowl: their average diameter was 14 cm. The lip was thickened, and the wall was convex and thinner than the other bowl types with an average thickness between 4 and 6 mm. Handles were rare but a few lug handles and nubs were documented. Surface finish was similar to the other types of bowls: the outside was polished and the inside was polished/smoothed. The necked bowl was less often decorated than the flaring or straight bowl – 83% were plain. The remaining bowls were decorated on the exterior body: 7% were painted-incised, 5.5% were red-slipped, and the rest were pattern burnished, incised, or had a combination of decorative techniques. Like the other bowl types, necked

bowls did not have traces of soot and were most likely used for serving. The smaller diameter of these bowls, however, suggests that they were used for individual servings of food and drink.

The last Derived Chanapata bowl type, much less common than the other three types, was the incurving bowl (Figure A.3). Like the necked bowl, it had an average diameter of 14 cm. Lip was also thickened, wall was convex and 5-8 mm thick, and handles were absent. The exterior wall was polished, and the interior wall was smoothed, polished, or a combination of both. Like the necked bowl, 83% of the incurving bowls were plain. The remaining bowls were decorated on the exterior surface: 6% were red slipped, 6% painted-incised, 2% pattern burnished, and 2% incised. The absence of soot and the relatively small diameter of incurving bowls suggest that they were used to serve and consume individual servings of food and drink.
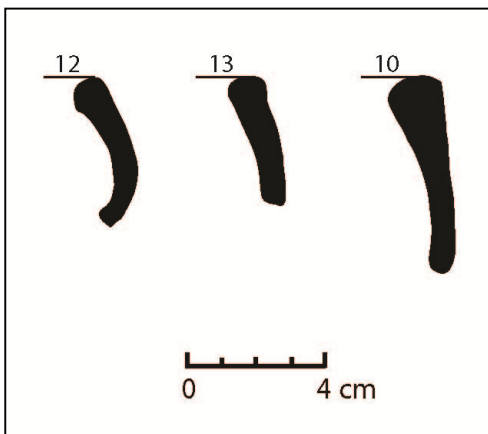
Figure A.3. Derived Chanapata small incurving bowls.

The second most common Derived Chanapata vessel form was the olla (23% of Derived Chanapata identifiable rims; 22% of all Derived Chanapata rims). Ollas were globular vessels with a straight or flaring neck, concave or straight in form, and an average diameter of 16 cm (Figure A.4). Lip was thickened and walls were 6-11 mm thick. Fragments were generally too small to identify the presence of handles that would likely appear on the shoulder or body of the vessel. However, the large quantity of handles with soot and typical Derived Chanapata paste and surface finish suggests that a large proportion of ollas had flat handles, placed either vertically or horizontally. Both the exterior and interior surfaces were smoothed but the rim was sometimes polished. The great majority of ollas (91%) were not decorated. The few decorated ones were pattern burnished (7.5%) on the outside. Unlike bowls, 30% of ollas had

soot on the exterior surface, indicating that they were used for cooking. One might expect a higher occurrence of soot on cooking vessels, but the fact that I studied rims rather than body sherds or bases (where soot is more likely to accumulate because these parts come into contact with fire) could explain the relatively low percentage of ollas with soot.
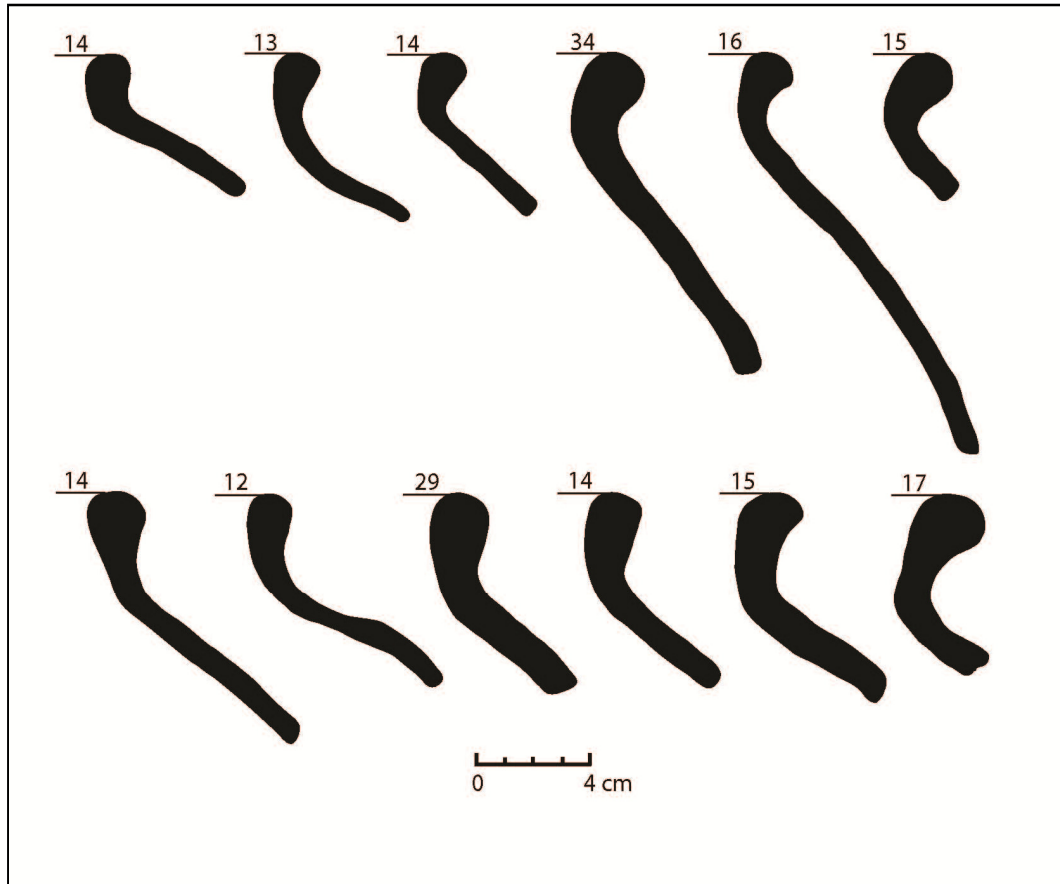
Figure A.4. Derived Chanapata cooking vessels (*ollas*).

The third most common Derived Chanapata vessel form was the jar (20% of Derived Chanapata identifiable rims; 19% of all Derived Chanapata rims). Jars had a long neck, straight or slightly flaring, that was straight-sided or sometimes slightly concave or convex in form (Figure A.5). Average diameter was 12 cm. Lip was generally thickened but sometimes rounded or flat, and walls were 6-9 mm thick. Like ollas, most fragments were too small to have handles, but a few flat handles were encountered. Exterior walls were usually polished, while the interior wall was smoothed and the rim sometimes polished. Jars were most often undecorated (86%), although in most cases the exterior polishing was so well made that it could have served as a

decoration. The few decorated jars were red slipped (8%) or pattern burnished (3.5%) on their exterior surface. Jars had no soot and were most likely used to serve and store liquids.
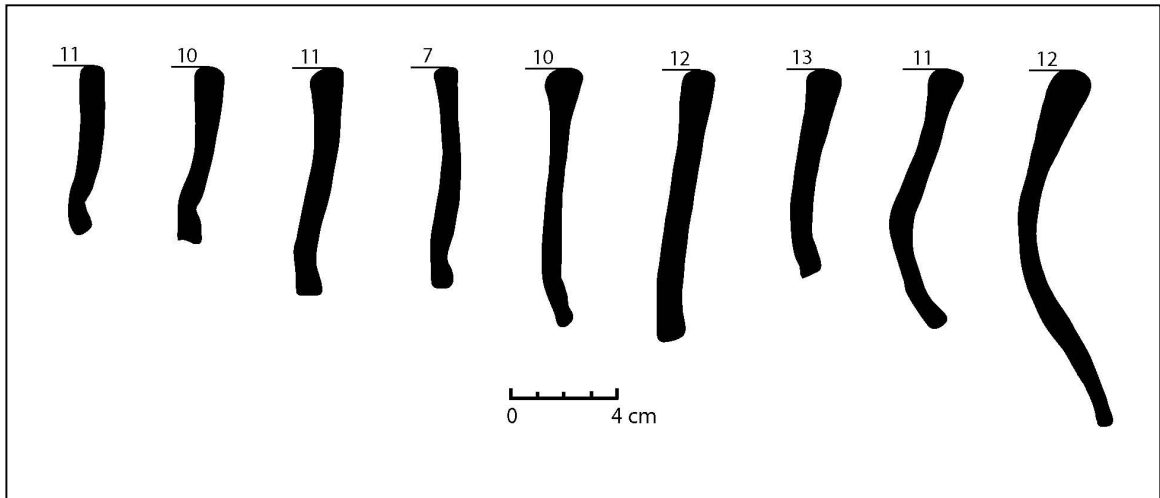
Figure A.5. Derived Chanapata jars (*cántaros*).
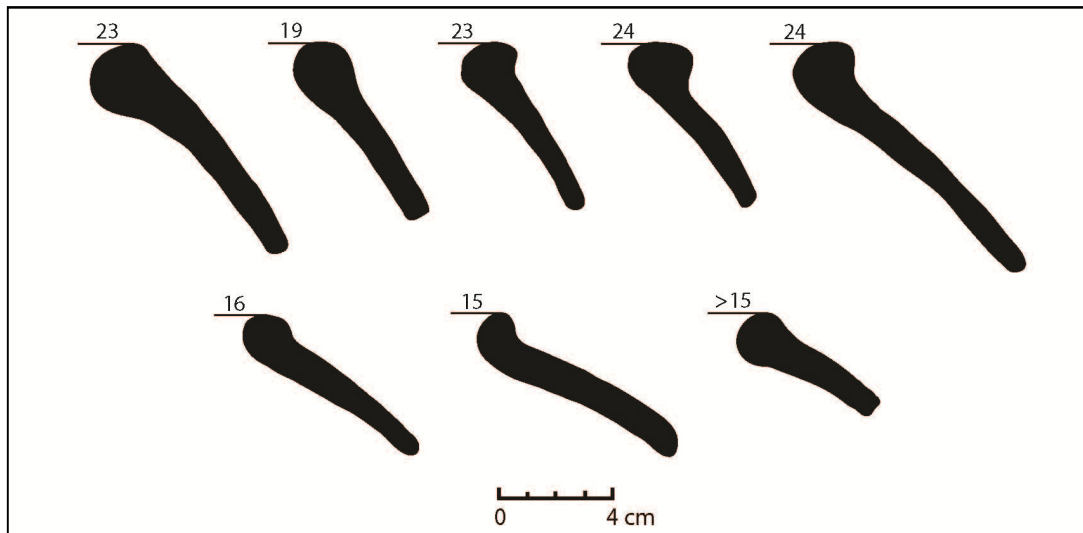
Figure A.6. Derived Chanapata neckless ollas (*ollas sin cuello*).

The fourth most common Derived Chanapata vessel form was the neckless olla (11% of Derived Chanapata identifiable rims; 11% of all Derived Chanapata rims). Neckless ollas were incurving globular vessels with an inward or outward thickened lip (Figure A.6). Average diameter was 17 cm and walls were 6-11 mm thick. None of the specimens had handles. Interior walls were smoothed and exterior walls were either polished entirely or polished on the

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rim and smoothed on the body. Like ollas and jars, neckless ollas were usually undecorated (87%). Decorated specimens were pattern burnished (12%) on the outside. Most neckless ollas did not have soot (89%), but a small number of vessels did have soot on their exterior surface (11%). This suggests that while most neckless ollas were used for storing food, other items, and perhaps liquids, a limited number was also used for cooking.

The fifth most common Derived Chanapata vessel form is the lid (8% of Derived Chanapata identifiable rims; 8% of all Derived Chanapata rims). Lids were not flat but slightly incurved, with a thickened, rounded, or flat lip, and a 6-8 mm thick wall (Figure A.7). Average diameter was 11 cm, which corresponds almost exactly to the average diameter of jars (12 cm). Lids were probably used to cover jars and protect their contents. Lids could be deposited in a jar's opening and be easily removed with a flat handle attached to the lid; several lids with such handles have been found. The top of lids was smoothed and the bottom polished. Almost all lids were undecorated (95%), but those few decorated were patterned burnished (4%) or red slipped (1%). Unsurprisingly, lids had no traces of soot.
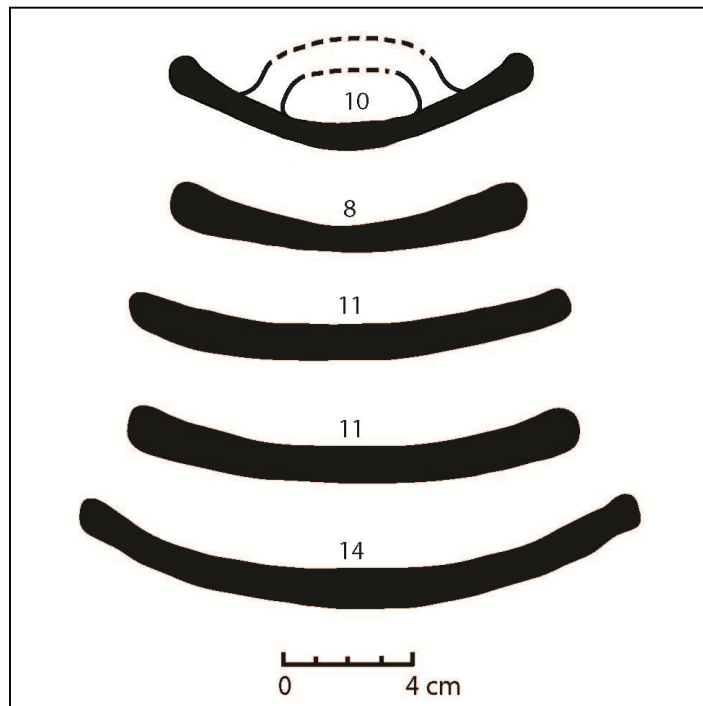
Figure A.7. Derived Chanapata lids (*tapas)*, used to cover jars.

The last Derived Chanapata vessel form is the plate (4% of Derived Chanapata identifiable rims; 4% of all Derived Chanapata rims). Plates were similar to flaring bowls but flatter and more open; they were also similar to lids but larger and with no handle (Figure A.8). Plates had very flared straight or sometimes convex walls with a thickened, rounded, or flat lip. Average diameter was 19 cm but a small proportion of plates were more than 30 cm in diameter (5%). Wall thickness varied between 6 and 9 mm. The exterior surface was polished or sometimes smoothed, and the interior smoothed. Unlike flaring bowls, 87% of plates were undecorated. The few decorated plates were pattern burnished (10%) or red slipped (2%). Soot was absent. The fact that plates are so open and large suggests that they were used to serve solid food to several persons.
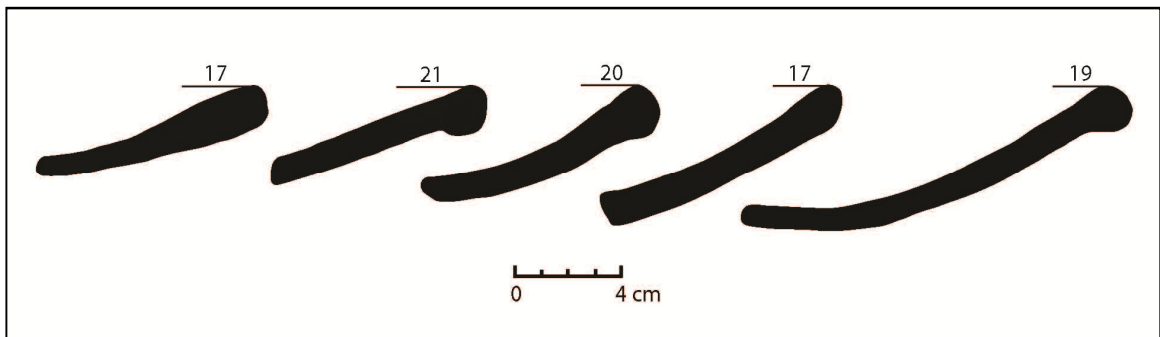
Figure A.8. Derived Chanapata plates.

Local

(rims, *n*=3107). Local pottery had a light orange, orange, or brown paste (66%); less frequently, the paste was cream, pink, or grey. The size of inclusions were highly variable and included medium (70%), fine (17%), and coarse (13%). Two thirds of local pottery were made with paste 2 (37%) and paste 1 (32%) described above; the remaining third (31%) was made with another paste (paste 3) that contained abundant mica in addition to the elements of paste 1 (white, non-plastic inclusions that are probably quartz, and matte black inclusions that might be crushed stone). The overwhelming majority of local pottery was oxidized (91%) while only 9% was fired in a reducing atmosphere.

One third of local rims were decorated (32%). Almost all decoration consisted of simple motifs roughly painted in black or red on a natural background (see Figure 4.4). Motifs included parallel straight or undulating lines, circles, dots, and other indeterminate designs. These motifs were mostly used on the interior and exterior surfaces of bowls and on the neck of jars. Rarely, local vessels were decorated with incisions, excisions, and applications.

Local pottery included a range of vessel shapes. The most common was the bowl (45% of local identifiable rims). All bowls had relatively small diameters and were most likely used for individual servings of food and drink (Figure A.9). Bowls had a round or thin lip and a convex or straight wall between 4 and 6.5 mm thick. Interior walls were smoothed while exterior walls were smoothed or burnished. Average diameter of the incurving bowl (20% of local identifiable rims) was 12 cm; of the straight bowl (13% of local identifiable rims), 12.6 cm; and of the flaring bowl (12% of local identifiable rims), 13 cm. More than half of the bowls (56%) were decorated on their interior or exterior walls.
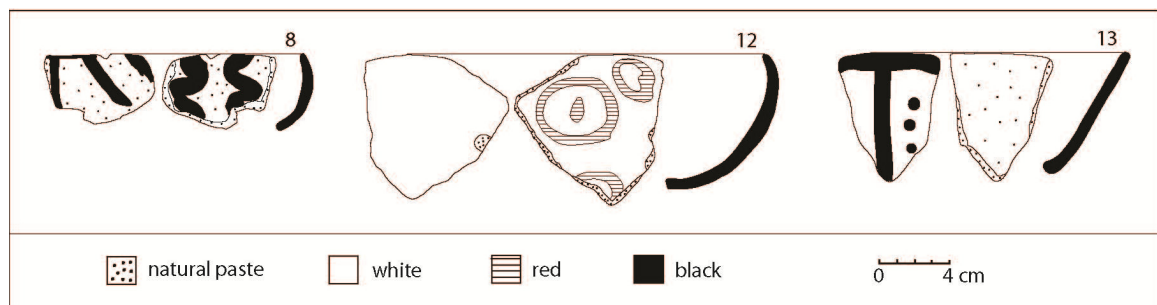
Figure A.9. Local decorated bowls.

Another common local vessel form was the jar (31% of local identifiable rims). Jars had a long neck, slightly flaring or straight, that was concave or straight in form (Figure A.10, left and center). Average rim diameter was 13 cm. Lip was round or flat and wall thickness varied between 6 and 8 mm. Both the interior and exterior walls were smoothed although a few were burnished. Some jars were painted on their exterior surfaces, while others were face-neck jars decorated with incisions, excisions, and applications.

The other common local vessel form was the olla (20% of local identifiable rims). Ollas had a flaring neck, concave or straight in form, and an average diameter of 16 cm (Figure A.10, right). Lip was round or flat and walls were 6.5-8.5 mm thick. Both the interior and exterior surfaces were smoothed, and the overwhelming majority of ollas (99.5%) were undecorated.

Most ollas (76%) had soot on the exterior surface, indicating they were used over a fire. The higher percentage of soot on local ollas as opposed to Derived Chanapata ollas may suggest changing cooking techniques through time. For example, local ollas may have been set directly into the fire (fire reached the upper body and rim of the vessel) while Derived Chanapata ollas could have been suspended over the fire by their solid handles (fire reached the base and lower body of the vessel). Other local vessel shapes were less common and included plates, neckless ollas, lids, and cups.
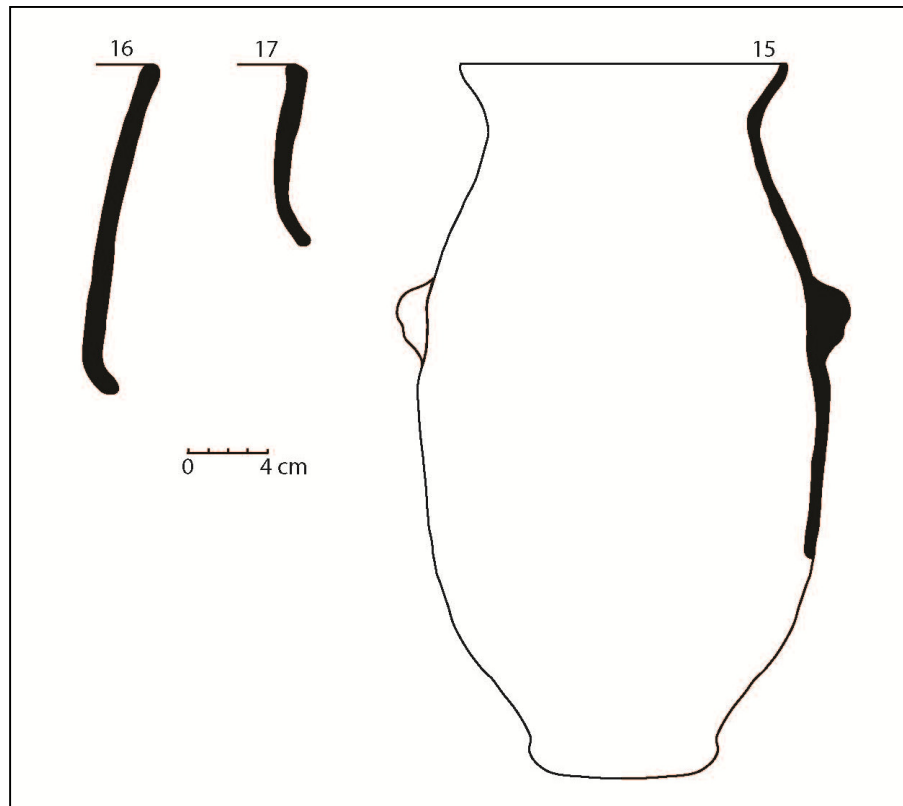
Figure A.10. Local jars (left and center) and olla (right).

Waru

(rims, *n*=79). Waru pottery had a light orange, orange, or (less frequently) light brown paste. Inclusions were medium-sized (57%) or fine (43%). Almost two thirds (62%) of Waru ceramics were made with paste 1, one third (33%) with paste 2, and the remaining 5% with

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paste (paste 3). Waru pottery was oxidized, although some vessels were not completely fired and remained gray in the middle.

Decoration on Waru pottery consists of simple motifs roughly painted on a white-slipped surface (see Figure 4.5). Motifs were executed with light red to dark brown paint, and included parallel straight, curved or undulating lines, parallel lines with dots in between, straight or curved lines with short perpendicular dashes, chevrons, and dots. Such motifs appeared on the interior surface of bowls and occasionally on their exterior surface.

Although Rowe (1944:19-20) reports Waru jars in his Chanapata collection, all the Ak'awillay specimens correspond to bowls (Figure A.11). Considering the curvature of Waru body sherds from Ak'awillay and the presence of decoration on their interior surface, it is logical to think that those fragments also came from bowls. None of the bowls had soot and all were likely used by one person at a time to consume food or liquid.
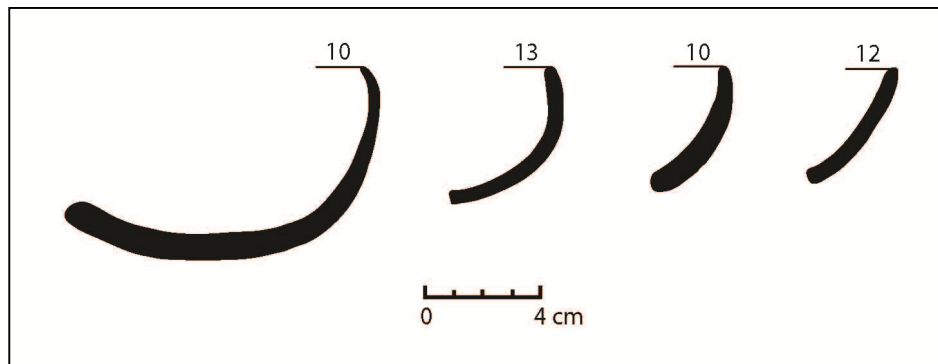
Figure A.11. Waru shallow bowls.

The most common type of Waru bowl was the incurving bowl (58% of all Waru rims). This bowl had a convex wall and a thin or rounded lip. Average diameter was 11 cm and wall thickness varied between 4 and 5.5 mm. The interior surface was smoothed and decorated; the exterior was smoothed or polished and sometimes decorated. The second type of bowl was the straight bowl (25% of all Waru rims). This bowl was very similar to the incurving bowl: it had a convex wall with a thin or rounded lip, an average diameter of 12 cm, and a wall 4.5-6 mm thick. It was also smoothed and decorated on the interior, and smoothed or polished on the exterior but rarely decorated. The third and last type of Waru bowl was the flaring bowl (13% of all Waru rims). This bowl was a little different from the preceding two types but its low frequency only allows for an approximate generalization. Flaring bowls had convex or straight walls and

thin or rounded lips. Average diameter was 14 cm (median 14 cm) and wall was 4-6 mm thick.

The interior surface was smoothed or polished and decorated, and the exterior was polished or

smoothed and sometimes decorated.

Incised *Incensarios*

(rims, *n*=5).   Incised *incensario* fragments were rare at Ak'awillay. Those recovered at

the site and other specimens recovered elsewhere in the Cusco region came from bowls that

were likely used as ceremonial burners. These bowls sometimes had a pedestal base and rim

scallops (see Bauer and Jones 2003:57-62). Geometric motifs such as lines, circles, dots, and

steps were incised on the exterior surface of vessels (see Figure 4.6). Modeled puma heads

incised in the same fashion also adorned some of these bowls.

Muyu Urqu

(rims, *n*=249). Muyu Urqu is a very fine polychrome pottery style. At Ak'awillay it had a

red or, less frequently, orange paste. Inclusions were most often fine, sometimes so fine that

they were almost invisible (76%). The remaining specimens (24%) had medium-sized inclusions.

Two thirds (64%) of Muyu Urqu ceramics were made with paste 2, 31% with paste 1, and 5%

with paste 3. Muyu Urqu pottery was always oxidized, although firing was not always complete.

Decoration consisted of black, white, and orange pigments on a dark red background.

The whole surface was highly polished. Motifs were geometric and included straight parallel

lines, zigzagging lines, bands, circles, dots, steps, and frets (see Figure 4.7). Other scholars have

also documented a "front face god motif" (Bauer 1999:117). Decoration always appeared on

the exterior surface of vessels, but the dark red background paint was generally found on both

surfaces.

Muyu Urqu vessel shapes were sometimes difficult to identify due to the fragmentary

nature of the remains (74% of Ak'awillay Muyu Urqu rims were identified to a specific vessel

shape). All identifiable forms were small bowls and cups that were used for the consumption of

food and liquids by one person at a time. The remaining Muyu Urqu rims from Ak'awillay (26%) seemed to belong to bowls or cups but were too fragmentary to distinguish.
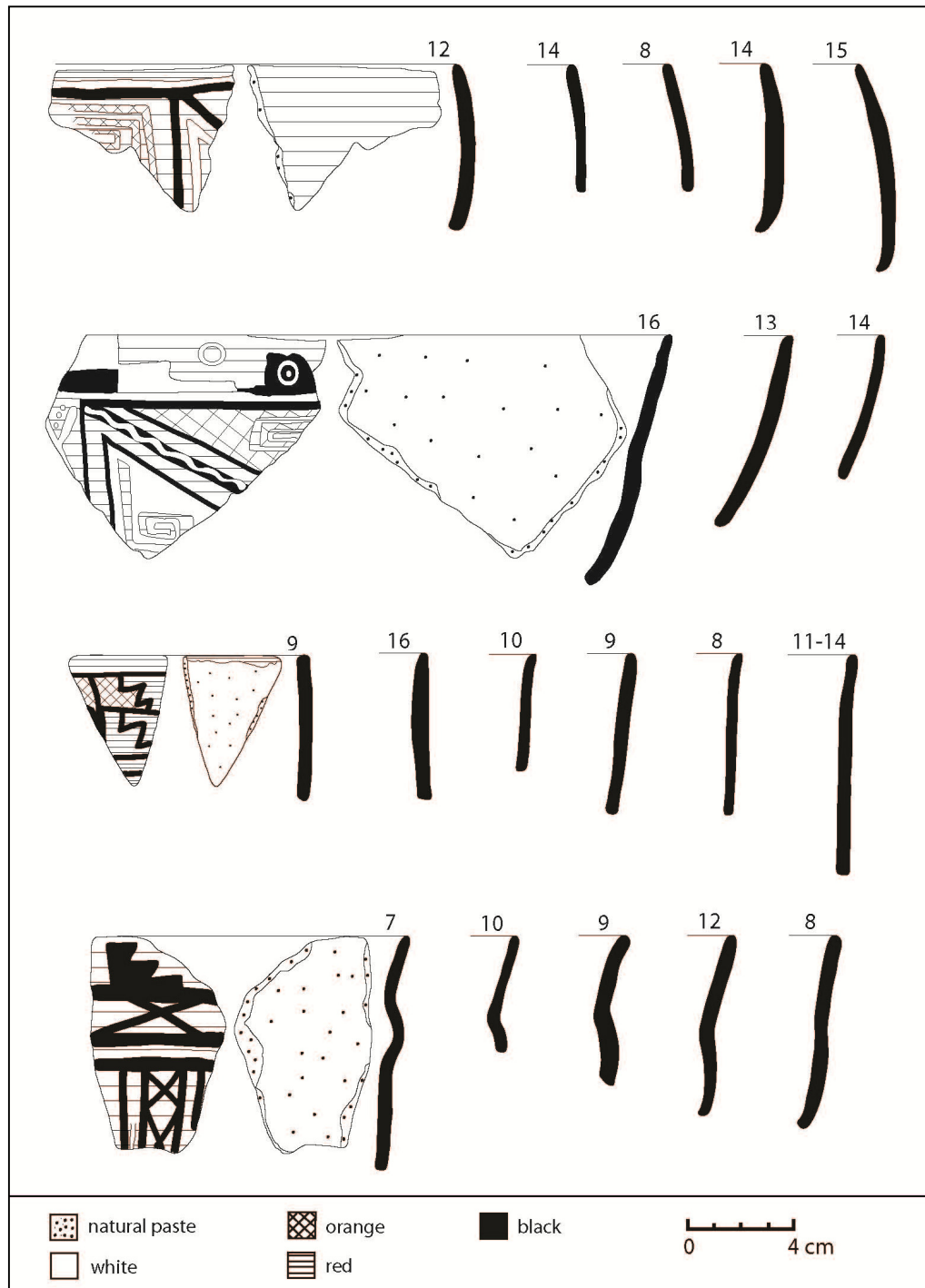
Figure A.12. Muyu Urqu bowls and cups: straight and incurving bowls (first row); slightly flaring bowls (second row); cups (third row); and *qiru* (last row).

The most common type of Muyu Urqu bowl was the straight bowl (51% of Muyu Urqu identifiable rims), followed by the incurving bowl (32% of Muyu Urqu identifiable rims) and the slightly flaring bowl (9% of Muyu Urqu identifiable rims) (Figure A.12, first and second rows). These three types of bowls were very similar; they had an average diameter of 12 or 13 cm, a round or thin lip, and a straight or convex wall 4-5 mm thick. Both the interior and exterior surfaces were highly polished, and the exterior was decorated.

Muyu Urqu cups were generally smaller than bowls (Figure A.12, third row). Cups had a straight, slightly flaring wall and an average diameter of 10 cm (median 10 cm). Its lip was rounded or thin, and its walls were thinner than those of other vessels (3-4.5 mm). Like the bowl, both the interior and exterior walls were highly polished, although occasionally only the rim was polished on the interior. Cups were most likely used for drinking beverages such as chicha.

A special type of drinking cup or beaker, the *qiru*, was identified in the Ak'awillay collection. The *qiru* is a tall cup with an undulating profile or an elevated band below the rim (Figure A.12, last row). It is a common Wari and Tiwanaku vessel form. Few examples were recovered at Ak'awillay. The most complete *qiru* (see Figure 8.10) was found in the public building and was 20 cm tall and 16 cm in diameter. It had a slightly flaring rim with a rounded lip and a flat base. *Qiru* were probably reserved for special occasions and ceremonies.

Qotakalli

(rims, *n*=351). Qotakalli is another very fine pottery style. At Ak'awillay it had a light orange, cream, or pink paste. Inclusions were fine (67%) or medium-sized (33%). Like Muyu Urqu, almost two thirds of Qotakalli pottery was made with paste 2 (62%) and the rest with paste 1 (38%). Vessels made with paste 3 were local imitations of Qotakalli, which may suggest that paste 3 was readily available in the immediate surroundings of Ak'awillay. Qotakalli ceramics were oxidized but, once again, about one third of the fragments were not fully fired.

Decoration consisted of black, black and red, or red geometric motifs painted on a cream background (see Figure 4.8). The cream background was sometimes natural but generally slipped with the same clay than that used to make the vessel. Surface was well smoothed until reaching a uniform burnished matte finish. Motifs included straight horizontal, vertical or
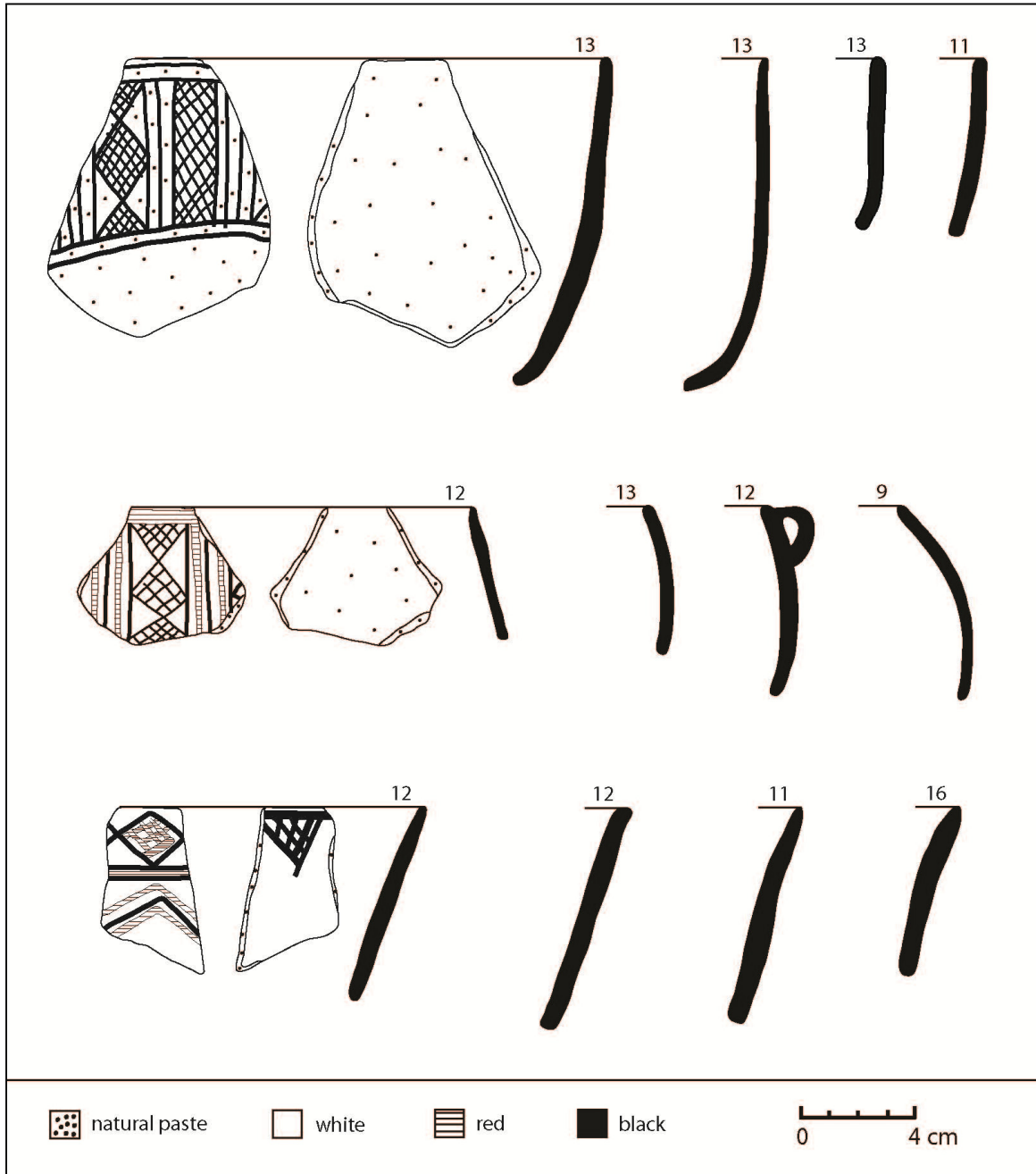
Figure A.13. Qotakalli bowls: straight bowls (top row); incurving bowls (middle row); and flaring bowls (bottom row).

diagonal lines, undulating lines, zigzagging lines, triangles, dots, and diamonds. Lines appear in groups of two or more, sometimes alternating between black and red. Triangles and diamonds were filled with cross-hatching or dots and others contained smaller triangles and diamonds. Black-and-red on white specimens were the finest, and their motifs were made with thinner

lines than those of the black-on-cream or red-on-cream varieties. Decoration generally appeared on the exterior surface of vessels, but some bowls were decorated on the inside as well.

The most common Qotakalli vessel shape was the bowl (96% of Qotakalli identifiable rims). All bowls had relatively small diameters and were most likely used for individual servings of food and beverage (Figure A.13). The straight bowl (39% of Qotakalli identifiable rims) had a straight wall convex or straight in form, with an average diameter of 12 cm. Lip was thin or round and wall was 4-6 mm thick. The interior wall was most often smoothed and the exterior was burnished or smoothed. Decoration is black-on-cream (55%) or black-and-red on cream (43%), and red-on-cream is rare (2%).

The incurving bowl (35% of Qotakalli identifiable rims) had a convex wall 4-5 mm thick, a round or thin lip, and an average diameter of 11 cm. Some specimens had a tripod base. Like the straight bowl, the interior wall was smoothed while the exterior was burnished or smoothed. Black-on-cream decoration was the most common (58%) followed by black-and-red on cream (40%). Red-on-cream decoration remains uncommon (2%).

The last kind of bowl was the flaring bowl (22% of Qotakalli identifiable rims). It had a straight or concave wall 4-6 mm thick, a thin or round lip, and an average diameter of 11 cm. Surface finish was the same as the other types of bowls. One notable difference between the flaring bowl and the other types of bowls was the decoration: the black-and-red on cream was the most common (49%), followed by the black-on-cream (44%); red-on-cream was more common than other bowl types (6%). The flaring bowl was the bowl most likely to have decoration on its interior surface.

The small number of other vessel shapes makes generalizations difficult. Cups had straight or curving walls 4-6 mm thick, a round lip, and a diameter that ranged between 7 and 11 cm (Figure A.14). The interior was smoothed and the exterior was burnished. Most were black-on-cream but a few were black-and-red on cream. Qotakalli cups were probably reserved for drinking beverages, perhaps during ceremonies.

Jars had a straight neck, concave or straight in form, a round lip, and a wall 4-7 mm thick. Diameter ranged between 3 and 15 cm (median 6 cm). The interior wall was smoothed and the exterior burnished. Five specimens from Ak'awillay were black-on-cream and one was black-and-red on cream. Jars were only decorated on their exterior surface. Like other jars,

those were probably used to serve and store liquids, although the presence of decoration makes the serving function more likely.
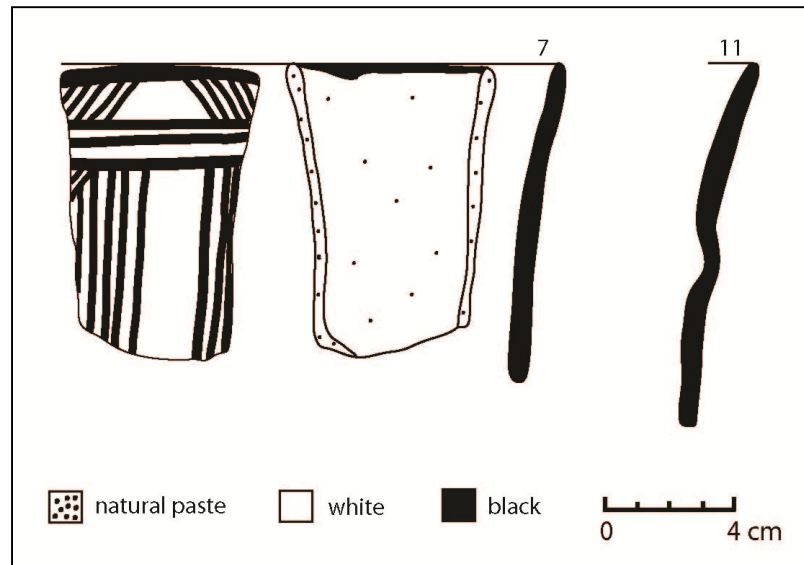
Figure A.14. Qotakalli cups.

Araway

(rims, *n*=19). The Araway collection from Ak'awillay is very small and the following description is based on the Ak'awillay specimens and on collections found throughout Cusco by other archaeologists (Bauer 1999:67-70; Bauer and Jones 2003:38-44; Glowacki 1996:199-207, 2005:106; Torres Poblete 1989). Araway pottery was made from a light orange, orange, or orange-red paste with medium-sized or fine inclusions. The vessels from Ak'awillay were manufactured with paste type 2 (56%) or paste type 1 (44%), and none were made with paste 3. All vessels were fired in an oxidized atmosphere although the firing was often incomplete.

Decoration on Araway pottery consisted of black and red motifs painted on a cream background (see Figure 4.9). Motifs were geometric and included vertical and horizontal lines, red bands outlined in black, undulating or zigzagging red lines between two straight black lines, triangles, pluses, checks, and quartered circles. The wing motif was also documented elsewhere in Cusco. Motifs were often organized in rectangular panels on the interior surface of flaring bowls and on the exterior surface of incurving bowls.

The most common Araway vessel form was the bowl. Flaring bowls had a straight or convex wall while incurving bowls had a convex wall. Like Qotakalli, Araway bowls had a thin or round lip. Bowls did not have traces of soot and their diameter indicates that they were used for individual servings of food and drink. In addition to bowls, Glowacki (1996:202) documented fragments of jars and cups at Pikillaqta (flat base tumblers).

Appendix B

AMS DATES FROM AK'AWILLAY

Five charcoal samples were sent to the Accelerator Mass Spectrometry (AMS) Laboratory of the University of Arizona to date the occupation of Ak'awillay (Table B.1 and Figure B.1).

Table B.1. AMS dates from Ak'awillay

Lab & Sample #	Material	Context	Associated Material	δ13C	Radiocarbon Age BP	calibrated* 1 sigma range	calibrated* 2 sigma range
AA81951	charcoal	House 4, floor 2 (Unit C)	Qotakalli, Muyu Urqu, Waru, Araway	-23.3	1439 +- 37	AD 622-669	AD 579-692 (0.981) AD 750-763 (0.019)
AA81952	charcoal	House 5, floor (Unit F)	Qotakalli, Muyu Urqu, Waru	-24.3	1369 +- 42	AD 624-627 (0.035) AD 631-683 (0.965)	AD 598-716 (0.933) AD 743-768 (0.067)
AA81953	charcoal	Public Building, wall (Unit G)	Qotakalli, Muyu Urqu	-24.2	1413 +- 36	AD 612-654	AD 575-666
AA81954	charcoal	House 2, offering below floor (Unit G)	Derived Chanapata; Chivay obsidian	-22.7	1898 +- 37	AD 54-137 (0.990) AD 200-202 (0.010)	AD 26-42 (0.038) AD 47-221 (0.962)
AA81955	charcoal	House 1, hearth (Unit H)	Derived Chanapata	-25.7	2071 +- 37	161-132 BC (0.241) 117-44 BC (0.759)	186 BC - AD 3

* Dates were calibrated with the radiocarbon calibration program Calib 5.1 (Stuiver and Reimer 1993) using SHCal04 southern hemisphere calibration.

These charcoal samples were collected from five different contexts: House 1 (from the hearth associated with the floor), House 2 (from the accumulation of stones below the floor), House 4 (from the second or most recent floor), House 5 (from the floor), and the public building (from the wall). These samples were taken from the lowest levels of each occupation and should date the construction of each structure (or, in the case of House 4, the reflooring episode) or the earliest moment of occupation of these structures.
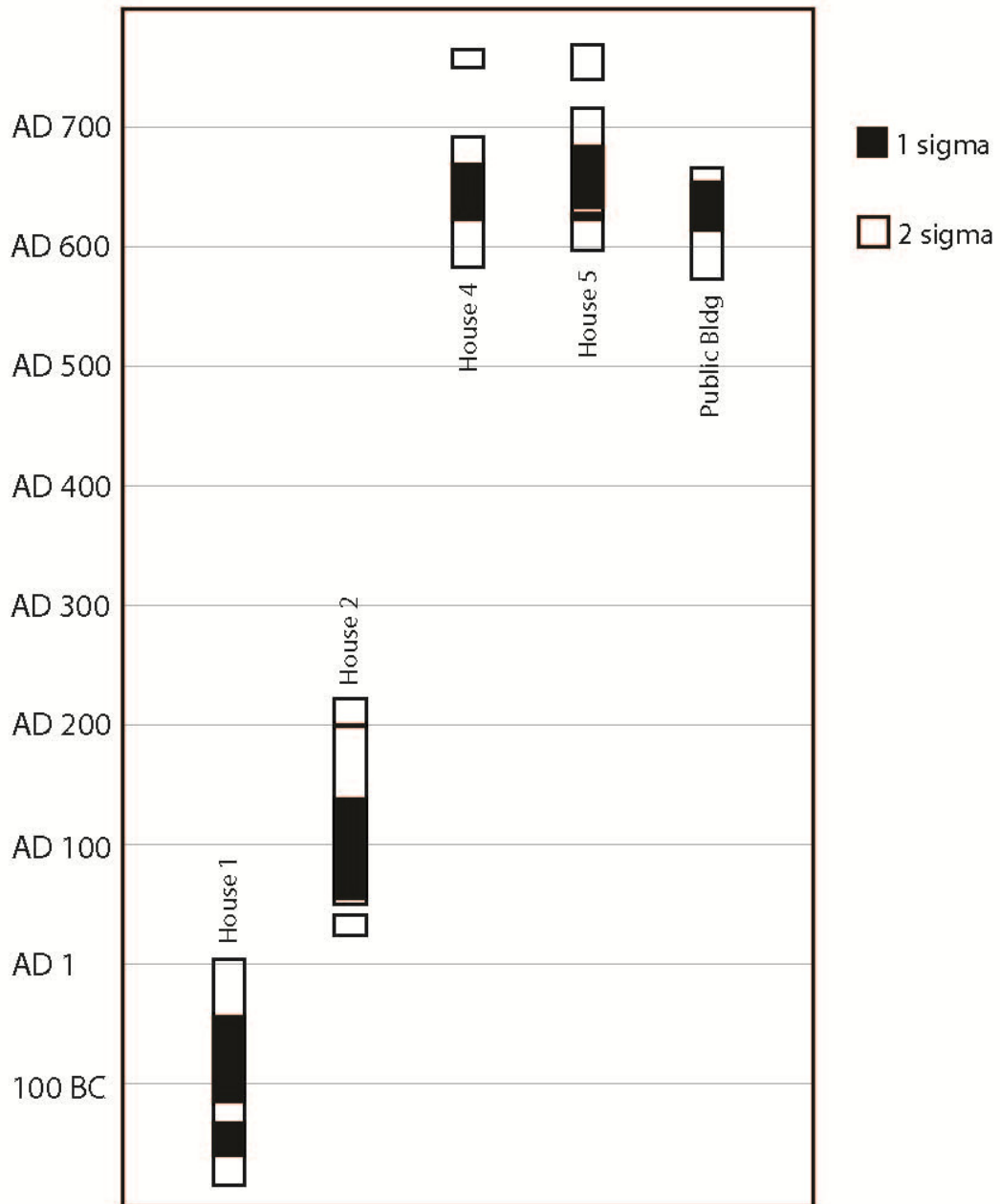
Figure B.1. Calibrated dates from Ak'awillay.

Appendix C

OSTEOLOGICAL DATA FROM AK'AWILLAY

At Ak'awillay we excavated 15 burials that contained a total of 19 individuals. Dr. Valerie Andrushko conducted the osteological analysis of all human remains. She recorded the following information for each individual: age, sex, preservation completeness, preservation condition, dental pathology, skeletal pathology, cranial vault modification, and burning. The osteological and archaeological data for each burial are summarized in Table C.1.

Table C.1. Main characteristics of the human burials from Ak'awillay

Burial #	Context	Period	# of indivi-duals	Bone preser-vation	Sex	Age	Position of the body	Direction head was pointing	Dental pathologies (# teeth)	Skeletal pathologies	Burning of the bones	Burial type	Offe-ring	Extra bones
1	House 2	LF	1	fair	--	1-2	?	?	none	- active porotic hyperostosis (occipital)	no	no pit	none	no
2	House 4	MH	1	good	F	26-35	flexed, on the back	E	- antemortem loss (3) - carious lesions (8) - pulp exposure due to caries (4) - 2 periapical abscesses - 4 periodontal abscesses - moderate calculus - moderate alveolar resorption	- 2 rib shaft frag. w/ healed fractures - maxillary sinusitis in the left maxilla - healed periostitis on the right and left tibia - spinal joint disease - degenerative joint disease in the feet	no	pit	none	yes
3	Kitchen	MH	1	fair	--	<1	flexed, seated	NE	none	- active porotic hyperostosis	yes	pit	none	no
4	Public Bldg	MH	1	poor	--	<1	?	NE	none	none	yes	cist	none	no
5	Public Bldg	MH	1	poor	F	26-35	flexed, on the back	SE	- antemortem loss (2) with alveolar resorption	- two rib shaft fractures in the process of healing - healed fracture to the spinous process of the 12th thoracic vertebra - spinal joint disease - degenerative joint disease in the left hand	no	no pit	none	no
6	Public Bldg	MH	1	poor	--	1-2	?	E	none	none	yes	pit and stones	none	no
7	Cemetery	MH	1	fair	--	1-2	flexed, on the side	N	none	- active porotic hyperostosis	yes	pit	none	no
8	Cemetery	MH	1	good	M	26-35	flexed, on the back	SE	- antemortem loss (6) - 5 periodontal abscesses - pulp exposure due to attrition (1) - moderate calculus - severe alveolar resorption - hypoplastic pit lesions on lower left canine	- healed periostitis on right and left tibia - healed osteitis and periostitis on left fibula - healed shaft fracture to right clavicle - healed fracture to the distal shaft of the left ulna - healed fracture to one rib fragment - healed fracture to the left 5th metacarpal - healed fracture to one finger phalange - healed fracture to the ray 1 distal pedal phalange - spinal joint disease - degenerative joint disease in the hands and feet with fusion of one proximal and one intermediate phalange at a 90 degree angle	yes	pit	none	no

#	Location			Preservation	Sex	Age	Position	Orientation	Dental	Skeletal		Burial feature		
9	Cemetery	MH	3	good	M	18-25	flexed, seated	NW	- carious lesion (1) - pulp exposure due to caries (1) - 1 periapical abscess with reactive bone - calculus flecks - linear enamel hypoplasias on right canine	- active and healed periostisis on right and left femoral shafts	no	pit and stones	none	no
				good	F	>46	flexed, seated	NW	- antemortem loss (18) 3 periapical abscesses - 1 one periodontal abscess - pulp exposure due to attrition (2) - severe alveolar resorption	- healed rib fracture - active/healed periostitis on right and left tibia, right and left fibula, right and left ulna, and left radius (systemic periostitis) - otitis in left temporal - degenerative joint disease in right hand - spinal joint disease in lumbar vertebrae	no		none	yes
				good	--	3-4	flexed, seated	NW	- slight deciduous wear	none	no		bird (?)	no
10	Cemetery	MH	3	poor	--	0-1	?	?	none	none	no	pit	none	no
				poor	--	1-2	?	?	none	none	no		none	no
				fair	--	2-3	flexed, seated	S	none	none	no		none	no
11	Cemetery	MH	1	fair	M	36-45	flexed, on the back	E	- carious lesions (7) - hypoplastic pit lesions on canine crowns	none	yes	pit and stones	none	no
12	Cemetery	MH	1	good	F	18-25	flexed, seated	NE	- antemortem loss (2) - carious lesions (5) - 2 two periodontal abscesses - pulp exposure due to caries (1) - calculus flecks - moderate alveolar resorption - enamel hypoplasias on canines	- healed porotic hyperstosis on right and left parietal and occipital - fused 3rd and 4th lumbar vertebrae in young adult individual without any other indication of joint disease - congenital condition: metopic suture present	no	pit	none	yes
13	Cemetery	MH	1	poor	--	17-18	?	?	unobservable	none	yes	no pit	none	no
14	Cemetery	MH	1	fair	--	8-9	flexed, on the back	(E)	unobservable	none	no	pit and stones	none	no
15	Unit A	MH	1	poor	M	36-45	flexed, seated	S	- antemortem loss (1) - carious lesions (2) - calculus flecks - hypoplastic pit lesions on right and left lower canines	- healed depressed cranial fracture on right parietal - healed reactive bone on right parietal, possibly infection resulting from cranial trauma - healed periostitis on right tibia - temporomandibular joint syndrome in right temporal	yes	pit and stones	none	no

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