Kinship and the Inca Imperial Core:

Multiscalar Archaeological Patterns in the Sacred Valley (Cuzco, Peru)

Most archaeological definitions of empire focus on the exercise of state power over a periphery, emphasizing the ethnic diversity and variable administrative practices of large expansionist states. As archaeological data accumulate for provincial and frontier regions, the organization of the imperial core holds unfulfilled potential for theoretical reconsideration. Studies focused on the provinces rarely problematize the development of the capital region, and with few exceptions (e.g., Sinopoli and Morrison 2007), the archaeology of imperial capitals and their rural hinterlands is so patchy that scholars must lean heavily on the documentary record to reconstruct the core. In the absence of a clear set of theoretical expectations regarding the development of statecraft in the imperial center, many archaeologists seem content to treat the core state as more politically integrated, militarily powerful, and ethnically unified than the areas that it is able to dominate. Such expectations seem reasonable—especially when refracted through conceptual models developed in other disciplines to study historical empires and the emergence of modern nation-states—but without reference to independent material evidence, they limit the interpretive power of the archaeological record.

This paper presents multiscalar archaeological data from the Cuzco region of highland Peru, to discuss the transformation of the Inca heartland during a period of early state expansion (c. 1200-1400 CE) and imperial growth and consolidation (c. 1400-1535 CE) (Figure 1).

Figure 1. about here

Like many former imperial capitals, Cuzco's modern urban occupation constrains archaeological investigation, although architectural studies and test excavations offer some important information about the Inca city (Farrington 2013). Almost 30 years of survey research have employed consistent field methods to generate settlement pattern data from a large region (nearly 2500 km²) that includes Cuzco, its metropolitan region, and a wide range of farming and herding landscapes surrounding the capital (e.g., Bauer 1992, 2004; Covey 2006; Covey et al. 2008; Kosiba 2010; cf. Kendall 1985). These surveys registered approximately 1000 sites dating from the period of Inca state formation, as well as more than 1500 sites with Inca imperial pottery. Regional survey work in the Sacred Valley to the north of Cuzco led to horizontal excavations in local households and public buildings at the site of Pukara Pantillijlla in 2000. Archaeological data from multiple scales of analysis reveal patterns in the distribution of Inca-style architecture and artifacts that challenge theoretical expectations of a highly unified and institutionalized state apparatus in the Inca heartland. Building on the data presented in this paper, it is possible to consider how particular kinship practices of Inca elites served as the basis for the institutional organization of the empire, raising the question of how kin groups interacted with institutions and offices in other ancient states and empires.

Inca Ethnohistory and Archaeological Study of Imperial Canons

Oral histories given by Inca nobles shortly after the European invasion discuss networks of Inca power in the Cuzco region (e.g., Betanzos 1999[1550s]; Cieza de León 1988[c. 1553]),¹ and later sources describe an ethnic heartland surrounding the capital that can be treated as roughly analogous to an imperial core (e.g., Covey 2006:208-212). Independent archaeological data are needed to evaluate the Colonial chronicles, which offer conflicting accounts of the antiquity of the Inca heartland, as well as the

¹ This article uses Mann's (1986) designation of multiple sources of social power as the basis for a network-based approach that identifies multiple kinds of power distributed regionally in ways that do not expect monopolization by state institutions or individuals.

degree to which Inca rulers maintained consistent practices of state administration across the capital region. According to the earliest detailed accounts, Inca rule at the local level was explicitly linked to political and ritual encounters occurring in the city of Cuzco, which possessed public spaces and structures necessary for performing interactions that perpetuated state ideological and economic power. Inca rulers had the power to summon their subjects to the capital, where they received orders and celebrated royal reciprocity in the form of public festivals and gifts of fine cloth and other craft goods. Inca elites also articulated different kinds of power into Cuzco's rural hinterland, and the remains of architecture and pottery offer different perspectives on the processes whereby this occurred.

Architectural Elements

Early chroniclers describe several Inca institutions and elite architecture in Cuzco (Table 1), as well as their expected distributions within the Inca heartland. Although ideal Inca forms presume specific construction materials, aesthetic features, and compound layouts (e.g., Gasparini and Margolies 1980; Hyslop 1990), deviation from these templates is to be expected, which provides a relative measure of state affiliation during construction and refurbishment of a structure (Figure 2).

Table 1 about here

Figure 2 about here

According to Colonial writers, the city of Cuzco contained large public spaces used for political functions, which local towns and villages apparently lacked. Inca plazas, especially the Awkaypata plaza in the center of Cuzco, also served as spaces for festive and ritual performances that integrated with activities in the sun temple and *aqllawasi* (a cloister for female ritual specialists), complexes that were reportedly not built elsewhere in the capital region. Inca political and ideological power emphasized centripetal

forces drawing subjects to Cuzco, rather than the replication of particular spaces and structures at lower-order administrative sites or local population centers. A state-developed road network linking Cuzco to provincial areas traversed some rural areas of the imperial core (e.g., Covey 2013). Although Inca roads and way stations (*tampu*) helped to convey provincial people and resources to the capital, they were not the basis for administering most local populations. In the case of supernatural entities that were situated in local landscapes, Inca rulers sometimes summoned their portable avatars to Cuzco or dispatched gifts and offerings that they had accumulated in Cuzco; but they also shaped natural rock outcrops and built shrine buildings (*wak'a*) in local contexts to signal their participation in ritual practices.

Cuzco was the location of palaces (*qhapaqwasi*) used for some administrative activities, but Inca royals and the descendants of several rulers also built country estates in the surrounding valleys, where they mobilized labor service to carry out major land reclamation projects (e.g., Betanzos 1999[1550s Part 1, Chapters 38, 43]). Much of the material evidence for Inca economic power in the heartland comes in the form of terraces (*pata*) built near royal estates, which are probably most accurately thought of as noble, rather than state, resources. Early sources describe the mobilization of agricultural surpluses and raw materials used for fancy craft production, which were maintained in various storage facilities in and around Cuzco (e.g., Betanzos 1999[1550s Part 1, Chapter 12]; Sancho de la Hoz 1962[1534 Chapter 17]), and some sources suggest that the Incas built storehouses in local communities as well (Cieza de León 1988[c. 1553 Chapter 24]). Although the Incas built fortifications (*pukara*) elsewhere in their empire, military architecture was not prominent in the Cuzco region in the imperial period (cf. Covey 2006).

Early chroniclers contrast the absence of Inca military installations with ridgetop fortifications that were reportedly ubiquitous across the Andean highlands before Inca incorporation. Pre-Inca peoples supposedly lacked a distinct “architecture of power,” and their coordinated construction of high

elevation defensive works represents a conservative counterpart to the valley-bottom terrace walls that Inca nobles built to intensify agricultural production. Early chroniclers do not indicate the construction of monumental architecture or the layout of public spaces within the ramparts of pre-Inca *pukaras*, and some (e.g., Cieza de León 1988[c. 1553 Chapter 24]) associate Inca conquest with resettlement to undefended communities with Inca storehouses and royal lodgings. Inca elites alleged that the sole source of social power among their early neighbors was defensive, and that the rise of the Inca state led to the creation of ordered urban spaces and new architectural elements that developed and concentrated political, economic, and ideological power in Cuzco. Across Cuzco's rural landscapes, Inca elites supposedly displaced local military power and appropriated sacred places as they established new community boundaries and developed private sources of economic and ideological power in projects to expand the royal estate system.

Portable Material Culture

The chronicles are less detailed concerning the production and distribution of material culture. Early sources tend to focus on fancy objects—gold and silver vessels, fine textiles, marine shell, carved hardwood cups—that are unlikely to be found on the surface of archaeological sites, or in the households of ordinary people. Such goods were thought to communicate a close relationship with the Inca ruler or his representatives, and they reportedly circulated beyond Cuzco only with royal permission. The chronicles have little to say about Inca pottery or everyday metal and stone tools and adornments, which constitute the vast majority of artifacts encountered in archaeological research in the Cuzco region. Archaeologists have identified Inca ceramic traditions that were common in the imperial period (e.g., Bingham 1915; Rowe 1944). As with Inca architecture, the conceptual category “Inca imperial pottery” contains a great deal of internal variation, and pottery from surface collections and excavations can be studied for its relative degree of fidelity to ideal wares, vessel forms, and

polychrome iconography. Inca pottery can be distinguished from pre-imperial styles in the Inca heartland (Bauer 1999), although it is important to observe that imperial polychromes and vernacular “pre-Inca” ceramics appear together in some excavation contexts dating to the fourteenth and fifteenth centuries (e.g., Covey 2006:247; Dwyer 1971; Kendall 1985). At present, the ceramic evidence suggests that Inca polychrome pottery represents the “soft power” (*sensu* Nye 2004) of the Inca nobility and their affiliates, rather than the hard power of state institutions (e.g., Quave 2012).

Multiscalar Archaeological Perspectives on Inca Social Power in the Cuzco Region

The size of the overall Cuzco survey region makes it possible to identify variations in site locations, regional hierarchies, and economic practices in the Cuzco Basin and surrounding areas. Local differences complicate a model of uniform and well-established Inca state dominance in all parts of the Cuzco region at the time of imperial expansion, and they encourage us to develop local archaeological case studies to understand longitudinal trajectories of Inca rule.

Regional Variations in Inca State Power

Settlement patterns during the Late Intermediate Period (1000-1400 CE, henceforth LIP) do not confirm documentary models of pre-Inca societies and the kinds of local power present before state integration. LIP populations did not favor defensive settlement in most parts of the Cuzco region, and high elevation sites rarely exhibit significant investment in formal defensive works. For example, the small upland villages of the Paruro region to the south of Cuzco are usually not situated in areas with natural defenses (Bauer 1992), and even the larger ridgetop villages found in the Sacred Valley to the north of Cuzco tend to have only modest walls or defensive ditches to accentuate natural inaccessibility (Covey 2006). The limited distribution of fortifications suggests either that Inca expansion was very rapid, or that defensive military leadership was not the defining source of local power across Cuzco as

the Inca state formed, although it may have been important in some upland areas. The largest LIP sites in the Cuzco region lie near valley-bottom farmlands in an axis running from the Xaquixaguana Valley through the Cuzco Basin to the Lucre Basin (Covey 2011). Most of these sites were undefended, and the largest settlements show evidence of monumental architecture (McEwan et al. 2005) or association with agricultural infrastructure (Bauer and Covey 2002; Covey 2014a). Within the Cuzco Basin, large-scale land improvement projects are associated with LIP communities that were established as Cuzco grew to urban proportions (Bauer and Covey 2002). The prevalence of large valley-bottom sites and relative absence of fortifications in upland communities contrasts with Inca origin stories emphasizing universal warfare, as well as with the archaeological evidence for social organization in other highland areas during the century or so prior to Inca imperial conquest (Covey 2008; cf. Arkush 2011; Bauer and Kellett 2010).

Analysis of LIP pottery from the Cuzco region includes visual assessments of ware attributes and iconography, as well as limited petrographic, x-ray diffraction, and instrumental neutron activation studies (e.g., Alcina Franch et al. 1976:91-101; Bauer 1999; Covey et al. 2014; D'Altroy and Bishop 1990; Dwyer 1971; Ixer and Lunt 1991; Ixer et al. 2014a, 2104b; Lunt 1987; McEwan 1984; Rivera Dorado 1971; Rowe 1944). There is considerable fabric and stylistic diversity across the region, with indications of widespread ceramic production and local consumption of vessels from multiple sources. Local potters used several different materials to temper their wares, including feldspar, diorite, mica, andesite, quartz, sandstone, slate, and sand. When decorating vessels, they typically produced red and black geometric designs on a buff background, attributes common to many local LIP styles in the central Andean highlands. There is variation in paste recipes associated with the same style, suggesting dynamic production practices across space and time (e.g., Ixer et al. 2014a). Excavation evidence also indicates local variations in some vessel forms, including bowls and jars (e.g., Bauer 1999; Dwyer 1971; Haquehua and Maqque 1996; McEwan et al. 2002). Surface collections from surveys indicate that most

LIP styles from the region have a fairly restricted distribution, with the majority of the examples of a style appearing within an area of a few hundred square kilometers. An exception to this distribution pattern is the Killke style from the Cuzco Basin, which is abundant at local sites across more than a thousand square kilometers (e.g., Bauer 1999; Covey 2014a, 2014b; Kosiba 2010).

The origins of the Inca imperial style remain poorly understood, but recent research emphasizes its deliberate innovation and its use of elements from multiple ceramic traditions (e.g., Ixer et al. 2014a, b). The distribution of Inca pottery indicates considerable expansion of settlements using imperial ceramics after AD 1400, although apparent population increases are not apparent in all parts of the Cuzco region. The Cuzco Basin experienced a massive rise in sites and settled area (Bauer 2004), most of it through the urban growth of Cuzco and the explosion of hundreds of new homesteads and hamlets (Bauer 2004:95). To the south, the Paruro region saw comparable changes. There are almost twice as many small sites (<1 ha) with Inca surface pottery as there are with LIP styles, and the regional settlement hierarchy developed through the construction of Maukallaqta, a 6-ha installation associated with the celebration of the Inca ancestral origin myth (Bauer 1992:99). In both areas, local LIP villages generally continued to be settled into imperial times, with little discernible change in occupation sizes.

By contrast, widespread settlement disruption occurred in areas to the west and north of Cuzco, and surveys encountered Inca pottery at fewer sites than LIP styles representing earlier occupations (Covey 2014c, d). Parts of the Sacred Valley underwent agricultural intensification during the imperial period, associated with the construction of Inca country palaces and the establishment of new Inca settlements near the irrigated lands at the valley floor (Covey 2006, 2014d). These estate landscapes reflect some of the same settlement pattern developments seen in the Cuzco Basin and Paruro region—the imperial-era proliferation of small sites and establishment of new upper-tier sites—but they exhibit less continuity in local village occupation than is evident in those areas. The Sacred Valley study region offers an example of intensive royal estate development, and architectural and ceramic evidence from

local villages makes it possible to consider changing relationships with Inca elites and state institutions over time.

Local Settlement Patterns in the Sacred Valley

The LIP settlement pattern for the Sacred Valley region was oriented toward broad-spectrum horticulture and herding, leaving the valley bottom underpopulated and undeveloped in most parts (Covey 2006) (Figure 4).

Figure 3 about here

The Sacred Valley survey identified three basic categories of village sites, based on ecology and proximity to Cuzco: (1) small and medium high elevation villages (4-6 ha) located at prominent points within a few hours' walk from the Cuzco Basin, (2) small villages (1-2 ha) located near the floor of the Sacred Valley, and (3) small and medium high elevation villages (4-6 ha) located to the north of the valley at prominent points more than a day's walk from the Cuzco Basin (Covey 2014b). The chronicles name some of the communities closest to Cuzco as pre-imperial marriage partners and ethnic Incas, whereas they describe the military conquest of villages in the Sacred Valley and in areas to the north taking place during extended campaigns a generation or two before the first wave of imperial expansion (Covey 2006).

To the north of the Sacred Valley, pre-imperial architecture, mortuary traditions, and pottery are distinct from those associated with the emerging Inca state, suggesting that the valley reinforced a cultural boundary (Covey 2006; Kendall 1985). Although most of the early standing architecture consists of unplanned agglomerations of fairly undifferentiated households, a few sites have defensive constructions or modest public buildings and plaza spaces. The best example of the latter is at Pukara

Pantillijlla, where a square structure with four windows and fourteen square interior niches was built on a saddle providing access to a rocky prominence that had been used for human burial by the earliest villagers in the area (Covey 2006) (Figure 3).

Figure 4 about here

The building does not conform to the Inca architectural canon, and it suggests that local leaders of groups living to the north of the Sacred Valley possessed some degree of ideological power prior to Inca incorporation. In addition to a few special constructions within larger villages, pre-imperial populations living to the north of the Sacred Valley built small mortuary structures in the fields and pastures surrounding LIP settlements.

Ceramic distributions to the south and north of the Sacred Valley suggest considerable contact among local populations, as well as different degrees of interaction with Cuzco Basin populations. Survey crews collected approximately 3000 LIP sherds as purposive samples from 224 sites, permitting some general observations regarding stylistic distributions. At 61 sites located to the south of the Sacred Valley, Killke pottery was roughly as prevalent as local imitations and other LIP styles. At the 71 sites found within the Sacred Valley, Killke constituted approximately one-third of the LIP assemblage, but the style made up only about one-eighth of the decorated LIP pottery collected at 92 sites to the north of the valley. Whereas the Sacred Valley constrained the distribution of the Killke style, it appears to have been a conduit for the more modest distribution of pottery produced in the nearby Lucre Basin. Small components of Lucre pottery were identified at 18 sites, almost all of which were located in or close to the main valley. Lucre pottery was absent in upper basin areas, including the Chongo Basin, where a local ceramic style tentatively called Cuyo appeared at 18 local sites. Three fragments of Cuyo

pottery appeared at sites in the main valley, but the style was not identified in other nearby areas, or to the south of the Sacred Valley.

A more intensive coding of paste and temper attributes reinforces the impressions of the type-variety analysis of the survey collections. A sample of 2542 LIP fragments from 150 sites was visually inspected and assigned to wares in a project-derived typology. Despite the limitations inherent to any survey collection strategy, it was possible to identify general distribution patterns for several wares found in the Sacred Valley region (Figure 5).

Figure 5 about here

For example, Ware 1 (sand and diorite temper with occasional andesite and quartz) and Ware 7 (quartz temper with some slate, red sandstone, and sand) were most prevalent in the Chongo Basin and other areas to the north of the Sacred Valley, and uncommon to the south of the valley.² Ware 5 (irregular slate inclusions with some quartz and red sandstone) was most common within the Sacred Valley, and Ware 10 (quartz, andesite, and sand temper) was most prevalent to the south of the valley.³ Ware 9 (slate temper with some andesite, mica, and fine sand) was the most common paste-temper category, and it was well-distributed in all three areas. Its broad iconographic associations—with Killke, Lucre, and transitional Inca motifs—raise questions about its associations with those styles, and with local ceramic practices that emulated them.

Figure 6 about here

² 66% of Ware 1 identifications (96/145) came from sites in the Chongo Basin and other areas north of the Sacred Valley, whereas only five identifications came from sites in the Chit'apampa or Patabamba areas. 63% of Ware 7 identifications (66/104) were identified from collections at sites to the north of the Sacred Valley, compared with 9 from areas to the south of the valley.

³ 46% of Ware 5 identifications (56/123) came from sites located in the Main Valley and Wanka areas. 45% of Ware 10 identifications (114/252) came from sites to the south of the Sacred Valley.

Inca state expansion into the Sacred Valley region began by the fourteenth century and intensified during the generations of imperial growth (Covey 2006) (Figure 6). Using the same sub-regional categories as above, it is possible to identify the main valley as the area of most intensive Inca focus. Of the 71 LIP sites in the Sacred Valley, 45 (63%) had an Inca ceramic component, suggesting continuing occupation in many areas amenable to intensive agriculture. Despite their proximity to Cuzco, upland sites located to the south of the valley had a smaller proportion (29/61, 48%) of continuing occupation. The valleys to the north of the Sacred Valley demonstrate even less evidence of Inca pottery (26/92 sites, or 28%), with the Chongo Basin showing the most limited presence of imperial pottery at existing LIP sites (11/62 sites, or 18%). Overall, local settlement continuity is less apparent in upland horticultural and herding landscapes, but there is a substantial increase in settlements near the valley floor, especially in areas close to Cuzco. Fifty new Inca sites appeared in the Sacred Valley region: 23 in areas south of the valley, 18 in the Sacred Valley, and 9 in areas lying to the north.⁴

Although Inca polychrome pottery is less prevalent in high elevation sites occupied during the LIP, some of the largest Sacred Valley villages show evidence of elongated rectangular structures that reproduce elements of the Inca architectural style (Covey 2006; Kendall 1985; Kendall et al. 1992). Architectural preservation is uneven across the region, so it is impossible to determine the ubiquity of such structures from standing architecture. These buildings are built of stone, but not finely worked blocks; and although they have windows and interior niches, these are usually not constructed in the trapezoidal forms seen in high-fidelity Inca structures. The size and arrangement of some rectangular buildings suggest that they were used as houses, but others appear to have had a religious function, such as Building 15 at Pukara Pantillijlla, which was built onto a bedrock outcrop in front of a natural cleft containing ceramic offerings (Covey 2006). None of this architecture conforms well to the

⁴ The Calca-Yanahuara survey area, just downstream from the Sacred Valley survey, identified even greater LIP-Inca settlement continuity in valley-bottom areas, and a 10% increase in Inca imperial site counts (Covey 2014d).

expectations for Inca state institutions laid out above, although the placement of some structures would make their identification as shrines (*wak'a*) a reasonable one. Outside of local LIP communities, Inca-style architecture in the upland areas is restricted to a few small patio groups that might represent minor way stations on routes from the Sacred Valley to neighboring regions (Covey et al. n.d.).

Near the Sacred Valley, where Inca ceramics are more common, there are several Inca architectural complexes associated with the country estates of the rulers Yahuar Huaccac (Qhapaqkancha), Viracocha Inca (Juchuy Coscco), and Pachacutic Inca Yupanqui (Pisac), and Huascar (Calca). The estates of Tupa Inca Yupanqui (Chinchero) and Huayna Capac (Quispeguanca) lie in other nearby survey regions (Alcina Franch et al. 1976; Covey 2014c, 2014d; Covey et al. 2008; Nair 2015; Niles 1999). The Inca complexes at Qhapaqkancha, Juchuy Coscco, and Pisac were built several hundred meters above the Sacred Valley floor, at places with existing LIP settlements (Covey 2006; Kendall et al. 1992 Yépez 1985). By contrast, the estates of later rulers were built in unoccupied locations, and Quispeguanca and Calca were established on the floor of the Sacred Valley.

These rural palatial complexes appear to be built for elite recreation and restricted ritual activities rather than for the administrative functions seen in Inca palaces in Cuzco and at highland administrative centers (Morris et al. 2011). Most estates possess rectangular plaza spaces that vary in size, including Juchuy Coscco (~0.8 ha), Chinchero (~1.0 ha), Quispeguanca (~2 ha), and Calca (~5 ha).⁵ Chronicle accounts and radiocarbon dates associated with buildings on these plazas suggest that construction of the larger ones took place during in the late fifteenth and early sixteenth century (e.g., Covey 2006:221). Although the Inca settlement of many of these sites is obscured by more recent occupations, chroniclers describe the later estates as palaces surrounded by new towns and satellite villages, which were inhabited by a retainer population that served the royal family that built them (e.g.,

⁵ The site of Qhapaqkancha, associated with the Inca Yahuar Huaccac, has a 0.25 hectare Inca-style platform placed next to the existing LIP village. Pisac does not have an identifiable plaza, although it is possible that the Colonial and modern town obscures an Inca plaza. The plaza at Calca exceeds the size of the main plaza in Cuzco by a hectare, and is attributed to construction in the short reign of Huascar (c. 1525-1533).

Betanzos 1999[1550s Part 1, Chapters 38, 43]. Inca estates are associated with areas with strong evidence of valley-bottom agricultural intensification, including river canalization, irrigation canals, agricultural terraces, and storehouses (Covey 2006; Covey et al. 2008; Farrington 1992; Niles 1999; Rowe 1997).

The Inca Impact at Pukara Pantillijlla

The regional patterns just described suggest some geographic and temporal patterns that can only be approached through more fine-grained excavation research. Focusing on the low-intensity Inca impact in the uplands to the north of the Sacred Valley, horizontal excavations conducted in 2000 in houses and public buildings at the LIP-Inca site of Pukara Pantillijlla offer perspectives on early Inca state intervention and its effects over time. At 10 hectares, Pukara Pantillijlla is the largest LIP site in the Sacred Valley survey. The site runs for more than a kilometer along a prominent east-west ridge (~3900 m asl) separating the upper and lower parts of the Chongo Basin. Despite its central location, differences between the surface pottery from Pukara Pantillijlla and collections from the nearby basin areas suggest that it was not the principal source of LIP pottery for smaller settlements and did not redistribute Inca pottery to the surrounding area (Table 2).

Table 2 about here

Most of the standing architecture at Pukara Pantillijlla consisted of single-room semicircular structures of modest size (generally less than 50 m²), built from fieldstones using mud mortar, with interior surfaces plastered with mud and grass. These buildings had a single doorway, sometimes corbelled near the lintel, and where wall preservation was sufficient it was possible to identify small quadrangular interior niches and windows. Semicircular houses represent a common domestic form in

LIP villages to the north of the Sacred Valley and in some other parts of the Cuzco region, although there is considerable local variation in the construction of doorways, windows, and other features (e.g., Covey 2006; Kendall 1985; Kosiba 2010). Structures were generally not grouped into larger patio complexes, and small ancillary structures thought to be used for household storage were adjacent to some buildings. These features suggest small households living at the site and a domestic level of food storage. Samples of grass from wall plasters in three semicircular buildings at Pukara Pantillijlla returned dates from the pre-imperial period (uncalibrated dates were 642 ± 32 BP [AA47654], 546 ± 31 BP [AA47655], and 590 ± 34 BP [AA47658]).

In addition to semicircular structures, several quadrangular buildings are preserved at Pukara Pantillijlla, representing forms that are rare at LIP sites to the north of the Sacred Valley (see Covey 2006; Kendall 1985; Kendall et al. 1992; Yépez 1985). These include square forms, some with rounded corners, as well as elongated rectangular structures that approximate the dimensions commonly seen in Inca imperial forms. Most of these structures were built of stone, but finely cut masonry was completely absent at the site. Quadrangular structures are generally found by themselves on domestic terraces, although one terrace contained a complex of four rectangular buildings of sizes that suggested domestic use and possibly storage. This compound, designated Buildings 10-13, consisted of two small structures and two of a size comparable to semicircular domestic structures, a total interior area of approximately 120 m^2 . Of the larger buildings, one had a trapezoidal doorway—an Inca feature—while the other had a particularly wide doorway (1.6 m) and several interior niches. A grass sample from a wall plaster in Building 13 (AA47657) yielded an uncalibrated date of 519 ± 55 BP.

As noted above, there are two quadrangular structures that appear to be non-residential and associated with the LIP and imperial occupations of the site. Building 5 is a large square structure situated on a small open space where the ridge flattens to a saddle before rising to a prominence at its end. This building had thicker walls and a wider doorway than other structures at the site, as well as

several other distinctive features, including four windows, fourteen rectangular interior niches, and a paved interior floor. A grass sample from an interior niche (AA34946) returned an uncalibrated date of 555 ± 45 BP, indicating construction or refurbishing prior to the imperial period.⁶ Building 15 is an elongated rectangular structure (approximately 10 x 4 m), built of fieldstones set in mud mortar. The building is constructed in front of a natural hollow in an escarpment, and the bedrock serves as its rear wall. The front of the structure is raised by a stone platform or porch. One door enters the structure from its long front—a typical Inca construction feature—and the interior had three preserved windows and three interior niches. A grass sample taken from an interior wall plaster (AA47659) returned an uncalibrated date of 382 ± 40 BP, indicating plastering during the imperial period.

Households at Pukara Pantilljilla

Excavations in the 2000 season uncovered the complete interiors of three semicircular buildings (Buildings 3, 4, and 9), and exterior units were placed on the domestic terraces associated with two of these. Most of the material recovered from these contexts was not affiliated with the Inca state. Small amounts of carbonized maize appeared in domestic contexts, and ground-stone tools in domestic contexts suggest that maize and other plants were processed in the household. These included fragments of *batanes* (10), *manos* (9), and grinders (12). Slate knives were common in domestic contexts, and other stone tools included axes and hammers. The lithic assemblage suggests that households had access to locally available andesite, whereas non-local materials such as chert and obsidian were less uniformly distributed. Domestic trash pits and household interiors yielded evidence of domesticated animals, with camelid bone identified in 17 proveniences and guinea pig in 13.⁷ The presence of numerous camelid figures fashioned from stone, pottery, and metal suggests the

⁶ Building 6, a small rectangular structure with rounded corners, was built behind Building 5, and grass from a wall plaster (AA47656) yielded a date of 443 ± 32 BP, which overlaps with the period of Inca imperial growth.

⁷ Although Buildings 3 and 9 yielded a sizable sample of animal bone—Building 3 had 2217 fragments (9.3 kg), and Building 9 had 2127 fragments (6.2 kg)—Building 4 had much less animal bone, 489 fragments (2 kg).

importance of these animals in household rituals, and may speak to the role of herding in local household economies. Herding apparently contributed to domestic textile production, although spindle whorls and other weaving tools were not distributed evenly (Table 3). Whorls were made of reworked potsherds, as well as stone; weaving tools were made of bone and metal. In addition to domesticated animals, the remains of wild animals were present in domestic contexts, including deer (4 proveniences) and unidentified bird bone (3 proveniences).

Table 3 about here

The three excavated houses lack evidence of a clear status hierarchy. House size was roughly comparable, and potential status goods are either uncommon across households, or present in roughly equivalent amounts. Personal adornments included beads or pendants made of stone and bone, as well as small circular pendants made from hammered metal (mostly copper or bronze, although one silver pendant appeared in Building 4). Four shawl pins (*tupu*) were found in association with a human skull that was placed under a broken grinding stone in a pit dug below the floor of Building 3. Metal pins and chisels or axe heads appeared in very small numbers in domestic contexts. Although it is tempting to associate the distribution of metal objects with the Inca expansion into the Chongo Basin, the relative paucity of such materials suggests that any metal production organized by the Inca state had only a limited impact at the household level at this site.

Pottery offers multiple subtle measures of Inca affinity in households at Pukara Pantillijlla. As discussed above, Inca pottery can be identified in terms of wares, iconography, and vessel forms, and Table 4 offers some measures of these. Wares 11 and 12, which were tempered with andesite and mica, accounted for 77% of the 1064 sherds identified as Inca ($n=822$), and their distribution differs between households, possibly in part due to length of occupation. The prevalence of pottery with Inca

decorations varied between the houses in terms of ubiquity and percentage of the overall assemblage, with Building 9 containing more Inca fragments than Buildings 3 and 4 combined. Inca decoration included classic examples of the imperial polychromes (Cuzco Polychrome A and B), as well as abundant examples of red-painted sherds. Although there were numerous examples of what appeared to be transitional Inca decoration (n=26), there were few examples of provincial Inca styles—three Inca sherds possibly from the Titicaca Basin (Urcosuyu and Pacajes styles) appeared in Building 9. Inca narrow-mouth jars and shallow plates represent vessel forms seen commonly in provincial contexts, and these were well-represented in all three houses. “High fidelity” Inca pottery—defined as narrow-mouth jars or shallow plates made from classic wares and decorated with Inca designs—was rare across the site (n=54), but it was found in all three houses (12 examples in Building 3, 16 in Building 4, 21 in Building 9), and otherwise virtually absent in public buildings excavated.

Table 4 about here

Overall, the excavated domestic contexts at Pukara Pantillijlla reveal slight variations in Inca affiliation, and it is hard to attribute these directly to the policies of the Inca state. Individual households acquired Inca metal tools and adornments in small numbers, as well as pottery with varying degrees of fidelity to ideal state vessels. The prevalence of Inca narrow-mouth jars and plates indicates the adoption of forms associated with state feasts for the service and consumption of food and drink at the household level.

Non-Residential Structures at Pukara Pantillijlla

Results from domestic contexts can be compared with the excavation of two complete structures (Buildings 15 and 6) considered to be non-domestic, as well as test excavations within a third

(Building 5). These contexts yielded less evidence of everyday subsistence activities—smaller samples of animal bone, and fewer tools for food and craft production, including cooking pots. Ground-stone tools were uncommon in these buildings, with two *batanes* and three grinders encountered in Building 5 and an addition grinder found in Building 6. One stone knife was present in each building, and other stone tools included a hammer (Building 6) and an axe (Building 5). Andesite and obsidian appeared in fewer contexts. Animal bone was much less common in Building 5 (n=115 fragments) than in Building 6, its ancillary structure (n=1022 fragments). Camelid bone was identified in two proveniences in Building 5, whereas Building 6 contained camelid bone (2 proveniences), guinea pig (4 proveniences), and bird and dog bone, and unidentified samples of burned bone. Building 15 had 816 fragments of animal bone, including camelid and guinea pig (in one provenience each). Samples of carbonized maize and tubers appeared in the lowest levels of Building 15, but macrobotanical remains were otherwise not observed in the public/ritual structures.

Metal artifacts in the non-residential buildings included two *tupu* pins found *in situ* with the body of a juvenile female placed in a stone-lined grave under the floor of the large square structure (Building 5), as well as fragments of pins or needles (n=3), a pendant made of copper or bronze, and two unidentified metal fragments. As Table 3 (above) shows, Building 15 and Building 6 had several tools for different stages of textile production, whereas Building 5 lacked any of these kinds of artifacts. The gendered association with activities in the non-residential structures—and the identity of the burial inside of Building 5—suggest female participation in different public and ritual activities.

Table 5 about here

When looking at the same Inca-associated ceramic categories discussed above for domestic contexts, there are some contrasts between non-residential buildings (Table 5). The public/ritual

buildings had percentages of decorated pottery comparable to the residential buildings 3 and 9, but very different manifestation of Inca-style ceramics. The structure that conforms best to the elements of Inca imperial architecture (Building 15) yielded more Inca-style pottery than the public buildings built in the saddle near the promontory, where almost no Inca pottery was excavated. The Inca-associated Wares 11 and 12 were uncommon in Buildings 5 and 6, whereas these pastes appeared in Building 15 at a percentage that fit within the range of domestic structures. It is not surprising that Inca narrow-mouth jars and plates made up small proportions of identified vessels in Buildings 5 and 6, but the relatively small number of these forms in Building 15 suggests that the building was not used to mobilize large-scale state-affiliated service of food and drink. To the extent that people at Pukara Pantillijlla feasted with Inca-style pottery, they appear to have done so more commonly in the context of local houses.

The non-residential structures at Pukara Pantillijlla show varying degrees of affiliation with the Inca state. Buildings 5 and 6 display limited Inca affinities in terms of both architecture and pottery, whereas Building 15 exhibits Inca architectural elements and a considerable proportion of Inca ceramics. Radiocarbon dates from lower excavation levels in Building 6 (AA47668, uncalibrated date of 491 ± 50) and Building 15 (AA47667, uncalibrated date of 498 ± 53) indicate overlapping occupations, suggesting that multiple buildings at Pukara Pantillijlla were used for the simultaneous performance of distinct relationships with the Inca state. It is possible that excavations in the small complex of rectangular structures (Buildings 10-13) would reveal an even stronger Inca connection, although the size and layout of the compound suggest an elite household rather than one of the state institutions described above.

Pukara Pantillijlla and Pisac

Pukara Pantillijlla experienced growth and the construction of new non-residential buildings during a period of early Inca expansion that sets the site apart from neighboring LIP villages, as well as from other local Inca communities. Parts of the site continued to be occupied during the Inca imperial

period, although there is evidence for the abandonment of some buildings, and it is clear that the relationship between the community and the Inca state did not grow closer during the final century of occupation. During that time, the Inca presence in the Sacred Valley intensified through the construction of the royal estate at the nearby site of Pisac, which overlooks new valley-bottom terraces and irrigation works (Covey 2006). Pisac does not conform to all of the architectural expectations for an Inca palace, but the site contains a large number of rectangular structures built from finely cut Inca-style ashlar. Many of the hydraulic features and agricultural terraces surrounding the site also exhibit this distinctive masonry, which is absent at Pukara Pantillijlla and other upland sites. Rectangular buildings at Pisac typically have trapezoidal doorways and interior niches, even though not all are built from fine masonry or as elongated rectangular forms.

Figure 7 about here

Although excavation work at Pisac has not been well published, Yépez's (1985) report on work in the Q'allaq'asa sector at the site offers some perspectives on the prevalence of Inca-style pottery (Figure 7). In the course of excavating a series of 2 x 2 m test units on a terrace outside of the area of finest Inca architecture, Yépez reported 23 proveniences with pottery, a total of nearly 1200 sherds. More than 60% of the pottery encountered was decorated, and decorated Inca fragments constituted more than half of the assemblage (n=607).⁸ In addition to these test units, Yépez reported a majority of Inca pottery in contexts associated with the cleaning of Inca fountains, the excavation of a rectangular structure, and a trench placed on another terrace. The overall picture from the Q'allaq'asa sector is of a diverse LIP assemblage covered over by an imperial Inca occupation that altered the settled area and

⁸ Yépez also encountered a sizable LIP component that he identified as Killke (74 sherds) and Lucre (25 sherds). Small components of the Early Intermediate and Middle Horizon Qotakalle style (n=2) and Colonial pottery (n=11) were also present.

introduced new Inca-style buildings, canals, fountains, and terraces. The pottery from this imperial occupation shows a much higher percentage of decoration than any context at Pukara Pantillijlla, and the Inca style predominates in the later occupation strata.

Discussion

A multiscalar archaeological study of the Inca heartland makes it possible to revisit the expectations of general models of the chronology, geography, and institutional dynamics of Inca state expansion and imperial transformation. Despite Inca visions of a unified social and ethnic heartland dating to the time of the first ancestors, the development of the imperial core was still underway at the time of the European invasion. The distribution of Inca-style architecture at high-elevation LIP villages near the Sacred Valley indicates the early establishment of a state presence within some upland villages, a practice that appears to have transitioned to estate construction on the high valley slopes. By the 1530s, Inca intensification projects targeted the valley bottom and drew on provincial sources of labor, populations of colonists and retainers that appear to have had a close association with Inca-style architecture and pottery. By contrast, most local upland communities lack evidence of administrative intensification over time. Excavations at Pukara Pantillijlla indicate a degree of acculturation, but not necessarily a state-directed overhaul of everyday life. If anything, two centuries of Inca intervention in the Sacred Valley contributed to cultural divergence between valley-bottom farmers and the horticulturalists and herders living in the uplands.

Different trajectories of Inca interaction can be attributed in part to the cultural and geographic diversity of the Cuzco region at the time of Inca state expansion. Proximity to the Cuzco Basin seems to explain some of the distribution of Inca pottery and architecture, and the Sacred Valley case demonstrates how the mountainous terrain constrained the spread of the imperial style. Other surveyed areas located within a half-day's walk of Cuzco have different rates of settlement continuity

and ubiquity of Inca pottery, indicating production and distribution practices that do not fit a simple distance-decay model with Cuzco at the center. Local ecology was also an important consideration in the articulation of Inca power, and there is reason to conclude that the development of valley-bottom (*kichwa*) farmlands proceeded in a distinct manner from state interventions in high farming and herding lands (*suní* and *puna*). In addition to considerations of local landscape, it appears that the Incas also established a strategic presence along routes that facilitated interregional connections. For example, in the Sacred Valley, early fortifications and imperial-era way stations probably helped to link Cuzco to the humid neighboring valleys where coca leaf could be cultivated and other lowland products could be acquired (Covey 2006; Covey et al. n.d.).

Recognizing that ecology encouraged the Incas to build an imperial heartland in particular parts of Cuzco—and to link their capital with provincial regions lying beyond it—we must address questions about which institutions proved useful for spreading Inca power, and under what social conditions they appear to have been effective. In the Sacred Valley, royal estates recapitulated elements of Inca ideological power, especially at sites built at the valley floor in association with new population centers and large plaza spaces. The estates of later rulers also established unprecedented economic power in the form of valley-bottom irrigation, terracing, and storage.

By contrast, Inca economic power in the uplands would have been modest and easily evaded, and Inca political power most likely involved drawing subordinates to nearby estates, or to Cuzco itself. Other than a few way stations on routes to the nearby coca-producing valleys, the Incas established no new state-affiliated architecture in the uplands during the century or more that Inca nobles invested in estate construction in the valley below. The early Inca constructions in upland sites consist of modest structures that might be considered shrines or elite households. The non-domestic structures at Pukara Pantillijlla lack a high-fidelity Inca affiliation and have few wealth objects. Excavated assemblages indicate that the state-directed feasting that occurred in the Inca capital was not reproduced in such

buildings, although a larger sample of excavated buildings is needed to evaluate whether local Inca-sponsored feasting occurred elsewhere. If local Inca-style structures like Building 15 represent Inca temples at the site of local shrines (*wak'a*), they suggest a form of ideological power that appears to have been at least partly brokered by female practitioners—the precursors of the *mamakuna* of the imperial period. This would be an important precedent to a central religious institution established in the Inca capital and a few provincial centers, but it does not appear that the articulation of ideological power was followed by an intensification of other forms of Inca power in upland villages near Cuzco.

Explaining the Discontinuous Inca Presence in the Imperial Heartland

The discontinuous manifestations of Inca power observed in the Sacred Valley allow us to reconsider what kind of state lay at the center of the Inca empire. The archaeological evidence indicates strong Inca control over the city of Cuzco and parts of its agricultural hinterland, but the Cuzco region was never the fully-integrated or homogeneous ethnic homeland that some Colonial sources describe. From a theoretical perspective, Inca state was not the bureaucratic entity that modern formulations of the state would lead us to expect (e.g., Weber 1968[1922]; cf. Mann 1986), and it would be hard to argue that legal rights and the duties of citizenship united Inca society as imperial campaigns commenced. The military advantages enjoyed by the Inca ruler in early campaigns came not from a monopoly on violence, but from the strategic deployment of labor tribute and alliances on extraordinary occasions (e.g., Betanzos 1999[1550s] Part I, Chapter 18).

From Mann's (1986) neo-Weberian perspective, early Inca rulers primarily exercised despotic power, relying on charisma and ideological power rather than institutions and infrastructure. Such a designation could easily give way to an interpretation of Inca power as springing fully-formed from the mind of the first emperor—a brilliant lie that became true as more and more people believed it and accepted the institutional transformations that accompanied it. Rather than dismiss despotic power in

this way, it is informative to consider the literature on charisma with a critical eye for its potential bases of power (e.g., Shils 1972[1965]; Weber 1947). Although Weber (1947:361) treats charisma as “specifically outside the realm of everyday routine and the profane sphere” and focuses on its routinization into offices and institutions, he also acknowledges the power of kinship in building and transmitting power (Eisenstadt 1968:xxi).

In the Inca case, kinship undergirded the state at the empire’s center. Generations of marriage alliances bound noble Inca households to each other, and to elite families in neighboring groups. The archaeology of the Andean highlands during the LIP suggests that after the failure of the institutions of the Wari and Tiwanaku states around 1000 CE, kinship served as the principal organizing force for local farmers and herders who became the targets of early imperial incorporation.⁹ It is likely that elite men and women in Cuzco’s large valley-bottom communities enjoyed disproportionate access to labor service, possibly a legacy of the colonization of parts of the Cuzco region by Wari populations (cf. Covey 2006). Centuries later, as the Incas extended their dominion, kin ties remained significant for the imperial elite and their rural subjects, and the idiom of kinship drove the growth of royal estates and the establishment of a provincial administrative hierarchy.¹⁰ To the extent that Inca Cuzco was stratified, class-based, or ethnically unified at the time of the European invasion, it is largely because the networks of noble households grew to approximate such distinctions.

Four characteristics of Inca kinship made it possible to extrapolate kin practices into imperial statecraft in the Cuzco region. The first was the complementary construction of gender, which allowed elite men and women to pool their social alliances and labor tribute to establish powerful households

⁹ More work is needed to evaluate the interplay between kinship and the growth of the earliest states in the Andean coastal and highland regions. Although it is plausible that Inca power built on shared social foundations, there are significant differences in the expression of state canons and the manifestation of ideological power (cf. Goldstein 2005; Isbell 1997).

¹⁰ The royal household (*panaqa*) grew through reproduction, but also by removing individuals from provincial communities and assigning them as retainers (*yanakuna*) in perpetuity. As the Incas established a “bureaucratic” decimal hierarchy in some provincial regions, the upper administrators of the system were close relatives of the Inca ruler, and the title used across the hierarchy (*kuraka*) derives from a Quechua term for “older son.”

with the resources to complete monumental construction projects. The second was the creation of polygynous households by powerful men—and the willingness of elite women to contribute resources and represent their own families under such arrangements. Although we should not take his figures literally, the early chronicler Betanzos (1999[1550s Part I, Chapters 5, 23]) describes the proliferation of royal households: Inca Roca, the sixth ruler, had six wives and 30 sons and daughters; his son Yahuar Huaccac, had 20 wives and 50 sons and daughters; and his great-grandson, Pachacutic Inca Yupanqui, had 300 children by the time he reached age 70. The burgeoning size of the ruling household provided men and women who could serve the growing empire in a range of capacities, although it also increased noble resource demands in the capital region, as well as the potential for factional competition within and between noble households.

The third characteristic allowing noble Inca households to build state power was the recognition that physical death did not end the social life of the most important men and women. Royal households were created by a male-female pair whose mummies continued to own the resources developed in their lifetimes, and to enjoy the service of retainers. The descendants of this couple enjoyed the benefits of their resources, except for a new couple who assumed the paramount offices and began to labor together to establish their own estate. The acknowledgment of ongoing kin obligations with certain royal dead overlaps with the fourth characteristic of Inca kinship: the establishment of kin relations with supernatural entities. The *aqllawasi* institution, which cloistered and trained noble Inca girls (as well as selected girls from the provinces), produced the *mamakuna*, female ritual specialists who knew how to produce fine craft goods, as well as food and drink for the use of the Inca and supernatural entities (*wak'akuna*). The male Inca paramount assigned some of these women to marriages with living men (including himself), but he designated others as wives of the Sun, and gave others for the service of his principal wife and of his ancestors (e.g., Betanzos 1999[1550s Part I, Chapter 17, 22]). As *mamakuna*, noble Inca women supported the ritual reciprocation of imperial labor tribute, and their assignment to

local shrines potentially allowed the ruling Inca pair to be considered as kin to supernatural forces that dominated local landscapes.

Broader Implications for Archaeological Interpretation

The pronounced power-building potential of Inca elite kinship practices offers a potential corrective to theoretical approaches to early states and empires that dichotomize kin-based and civic social practices (for example, Aristotle's *Politics*; cf. Maine 1861; Service 1975; Tönnies 2011[1887]). As Weber notes (in Eisenstadt 1968:111), societies in Western Europe since the Middle Ages are distinctive in subordinating kin groups and the "folk-community" to the institutional structures of the state. The Inca empire has often been cited as an exception to universal models derived with Western polities in mind, but if the Western constructions of metaphysics, gender, monogamy, and citizenship are thought of as representing the opposite extreme—perhaps as the derived outcome of state elites and institutions regulating and curtailing kinship through a long administrative and ideological process—then scholars should rethink some of the institutional expectations surrounding state formation and administration. In some cases, legal institutionalization and the evolution of bureaucracy might represent microevolutionary enhancements to statecraft that redefined kinship, rather than well-defined features of the earliest states. Understanding the range of roles that kinship played in different processes of state formation and administration requires additional case studies that consider archaeological evidence at multiple scales. For example, the extended irrigation networks and family compounds of Ubaid Mesopotamia might have offered very different prospects for institutional development than the fishing and horticultural chiefdoms of the Hawaiian Islands (e.g., Kirch 2010; Stein 1994).

As early state power becomes situated in a more refined archaeological context, its discontinuous nature raises questions about the potential for the state growth to be exclusionary.

Rather than portraying the core as driven inexorably to conquer, annex, and acculturate, Shils (1972:105-106[1961]) approaches the center-periphery distinction from the perspective of ideological power, noting that “[t]he mass of the population in most premodern and non-Western societies have in a sense lived *outside* society and have not felt their remoteness from the center to be a perpetual injury to themselves ... because, for the most part, their convivial, spiritual, and moral center of gravity has lain closer to their own round of life.” The archaeology of Inca Cuzco tells us about horticultural villages and herders who pursued lifeways that contrast with the stylistically-marked landscapes that noble Inca families created for themselves and their retainers in the valleys nearby. Recognizing that state elites and the institutions they dominated did not always seek to incorporate or include all people raises important interpretive questions for archaeologists and others working with state canons, as well as some significant reflections on the mythos of democratic egalitarianism in contemporary nation-states. Answering these questions requires strong and well-integrated archaeological databases, and much more work on the lives of local people during times of state rule.

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Figures

Figure 1. Systematic archaeological surveys in the Cuzco region include (1) Bauer's Paruro survey (1984-1987), (2) Bauer's Cuzco Valley survey (1997-1999), (3) Covey and Yépez's Sacred Valley survey (2000), (4) Covey and Yépez's Xaquixaguana survey (2004-2006), (5) Bauer and Araóz Silva's Oropesa-Andahuailillas survey (2006), (6) Kosiba and Galiano Blanco's Wat'a survey (2005-2006), and (7) Covey et al.'s Calca-Yanahuara survey (2007). All projects used the same basic field methods.

Figure 2. Examples of Inca architecture from three royal estates in the Sacred Valley. Inca building forms, construction materials, and decorative features vary even at royal estates.

Figure 3. LIP settlement patterns from the Sacred Valley study region.

Figure 4. Building 5 at Pukara Pantillijlla exhibits local LIP architectural features that are distinct from the Inca form.

Figure 5. Sub-regional distributions of LIP wares identified by the Sacred Valley Archaeological project show that some pottery was largely restricted to areas north of the Sacred Valley, whereas other wares circulated more widely in the valley and areas to the south. Intensive surface collections from Pukara Pantillijlla (VS-176) are excluded from the Sacred Valley sample.

Figure 6. Inca sites registered in the Sacred Valley study region and Calca-Yanahuara survey. Locations of royal estates and other sites mentioned in the text are noted.

Figure 7. Photograph of the Q'allaq'asa complex at Pisac. The Inca estate was built at the location of a LIP settlement, but shows a high prevalence of imperial polychromes.

TABLES

Table 1: Inca Imperial Architectural Elements

INSTITUTION	TYPE OF POWER	POSSIBLE ARCHITECTURAL FEATURES
Qhapaqwasi (“house of the king”)	Political, Economic, Ideological	Well-built enclosed complex combining open spaces and multiple structure types (e.g., Morris et al. 2011)
Aqllawasi (“house of the chosen ones”)	Ideological	Enclosed complex with limited structural variation (e.g., Morris et al. n.d.)
Sun Temple	Ideological	Well-built enclosed complex with patio group architecture, possibly special architectural features (e.g., Bauer 2004)
Wak’a (shrine)	Ideological	Offerings and modified rock formations, possibly associated with Inca-style structures (Bauer 1998)
Qollqa (storehouse)	Economic	Complex of repeated rectangular buildings of similar dimensions (e.g., Protzen 1993)
Pata (agricultural terrace group)	Economic	Canal and terrace complexes built with Inca masonry techniques or found in strong association with new Inca settlement (e.g., Farrington 1992)

Table 2. LIP and Inca Ceramics in the Chongo Basin

	LIP Sites	Total Area (site avg.)	Wares 1 and 7	Wares 9 and 10	Inca Sites (sherds)
Upper Basin	40	36 ha (9093 m ²)	18.1% (n=109)	38.7% (n=233)	4 (n=6)
Pukara Pantillijlla	1	10 ha	23.3% (n=58)	16.1% (n=40)	1
Lower Basin	26	21 ha (8204 m ²)	15.9% (n=30)	56.6% (n=107)	21 (n=90)

Table 3: Distribution of tools associated with textile production

Building	Ceramic whorls	Stone whorls	Bone weaving tools	Metal needles or pins
3 (domestic)	9	2	6	0
4 (domestic)	1	0	0	0
5 (public/ritual)	0	0	0	0
6 (public/ritual)	2	0	1	1
9 (domestic)	0	3	4	1
15 (public/ritual)	4	0	3	2

Note: Metal pins figure does not include *tupu* pins found with human remains.

Table 4. Ceramic figures for domestic contexts at Pukara Pantillijlla

Building	Wares 11 & 12	Decoration	Slipping	Inca decoration	Inca jars	Plates
3	1053 (6.0%)	3275 (19%)	2194 (12.6%)	305 (1.8%)	38	136
4	454 (7.5%)	654 (11%)	382 (6.3%)	135 (2.2%)	19	78
9	1054 (11.8%)	1574 (18%)	1253 (14.0%)	537 (6.0%)	23	90

Note: Paste and decoration figures based on individual sherd counts. Vessel identifications based on minimum number of identifications—refitted sherds from the same vessel are counted as a single vessel

Table 5. Ceramic Figures for Public/Ritual Contexts

Building	Ware 11 & 12	Decoration	Slipping	Inca decoration	Inca jars	Plates
5	88 (4.9%)	285 (16%)	170 (9.5%)	8 (0.4%)	1	15
6	95 (2.8%)	629 (18%)	420 (12.3%)	16 (0.5%)	3	14
15	556 (8.8%)	958 (17%)	506 (8.8%)	157 (2.7%)	6	61

Note: Paste and decoration figures based on individual sherd counts. Vessel identifications based on minimum number of identifications—refitted sherds from the same vessel are counted as a single vessel

Figure 1

Figure 2

Above: Trapezoidal doorway and interior niches, Pisac

Top left: Great hall (kallanka) and retaining wall, Juchuy Coscco

Bottom left: Agricultural terrace wall, Yucay

Figure 3

Figure 4

Figure 5

South of Valley: Chit'apampa (CH), Patabamba (P)
 Sacred Valley: Main Valley (M), Wanka (W)
 North of Valley: Chongo (C), Qochoq/Poques (Q)

Figure 6

Figure 7