# The Archaeology of Wak'as

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Explorations of the Sacred in the Pre-Columbian Andes

edited by Tamara L. Bray

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# 5

Pachacamac—Old Wak'a or Inka Syncretic Deity?

Imperial Transformation of the Sacred Landscape in the Lower Ychsma (Lurín) Valley

Krzysztof Makowski

#### INTRODUCTION

The Spanish chroniclers referred to the Lurín Valley by several names, including Ychsma or Irma, both Spanish transcriptions of an Aymara word, and Pachacamac, which is a Quechua word. This south-central coastal valley is one of the relatively few regions in Peru where it is possible to study across the boundaries of protohistoric and colonial period archaeology. The number of written sources pertaining to this region is relatively large, and many were published during the sixteenth century by the first Spanish conquerors and priests (Eeckhout 1999b; Rostworowski 1972, 1999, 2002a, 2002b; Salomon et al. 2009; Spalding 1984). However, what may seem like a blessing can also be a hindrance to archaeological investigation. The simple comments made by the chroniclers are often uncritically accepted as truth with the archaeological data serving only to illustrate the historian's interpretations.

In this chapter I intend to show how our reading changes when the results of systematic excavations of considerable extension are taken as a starting point and written sources are subject to rigorous internal scrutiny. The archaeological results suggest that Inka imperial policies completely transformed the landscape of the Lurín Valley. The reorganization involved not only the construction of new urban settlements for populations moved from elsewhere in the highlands and possibly the coast, but also the creation of new sacred sites—or *wak'as*—and new ceremonial spaces. As expected, the

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largest building activities were conducted in Pachacamac proper. This local ceremonial center, which was originally relatively modest, was transformed during the Late Horizon by the construction of walled streets, new enclosed space, and large plazas, in addition to the erection of substantial new temples and an *acllahuasi* (house of chosen women). New ramped pyramids were also built during this time period.

Studies on the distribution of wak'as and their ceremonial functions in the imperial capital of Cuzco (e.g., Bauer 1998, 2004; Rowe 1979; Zuidema 1980, 2008, 2010) indicate that the main rituals associated with the Inka ceremonial calendar were not restricted to the monumental urban core of the city but rather were conducted throughout the sacred valley. The empire's religious doctrine and history were inscribed upon the state-modified landscape (van de Guchte 1990; Kosiba, this volume). Rocks, both carved and natural, springs, caves, fountains, and architectural elements were transformed by the Inka into "wak'as," or sacred places, serving as points of reference for socially shared memory. I believe that imperial strategies in the Lurín Valley followed the same pattern and procedures. Both Pachacamac and the site of Pueblo Viejo-Pucará were part of a new sacred geography created by the Inka to legitimize their right to rule the coast. The two case studies that will be presented in this chapter are based on field research conducted at the sites of Pachacamac and Pueblo Viejo-Pucará and will serve to substantiate the hypothesis outlined above.

Our investigations in the Lurín Valley have focused on issues related to the nature of Inka administration in this zone. They have been carried out as part of the archaeological program Lomas de Lurín, and subsequently the Valle de Pachacamac program, both of which were field-school projects of the Pontificia Universidad Católica del Perú (PUCP) conducted with the support of the Peruvian-based company Cementos Lima S.A. Investigations began here in the 1990s with excavations of the monumental entrance to Pachacamac from the north, which is referred to as the "Third Wall," undertaken in 1994– 95 by Hernán Carrillo and Daniel Guerrero and the commencement of longterm excavations in Pueblo Viejo–Pucará in 1999 (Figure 5.1). Judging by the ethnohistoric evidence, the burial rites, and the typical highland architecture, Pueblo Viejo–Pucará, located near the ceremonial center of Pachacamac, was a major settlement of the Caringa of Huarochirí (see Chase, this volume) and the principal abode of the lords of this moiety.

The comparative analysis between Pachacamac proper and Pueblo Viejo– Pucará proves that the rigid architectural classifications often used to distinguish between political and religious functions, which typically counterpose



FIGURE 5.1. Map of the Lurín Valley, south coast of Peru (produced by Gabriela Oré).

palaces and temples, fail to explain the variety of forms and uses of the sacred places and things. Unlike in the Greek Hellenistic, Roman, and Christian traditions, it is the landscape, transformed or not, rather than buildings or iconography, that comprises the sacred and ritual spaces of the Andes. The concept of wak'a, somewhat equivalent to the notion of numen, relates primarily (in its material form) to rocks, fountains, lakes, and other landscape features (for further discussion, see Bray, this volume; van de Guchte 1990).

In Pachacamac and Pueblo Viejo–Pucará, ceremonial architecture is found associated with sacred landscape features like rock outcrops, hills, and promontories located near the sea or lakes. The monumental architecture associated with these sacred places fulfilled multiple functions that were as much political and economic as religious in nature. Plazas and enclosures were used for mass gatherings. Ramped platforms served in some cases as *ushnus* (see Meddens, this volume) and in others as elevated spaces that overlooked enclosures from which the representatives of power and sometime officiates of particular rituals appeared before the assembled audiences. The frequent association of these features with storage areas as well as the absence of spaces with clear residential functions suggest that these various-sized structures served as a stage for both tax payments and festival gatherings (Eeckhout 1999b, 2003a; López-Hurtado 2011; Villacorta 2004, 2010).

In Pachacamac, ceremonial roads enclosed between parallel walls directed the movements of parishioners who came to pay taxes, to deposit offerings, to fast, or to celebrate. Pachacamac is no different in this respect from two of the most important extant temples of the imperial Inka cult: the Coricancha and the Temple of Lake Titicaca (Stanish and Bauer 2004). In Pueblo Viejo– Pucará two large enclosed plazas attached to both the ushnu and the main palace served as a stage for celebrations. In both of these cases, the sharp differentiation between secular and ceremonial spaces turns out to be difficult and ultimately inoperative.

# IMPERIAL INKA TRANSFORMATIONS OF THE PACHACAMAC SACRED LANDSCAPE

Throughout the twentieth century, from Max Uhle (2003 [1903]) to Arturo Jiménez Borja (1985), Thomas Patterson (1966, 1985), María Rostworowski (1999, 2002a), and Peter Eeckhout (1995, 1998, 1999a, 1999b, 2003a, 2003b, 2004a, 2004b, 2004c, 2005, 2008, 2009, 2010), multiple interpretive scenarios have been presented for the monumental complex of Pachacamac. Uhle (2003) [1903]), for instance, argued that the planned organization and erection of the major monumental buildings at the site were associated with the imperial Inka administration. Other scholars subsequently assumed instead that the orthogonal layout of Pachacamac had its origin in the Middle Horizon (Shimada 1991; Lumbreras 1974:154, 165). These interpretations undoubtedly stemmed from Dorothy Menzel's (1964, 1968, 1977) important work on the stylistic chronology of the Middle Horizon and her convictions regarding the role of this ceremonial center during this time period. Some scholars, like Régulo Franco (1993a, 1993b; also Franco and Paredes 2000), went even further, positing that the foundations of Pachacamac dated back to the Formative period and that the ceremonial complex had developed continuously since then.

In recent decades, new interpretive proposals supported by new archaeological evidence have joined the previous ones. Considering both old and new proposals, we now have four completely different interpretations of Pachacamac, which include the following:

 That it was a ceremonial center with a major temple and several secondary temples, built by faithful communities comprising ethnic groups from both the coast and the highlands (e.g., Jiménez Borja 1985; Rostworowski 1999, 2002a; also Eeckhout 1999b:405–8), with implicit comparisons drawn between the site of Pachacamac and those of Mecca and Delphi that derive, in large measure, from the comments of the early Spanish chroniclers.

- 2. That it was a planned urban administrative and ceremonial center whose layout was defined in the Middle Horizon or slightly earlier (e.g., Bueno 1970, 1974–75; Patterson 1985).
- 3. That it was the capital city of one of the major coastal chiefdoms in the Late Intermediate period, where many palaces of rulers were successively built, one alongside the other on the sandy open field that lies to the northeast of the temple of the god Pachacamac, on the valley's high edge (e.g., Eeckhout 1999b, 2003a; Uhle 2003 [1903]; and Tello 2009 [1940–41] had already made similar statements). For Eeckhout (1999b, 2003a), each king was buried in his palace in similar fashion to Chanchan, the capital of the north coast state of Chimor.
- 4. That it was the result of a long, discontinuous development wherein each of the successive stages of monumental construction was separated by breaks of different duration and each was seen as having a different origin and characteristics. The perceived spatial organization was actually due to the superimposed phases corresponding to the late periods, and particularly to the Late Horizon (Uhle 2003 [1903]). This view can be seen in Hyslop's (1990:255–61) statement that "Pachacamac is probably the most monumental example of Inka planning that coordinated and adjusted its design to a pre-existing layout."

I believe that the fourth scenario best fits the results of the archaeological excavations undertaken by Eeckhout (1995, 1999a, 2004b, 2010; Makowski 2007; also Shimada, 2003, 2004, 2007; Shimada et al. 2004, 2010). Clearly, all the interpretations of Pachacamac's layout offered to date start from three presumably key material features of the complex: (1) the presence of a road network with the two main thoroughfares intersecting at right angles and running between two walls; (2) the presence of two monumental alignments on the north side, known as the Second and Third Walls, that closed off the entrance to the *temenos* delineated by the First Wall; and (3) the impressive contrast in the archaeological elements contained within the spaces between the First and the Second Walls, as well as the Second and Third ones, in comparison to elsewhere at the site. The later observation relates to the fact that the pyramids with ramps and other adobe-brick complexes of a monumental nature are aligned along the outskirts of the First Wall, while in contrast, the dense concentrations of materials indicative of human occupation outside the Second Wall are not associated with any trace of monumental architecture. It



**FIGURE 5.2.** Map of Pachacamac in the lower Lurín Valley showing the principal architectural features at the site (produced by Gabriela Oré).

was on the basis of this contrast that Uhle had speculated about the presence of residential precincts having been built of perishable materials in this area.

One assumption whose validity was never proven affects most of the interpretations of the architectural development of Pachacamac: namely, that evidence of the Inka presence at this famous site would have been limited to a single occupation level—the last—in the complex stratigraphy. Another is that there had been only a few constructions built by the Inka and that all of them were exclusively distributed around the peripheries of the monumental core comprising the Painted Temple and various of the pyramids with ramps (Eeckhout 1998, 1999b, 2010; Shimada 1991). Among the long-recognized Inka buildings at Pachacamac are the Sun Temple, the Pilgrim's Square, the Acllahuasi, and the Taurichumbi Palace (Figure 5.2).

Since 2005, when I began systematic excavations at Pachacamac, abundant and strong evidence has mounted against the above-mentioned assumption about the relatively restricted degree of Inka intervention at the site. We have also accumulated considerable evidence that the planned appearance of monumental Pachacamac, with its three massive walls, primary streets, and



FIGURE 5.3. Map showing the location of excavation areas I-E (northeast facade of the Temple of the Sun) and I-F in the Pampa Sur sector of Pachacamac (produced by Gabriela Oré).

walled enclosures, was created under the aegis of the Inka administration. These major construction works, involving the movement of massive amounts of soil, clay, and bricks, as well as some catastrophic natural events such as earthquakes and heavy rains, have resulted in the presence of more than one layer and many superimposed structures in the stratigraphy associated with the Late Horizon. The various overlapping layers containing Late Horizon materials, which reflect the leveling of surfaces, the dismantling of walls, the creation of floors, and the compacting of colluvial sediments, were found to be almost 2 m thick in some areas of the site.

Our most powerful evidence to this effect comes from the 2010–11 and 2011– 12 excavation seasons, which focused on the northeast facade of the Pyramid of the Sun and the First Wall (Sector I-E) (Figure 5.3). Our excavation units at the Pyramid of the Sun were placed within the deep cavity previously created by looters at the center front of the structure that cut through the first and second terrace of the northeast facade of the temple.<sup>1</sup> The looters took advantage of the collapsed retaining wall associated with the lower (first) terrace and perhaps also an ancient passageway with stairs located right in the middle of the temple facade. This wall, almost completely buried by sand, is omitted from the map of Uhle as well those made by subsequent investigators.

Our excavations at the Pyramid of the Sun were located a few meters south of Strong and Corbett's (1943) early trench. The First Wall, which partially encircles the Pyramid of the Sun and the two temples supposedly dedicated to Pachacamac (e.g., the Ancient Temple and the Painted Temple), attaches to the front of the retaining wall of the lower terrace of the Temple of the Sun. It should be stressed that our excavation is in the middle of the northeast facade of the temple where Max Uhle located the main entrance to the courtyard situated atop the pyramid. The stratigraphy exposed in the reexcavation of this area parallels the profile published by Strong and Corbett (ibid.) both in terms of orientation and composition. Our unit, however, exposed an area of direct contact between the natural and cultural layers and the Inka architecture that provides significant insight into the depositional sequence. Similar profiles are found in various other parts of Pachacamac, as well, particularly inside and outside the walled courtyard of the ramped pyramids.

The uppermost layers in our excavation correspond to well-preserved organic waste (Figure 5.4). In excavating them, we realized that these layers were composed of mats from ceilings and walls made of perishable materials that had originally been associated with the first or second terrace of the Temple of the Sun. Those who had been charged with throwing out this material had probably descended by the staircase that had been destroyed by the looters. They would have gone to the bottom of the terrace and deposited the waste on the left (to the northwest) over the walls that were already partially destroyed at this time. Along with the discarded mats we also found quantities of fine Inka-Lurín-style ceramic fragments (Figure 5.5), other organic waste, and weaving and spinning tools. If this profile had been found elsewhere within the site of Pachacamac, it would have been interpreted as evidence of the reoccupation of an older Ychsma ceremonial building for domestic purposes during the Late Horizon. However, in this case it is clear that the wall segments, partially destroyed and covered with Inka period trash, were also built during the Inka occupation. Nevertheless, these walls clearly correspond to a second phase of construction and the use of the first terrace of the Temple of the Sun.

During the first phase of construction, the adobe walls were carefully faced with cut stone. These walls served to retain the fill of one of the two short terraces that project outward at the two ends of the northeast facade of the stepped pyramid-like bastions. Possibly the main entrance to the Sun Temple originally opened to the walls of the second terrace from the east-facing courtyard that was formed by the bastion-shaped projections of the first terrace. We



FIGURE 5.4. Excavation units Nos. 3 and 4 in Sector I-E near the northeast facade of the Temple of the Sun: (a) excavation profiles indicating complex depositional sequence and contacts between Inka architecture and other natural and cultural layers; (b) Sector I-E, Unit 3, showing layers of stratified organic waste covering Inka wall of the second phase (photographs by author and Alaín Vallenas).

were able to define the stratigraphic level for the foundation of the walls of the first phase as existing well below those of the wall of the second phase. In both levels we found diagnostic Inka ceramic fragments, though in smaller quantities in comparison to the upper layers with the remnant organic mats.

The second phase of adobe wall construction is not lined with cut stone, such as seen in the first phase, but rather is thinner and made of low-quality bricks. Layers of sand and fragments of archaeological adobe separate this level from the lower one. Late Horizon ceramics and some adobe fragments are also found in the levels that lie beneath the foundations of both walls mentioned above. These profiles provide strong evidence of four successive episodes, all of which appear to be associated with the Inka presence in the Pachacamac



**FIGURE 5.5.** Fragments of identifiable vessel forms of provincial Inka polychrome pottery recovered from the northeast facade of the Temple of the Sun in Sector I-E: aríbalos (a, f), shallow plates (c, d, h), and wide-mouthed ollas with horizontal handles (e, g); provenience of sherds: (a) Unit E-3, Layer 1; (b-d) Unit E-3, Layer 3; (e-g) Unit 5, Layer C; (h) Unit 5, Layer D (photographs by author).

sanctuary. Some of these episodes appear to be separated by fairly significant amounts of time. For instance, the analysis of the micro-stratigraphy indicates that the walls of the second construction phase were destroyed, subjected to erosion by rain and weathering, and then covered over by sand before the trash and rush mats were subsequently deposited on top of them.

A relatively thin, colluvial layer of sand and a layer containing fragments of adobe representing an episode of destruction were found below the Late Horizon levels. These layers cap the construction of the Lima period (AD 300–600) architecture that was found at the bottom of our excavation. During the reexcavation of Strong and Corbett's trench, we also encountered several layers containing both negative-decorated and plain pottery dating to the Early Intermediate period between the level of the Middle Lima architecture and the sterile stratum.

The First Wall of the Pachacamac sanctuary is attached to the retaining wall of the lower terrace of the Pyramid of the Sun. It is little wonder, therefore, that we found evidence in several segments of the First Wall that it was a very late construction built at the end of the Late Horizon. Trenches and test pits were placed along sections of this wall where it would have been feasible to have gates (Figure 5.6). We were not successful in locating any entrances, however, nor are any known from any other part of this enclosure. The excavations made clear that the construction was never completed and that only the foundations had been consolidated in several sections (Figure 5.7). Beneath the wall foundations, which were found to contain fragments of fine Inka polychrome pottery (Figure 5.8), we encountered several sterile colluvial layers and one of alluvial origin. We discovered no traces of a parallel older wall in our investigations. The wide trenches excavated inside this wall produced evidence of occupation only during the Lima 4 and 5 periods (AD 300–600). We were also able to pinpoint the founding date of the only two monumental adobe structures located in the area outside of the First Wall. Neither of these was ramped. The structure near the Pyramid of the Sun labeled as the Southwest Building was certainly built at the same time as the First Wall (see Figure 5.6).

The results of our investigations in the remaining structures (e.g., the Northeast Buildings) found on the lower slopes of Cerro Gallinazo in Sector I-F have been a surprise (see Figures 5.3 and 5.6). Based on the surveys of Max Uhle (2003 [1903]) and Go Matsumoto (2005), we expected to find one or two large structures potentially correlated with a path registered on Uhle's original map. This path is still in use today and may have had an early prehispanic origin. If so, it would have connected the beach facing the island group of Cahuillaca



**FIGURE 5.6.** Map of the southern sector of Pachacamac indicating location of the First Wall and excavation units from 2009 and 2012 field seasons (produced by Gabriela Oré).

with the temples of the Sun and Pachacamac. However, more detailed survey and excavations showed that the path did not exist in ancient times. Instead of a single large rectangular building, we uncovered at least nine independent residential structures aligned in two rows that can be seen in Sector I-F in Figure 5.6. These houses were built during the later part of the Late Horizon; during the colonial period these buildings were reused as stables.

In the area of the Second Wall, we excavated four large units in strategic locations. One of the excavation units (SW-EI) trenched through the final section of the main North-South Street (Figure 5.9). This unit allowed us to record the stratigraphic associations of the road and the packed earth surfaces and mud floors associated with the western lateral wall. This wall is an extension of one of the two that line the street along its length. The results of these excavations were again surprising.

We had expected to find a complex stratigraphic sequence similar to the profiles documented by Eeckhout (2005) and Shimada (2003, 2004; Shimada et al. 2004, 2010) below the Painted Temple and in the Pilgrim's Plaza.<sup>2</sup> Instead, we found clear evidence that this part of the North-South Street



**FIGURE 5.7.** Profile of wall segment indicating that wall construction was aborted at point at which foundation was being prepared (drawing by Gabriela Oré).



**FIGURE 5.8.** Provincial Inka polychrome sherds found associated with the foundations of the First Wall (photographs by author).

had been built in the early part of the Late Horizon. A solid floor associated with the foundations of one of the lateral walls was constructed upon sterile soil or an intentionally leveled layer bearing traces of heavy wear from foot traffic. This floor, composed of coarse clay, the canal lined with slabs of stone that cuts the floor in the middle of the street, and the west wall were all built



**FIGURE 5.9.** Map showing location of excavation units in the area of the Second Wall (produced by Gabriela Oré).

at the same time (Figure 5.10). The east wall had been remodeled by attaching a jamb that created a monumental entrance through the Second Wall. On the solid floor we recorded many layers of accumulation of wind-driven sand and some slight traces of the packed earth indicative of heavy traffic. Over time, the ground level rose, making it necessary to construct wells to reach the canals for cleaning.

In another trench we registered the partial dismantling of the lateral walls of the road after a catastrophic earthquake and before the construction of Pyramids V and VIII and the enclosure that connects them. The erection of the first of these pyramids entailed the destruction of the lateral eastern wall of the road, judging by the surface evidence. These two ramped pyramids are the only ones that were built outside the Second Wall. The back (west) wall of Pyramid VIII is situated 5 m from the northeast edge of the road (see Figure 5.9). Once the walls had been dismantled, the area where the road had once been located was built over with domestic wattle-and-daub structures. This latter occupation clearly dates to the Late Horizon, producing diagnostic materials such as Cuzco Provincial Polychrome *aríbalos* and dishes.



**FIGURE 5.10.** East-west profile across the entrance to the North-South Street through the gate in the Second Wall, showing the floor of coarse clay and the stone-lined canal cutting through the floor in the middle of the street (photograph by author).

These findings required us to revise our understanding of the role of the North-South Street. I am convinced that the major function of both it and the eastern extension of the East-West Road (see Figure 5.2) was to ensure access to Ramped Pyramid No. 2 (Paredes 1988) and thus, indirectly, to the Plaza of the Pilgrims. As both Paredes (1991) and Ravines (1996) correctly noted, however, the East-West Road differs significantly from the North-South Street. From its junction with the latter, the western end of the East-West Road lacks the formal characteristics of a street; rather it consists of irregular segments partially covered with piles of prehispanic refuse. The eastern extension of the East-West Road does, however, end at the entrance to the ramped pyramid (No. 2). A depression of nearly 4 m in depth recorded by Uhle (2003 [1903]; Shimada 1991) extends from the junction of the Pilgrims.

Both streets also gave access to the storehouse area and the secondary patios at the rear and sides of Ramped Pyramids Nos. 1 and 12 (see Figure 5.2). The

eastern part of the East-West Road only reaches the back door of the complex of Ramped Pyramid No. 1. Here a large depression opens onto a triangularshaped field that is partially enclosed by tall piles of refuse. The stratigraphic sequence we recorded suggests the possibility that the intersecting road system was modified after Ramped Pyramid No. 2 was constructed (Franco 1998). The gateway in the Second Wall was also filled in with sand, and the entrance segment of the North-South street was dismantled and later partially covered over by wattle-and-daub constructions.

Given these findings, we had to ask ourselves the following question: where was the main entrance to the sanctuary of Pachacamac? People who entered the shrine from the north, through the gateway in the Third Wall, would have had to pass through the Second Wall at some point. Besides the access to the North-South Street, the Second Wall has only one more opening on the northern periphery of the monumental complex. This opening corresponds fairly closely to the visual axis that extends from the gateway in the Third Wall to the main ramp of Pyramid No. 1 (Figure 5.11a). It also has an inner buttress on the eastern side, similar to the one seen on the gateway in the Third Wall. Its shape is currently amorphous, as if it were simply a part of the wall that had collapsed due to either human or natural causes. At this location, we excavated two large areas on either side of the Second Wall (Figure 5.11b). The results proved very insightful. We were able to ascertain that this was actually the main entrance to the monumental complex of Pachacamac on the north side during the Late Horizon. The gateway was specifically designed as such and was built at the same time as the Second Wall. This is clear because the wide threshold of the doorway is a part of the wall's plinth; both were built together with two levels of large, interlocking, parallelepiped adobe bricks. The entrance to the inner patio was carefully prepared for heavy traffic. A thick floor of cast clay was built over an adobe brick platform affixed to the plinth. The fill used to level the floor contains a good deal of diagnostic Late Horizon material.

These results match the conclusions of the still-unpublished report of Ponciano Paredes, who excavated Ramped Pyramid No. 1 (Ramos 2011). Paredes believes that the monumental phase of this complex—now reconstructed—dates to the Late Horizon. Pyramids Nos. 1 and 4—which have different orientations—formed the hypothetical entrance-complex to the sanctuary complex of Pachacamac. Their ramps opened onto the same sequence of patios, one of which contained a large *puquio* (spring); now covered by sand; these patios were entered through the gateway in the Second Wall. I find the presence of a puquio—an essential element for the required ablutions prior fasting and other ritual acts—most significant.



**FIGURE 5.11.** Gateway opening in the Second Wall opposite Ramped Pyramid No. 1 after the entrance to the North-South Street was destroyed by earthquake and abandoned: (a) before and (b) after excavation (photographs by author and Gabriela Oré).

At the beginning of the first season of excavations in 2005, we considered several possible scenarios with respect to the role or possible roles of the area between the Second and Third Walls. The first idea was that it might have been a residential urban area that housed artisans and low-ranking officials; a second idea was that it might have been a complex with areas where goods and food were produced related to the pyramids with ramps and the large walled enclosures, or *canchones*. Third was the possibility that it could have been an encampment area meant to house the large numbers of laborers required to build the walls and structures ordered by the imperial administration, and also produce the cultural paraphernalia necessary for foundational rites and other ceremonial requirements. In this latter case, the complex would not have been expected to exhibit a planned organization. However, spatial relations of a functional nature might be expected given such a scenario linking control stations, communal areas of manufacture, the areas where food was prepared, and the relatively ephemeral residential areas distributed about the peripheries.

The results of our excavations on the north side of the Second Wall provided important evidence to support the third scenario (see Figure 5.9). Small reed and wattle-and-daub structures were found situated above and between the piles of refuse that surrounded a large rectangular structure subdivided into various rooms and built within a relatively short time period. Activities conducted in this large structure included food preparation and low-intensity craft production. The remarkable thickness and complex stratigraphy of the refuse piles in this area indicate the intensity of production processes that took place here. This organization of space seems to correspond to specific tasks entrusted to several nuclear family groups under a single command. The results of the ground-penetrating-radar (GPR)<sup>3</sup> and magnetometer survey (Figure 5.12) conclusively confirmed that the entire eastern expanse of the open field between the Second and Third Walls was given over to temporary activities and residences similar to what was found in the area excavated nearby by Daniel Guerrero and Hernán Carrillo (Guerrero, n.d.). The residential structures in the peripheries were not aligned with the roads, nor was any other planning criteria perceivable. But the architecture located close to the Second Wall was partially planned, with the main axis oriented along this feature. While we had anticipated finding a straight road between the gateways in the Third and the Second Walls that would have continued on to the north, this was not confirmed. Instead of a road or an area of packed earth lined by stones, excavations revealed a dense occupation area where activities and dwellings similar to those mentioned above were recorded.



FIGURE 5.12. Map of grid of remote sensing survey conducted in 2006 and 2009 in the area of the Second Wall (produced by Gabriela Oré).

All occupation levels in this area contained Late Horizon diagnostic materials. The stratigraphy in the excavation units matched that obtained through the GPR survey; in other words, we found only one level with architecture that went no deeper than I m below the current ground level. Below this Late Horizon level is the natural sandy soil. Through a series of test pit excavations, it was established that the sterile soil levels have a complex natural stratigraphy with multiple layers of saltpeter and alluvial sediments that correspond to episodes of unusual humidity or rain, such as occurred in the seventh or twelfth century AD. In 2010 this initial study was complemented with magnetometer studies.<sup>4</sup> The remote-sensing data from the open area around the Second Wall yielded conclusive negative results regarding the presence of residential agglomerations of an urban nature. To the contrary, a patchwork of relatively brief, and often unrelated, events was recorded in this sector, all dating to the Late Horizon.

The implications of the excavation results presented here are as follows. First, the monumental site of Pachacamac, the great temple and oracle of regional notoriety, was created by the Inka Empire. Indeed, it is likely that

this special place on the edge of the fertile valley, in front of the guano islands, next to a freshwater lagoon and various other water sources, had previously been a wak'a, or a traditional place of worship, for the local people. But a careful review of the arguments of Maria Rostworowski (1999, 2002a) and other historians does not necessarily confirm that Pachacamac was a local cult for 1,000 years or more. This idea, which has also been championed by various archeologists (e.g., Franco 1993a, 1993b, 2004; Franco and Paredes 2000; Paredes and Franco 1988; Shimada 1991), arises from only one ambiguous material fact: the sloping sides of a pyramid built in the Lima period (approximately AD 300-600) served to support the Step Pyramid of the Late Intermediate period, whose outermost facades were painted during Inka times. However, it has never been demonstrated that the decision to build the Painted Temple on the side of the pyramid called the "Old Temple," which would have been in ruins and abandoned for at least two hundred years prior to the Inka intervention, was deliberate. The overlap of later Ychsma buildings on earlier Lima period ruins is common on the central coast of Peru, as seen, for example, at Maranga and Cajamarquilla, and does not necessarily imply continuity in use of architectural spaces. The decision to build one structure on or near another that has been abandoned for centuries or even decades can be due to any number of factors, ranging from random selection to convenience of location vis-à-vis natural features like water sources or high ground to vague perceptions of the sacredness of a site. To suggest that two temples built next to one another in two different periods were dedicated to the same deity would require evidence of continuity in architectural design or religious iconography, and no such evidence has yet been found at Pachacamac.

The Step Pyramid is usually called the Temple of Pachacamac, although neither the mural decoration nor the iconographic program of the two-faced idol matches the presumed personality traits of the "organizer of the universe," or "the god who remains in the bowels of the earth," to whom the temple was believed to have been dedicated (Dulanto 2001). The sculpture at the top of the pyramid represents two independent figures. Each of these deities differs in important details of dress and attributes from the other. One appears to represent a god associated with the land and the growth of corn, and the other a being of opposite nature, e.g., a god of the heavens. The mural decoration of the pyramid from the Inka period (see Bonavia 1985) becomes the symbolic image of an island with corn, surrounded by the sea full of fish. These figurative designs would appear to have been inspired by the myths of two other ancient gods worshiped at Pachacamac: Cuniraya Viracocha and his lover, Cahuillaca, who became an offshore island (visible from the sanctuary) in an attempt to flee the persecution of the supernatural father of her child.

Structures of later periods built over those of the Lima period are very common on the central coast and don't represent positive proof of the continuity of worship in any given place. On the other hand, the Pachacamac idol's decoration (see Dulanto 2001) appears to be closely linked with northern traditions—particularly as seen at the Huaca del Dragon in the Moche Valley, Chotuna in Lambayeque (Donnan 2011:233–44), and in the motifs associated with the ceramic tradition of the Casma Valley (Shimada 1991). Perhaps it is no coincidence that the Huaca de la Luna in Trujillo bore the name of Pachacamac (Rostworowski 2002a). In the myths recorded by the chroniclers, Pachacamac is portrayed as a foreign deity in contrast to the goddesses Cahuillaca and Urpaihuachac and the god Cuniraya Viracocha. The hypothesis that the cult of Pachacamac was brought by the Inkas from the north to the central coast and merged with local cults is a tempting one.

In any case, it is evident that the Inka administration appropriated the sacred landscape of Pachacamac and transformed it completely. It seems that every Sapa Inka added another set of buildings to the site, including Ramped Pyramids Nos. 1, 2, 4, and 8 and perhaps many others. Enclosing perimeter walls were also being continuously erected during the Late Horizon. There are signs that ramped pyramids and other secondary buildings were used briefly and then essentially abandoned. There is no single or permanent road system that links the large walled enclosures (*canchones*) and ramped pyramids to the Pilgrim's Plaza, the Painted Temple, the Pyramid of the Sun, or the Acllahuasi. Each building had its own separate entrance system and reception area for visitors. As a hypothesis, we can suggest that the visitors to the temple oracle were housed, perhaps according to their place of origin, in the courtyards in front of the ramped pyramids and were allowed to access the Pilgrim's Plaza after fasting.

As noted above, the pyramids with ramps were fully in use during Inka times and many of them were constructed during the Late Horizon (Pavel Svendsen 2011:155–56). At least three of them (Nos. 1, 2, and 4) played a key role in the hypothetical reception given to pilgrims who entered the shrine from the north (see Figure 5.2). It is therefore reasonable to postulate that they never functioned as permanent or principal residences of Ychsma lords, as has been previously suggested, at least during the period of Inka occupation of the site. There are several arguments for this line of thinking, with some of the evidence for this supposition coming from excavations at the site of Pueblo Viejo–Pucará—another striking example of the Inkaic creation of a new sacred landscape and new landscapes of power.

# THE WAK'AS OF THE MITMAQKUNA SETTLEMENT OF PUEBLO VIEJO-PUCARÁ

The site of Pueblo Viejo–Pucará was the abode of the lords of Caringa, the major chiefdom on the left bank of the Ychsma Valley (Makowski 2002). The site lies less than 15 km from the ceremonial center of Pachacamac in the *lomas* grazing zone (400–600 m a.s.l., which is still used today by the highland herders of Santo Domingo de los Olleros (see Figure 5.1). It is located in the labyrinthine system of lateral ravines that crisscross the first spurs of the Andes. It is worth noting that Pueblo Viejo–Pucará visually dominates the access to Pachacamac from the south and the east. Archaeological excavations at the site produced ceramics diagnostic of the Inka period in all stratigraphic levels, and our investigations conclusively demonstrate that it was built during the Late Horizon and abandoned shortly after first contact with the Spaniards, around 1560 AD (Makowski 2002).

The site is situated in a naturally fortified location. Recurring evidence of weapons manufacture and camelid husbandry suggest that Pueblo Viejo–Pucará was occupied by allies of the Inka, perhaps a military detachment, which may have been charged with the management of the herds pertaining to Pachacamac as well. This Late Horizon urban center, or *llacta*, is about 12 ha in size (not counting the agricultural terraces or minor activity areas noted on the peripheries, which would increase the size of the site to approximately 26 ha in total).

Excavations at the site encompassed an area of more than 11,000 m<sup>2</sup> and uncovered two palatial dwellings, a small temple, and portions of four residential precincts (Figure 5.13). Each of the residential precincts comprise several courtyard units containing from three to five groups of houses whose entrances open onto a common area of irregular shape that may be partially enclosed. The architecture of both the common houses and the elite dwellings has the same modular design. A module comprised two rectangular rooms connected by a passageway that usually contained two, two-story storage units. Areas with human burials were found within most of the residential groups. Some of the storerooms were turned into mortuary chambers to receive various of individuals. The bodies were seated in a flexed position; they had probably been buried fully dressed but with no other wrappings, to judge by the position of the bone elements. The types and amounts of associated funerary objects correspond to the highland tradition (Isbell 1997; Salomon 1995). The spatial organization of the Pueblo Viejo-Pucará settlement also suggests a form of social organization common to the highlands involving division into upper and lower halves, each of which contained a palace-like house as seen in Sectors II and IV.



FIGURE 5.13. General plan of the mitmaqkuna site of Pueblo Viejo–Pucará, located above and to the northeast of Pachacamac. The palatial complexes are associated with Sectors II and IV; the small temple is located between Sectors IV and V; and distinct residential precincts are found in Sectors I, III, IV, and V. The two straight lines indicate the visual field, which extends from the ushnu platform in Sector II to the space between two sukanka-like circular structures located on the top of the summit temple platform (produced by Gabriela Oré).

Many of the structures found in the four residential areas were clearly elite dwellings. These contained from two to six modules, each with porch-terraces that opened onto a common internal patio. Access to the interior patio space from the outside was restricted (Makowski et al. 2005, 2008). As mentioned, two dwellings at the site are clearly palace-like in size and composition. They have large double kitchens associated with the courtyard, along with evidence of food and drink having been prepared for a large number of people. Several outbuildings, including various domestic enclosures and large corrals, are associated with the largest of the two palaces, which also had three ample patios and a general monumental character (Figure 5.14). Two of the patios are not connected with the domestic sectors and appear to have had a ceremonial function to judge by the finds of *Spondylus* and the presence of a large, wak'a-like rock in the center of one.

The palaces are neither Inka in design nor made of cut stone masonry, but the principal palace in the lower half of the settlement includes two ceremonial courtyards with a typical Inka altar-ushnu that was likely given periodic libations. The material culture, the residential and public architecture, and apparent customs of the former residents of Pueblo Viejo–Pucará are very similar to those known for the peoples living near the headwaters of the Lurín Valley, and from Huarochirí itself, where Avila recorded the traditions of the Checa (Salomon and Urioste 1991; Chase, this volume).

Thanks to the high degree of preservation, three sacred places containing several probable wak'as in their original contexts were documented at the Pueblo Viejo–Pucará settlement. These include an ushnu-altar, the summit temple comprising a monumental platform with staircase and two *sukanka*-like circular structures,<sup>5</sup> and a *huanca*-altar. The features identified here as potential wak'as correspond closely with the descriptions provided by both Avila (see Salomon and Urioste 1991) and Polo de Ondegardo (1916 [1571]), among other early colonial sources. For instance, the offerings found in the crevices of the sacred rock on the summit temple and around it consisted of gold beads, pieces of gold and silver sheet metal, fragments of *Spondylus princeps*, and a *sara conopa* (Figure 5.15a, b). These items are similar to those received by the highest-ranking wak'as in Cuzco (Rowe 1979).

We suggest that the element referred to as an ushnu at Pueblo Viejo– Pucará warrants this name for several reasons in spite of the fact that it is not part of an architectural complex as seen at other classic Inka sites. The ushnu at Pueblo Viejo–Pucará consists of an elevated platform containing a loose gravel fill that dominates two ceremonial plazas where *Spondylus princeps* and other fragmented mollusk shells were found. Excavations around the base of



**FIGURE 5.14.** Palatial compound in Sector II in the lower part of Pueblo Viejo–Pucará (photograph by author).



FIGURE 5.15. Offerings found in association with the stone outcrop and wak'a comprising part of the summit temple at Pueblo Viejo–Pucará: (a) spherical gold bead, perforated silver discs, propitiatory amulet, and carved corn (Zea mays) conopa; (b) Spondylus princeps shell fragments, a pendant, and eight beads made of Spondylus shell (photographs by Manuel Lizárraga).

this elevated platform produced a vessel decorated with modeled corncobs (Makowski et al. 2008). The platform is accessed by staircases from the two ceremonial plazas and a ramp from the central patio of the palace where evidence of banquets with abundant consumption of corn beer, deer meat, and camelids was recovered.

From the ushnu platform, the visual axis extends toward the south and is demarcated by the space between two circular, turret-like structures built on the summit temple platform (see Figure 5.13). One of these structures contains a sacred rock (Figure 5.16a) to which gold and silver had been offered, as noted above, while the other had contained a huanca-idol originally located in the interior center of the structure (Figure 5.16b). Viewed from the ushnu, these two round structures stood out against the horizon like sukankas. A second huanca-idol with an associated altar is found along the same visual axis in the middle of a large corral at the foot of the mountain.

Unlike the settlement, the summit temple of Pueblo Viejo-Pucará exhibits signs of systematic and intentional destruction, which was performed, in all likelihood, by the extirpators of idolatries in the early colonial period. Only the retaining wall of the platform, with its monumental staircase of nine steps, remains intact. The walls of the two circular structures were dismantled down to their foundations. It is estimated that they may have originally reached 3 m in height, based on a comparison of their average width with the betterpreserved structures at the site. Both structures had two narrow doors, the widths of which varied between 0.56 m to 0.85 m; the interior space within each, however, was so small that one could not have easily walked around either the huanca or the rock outcrop contained inside the two enclosures. The location of the double apertures in both circular structures is best explained by the play of light. Tracking the progress of light and shadows projected through a narrow entrance over the surface of niches or small rooms was one of the principal methods used to define ceremonial time in Inka architecture (Ziólkowski and Sadowski 1992:46–64, fig. 10).

The one huanca preserved in situ in Pueblo Viejo–Pucará is found in the middle of the livestock corrals located to the south of the main palace in the lower moiety. The monolith is attached to a small stone platform, which may constitute an altar. As attested by Duviols (1973, 1979), huancas were typically found in pairs, and marked the center of the two halves that comprised the sacred space of highland communities in the sixteenth and seventeenth centuries (see also Dean, this volume). One of the two huancas, which was linked to the founding ancestor and protector of the community (the huanca marcayoc), was erected at the spring, canal, or cave from which the founding



FIGURE 5.16. The summit temple at Pueblo Viejo–Pucará with two circular structures: (a) circular structure with two narrow entrances and sacred rock outcrop inside; (b) circular structure with two narrow entrances and hole in center where monolith, or huanca, would have originally been placed (photographs by Manuel Lizárraga).

ancestor had originally emerged (Arriaga 1999 [1621]:128). The other huanca was called huanca chacrayoc, and, as its name suggests, it was located in the middle of the community's cultivated fields, or at the boundary between fields and pasture (Arriaga 1999 [1621]:128). In the Andean highlands, the settlement area—which in Quechua is *marca*—is generally located near sources of water in the valley bottoms or near the edge of terraces that overlook deep valleys. Conversely, the cultivated fields (*chakras*) climb up the slopes almost to the edge of the pasture lands. A natural opposition thus arises between the center of the productive half above and the center of the populated half below.

Within a classificatory scheme that is recurrent in Andean cultural reality, one of these centers relates to the male ancestors, e.g., the marcayoc, considered the colonizer and proprietor of a village, and the other to the female ancestors, e.g., the chacrayoc, the tiller and owner of the productive fields (Dean 2001; Duviols 1979). In imperial Cuzco the main male ancestor known as Huanacauri dominated the landscape from the summit of a nearby mountain. Huanacauri purportedly merged with the huanca marcayoc of Cuzco (associated with the third of the Ayar brothers, the founders of Inka Cuzco) and Zañu (the local, non-Inka ancestor) (Urbano 1981). In Pueblo Viejo– Pucará, the huanca within the circular structure on the summit temple would be classified as the huanca chacrayoc while the huanca located in the heart of the settlement near the corrals would likely have constituted the huanca marcayoc.

The main symbolic and ceremonial axis for important sacred places in the Andean highlands is the north-south alignment. The people of Pueblo Viejo–Pucará chose to construct their main temple at a site on the visual horizon very close to the south celestial pole as seen from the ushnu platform (see Figure 5.13). All the evidence suggests that this choice of location, as well as the specific rock outcrop, was carefully selected. At the opposite end of this axis, to the north, is Cerro Botija—the highest peak in the area—on the summit of which has been found offerings of shell (Figure 5.17). Investigations on the slopes of this mountain have revealed a facility to condense fog that would have produced water for irrigation and a reservoir; we believe these features were likely constructed by the people of Pueblo Viejo–Pucará (Makowski 2008).

The location of the summit temple wak'as do not correspond to astronomically relevant orientations related to calendric calculations (Makowski and Ruggles 2011). Rather there seems to have been a different intention behind their placement. We believe the aim of the builders of the summit temple and the ushnu was to create a proper frame for the ritual activities carried



**FIGURE 5.17.** Cerro Botija, the highest peak in the area, seen from the summit temple looking north in the dry season when the vegetation grows thanks to fog condensation (e.g., the loma phenomenon); structures seen below in center of photo comprise the palatial compound and associated ceremonial plazas and ushnu in Sector II (photograph by author).

out in the ceremonial space defined by the wak'as adjacent to the palace of the principal ethnic lord. In this area of the coast, the dry season comes to an end at the beginning of November when the thick fog known as *garua* disappears (except during anomalous years). At this time of year, a portion of the starry sky becomes visible from the ushnu in the broad pass between two local peaks named Lomas de Pucará. It is on the top of this broad pass that the summit temple with the two sukanka-like circular structures was built. In a recent archaeoastronomical study, Makowski and Ruggles (2011) demonstrated that these two structures frame astronomical south and point to where the Andean constellation Yacana-Llama appears in the night sky in the corresponding months of the rainy season in the mountains. Local people from colonial times to the present have believed that the longer this constellation can be viewed through this pass, the more intense will be the summer heat in the coast and the more water will fill the Lurín riverbed.

The observation of dark constellations within the Milky Way, together with the tracking of bright constellations such as the Pleiades (known as Catachillay in Quechua), played a substantial role in both Andean calendrical calculations (Zuidema 1982) and weather prediction. For the people of Huarochirí in the sixteenth century, the constellations were particularly important for the forecasting of rain. The well-being of many Andean communities was highly dependent on the volume of rain predicted, and the rains were believed to be related to the behavior of the Yacana, the mythical llama who drinks water from the Mayu river (Milky Way) in the night sky (Salomon and Urioste 1991, chap. 29). The reappearance of the mythical llama's head and eyes, e.g., the star clusters Alfa and Beta Centauri, located near the South Pole, in the months of November and December signaled the beginning of the new agricultural cycle for Andean communities (Zuidema and Urton 1976). Farmers predicted the intensity and duration of the rains from the intensity of the trajectory of the Yacana and other dark constellations, like H'anpatu, the Toad, near the Southern Cross.<sup>6</sup>

The features of the summit temple discussed above suggest that it (re)constituted the *paqarina*, or ancestral wak'a, of the Caringa mitmaqkuna from Huarochirí (see also Chase, this volume). This mitmaq population, resettled by imperial mandate to guard the flocks of Pachacamac and defend the oracle site, would appear to have moved their wak'a with them to their new location. In reconstituting their llacta within this new setting, the Caringa reestablished their native wak'a precisely where it belonged in the new, imperially ordered landscape—to the south of the ushnu.

### CONCLUSIONS

This chapter presents some of the results of archaeological investigations conducted at two landmark settlements in the Lurín (Ychsma) Valley that have long been recognized for their importance and complexity. The field research undertaken at the sites of Pachacamac and Pueblo Viejo–Pucará by the author over the past two decades invites us to reconsider the standard interpretations of Inka political strategies on the central coast that have traditionally privileged the documentary sources (see also Chase, this volume). Based on her reading of the historical materials, Rostworowski (1972, 1999, 2002a, 2002b) suggested that the imperial footprint on the central coast was both discrete and limited, with local political and religious structures as well as economic organization left largely intact by the Inka out of deference to the power and prestige of the god Pachacamac. As a consequence of this view, it has typically been assumed

that all late-period structures and sites in the Lurín Valley that lack clear sign of Cuzco-style masonry or form must predate the Inka conquest, e.g. that they must pertain to the Late Intermediate period or earlier.

The results of our investigations show that this is not the case. Most buildings constructed during the Late Horizon, to judge by associations with provincial Inka pottery, lack diagnostic features of Cuzco's imperial architecture of stone and adobe. It is also evident from our research that the Inka administration completely appropriated the existing sacred landscape of Pachacamac, encompassing the sacred islands of Cahuillaca, the lagoon of Urpaihuachac, and the temples of Cuniraya Viracocha, and fully transformed it. The Inka clearly established a new military urban settlement with mitmaqkuna from Huarochirí who were relocated to Pueblo Viejo-Pucará, and made the yunga people from the left bank of the Ychsma (Lurín) River submit to the power of this highland population, who had become allies of the Cuzqueños. The Pachacamac area was but one component of a larger overall plan whose apparent purpose was to reorganize the economic management of the lands and resources of the Lurín Valley, turning it into the "pantry" of the Punchao and Pachacamac wak'as. Other new settlements like Huaycán de Cieneguilla (Álvarez Calderón 2008; Marcone and López-Hurtado 2002) certainly formed part of this plan. Many of these late-period sites are distinct from one another in terms of both public and domestic architecture-an aspect that likely reflects the different origins of the communities relocated to these sites by the imperial administration.

The question of whether the settlements containing platforms with ramps found in the Lurín and other central coast valleys were established by the Inka administration or whether they were simply expanded during the Late Horizon with the construction of new areas of residential and public architecture remains open (Eeckhout 1999b, 2009, 2010; Makowski 2002; Makowski et al. 2008). At Panquilma, for example, López-Hurtado (2011) found Inka sherds in association with both earlier and later phases of occupation in excavations around the platforms with ramps at the site. In any case, it is clear that the distribution of settlements with residential occupation dating to the Late Horizon correlates closely with the main farming and herding areas in the valley and the lomas zone.

It is likely that the construction and/or reuse of platforms with ramps in the Lurín Valley and elsewhere on the central coast during the Late Horizon was related to the special status of the resident populations of these settlements as those who paid tribute to the Inka-sponsored deity Pachacamac. We have shown in the previous discussion that visitors to Pachacamac during the Late Horizon arrived through a gate in the facade of the Second Wall, after which they entered enclosed plaza spaces in front of the ramped pyramids. During the excavations, abundant evidence of large-scale food and drink preparation was recovered in these plaza spaces, suggesting ritual feasting activity (Eeckhout 2010).

It is reasonable to suggest that the buildings that served to bring together the faithful at the beginning and end of their hypothetical pilgrimages, e.g., the platforms with ramps, would have been an appropriate setting for the appearance of the local ethnic lords, or kurakas, who served as intermediaries for the Inka. From atop the raised platform, the kuraka and his subordinates, or mandones, could preside over ceremonial acts after the pilgrims had deposited their gifts and tribute in the form of foodstuffs in the warehouses at the rear of the building complex. A similar platform in miniature likely served for comparable tributary or offering purposes in the context of the festivities held at each of the outlying settlements in the Lurín and other central coast valleys such as Panquilma (see López-Hurtado 2011). This does not necessarily mean that the platform or pyramid with ramp was conceived as the main or even secondary residence of the kurakas. Neither the ramped pyramids nor the platforms with ramps have produced unambiguous evidence of domestic habitation (Villacorta 2004). On the other hand, there is plenty of indication of the sacredness of these architectural spaces (Farfán 2004). The buildings whose palatial function was clearly indicated, such as found at Puruchuco (Villacorta 2004, 2010) or Pueblo Viejo–Pucará (Makowski et al. 2005), differ significantly from the ramped pyramids insofar as they contain large residential areas, as well as areas for reception, ceremonial activities, and depository functions.

In the context of the evidence presented, it should be clear that the typological distinctions embedded in the division of architectural spaces into secular versus ceremonial, as seen in the use of such common terms as "palace" and "temple," are both mistaken and inappropriate. The whole landscape, with or without monumental architecture, was most likely the setting for Andean ceremonialism, simultaneously retaining both its sacred character and its economic significance. The transformation of the ceremonial landscape via the construction of new wak'as at Pachacamac, such as the Temple of Sun, the new lagoon, and the acllahuasi (Tello 2009), as well as the creation of monumental architectural spaces where people could both worship and pay tribute, was undoubtedly a principal instrument of imperial policy and an effective tool of ideological domination. In this way, the submission of the local deities to the imperial gods in the collective religious consciousness was probably achieved, and the acceptance of the power of Cuzco over the local yunga lands and peoples of the coast materially realized.

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### NOTES

I. The illegal activity of the looters took place mostly in the years between 1919 and 1924 (Daggett 1988:13; Tello 2009:357–58, fig. 295).

2. This was because we expected that several road levels and various road layouts would have been superimposed on the place where the main entrance to the shrine of Pachacamac was likely located. Patterson (1985; see also Bueno 1970, 1974–75, 1982; Shimada 1991) believed the main road had been in use since the Lima period, i.e. for almost a thousand years, since the North-South Street seems to head toward the pyramid made with small adobe bricks like those found in the Old Temple.

3. The excavations were supplemented with a ground-penetrating-radar survey (GPR) in 2006 using the ZOND 12E geo-radar of Finnish manufacture; this instrument had a bipolar antenna as well as two external 500 and 700 MHz antennae; Jaroslaw Jaworski was in charge of the study.

4. Two types of magnetometers, fluxgate and cesium gradiometer, as well as a differential GPS were used by Dr. Krzysztof Misiewicz from the Ptolemais Warsaw University in this investigation.

5. "*Sukanka*" is mentioned in colonial sources as being a two-pillar device that was built on the Cuzco visual horizon to enable the determination of the position of the sun and provide the reference for the calculation of calendrical dates and events. Because of the presumed distance from the point of observation, scholars agree that *sukanka* must have been somewhat turret-like in form and appearance (Williams 2007; Zuidema 1988, 2010:171–91).

6. It is interesting that both of these creatures (the llama and the toad) appear to be embroidered into the famous Brooklyn mantle in which they are depicted with crops growing out of the their bodies; this mantle, which dates to the period AD 1–300, is housed in the Brooklyn Museum (Makowski 2000:304, fig. 52; 2005).

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