Chapter 37

Wari and Tiwanaku: International Identities in the Central Andean Middle Horizon

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CIVILIZATION IN THE CENTRAL ANDES – WARI AND TIWANAKU

When Julian Steward organized the *Handbook of South American Indians*, he placed Andean cultures in Volume 2, titled "The Andean Civilizations," (Steward 1946). Andean societies, and particularly those of the Central Andes, were the only ones recognized as "civilized," by Steward and his colleagues.

Answering the question "When did Central Andean cultures evolve into civilizations?" the best consensus has been the Middle Horizon, from about AD cal 650 to 1050. Specifically, the Middle Horizon Wari and Tiwanaku social formations were civilizations—with cities (Isbell and Vranich 2004; Isbell et al. 1991; Kolata 1993; Ponce 1981; but see Makowski, chapter 32 of this volume), state government (Isbell and Schreiber 1978; Kolata 1993; Janusek 2004) and maybe even imperial systems of expansion (Isbell and Cook 2002; Stanish 2003; Schreiber 2005). In terms of archaeological evidence, both Wari and Tiwanaku had complex settlement hierarchies. But what were these capitals like, and how were their polities organized? How did they differ from older Andean settlements and polities?

"Middle Horizon" is a period in Peruvian prehistory (Figure 37.1), but cultural dynamics embraced an area much larger than Peru (Figure 37.2). The Middle Horizon was the time when leadership in complexity within the Central Andes shifted from northern Peru and the Pacific coast – especially the spectacular Moche culture (see Chapter 36 in this volume) – to south central Peru, northwestern Bolivia and the Andean highlands (Figure 37.1). A new religious art spread through the Andes, composed of three primary

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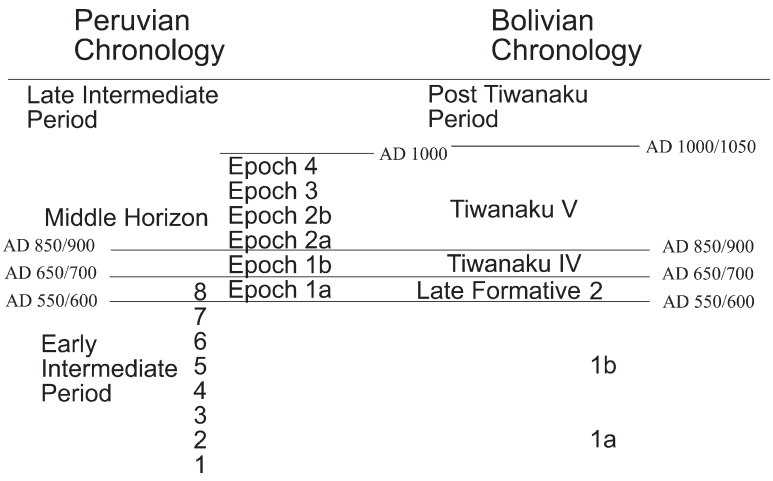

Figure 37.1. Cultural chronology for the Middle Horizon, with absolute dates based on current calibrated radiocarbon assays. The calibrated radiocarbon dates indicate that Huari is slightly later than formerly thought, and Tiwanaku is 150-200 years later, at least in its Later Formative 2 emergence and Tiwanaku IV phase. (William H. Isbell)

supernatural images. From new urban capitals in central highland Peru and Lake Titicaca Bolivia, the distinctive religious icons diagnostic of the Middle Horizon reached the northern Peruvian mountains and coast. In the south they dispersed through the highlands, reaching southern Bolivia and the eastern valleys that descend to tropical forests – among them, Cochabamba with its immense mounds and idyllic conditions for maize agriculture. Northern Chile, at least as far south as San Pedro de Atacama, participated in this great interaction sphere, as did northwestern Argentina's La Aguada cultural style (see Chapter 30 in this volume; Figures 30.5, 30.6).

In recent years discussions of the Middle Horizon have centered around chronology of Wari and Tiwanaku development, the origin and spread of the distinctive iconography, the development of the two great capital cities, and the organization of their polities. The spread of Middle Horizon art implies some sort of unification; did it represent pre-Inca Empire, or something more limited? However, at least in part because Tiahuanaco is in Bolivia, and Huari is in Peru (where even chronological conventions are different), and perhaps also because Tiahuanaco has been recognized as an archaeological center for centuries, while Huari's first archaeological descriptions appeared in the 1940s, investigators study one or the other, but very rarely both [Note 1]. Treating the two together is progressive, although it is surely the only way to understand the Middle Horizon, and the way it changed Central Andean trajectories of cultural evolution.

Middle Horizon art was discovered at Tiahuanaco, and named after the site (Stübel and Uhle 1892). Subsequently, many archaeologists assumed that Tiwanaku iconography originated at Tiahuanaco, creating a "Tiahuanaco First" slant to Middle Horizon studies. This is wrong, but an error easily made in light of the name. To avoid unwarranted implications of the name, I suggest a neutral acronym, SAIS (Southern Andean Iconographic Series) for Middle Horizon art formerly called "Tiahuanaco," "Coast Tiahuanaco," "Epigonal" and many other names.

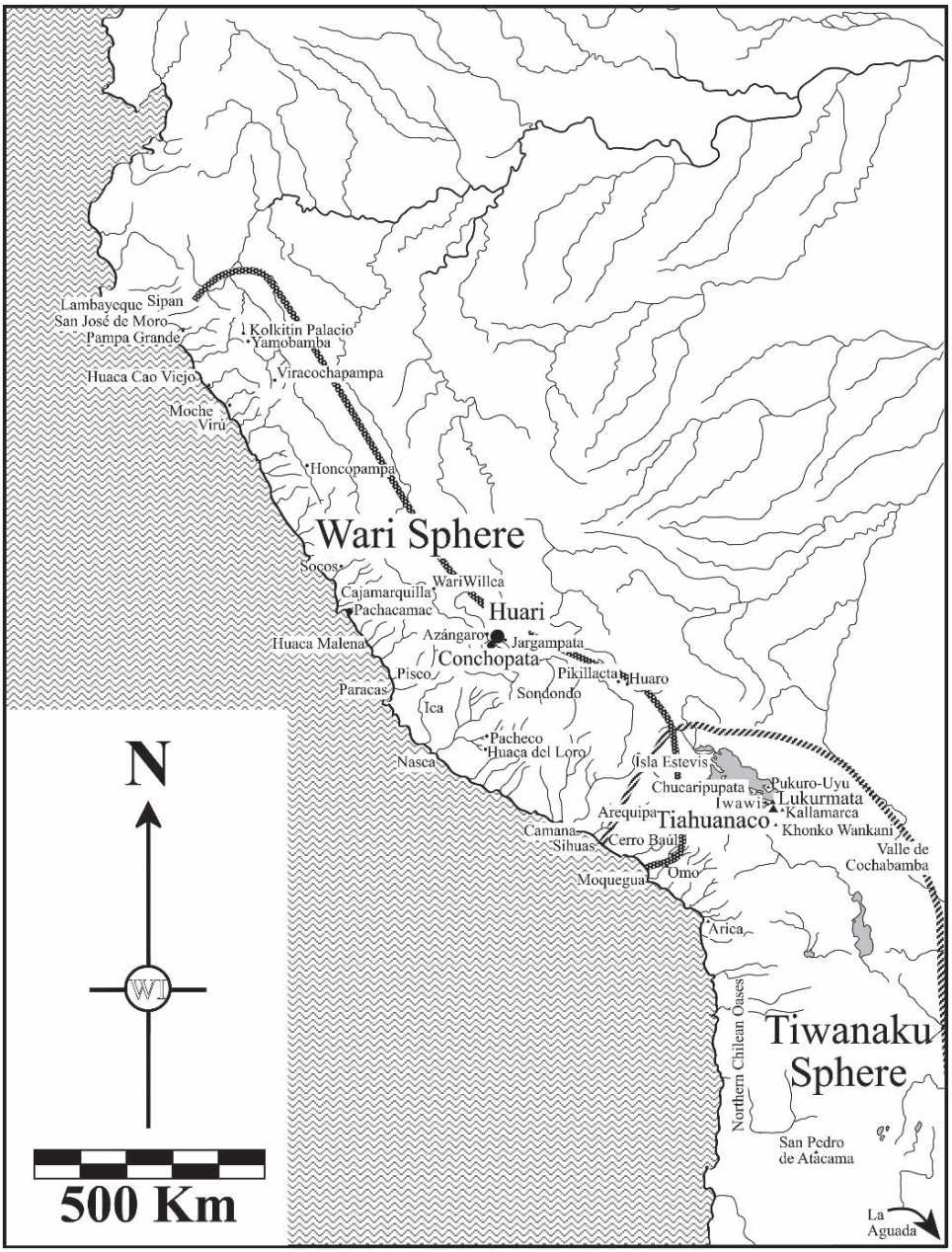

Figure 37.2. Map of the Wari and Tiwanaku spheres, locating the cities of Huari and Tiahuanaco within each, as well as other major sites and locations discussed. (William H. Isbell)

THE SAIS PANTHEON, AND CROSS-DATING HUARI WITH TIAHUANACO

SAIS iconography is most beautifully and completely represented on Tiahuanaco's megalithic "Gate of the Sun" (Figure 37.3), which is probably one of the latest sculptures produced at Tiahuanaco. The beings depicted are three anthropomorphic figures, or sets of figures, a Staff God, a Rayed Head – who may be an attribute of the Staff God – and a variety of Profile Attendants. These three supernaturals co-occur in virtually all Middle Horizon art styles, such as the polychrome images on giant urns and jars from Huari's second city, and neighbor, Conchopata (Figure 37.4). Consequently, it seems that they represent the ideological core of a new religion. The three were clearly ranked – Staff God first, Rayed Head second, and Profile Attendants last.

Tiahuanaco's Gate of the Sun (Figure 37.3) shows 1 Staff God, 11 Rayed Heads, and 30 Profile Attendants in a clearly bounded area. The Rayed Heads, including the Staff God's face, surely represent 12 months. Thirty days are depicted by Profile Attendants, producing a 360-day solar calendar, whose correction for true solar years was apparently worked out by observing the setting sun over the monoliths in the western Balconera wall of Tiahuanaco's Kalasasaya building (Benitez n.d.), near the modern location of the Gate of the Sun (see further discussion below in "The Cities of Huari and Tiahuanaco" section).

The SAIS Staff God surely represents an early version of a principal Andean deity similar to Inca gods Viracocha, Sun, Moon, and Thunder (Demarest 1981; Menzel 1968). The Sun seems most likely, given 12 Rayed Faces on the gateway. However, Menzel (1977) compared the Staff God image with the Inca Thunder God, ruler of the weather, especially life-giving rain. Significantly, a Wari Staff God depiction shows a male and a female version, standing side by side (Figure 37.5; Morris and von Hagen 1993: 112; Posnansky

Figure 37.3. Tiahuanaco's Gate of the Sun. Its central panel includes all three SAIS images: the Staff God (1), two variants of Profile Attendants (30) and a band of Rayed Heads (12) across the bottom of the decorated area. The profile attendants are organized into three rows, one above the other, facing the Staff God. They may be marching in procession toward, or perhaps kneeling to the central figure. (photo by William H. Isbell)

Figure 37.4. Conchopata Offering Urn, decorated with polychrome painted SAIS images, including the Staff God and Profile Attendants. This fragment was discovered in 1999, but belongs to the style discovered by Julio C. Tello at Conchopata in 1942. Wari style. (photo by William H. Isbell)

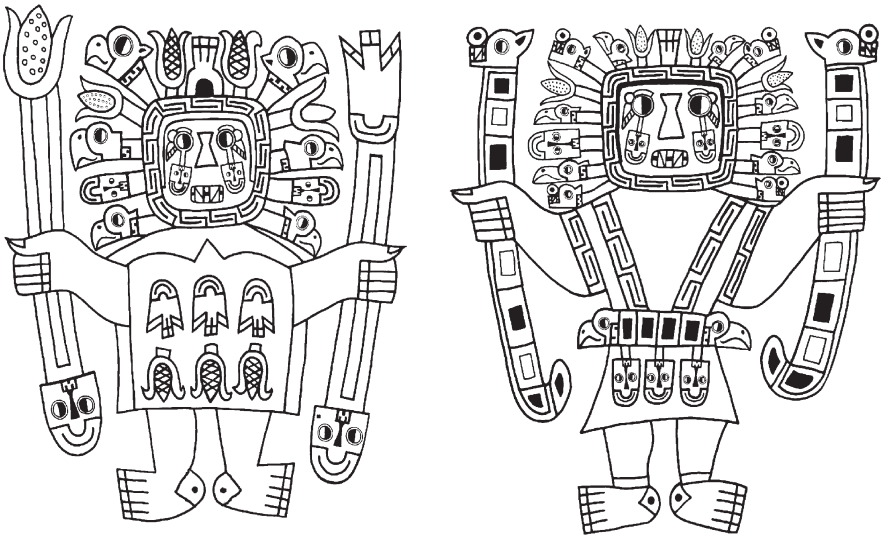

Figure 37.5. Drawing of Male and Female Staff Gods from oversize urns discovered at Pacheco, Nasca. Wari Style. (Redrawn by William H. Isbell from Morris and von Hagen 1993: 112 and Posnansky 1957: plate LVIIa)

1957: plate LVIIa), that Menzel related to the divine Inca couple, Sun and Moon. Inca analogies for Profile Attendants are unexplored. There is certainly continuity between SAIS art and Inca religious ideology, but not enough for secure analogies.

The origin of SAIS iconography continues to confound archaeologists. It did not originate at Tiahuanaco, where it appears more or less fully developed in stone sculpture

[Note 2]. Although very few of Tiahuanaco's stone carvings were discovered in datable archaeological contexts – so their temporal assignments must be inferred through seriation (Agüero et al. 2003) – what are surely Tiahuanaco's archaic sculptures belong to the widely spread, early altiplano style known as Yaya-Mama (Chavez 2004). The only SAIS icon in that style is the Rayed Face. Furthermore, there is little transition between Yaya-Mama sculptures and the SAIS statues, which emphasize fine-line incision, and are often referred to collectively as "Classic Tiahuanaco."

Roots of SAIS iconography are found in several early south Andean cultures. They include Pucara of the northern Titicaca Basin; Pucara Provincial from coastal Arequipa; the Yaya-Mama style (with Rayed Head only); and northern Chilean art—but, almost exclusively, hallucinogenic snuff paraphernalia found in burials from Atacama oases cemeteries (Isbell and Knobloch 2006). However, the complete set of SAIS icons are not included in any of these art styles, or in the configuration of images that appeared more or less simultaneously at Tiahuanaco and at Huari/Conchopata [Note 3] early in the Middle Horizon. Without evidence for gradual development, archaeologists must conclude that synthetic reconfiguration of the pantheon took place very quickly.

Although it has been known for years that Tiahuanaco and Huari shared SAIS images, only now have we discovered virtual duplication in the two heartlands, confirming that images in both were copied from the same model, that was apparently circulating between both capitals. In spite of different media, the Staff God on the back of Tiahuanaco's Ponce Monolith is almost identical to the Staff God painted on giant offering jars from Conchopata (Figures 36.6 and 36.7, compare Staff Gods). Direction of the diffusion cannot be inferred securely, although the antecedent cultural styles are southern. At last SAIS stylistic development in the two heartlands can be synchronized. SAIS imagery appeared at Huari/Conchopata in Middle Horizon 1B, and at Tiahuanaco in the Tiwanaku IV period, whose best C14 dates show it to be about AD 700, a century or so later than argued in currently popular discourse (Figure 37.1). Dating Tiahuanaco excessively early is a legacy of old thinking that may finally be corrected.

Of course, Tiahuanaco and Huari/Conchopata have examples of SAIS art that are unusual and deviant, that might represent steps in the gradual development of the pantheon, but they look more like coarser variants of the mature compositions, and do not appear to be temporally earlier. Consequently, I am convinced the Ponce Monolith and the Conchopata offering jars belong to a moment not long after the simultaneous adoption of SAIS art at Tiahuanaco and at Huari/Conchopata, through mutual agreement. Religious leaders from the two spheres must have met and agreed on a new cosmology – along with conventions for its depiction, that drew on a wide range of southern cultural traditions – that both would embrace.

Reconfigured SAIS iconography became popular in both metropoles, at Tiahuanaco on stone sculpture, and at Huari/Conchopata, painted on oversize ceramic jars and urns. At its most complex the synthesis includes a full-bodied, standing, front-face Staff God associated with smaller and obviously subordinate Profile Attendants, often depicted in diagnostic running or kneeling pose. The profile attendants hold a single staff in front of their body. The back often has a wing, or a second arm and hand grasping an axe and severed head. Attendants often appear to the right and left of the Staff God, sometimes in several groups or rows above and below one another (Figures 37.3-37.7). The Staff God sometimes stands on a three-step pyramid (Figure 37.6). Rayed heads appear alone, or in complex compositions, but seem to be abbreviated Staff God images.

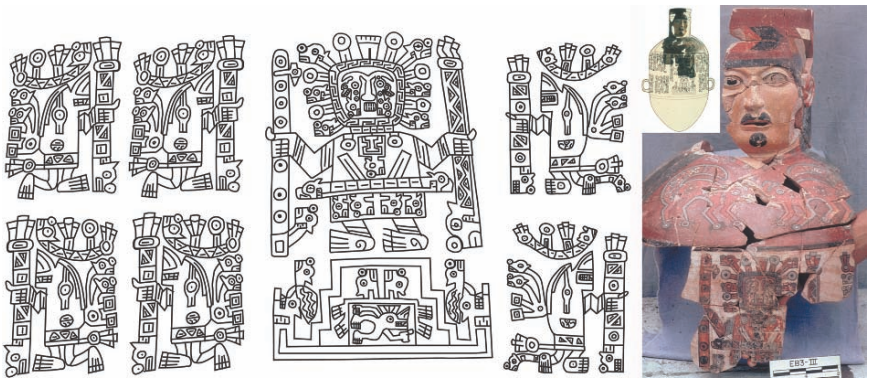

Figure 37.6. Conchopata Oversize Offering Jar. Staff God and Profile Attendants are depicted on this giant jar, discovered at Conchopata in 1977. The Staff God stands on a three-step pedestal, while two rows of flanking Profile Attendants are depicted to the right and the left. The upper row faces the central figure, while the lower row faces away. Wari Style. (photo by William H. Isbell)

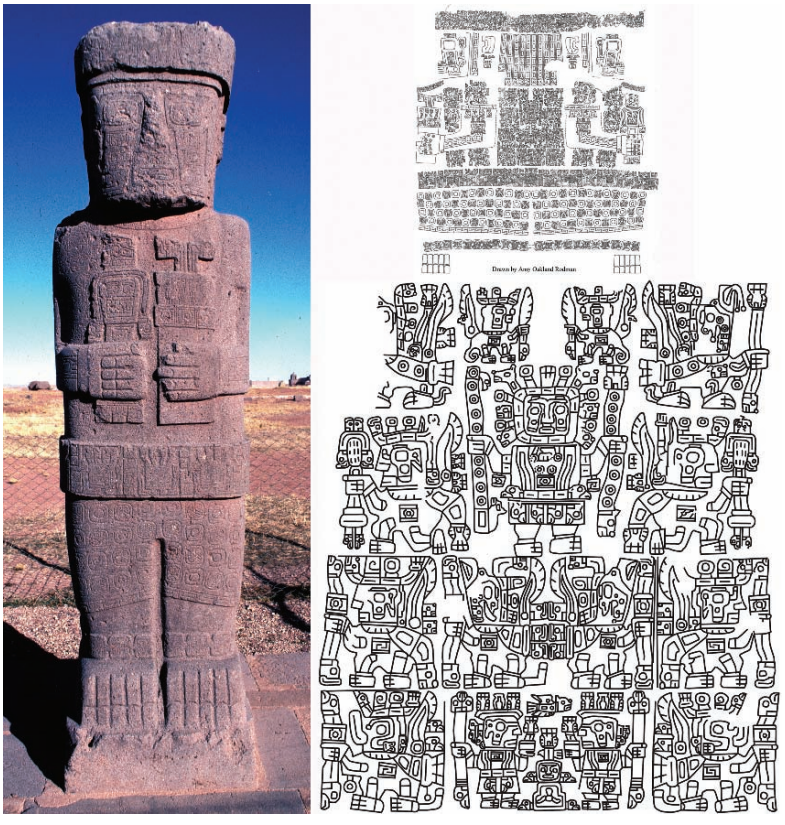

Figure 37.7. Tiahuanaco's Ponce Monolith. The surface is covered with designs incised into the stone with very fine lines. In the middle of the back is a Staff God, with rows of Profile Attendants to the right and left. (photo by William H. Isbell)

STYLISTIC HORIZON AND POLITICAL UNIFICATION: THE QUESTION OF EMPIRE

Wari and Tiwanaku shared SAIS iconography, and its diffusion from the two centers defines the Middle Horizon. Other material culture was also spread, including striped tunics of interlocking tapestry, woven on long, horizontal looms, and decorated with distinctively stylized religious images. A tall drinking vessel called a "kero," pottery decorated with painted polychrome designs, burnished black ceramics, four-cornered hats, metal shawl pins known as "tupu," *Anadananthera colubrina* symbols, and bronze metallurgy seem also to have spread throughout the Andes as part of the package.

Early archaeologists considered Middle Horizon cultural diffusion to be a single wave originating at Tiahuanaco, and gradually diminishing with distance. As more research accumulated in the second half of the twentieth century it became clear that there were two variants, each quite consistent within its territory. Tiwanaku is characterized by megalithic stone monuments, vernacular architecture of small adobe rooms, grinding stones with a push-pull mano, distinctive llama mandible tools, conical "trompo" stones, small stemmed projectile points, interlocked tapestry tunics of one piece woven entirely of wool, wooden snuff tablets and other drug-snuffing paraphernalia, as well as pottery that is easily differentiated from Wari ceramics by experienced archaeologists. Tiwanaku people carefully placed trash in deep pits, as though it were ritually polluting.

By contrast, Wari is characterized by rough stone buildings and the indiscriminant dumping of trash in abandoned houses. Public architecture emphasized quadrilateral compounds divided into rectangular apartments so rigidly organized that it has been called orthogonal cellular architecture (Isbell 1991). Less common are D-shaped ceremonial structures. Vernacular buildings are also rectangular, but less regular in plan. Huari people used the rocker grinder. Llama pelvis tools and ovate stone points were popular, but snuff tablets were rare or absent. Interlocked tapestry tunics were very similar to Tiwanaku's in appearance, but different in construction. They were woven in two pieces and seamed up the middle. Usually they had cotton warp and woolen weft. Four-cornered hats from the two cultures were also similar in appearance, but different in manufacture.

Each city spread its own material culture creating a Wari realm in the north and a Tiwanaku sphere in the south (Figure 37.2). Based on distributions of material remains, especially pottery, the boundary between the Wari and Tiwanaku territories ran through southern Peru, across the Department of Puno, some distance north of Lake Titicaca, to the coast of Arequipa and Moquegua (Rowe 1956). In Arequipa Wari ceramics are found in the Ocoña-Cotahuasi Valley (Jennings and Yépez 2002), and farther south to at least the Sihuas Valley. Tiwanaku ceramics dominate northern Chile and Peru's southernmost Department of Tacna (Berenguer and Daulesberg 1989). In between, from the city of Arequipa to the Moquegua coast, Tiwanaku ceramics occur, but there are also Wari sites and enclaves (Cardona 2002).

From the boundary with Wari, Tiwanaku ceramics and other artifacts extend south through Bolivia and Chile, reaching Potosi, Tarija, and northwestern Argentina at their southeastern extreme. In Chile they are spread throughout the dry Atacama region, at least to San Pedro de Atacama (Torres 2002).

Wari art and artifacts extend far to the north, reaching Cajamarca and the Chotano River in the highlands. On the coast they stretch from Moquegua to at least the Lambayeque Valley.

Does the Middle Horizon diffusion of pottery styles and other material culture reveal the spread of empires, perhaps through conquest? Some Andeanists answer "Yes," pointing

to archaeological evidence for intrusive colonies and provincial rule. On the other hand, it is clear that in many places, Wari, and in others, Tiwanaku, cultural remains appear only as prestige goods, or as stylistic influences that do not look like imperial invasion or administrative control.

A puzzling feature of Wari and Tiwanaku spread is action in concert, similar to what is implied for the synthesis of SAIS iconography. Early in the Middle Horizon, perhaps by AD 650 to 700, Wari and Tiwanaku colonists invaded the Moquegua Valley, on the far south coast of Peru (Goldstein 2005; Williams and Nash 2005). Wari occupied the upper valley, and Tiwanaku the middle sector. There is little or no evidence of warfare between the two, or between the new arrivals and the locals, although the possibility cannot be ruled out.

In Moquegua Wari established its primary center on a vertical-sided mesa named Cerro Baul, as well as several neighboring hills. Naturally defensive, Cerro Baul was further strengthened with baffles on the ascending trail, and perhaps additional walls. On the flat summit Wari settlers constructed 4 or 5 ha of stone walled buildings, including orthogonal cellular patio groups, D-shaped temples, feasting halls, a brewery, and other facilities appropriate for residents, administrators and guests, although barracks have not been discovered. A long and impressive canal was dug, claiming new land for cultivation, and bringing water to the foot of the mesa-top town (Williams 2003). A Huari heartland authority at Cerro Baul was commanding labor, and negotiating with Tiwanakan neighbors.

Wari settlements on the surrounding slopes include a range of residential facilities varying from large elite homes to small, humble dwellings (Nash and Williams 2002). Some residents appear to have come from the Huari heartland, while others seem "Warified" locals. Indeed, the archaeological record reveals Huari intrusion, as well as the emergence of a new, Wari identity based on innovative material culture combining Wari with local traditions. At the Middle Horizon Beringa site, several valleys north, Owen (in press) documents similar processes in pottery. Apparently, a new international Wari identity was being forged.

Tiwanaku established two sets of communities downstream from the Wari settlements. They were not fortified, and were characterized by virtually pure heartland material culture, in two versions known as Omo and Chen Chen. Material culture as well as the people themselves, seems to have remained faithfully heartland, with no "Tiwanakanized" locals or hybrid, international assemblages or identities (Blom and Buikstra 1999; Goldstein 2005; Sutter 2005).

At the Omo enclave 20 km from Cerro Baul a medium-sized monument was constructed of adobe. Originally including several walls faced with cut stones, the complex was about 45 m wide and 120 m long. It consisted of three in-line enclosures, each elevated above its predecessor. The first two are open assembly areas. The uppermost was divided into a series of rooms around a small, central sunken court. Goldstein (2005) emphasizes similarities between the M10 building and altiplano temples, interpreting M10 as a heartland installation where religious processions took place. However, M10 is remarkably similar to later Andean palaces, at least as they were described for the Incas, so it may represent the seat of political authority for Moquegua's Tiwanaku colonists. Was it occupied by a Tiahuanaco governor, or a colonist patriarch? Was control of the colonies centralized rule, or more ceremonial and ideological, as Goldstein now infers?

Tiwanaku's Moquegua colonists were altiplano immigrants, but there is confusion about how the colonies should be understood. When Paul Goldstein (2005) began investigating Tiwanaku intrusion into Moquegua he emphasized the awesome power of the Tihuanaco state, and colonists' dependence on it. But progressively, and heavily influenced by

analogy with modern highland squatters in Moquegua, he stresses the agency and choice of the migrants themselves, even suggesting that the colonists may have migrated to escape state control. Or, perhaps they were refugees from heartland convulsions. Be that as it may, what is clear is that the local Moqueguans were not drawn into an expansive and international Tiwanaku political identity. Even if the Moquegua colonies were ruled from Tiahuanaco, through a governor installed at M10, Tiahuanaco's behavior is puzzling. Empires promote new international identities. Empires exploit provincial people. Empires do not ignore the conquered locals.

In the southern altiplano heartland, Lukurmata, Khonko Wankani, Pajchiri, Oje, Chucaripupata and Pukuro-Uyu are all Middle Horizon (many have earlier occupations as well) sites that have monumental architectural remains reminiscent of the monumental buildings at Tiahuanaco. None is located more that 50 to 75 km from the ancient capital. Few of these sites have been investigated well enough to fully understand their role in the rise of Tiahuanaco, or in Middle Horizon political organization, but the spatial distribution seems to define a core territory spreading no further than 75 km from the capital. It probably represents the early cultural hearth within which Tiahuanaco developed, as well as an area that was subject to direct rule. What was the history and nature of Tiwanaku beyond this core territory?

The Moquegua colonies had a temple/palace at Omo M10, perhaps representing direct rule from the metropole. So the Middle Moquegua Valley was probably an imperial province of Tiahuanaco, with its capital at Omo M10, although lack of interest in local residents seems contradictory, and peacefully (?) sharing the Valley with Wari even more curious.

Significantly, no other provincial Tiwanaku capitals have been identified by the presence of monumental administrative architecture. A Tiwanaku settlement on the northern Lake Titicaca shore, at modern Puno's Isla Esteves (Figure 37.2) may have had more than domestic architecture and agricultural terraces, but construction of a luxury hotel destroyed most remains. Stanish (2003) argues that Tiahuanaco directly controlled this area, as well as a corridor connecting the two locations, that skirted the entire west side of Lake Titicaca. But with no administrative capital, archaeologists cannot be sure. Perhaps future research, determining whether there were intrusive colonies, plus "Tiwanakanized" locals, will resolve the question.

During the Middle Horizon, Tiwanaku art and artifacts became extremely common in the agriculturally rich Cochabamba Valley. This eastern Andean valley, long inhabited by complex societies, was famous for maize, and chicha beer brewed from maize. The Inca Empire completely reorganized the valley to extract maize – and left a spectacular mountain-top administrative town, Incarracay, overlooking the basin. Some archaeologists argue that earlier Tiwanaku did the same, citing as evidence Cochabamba's adoption of Tiwanaku-style pottery (Ponce 1981; Stanish 2003). However, settlement patterns changed little (Higueras 1996), and no Tiwanaku-style administrative architecture has been identified, even at the site with the most Tiahuanaco-like ceramics, Piñami (Céspedes 2000). Furthermore, a study of biodistance based on skulls from the Cochabamba region implies demographic continuity, not the intrusion of altiplano people during the Middle Horizon (O'Brien 1999), as in Moquegua. Much more research is required. Perhaps new investigations will change our ideas about relations between Tiahuanaco and Cochabamba, but at present it seems more likely that Tiahuanaco was an influential religious center, trade partner, and international cultural model emulated by Cochabambans, not an imperial administrator. It is apparent from Cochabamba-Tiwanaku style artifacts that a new international Tiwanaku identity had emerged.

Arica, on the Chilean coast, is another debated case of Tiwanaku colonization. Goldstein (2005) argues that highland Tiwanaku colonists were present, but administrative architecture is lacking. Uribe and Agüero (2002) conclude that the impressive Tiwanaku materials can be accounted for by trade with the neighboring Tiwanaku colonies in Moquegua.

Throughout arid northern Chile, south of Moquegua and Arica, Tiwanaku artifacts occur in select burials. Spectacular textiles appear, as do keros and other ceramics, occasional gold objects, and of course, snuff paraphernalia that bear SAIS icons. Some scholars infer Lake Titicaca colonists (Kolata 1993; Rodman 1992), but most archaeologists point out that the number of Tiwanaku-style objects is actually small, and they occur as a minority of artifacts among a great many more local artifacts in elite graves. The more convincing interpretation is that llama caravans conveyed traders and goods across vast deserts, dispersing products of different microenvironments and craft traditions in a long-standing system of trans-cultural interaction (Berenguer 2000; Berenguer and Daulesberg 1989) that Stovel (Chapter 49 in this volume) describes as a "cultural field." Apparently, Tiahuanaco was not extending political control or sending colonists into Chile, but participating in an ancient sphere of relations that involved poorly understood movements of people and goods. What was probably new was the promotion of a multinational Tiwanaku identity associated with practices involving Tiwanaku-style material culture.

Wari stands in sharp contrast to Tiwanaku. Administrative architecture similar to that constructed at Moquegua's Cerro Baul appeared throughout the Wari sphere (Isbell and McEwan 1991, Schreiber 1992) early in its development. The most impressive provincial administrative capital is Pikillacta (McEwan 2005) (Figure 37.8), in the Cuzco Valley about 300 km southeast of the Huari metropole. A rectangular complex encloses 1 sq km

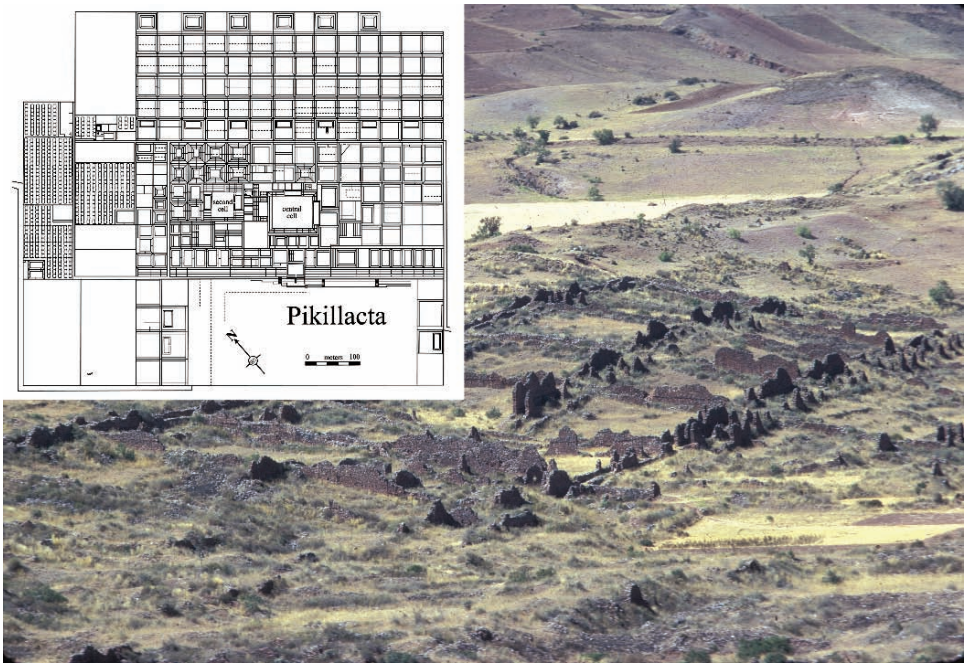

Figure 37.8. Pikillacta, the Wari administrative center in Cuzco. (Map redrawn from McEwan 2005: fig. 2.7; photo by William H. Isbell)

of orthogonal cellular architecture. Within are walled streets; patio groups containing large plazas surrounded by multi-storied lateral rooms and halls; rows of small, oval rooms that might have been storehouses, and ceremonial courts. There also are roads and irrigation canals, an aqueduct, great walls, and other features that reshaped the entire valley during 2 to 4 centuries of Wari occupation – about AD 650–700 until 900–1000 (McEwan 2005). Twenty km south of Pikillacta is Huaro, another intrusive Wari community, larger in area than Pikillacta, but more residential in nature (Glowacki 2002). Elite tombs, perhaps for Huari governors, were found on Huaro's Batan Urqu hill (Zapata 1997). Wari ceramic styles significantly altered the pottery traditions of Cuzco, and the labor invested in Wari public architecture ran into millions of man days. There is little doubt that Cuzco became a province administered more or less directly from Huari, and that exploited locals were participating in an empire that promoted a new international identity.

Almost 1000 km north of Cuzco, in the Huamachuco Valley, is Viracochapampa, a Wari orthogonal cellular enclosure similar to, but somewhat smaller than, Pikillacta (Topic 1991; Topic and Topic 2001). Huamachuco had an impressive architectural tradition of its own, which probably contributed as much to Wari innovations as it received. Furthermore, Viracochapampa was not occupied for long, and much of its great enclosure remained vacant of interior compounds. So Wari presence in this northern region is unlikely to have been simple conquest and control as implied for Cuzco. More likely, it represents accommodation to indirect rule, or perhaps an even more mutual process, but surely involving some degree of control as well as the international Wari identity and material culture, at least among Huamachuco's elites. Perhaps a similar process explains Honcopampa, a town in the next valley to the south, the large Callejon de Huaylas. It seems to have been a center for indirect Huari rule, consisting of several palaces and mortuary monuments that combined local and foreign architectural canons, as well as ceramics.

The most intensive investigation of an intrusive Wari occupation outside the heartland is in the Sondondo Valley, about 130 km south of Ayacucho (Figure 37.2; Schreiber 1992, 2005). A small orthogonal cellular administrative compound, 125 by 255 m was constructed. Katharina Schreiber shows that Wari built roads through the area, relocated all the settlements, constructed a shrine, and terraced and irrigated the valley sides. This is an extremely convincing example of imperial conquest, colonization, and then administrative reorganization and control for imperial benefits. Huari exploited Sondondo.

Schreiber (2005) argues from her Sondondo study that similar behavior was more or less characteristic of Wari, and that consequently, it must be classified in the unilinear stage "empire." While I agree that Wari is best understood as an empire, classification often results in the imposition of the ideal characteristics on the past, creating unverified knowledge that goes untested because it conforms to our expectations. I suspect that variation in Huari's provincial policies was extremely great, as were the forms of its control and other influences. In many cases neither conquest, colonization, nor provincial rule seem indicated by the archaeological record. Conversely, even when these classic diagnostics of empire are lacking, as in Peru's north coastal valleys, Wari cannot be discarded as irrelevant. The presence of Wari ceramics in elite tombs, as at the Jequetepeque Valley site of San José de Moro (Castillo 2001), reveals at least some degree of participation in Wari's new international identity.

Schreiber's case study in Sondondo, fascinating as it is, may not represent typical Wari provincial rule, as she infers. Wari also occupied neighboring Chicha Valley, but the settlements and the landscape were modified very little (Meddens 1985). Why such difference in policy? A hint may be preserved in Sondondo – megalithic tombs. Not only

was Sondondo radically reorganized, but one of the sites has megalithic stone chambers that were probably sepulchers for nobles. Since comparable tombs are limited to the Huari capital itself, I suspect that the Sondondo Valley had a Wari royal residence, a country palace or royal retreat. Inca rulers built palaces some distance from Cuzco, where they could retreat from the public. The most famous example is Machu Picchu, but there are numerous others. Like Sondondo, the surroundings were intensively terraced, and royal mummies were kept there some of the time.

The Wari provincial administrative capitals of Peru's highlands, and other less known examples, reveal a profound difference between Wari and Tiwanaku. Wari behavior, albeit still far from adequately understood, is much more consistent with expectations of an empire than Tiwanaku, which contradicts fundamental expectations, even in its best case, Omo in the Middle Moquegua Valley. Huari did establish and administer provinces for the benefit of its homeland elite. It "Warified" provincials, and everywhere seems to have promoted a new international Wari identity with distinctive material culture. Tiahuanaco has only one known case of what might have been provincial administrative architecture, but the residents of the site seem to have rigidly maintained heartland Tiwanaku identity, without interfering with locals, who show no evidence of participating in a unifying social process. Elsewhere, there is no trace of administration, but much more evidence for material culture employed to create a common new Tiwanaku identity.

Of course, definitive conclusions are still premature. Along the coast Wari's orthogonal cellular compounds are very rare, consistently smaller than in the highlands, and they often have such sparse occupational debris that it is difficult to confirm their cultural affiliation. In the far south coastal Camana Valley, excavations by Malpass (2002) at a small orthogonal cellular complex produced barely a handful of Wari-related sherds. Significantly, the south coastal valleys of Nazca, Ica, and Pisco experienced radical ceramic changes during the Middle Horizon, with Wari-related pottery styles replacing millennia-long local traditions. This certainly suggests Wari colonization, followed by the formation of a new identity. To date, however, only one tiny orthogonal cellular compound has been identified, Pataraya, high in the Nazca Valley (Schreiber 2001).

Peru's central coast has little evidence for specialized Wari administrative architecture either, in spite of great cultural transformations during the Middle Horizon. Wari-style pottery and textiles appear in burials at Pachacamac (Kaulicke 2001), Huaca Malena, Chimu Capac, and other sites. SAIS icons became ascendant, innovative ceramic styles appeared, and new, but still poorly defined, architectural forms materialized at centers such as Cajamarquilla. Settlement patterns experienced change, but the small Socos site in the Chillón Valley (Isla and Guerrero 1987) seems to be the only example of orthogonal cellular construction.

On the north coast Wari-style pottery and ovate obsidian projectile points appeared in burials at San Jose de Moro (Castillo 2001). Wari ceramics and icons were found at Huaca del Sol/Huaca de la Luna, and other centers. Wari tapestries were buried at Huaca Cao Viejo, and other cemeteries with important local elites. A new polychrome ceramic style called "Huari Norteño" (Larco 1948), inspired by Wari but with strong local components, gained widespread popularity. In later north coast religious art several SAIS-inspired icons accompany older Moche supernaturals.

In the mid-twentieth century archaeologists agreed that north coast cultures were so completely transformed during the Middle Horizon that they must have been conquered and reorganized by Wari. However, recent research (Bawden 1996; Chapdelaine 2002) identifies cultural patterns thought to have been introduced – including great rectangular

administrative enclosures, planned urban centers, and probably even state government – in pre-Middle Horizon Moche culture. Emphasizing continuity in north coast culture as well as political capitals such as Pampa Grande that reveal no Wari presence (Shimada 1994), the convulsions of north coast civilization during the Middle Horizon and Late Intermediate Period are now attributed to internal factors, not Wari warriors. However, this reversal may represent extreme swings of the intellectual pendulum, from inferring Wari conquest and absolute control to the inference that Moche culture remained totally independent of Wari throughout the Middle Horizon. Wari may have been resisted by the Moche, at least from about the Viru Valley north (Topic and Topic 1987). But of course, even if these scholars are correct, the north coast still reveals enough Wari influence to indicate significant participation in the newly emerging international Wari identity.

Definitive interpretations of the spread of Wari and Tiwanaku culture during the Middle Horizon are still elusive. There seems little doubt that some kind of imperialistic organization and expansionism was involved. But the Andean archaeological record does not confirm the imperial organization or goals typical of "empire" as an evolutionary stage. Tiwanaku is more divergent than Wari, for at least in some parts of the highlands, Huari behaved much like a typical imperial power. However, extremely sparse occupation in some orthogonal cellular compounds and even seemingly never-completed enclosures, demands more investigation if Wari provincial organization and political economy are to be understood. If the transformed and highly administered Sondondo Valley characterizes Wari provincial activity, imperialism was much more like the evolutionary ideal than implied by the archaeological remains from the central coast, for example. But the Sondondo Valley may not have been a province at all, but a royal estate. Many coastal valleys, some revealing remarkable cultural transformation during the Middle Horizon, have little or no evidence for direct Huari administration. Perhaps indirect rule was employed, but this remains to be documented. On the other hand, the adoption of SAIS icons, the popularity of new, innovative styles in pottery, the prominence of clothing of interlocking tapestry – often depicting SAIS themes – and other material culture do attest to the emergence of a shared new Wari religion and identity.

Tiwanaku is more confusing. It seems to have created mechanisms for provincial rule in Moquegua, only to ignore the exploitative goals of empire. In other areas the nature and processes of Tiwanaku incursion are far from understood, but seem to be based more on the promotion of new religion and identity through consumption of distinctive material culture. Was this an immature step toward imperialism that was never realized, or some kind of cultural formation that is not adequately understood by archaeologists?

Among many practices that promoted new Wari and Tiwanaku identities, one of the most prominent was drinking maize beer from a distinctive chalice-like kero. Was a single new system of etiquette shared by Wari and Tiwanaku? Did both cultures subscribe to a higher-level identity, perhaps like Christianity, with competing centers, like Rome and Constantinople?

THE CITIES OF HUARI AND TIAHUANACO

Prior to the Middle Horizon, neither the Huari nor the Tiahuanaco heartlands seem likely places for the appearance of a state capital capable of extending influences over millions of Andeans. During the preceding Early Intermediate Period, north coast Moche culture was the Central Andean evolutionary apogee. The wealth and power of its principal lords, such

as the rulers buried at Sipan, imply a degree of social differentiation and hierarchical power characteristic of civilized, state government. However, if Castillo and Uceda (Chapter 36 in this volume) are correct, the realm was composed of small and competing "peer polities" and never unified into one centralized regional state. But Moche survived into the first century or so of the Middle Horizon, so refined chronological control is required to determine what political and cultural developments were achieved after Wari/Tiwanaku influences impinged on the Moche, and which significantly precede them.

Antecedent conditions around Tiahuanaco are ill-understood, in part because nationalistic narratives about the monumental center exaggerated its antiquity (see Chapter 55 in this volume). When the Moche were constructing great pyramids in the capitals of their "statelets," during the first half of the Early Intermediate Period, the Pucara site, north of Lake Titicaca in modern Peru, was ascendant in the altiplano. Pucara collapsed between AD 200 and 400, but Tiahuanaco and its heartland do not seem to have become the new altiplano center before about AD 500, and perhaps even somewhat later. In fact, the Tiahuanaco heartland appears somewhat backward during the Early Intermediate Period. A larger settlement was located only 30 km away, near the tip of the Taraco Peninsula (Bandy 2006). But population was growing, perhaps a result of raised fields agricultural technology, exploiting wetlands along the lakeshore. However, there continue to be questions about the chronology and use history of Lake Titicaca's raised fields. Just to the south of Tiahuanaco are vast grazing lands, and the early monumental center of Khonko Wankani (Janusek et al. 2003).

Huari's Ayacucho Valley is also poorly known for the Early Intermediate Period Huarpa culture (see Leoni 2006). Settlement survey indicates that population grew immensely and a complex settlement system was developing (MacNeish et al. 1981), perhaps supported by new engineering skills for long irrigation canals, as well as terracing steep hillsides for farming. However, former ceramic classifications have not distinguished the end of the Early Intermediate Period from the early Middle Horizon adequately; therefore dating requires future revisions. The claim that a single state unified the Valley (Leoni 2006; Lumbreras 1974) is based more on evolutionary expectations than on archaeological data: if Huari became an empire early in the Middle Horizon, the antecedent Huarpa culture must have been a state. More probably, the Ayacucho Valley was like the Tiahuanaco heartland, culturally rather backward during the Early Intermediate Period, at least relative to the Moche or Pucara cultures. Certainly, neither heartland stands out as the place that would be expected to produce a great urban capital and expansive state.

As discussed above, Huari and Tiahuanaco were historically related in their ascendancy to prominence – they do not represent independent evolutionary processes. In some respects they were astonishingly similar, but in some others, virtual opposites. This is apparent in the capital cities' built environments.

The people of Tiahuanaco constructed in two extremes (Figure 37.9). Homes were of adobe, a part of the land that melted back into the altiplano without leaving a trace. Sturdy and warm, but ephemeral, they affirmed generationality. On the other hand, public monuments were megalith-faced pyramids participating in eternal sacred space-time. Within Tiahuanaco's monumental civic center, gateways, walls, and building perimeters were precisely aligned with sacred phenomena such as mountain-tops and astronomical positions, with commanding vistas and transitional places participating in a cosmos that dwarfed humans as much as the great monuments dwarfed visitors to the metropole (Benitez n.d.; Isbell and Vranich 2004; Vranich 1999, 2002). Carefully organized vistas framed the façades of platforms, revetted with megalithic stonework of awesome proportion and

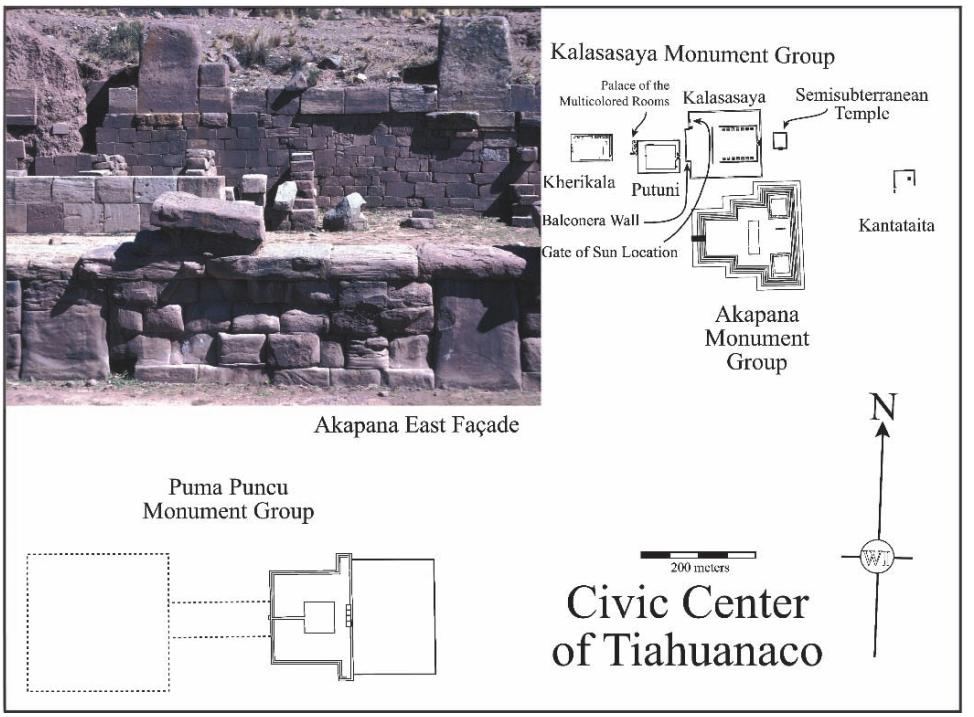

Figure 37.9. Map of Tiahuanaco's civic center and photograph of the megalithic stone revetment on the east face of the Akapana. (Map based on Arellano 1991: fig. 2 and fig. 20; Escalante 1993: fig. 113, fig. 143, fig. 187, fig. 189, fig. 194, fig. 200; Kolata 1993: fig. 5.3, fig. 5.5a, fig. 5.36a and fig. 5.36b; and Manzanilla 1992: fig. 4; Posnansky 1945: plate 1; Vranich 1999: fig. 6.3, fig. 7.1; photo by William H. Isbell)

precision (Protzen and Nair 2002). Some surfaces may have been covered with burnished metal sheets. Beyond the civic center were simple mud and thatch huts.

Huari people built with field stone (Figure 37.10), covering rough walls with mud that was often finished with shiny white plaster (Isbell et al. 1991). Whether a modest residence or an elite palace, Huari enclosed places with high walls; surviving examples of walls are 2–4 m thick and 8 m tall. Once they constituted multi-floor labyrinthine buildings, proclaiming the domestication of landscapes. Architects shut out nature by building repetitive, modular cells within rectangular block apartments. But chaos was apparently never defeated for the map of Huari reveals no comprehensive city plan. There were tendencies to maintain orientations within areas, but old buildings were razed and new ones constructed with little concern for the former urban grid. Approaching Huari, the visitor was confronted by a confusion of enormous architectural blocks, erupting like jagged white teeth from a skeletal jaw of gray volcanic rock.

Tiahuanaco lies 20 km from the shore of Lake Titicaca, where the valley narrows and rises sharply, providing a unique view of the sacred snowcapped mountain of Illimani to the east, and a fading view of the hallowed lake in the west. The southern horizon is dominated by the three peaks of the, spiritually empowered, Quimsachata range (Alexei Vranich, personal communication). Before the Akapana pyramid was constructed, blocking the old horizon view, the south celestial pole was directly over the highest peak of Quimsachata

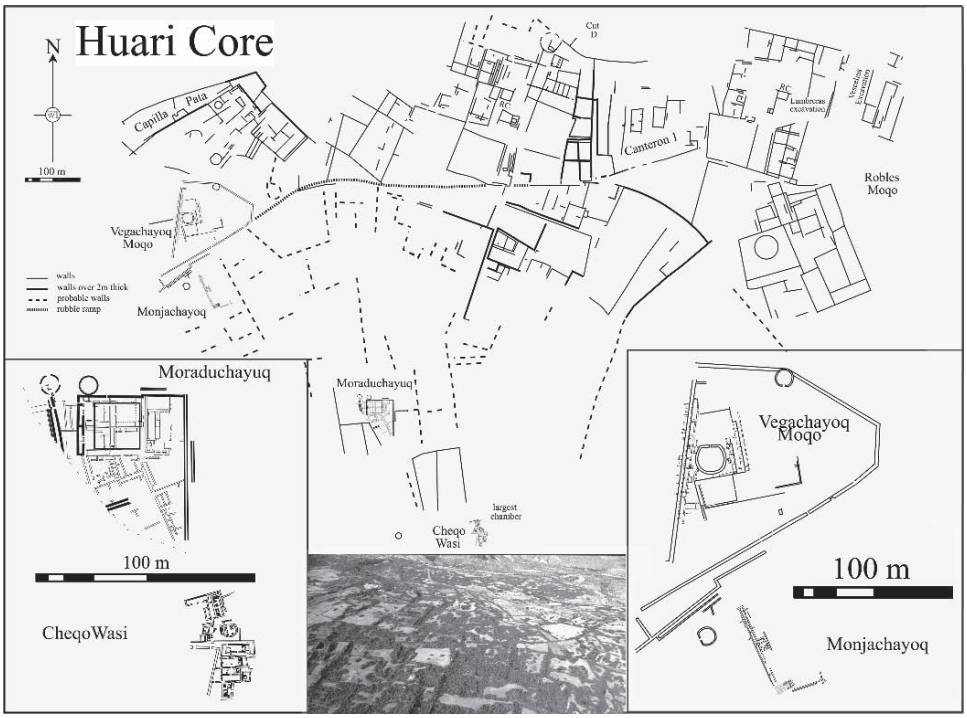

Figure 37.10. Civic center of Huari and air photo of massive, fieldstone walls of orthogonal cellular architecture in the vegetation-covered northern sector of the city. (Map and photo by William H. Isbell)

when viewed from Tiahuanaco's Semisubterranean Temple, through its entrance. From this vantage, dark cloud constellations of the Milky Way appeared to ascend from, and return to, the Semisubterranean temple (Benitez n.d.).

Huari was sited on a long spur of elevated land that projects from the valley side, with deeply entrenched streams surrounding it. Success of the city probably reflected new irrigation technology, based on long canals through difficult terrain, providing water to residents as well as irrigated terraces on slopes below. Approaching the city travelers ascend and descend the broken valley terrain. The city comes into sight, is lost, comes into sight again, disappearing and reappearing, until the trail narrowed into a walled street in which visibility was limited to pedestrians before and behind, and a slice of sky above.

Tiahuanaco underwent a dramatic transformation between AD 600 and 700 (Isbell and Vranich 2004; Kolata 2003; Vranich 1999, 2002) that established new monumental standards for civic architecture and greatly increased the resident population. New international ceramic styles replaced many of the old pottery shapes, implying changes in cuisine as well as comensal etiquette – probably associated with new feasting events linked to the SAIS religious innovation. Old buildings, the Semisubterranean Temple, and perhaps the Kalasasaya and poorly understood Kerikala, were selectively dismantled (Couture 2004; Couture and Sampeck 2003) to build new structures that included the Putuni, the remodeled Kalasasaya, the Kantatayita, and, most visibly, the towering Akapana pyramid. At the western entrance to the city construction began on the Pumapuncu.

Before this urban renewal, Tiahuanaco's civic center consisted primarily of the small Semisubterranean Temple, with an early version of the Kalasasaya added somewhat later. The Semisubterranean Temple was carefully aligned to observe the Milky Way over the Quimsachata peak as well as lunar extremes. But, the old view of the southeastern horizon was blocked by the lofty new Akapana Pyramid, certainly a deliberate act. Probably at more or less the same time, renovations in the Kalasasaya added the Balconera wall (Figure 37.9), whose monumental ashlars track annual solar movement against the western horizon. Apparently, Tiahuanaco's seventh-century architectural transformations included the change from an old lunar almanac to a new solar calendar, with focal astronomical observations shifting from the Semi-subterranean Temple to the refurbished new Kalasasaya. SAIS iconography on the later Gate of the Sun expresses the solar year, so Tiahuanaco's architectural renovation probably corresponds with the adoption of SAIS supernaturals, and new ritual practices keyed to the solar year.

Tiahuanaco became the primary pilgrimage objective of the southern Andes, with its major entrance the west-facing Pumapuncu mound. Monumental buildings had deliberate circulation routes and programmed vistas. Vranich's (1999) study of the Pumapuncu indicates that visitors ascended the mound and entered a narrow corridor, probably passing through a megalithic gateway, to suddenly emerge in a courtyard with a view of the sacred Illimani Mountain, the Akapana Pyramid, and residential suburbs beyond the hallowed civic center. Along these and other routes, selected locations were probably punctuated with music, song, dance, and perhaps even costumed performances. Many of Tiahuanaco's residents were employed in maintaining the on-going spectacle, and others probably produced goods sought by visitors, including souvenirs of the holy pilgrimage.

Nineteenth- and early twentieth-century consensus was that Tiahuanaco had been a vacant ceremonial center (Squier 1877). In the mid-twentieth century dense refuse littering the entire surface was finally understood to indicate a sizable ancient population (Parsons 1968). At that time scholars were rethinking ancient American cities, arguing that many had been great demographic centers. However, arguments sometimes ran to excess. Carlos Ponce (1981) declared that Tiahuanaco's urbanized area totaled some 4 to 6 km^2 with a resident population of 50,000, and perhaps as many as 100,000. Alan Kolata (1993: 205) affirmed 30,000 to 60,000, with about 115,000 in the greater urbanized Tiahuanaco heartland. However, evidence was lacking, and a decade later Kolata (2003: 15) withdrew to a more modest figure of 15,000 to 20,000 inhabitants. I find this the most convincing estimate.

At Tiahuanaco's peak thousands of hectares of raised fields were under intensive cultivation in the wetlands along the shores of Lake Titicaca. In spite of continuing disagreements about ancient productivity (Erickson 2003; Kolata 1993, 2003), this widely distributed South American agricultural system appears to have provided Tiahuanaco a relatively secure agricultural base, despite high altitude and frequent frosts. It is now argued that a century-long drought beginning about AD 1100 devastated altiplano raised-field production, causing Tiahuanaco's collapse (Kolata 2003). This is thought-provoking research, but conclusions are far from confirmed.

Modern architectural reconstructions at Tiahuanaco, especially the Kalasasaya, violate the original forms. Stone blocks from some of the original walls were extracted to reconstruct others. Furthermore, artists' renderings of the metropole depict it as an open city crisscrossed by great avenues that defined a single urban grid to which pyramids and public squares were oriented (Escalante 1993). Some scholars (Kolata 1993; Kolata and Ponce 1992) add a surrounding moat, converting the civic center into a sacred island. However, much of this imagery comes from romantic speculation early in the twentieth century

(Posnansky 1910). Other Andean cities consisted of securely-walled compounds and enclosures of different sizes, with little evidence for great avenues, expansive public spaces, or a universal grid. In fact, some of the regularity of Tiahuanaco's urban grid and building orientation appearing in recent maps has apparently resulted from plotting difficult-to-locate building corners in terms of grid-based expectations, rather than the real spot.

Current ground penetrating radar and excavations at Tiahuanaco are showing that the altiplano capital was more like other Andean cities than formerly thought (Alexei Vranich, personal communication). Around the Akapana pyramid, Semisubterranean Temple, and Kalasasaya, a great gravel plaza with subterranean drains was constructed, but over older architecture, in a great urban renewal program. Later, even this plaza was being covered with rectangular enclosures, many probably the residences of elite individuals and groups.

Several compounds excavated near the center of Tiahuanaco are interpreted as palaces (Couture 2004; Kolata 1993, 2003), and, of course, archaeologists can learn a great deal about ancient political organization by examining ruins of palaces. Tiahuanaco's most extensively studied example was named the "Palace of the Multicolored Rooms." But it is very small, about 20 to 25 m long and 7 or 8 m wide, no larger than a third- or fourth-order Inca chief's home, and significantly smaller than the public building at Omo M-10, also perhaps a palace. Other Tiahuanaco architectural complexes, tentatively identified as palaces, are equally small. If these small residences were the palaces of Tiahuanaco's senior leaders, I doubt the existence of a supreme monarch. More probable would be some kind of council or senate in command of the city, with a larger number of less exalted top leaders.

Alternatively, buildings identified as Tiahuanaco's palaces may have been only part of original royal residences, such as the kitchens and retainers' quarters. The Palace of the Multicolored Rooms is attached to the rear of the Putuni, a small but monumental enclosure, that lies right behind the great Kalasasaya. Perhaps the three buildings constituted a single complex, all of which was a royal palace (Figure 37.9). Together, the form – a sequence of enclosed patios in descending size, with impressive gateways between them – bears significant resemblance to later Inca palaces, as do Tiahuanaco's Pumapuncu complex, and even the Akapana. Royal palaces of this magnitude would imply that Tiahuanaco was ruled by kings wielding astonishing power.

The Tiahuanaco rulership question has been addressed with sculpture. Tiahuanaco's monumental stone statues represent kings (Figure 37.7), with their prominence in the metropole demonstrating royal power. However, the statues seem deliberately generic, without distinguishing features. Furthermore, Berenguer (2000) points out that many of the statues carry what appear to be a kero goblet, and a snuff tablet. Paraphernalia for hallucinogenic trance seems more properly associated with shamanism than rulership, unless shamanism and rule were more integrated in Tiahuanaco sociopolitical structure than anthropologists generally imagine.

It would be attractive to use Tiahuanaco mortuary practices to identify rulers and elites, but information is scarce. Hundreds and perhaps thousands of graves were looted in the past to create spectacular private collections of Tiwanaku artifacts, but written descriptions of the tombs are not available. Archaeologically-excavated graves range from simple holes to stone-lined pits or cists, to shafts with bell-shaped chambers, to shafts with side chambers. Most graves contain a single individual, flexed and seated or reclining to one side, with several ceramic vessels, and perhaps some jewelry. Feline incense burners, often with heavily-sooted interiors, are found in some graves, and may identify burials of shamans. Small objects of gold occur, usually cut from thin sheets of foil. Tiwanaku graves from Moquegua, although mostly looted, appear similar to those of the highlands.

To date, no truly spectacular tombs have been reported from the capital, or elsewhere within the Tiwanaku sphere. The most wealthy tomb is surely the "Treasure of San Sebastián" in Cochabamba, if the casual discovery made in 1916 really represents the grave of a Tiwanaku provincial official, as consistently asserted (Berenguer 2000: 72–73). Even this find—a costume of gold consisting of a staff, sandals, wide arm and leg bracelets, two pectoral disks, belt, epaulets, necklace, ear ornaments, a large forehead ornament, a golden bowl and many sequins originally sewn onto a tunic and/or skirt—could not have weighed more than a single gold backflap of a Moche Lord from Sipan. Perhaps more significantly, the kinds of gold ornaments – broad arm and leg bracelets, circular pectorals, forehead ornament – are not shown in Tiahuanaco sculpture. If these gold objects constituted the uniform of a Tiwanaku governor, similar accessories were not shown on metropole monoliths. I suspect that the costume is not Tiwanaku, but later – the ruler of an early post-Tiwanaku kingdom.

Unlike Tiahuanaco, Huari has no megalithic pyramids. Its architecture avoided volumetric forms in favor of labyrinthine enclosures. Rough-stone masonry with gleaming white plaster was used for palaces, temples, and domestic residences (Isbell and Vranich 2004).

Some of Huari's buildings were constructed of carefully shaped and fitted ashlars. Examples include a semi-subterranean temple at Moraduchayuq, a royal mausoleum at Monjachayoq, and noble tombs at Cheqo Wasi. Cut stones are present at Marayniyoq, and unassociated blocks are found here and there about the Huari metropole, including examples reused in late rough-stone walls. So stone-cutting was known, although megalithic masonry has not been common enough at Huari to be one of its defining architectural characteristics. Significantly, it is becoming apparent that cut stones were looted from Huari in quantities exceeding our former understanding, probably beginning in early Spanish Colonial times. Perhaps megalithic architecture was quite a lot more common in the ancient city than in its twentieth-century ruins.

Huari's architectural compounds were carefully planned, beginning with foundations and drains, up through doorways and roofs. Most were divided into rectilinear or trapezoidal grids with a small repertoire of modular "apartments" repeated over and over, giving Huari architecture its descriptive name, "orthogonal cellular" (Isbell 1991). Circular or D-shaped buildings seem to have been temples.

The most popular modular cell consisted of an open courtyard, surrounded on three or four sides by elongated rooms or halls, about 2 m wide, of one, two, and possibly three stories. A wider room, a niche hall, or some other form might occupy one side of the patio. Around the edge of the courtyard was a broad bench raised about 30 cm above the patio floor, and about 100 to 175 cm wide, that was probably covered by long eaves of the multistoried halls. These benches made excellent work spaces, sheltered, but well lit. By contrast, the narrow, roofed halls seem to have had only one or two doorways, and no other sources of light, so it is likely that they were dark, and fit primarily for storage and perhaps sleeping [Note 4]. Nonetheless, many patio groups were residences, and are probably best understood as apartment houses.

More or less continuous remains of stone architecture – including enormous enclosures – and dense occupational trash cover an area of about 2.5 km^2 at Huari. Traces of refuse and occasional walls sprawl over another 15 km^2 of rugged terrain. The most conservative techniques for estimating prehistoric population suggest 10,000 to 20,000 people in the city at its peak, while more liberal assumptions imply some 35,000 to 70,000 inhabitants (Isbell et al. 1991). An estimate of 20,000 to 40,000 seems most reasonable, so in all

probability, demographically, Huari and Tiahuanaco were similar, with Huari probably a bit larger at their apogees.

As a city, Huari coalesced from several earlier villages slightly before the beginning of the Middle Horizon, about AD cal 650. I suspect that its original core consisted of several palace compounds that attracted migrants to settle around them as retainers. However, Huari buildings were probably never unifunctional, but constantly "becoming." Vegachayoq Moqo, the largest excavated area in the ancient city, appears to have begun as a palace, or royal court, with a roofed, stage-like space for formal events that overlooked an assembly space. Later, a D- shaped temple was constructed in the patio, probably a mortuary monument in honor of a deceased king or royal dynasty. Eventually a great wall was built across the court that contained many tombs for dead of modest status. So Vegachayoq Moqo seems to have begun as a palace, to become a royal mortuary monument where visitors revered high-status dead. Still later it became a cemetery for persons of intermediate and perhaps even low status, a function that may have continued until the city was abandoned. But some parts of the building, and especially the elite residential area and stage-like court, were deliberately buried as the building complex was remodeled.

Across a walled street from Vegachayoq Moqo is Monjachaoq, dreadfully looted, but containing remains of a royal tomb deep below its surface (Isbell 2004; Perez 1999). Since it is unlikely that the Monjachaoq tomb belonged to the king who resided at Vegachayoq Moqo, the southwestern portion of Huari probably included several royal palaces, occupied by a series of kings.

Monjachaoq, 0.5 km to the east, is a space initially occupied by an impressive, semi-subterranean temple of cut stone, that is so reminiscent of Tiahuanaco architecture that it might have been constructed by Tiwanaku workmen (Isbell 1991). The temple was probably built in Middle Horizon 1, about the same time Huari and Tiahuanaco intruded into the Moquegua Valley. Perhaps the two did engage in war, with victorious Huari bringing captured soldiers, experienced in Tiahuanaco megalitihic construction techniques, back to their own capital to labor for new masters. But this is speculation. Perhaps stone cutting and megalithic masonry are not so difficult to reinvent semi-independently. More research is needed.

After several remodelings the Moraduchayuq temple was leveled. A rectangular enclosure was built and subdivided into standardized cells, each consisting of a patio surrounded by elongated halls, with at least a second floor that was probably of similar plan. These patio groups housed people of intermediate status, inferred to have been permanent residents, probably minor administrators within Huari's politico-economic bureaucracy.

Refuse at Moraduchayuq contained few special tools associated with craft production or agriculture. Luxury goods imply at least some status for the residents, and large quantities of food-serving vessels suggest consumption beyond the level of households, probably institutionalized feasting. Since remains of kitchens are small enough to have been domestic, food served at feasts may have been prepared elsewhere. Moraduchayuq residents seem to have been part of a larger organization, probably Huari's government, perhaps middle managers within the state apparatus, who offered periodic feasts to the workers they supervised (Isbell et al. 1991).

A third area excavated at Huari is Cheqo Wasi, where several concentrations of megalithic chamber tombs were found (Isbell 2004; Perez 1999). These impressive graves represent the second highest level in Huari's social hierarchy, well above the residents of Moraduchayuq, and immediately below the royal tomb identified at Monjachaoq. Unfortunately, heavy looting makes interpretation of Cheqo Wasi difficult, and none of the

compounds was completely defined by excavators. Does this concentration of megalithic tombs represent a dedicated noble cemetery, or the mortuary rooms of several palaces that happened to intersect in this part of the city?

Huari's urban core seems too congested to accommodate the heavy flow of visitors that pilgrimage involves. Based on what we currently know, Huari's streets were narrow and walled. Visitors would have required guides to avoid losing their way in the confusing compounds between these arteries. And there were no great open spaces like the plaza of remodeled Tiahuanaco. However, several hilltops overlooking Huari have remains of extensive Middle Horizon buildings, and ample space for large numbers of campers. From the peak of Cerro Churu, where a huge rectangular ruin is located, Huari occupies the north horizon, while turning in the opposite direction reveals the Huamanga Basin with the southern Peruvian cordillera behind. On a great ridge north of Huari is Marayniyoq with Middle Horizon ruins that include spectacular megalithic construction, today reduced to foundations from looting. It has a commanding view of Huari to the south, and the opposite gaze reveals the Huanta Valley, Mantaro River, and the central Peruvian cordillera beyond. Perhaps Huari was at least a little like Tiahuanaco in serving as an objective for pilgrimage, but if so, visitors' experiences were choreographed very differently.

Huari has several stone monoliths that represent humans, all without SAIS iconography. In fact, none has any fine-line incision, the technique used for most SAIS sculptural representations at Tiahuanaco. Could Huari's statues represent kings, as suggested, but certainly not confirmed, for Tiahuanaco?

Huari has a second city – Conchopata – in the southern "Huamanga enclave" of the Ayacucho Valley (Figure 37.2; Cook and Benco 2001; Isbell and Cook 2002; Knobloch 2000; Ochatoma and Cabrera 2002; Tung and Cook 2006), only 20 to 40 ha in size. Early in its history, Conchopata seems to have competed with other settlements. Its achievement of local dominance probably related to adoption of SAIS iconography, followed by success in ritual more than in military accomplishments – although strontium analysis indicates that "trophy heads" in two of Conchopata's temples were probably foreigners, not local ancestors (Knudson and Tung in press). Perhaps Conchopata even competed with Huari at an early moment, and interacted with Tiahuanaco in the Middle Horizon 1B synthetic reconfiguration of SAIS iconography. A unique art theme shows warriors riding in reed canoes as they brandish weapons (Ochatoma and Cabrera 2002). Perhaps this represents heroes who journeyed to the altiplano, across sacred Lake Titicaca, to negotiate a new religious ideology with Tiahuanaco counterparts.

SAIS images known from Huari tend to be later than at Conchopata, and on regular-size vessels, implying their more secular nature. But little of Huari has been excavated, although a surprising recent discovery at Vegachayoq Moqo includes a textile fragment decorated with Profile Attendants. Spectacular unprovenienced textiles with SAIS icons, some of them remarkably similar to images painted on oversize Conchopata vessels have been described by William Conklin (1970, 2004). These fine weavings were surely produced in specialized highland workshops that remain to be discovered by archaeologists.

The nature of relations between Huari and Conchopata is not clear, but mortuary remains imply that Conchopata's rulers were at least two steps below the supreme dignitaries of Huari. Much of the surviving architecture seems to represent small palaces where polygynous nobles vied for power and prestige, employing feasts and banquets as one competitive medium. Wives and concubines manufactured pottery for special events, some decorated with SAIS icons. But these women were also constructing more visible new "urban woman" identities based on their control of pottery making, brewing,

and other comensal practices. Diet at Conchopata was maize-based, with no difference between men and women (Finucane et al. in press).

The Huari heartland includes several examples of planned orthogonal cellular architecture, ranging from tiny Jargampata, to immense Azángaro. These sites often include terraces and irrigation canals that were almost certainly constructed by corveé labor. It seems likely that all were functionally similar to Inca royal estates – rural centers of intensive agriculture, owned and managed by kings and nobles to enhance personal wealth and power. If so, "royal estates" are much more obvious around Huari than at Tiahuanaco.

Little is known about the collapse of Huari, but in the central and south highlands SAIS iconography disappeared entirely, as did urban centers and complex political units. Change was profound. However, excavations in Huari's Moraduchayuq compound indicate gradual abandonment, so it seems that violent military conquest is unlikely, as well as similar catastrophes. In recent years we have learned that the capital was probably occupied for a century or more than formerly believed, until the end of the Middle Horizon (in Epoch 4, not Epoch 2, as formerly believed), so some progress is being made. A few scholars have sought to explain Huari's abandonment with the same drought implicated for Tiahuanaco, but even in the altiplano this interpretation lacks confirmation, so its extension to Huari seems premature. A great deal more archaeological research is called for.

CONCLUSIONS

The rise of Huari and Tiahuanaco was linked, interactive and simultaneous. Synthetic reconfiguration of SAIS iconography and shared colonization of Moquegua are obvious aspects of the relationship, but many others are implied – from similar drinking vessels to the Tiahuanaco-like megalithic semi-subterranean temple at Huari.

SAIS icons surely represent a pantheon of deities similar to later Inca gods. They were associated with a new solar calendar as well as an annual round of ritual practices that constituted the core of a new religion embraced by both metropoles and cultural spheres. The role of this new religion in Middle Horizon conquest and expansion was surely very significant, but remains little understood today. SAIS iconography disappeared in the highlands at the end of the Middle Horizon quite utterly, so it is not surprising that analogies with Inca religion are not terribly close.

Both Huari and Tiahuanaco were capable of colonizing distant lands and setting up provincial administration similar to what is classified as "empire." Huari used imperial strategies in provinces much more than Tiahuanaco did, but a great deal of metropole influence in both realms is not consistent with our ideas about how empires operate. Apparently alternative organizational practices remain poorly understood by evolutionary archaeology. Tiahuanaco in particular defies our understanding of its political and economic dimensions. However, both Wari and Tiwanaku diffused very distinctive material culture that was surely employed far and wide to express a new, international identity, associated with each metropole. Similarity between the two material repertoires suggests that these new identities were linked, perhaps even two variants of a single religion.

Both Huari and Tiahuanaco were large pre-industrial cities, with maximal populations exceeding 15,000 inhabitants. Both could have reached double this figure, although it appears that Huari was somewhat larger in permanent inhabitants, while Tiahuanaco received the greater numbers of pilgrims, perhaps by several orders of magnitude. Neither city seems to have been highly differentiated in terms of economic or craft specializations. Tiahuanaco

seems more ceremonial; Huari more administrative and residential. In spite of the shared religion, the two cities were remarkably different in their construction of place, including their built environments, and ideas about refuse and pollution. Together they reshaped Andean culture, shifting the focus of civilization from Peru's north coast into the highlands, hundreds of kilometers south, where the Inca Empire would appear half a millennium later.

Acknowledgments I am privileged to have excavated at Huari and elsewhere in its heartland, as well as in the Tiwanaku heartland, at Iwawi. Working in both core areas has provided me a unique perspective on the interrelated rise of Huari and Tiahuanaco. Because Huari, Tiahuanaco and the Middle Horizon constitute such a broad topic, and the length of this chapter is restricted, I was obliged to eliminate much bibliography, citing only one or two recent publications of an author, where a more complete bibliography can be found. Special thanks to Alexei Vranich as well as Leo Benitez who presented lectures on their current Tiahuanaco research at SUNY Binghamton in the spring of 2006. Charles Stanish and the Cotsen Institute of Archaeology organized a conference on Tiahuanaco in May, 2006, with Vranich and his research team, Paul Goldstein, and many others, presenting their recent research. In May 2007, Mauricio Uribe and I organized a conference at the University of Chile, sponsored by Dumbarton Oaks and the Cotsen Institute, on SAIS iconography. Specialists from around the globe attended, presenting research and discussing issues. All these sources have informed my thinking as it appears here. I also thank my colleagues from recent excavations at Conchopata, including José Ochatoma, Alberto Carbajal, Anita Cook, Tiffiny Tung, and Martha Cabrera. Ismael Perez shared his current work at Huari, as well. Patricia Knobloch provided many insights into iconography and chronology. Her knowledge of Middle Horizon styles and their synchronization is without equal. Joerg Haeberli generously shares his thinking with me. Helaine Silverman read and commented on an early version of this chapter. Judy Siggins, my wife, read, commented and edited several versions. Without her assistance, it would still be in preparation. I, of course, bear sole responsibility for any errors.

NOTES

1. In the literature, Wari is also spelled Huari, and Tiwanaku is also spelled Tiahuanaco (and at least one other variant). I have proposed the following orthographic conventions. Wari – the wide-spread Middle Horizon culture associated with the city of Huari. Huari – the capital city of the Wari polity and culture, located in the Ayacucho Valley of central Peru. Tiwanaku – the widespread Middle Horizon culture associated with the city of Tiahuanaco. Tiahuanaco – the capital city of the Tiwanaku polity and culture, located near the south shore of Lake Titicaca, in northwestern Bolivia.
2. Textiles were surely an important medium for SAIS iconography, and probably one in which major artistic canons were worked out. However, their delicate nature means that they do not preserve at Tiahuanaco and elsewhere in the Andean highlands except under exceptional circumstances.
3. Conchopata, the second Middle Horizon city in Huari's Ayacucho Valley, was located only 10km from the capital. It was a center where painted pottery was manufactured, which was decorated with religious icons of the SAIS and other traditions. Much of Conchopata has been destroyed by urban growth of the modern city of Ayacucho, but emergency excavations have also been fairly extensive, so Conchopata and its SAIS icons are better known than Huari and its material culture.
4. Some architectural models of Huari buildings show a row of small windows above the tops of the doorways. Windows of this kind have not been identified in excavations, but perhaps because walls are rarely preserved to sufficient height, especially if windows reduced structural stability. Also, a very small number of objects that were probably lamps have been discovered, and a few niches whose tops are preserved have traces of soot that suggest interior lighting with portable lamps.

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