Archaeological Investigations at Pikillacta, a Wari Site in Peru

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The 1989 and 1990 field seasons at the Wari provincial site of Pikillacta in the valley of Cuzco, Peru, comprised the first extensive excavation of the second-largest existing Wari architectural complex. Occupied between A.C. 600 and 900, Pikillacta was built in three successive construction phases and finally abandoned before completion of the final one. Excavations revealed well-preserved architecture in the center of the site, including such features as gypsum-plastered floors and walls; superimposed floor remains collapsed on one another, demonstrating the existence of multi-storied buildings; plastered staircases; plaster-lined niches; and a variety of sub-floor offerings pits. Although the interiors of the buildings were largely devoid of artifacts, excavations in the site’s principal midden produced an abundance of material: large quantities of ceramic remains, including such foreign styles as Nazca and Cajamarca, as well as objects of bone, shell, metal, obsidian, and worked stone. Evidence is presented that addresses many of the long-standing questions regarding this unusual site. The data suggest a sudden but orderly abandonment of Pikillacta in the midst of the last construction phase. Entrances to many of the buildings were carefully sealed, and at least one partially constructed building was intentionally buried. There is also evidence that the central portion of the site was consumed by fire during or shortly after abandonment.

Introduction

How and when the first Andean imperial state developed has long been the subject of scholarly debate. By the time of the Spanish conquest in A.C. 1532, the majority of the vast territory of Andean South America had been united into a single political entity known as the Inca Empire. The Spanish conquerors were astonished not only at the size of the Empire but also by its sophisticated political and economic structure, and by its monumental public works. Soon after the Conquest, the Spaniards made inquiries into the origins of the Inca state, learning that the empire had been in existence for only about 80 years (Rowe 1946; 205; Schaedel 1978: 115). This seems entirely too short a time for the Incas to have not only conquered such a vast territory but also to have independently invented all of the political and economic institutions necessary to control it. Recent archaeological studies have demonstrated that the Incas were the end product of a long process of social evolution, and that the origin of the state and the concept of empire lay further in the past than the Spanish were told.

Research focusing specifically on the remains of the Wari culture reveal archaeological evidence for the emergence of an expanding state during the Middle Horizon time period (A.C. 540–900). Several monumental architectural complexes have been identified as Wari state centers of administration. Most prominent of these are Pikillacta near Cuzco in the southern Highlands, Viracocha Pampa near Huamachuco in the north Highlands, and the presumed capital of the empire, the site of Wari in Ayacucho (Fig. 1). Additionally, Wari-style artifacts are found throughout much of what is now modern Peru. These data have been interpreted by many scholars to suggest that the Wari were the originators of the first Andean empire.

In addition to being a stylistic horizon of ceramics and other portable artifacts, the Wari empire has been defined by a widespread, highly uniform, architectural style. Shifts in settlement pattern occurring during the Middle Horizon have also been viewed as a diagnostic trait of the Wari empire (Lumbreras 1974; McEwan 1979, 1984; Rowe 1963; Schaedel 1966; Schreiber 1978, 1987; Willey 1953). These changes are seen to reflect a reorganization of economic and social activities with an emphasis on centralized administrative control and channeling of resources that seems to suggest the imposition of an imperial organization (Schaedel 1966).
The archaeological remains of the Wari culture appear to meet many of the criteria used in anthropological definitions of the state, which commonly include concentration of economic and political power, monopoly of force, organization along political and territorial lines, and differential access to resources based on status (Service 1962; Adams 1966; Fried 1967; Wright 1977). Trigger (1974: 98–101) has noted that the distribution of varying sized settlements is likely to be significant in interpreting political organization. In complex societies, the size and architectural features of some settlements are likely related to their position within an administrative hierarchy. Wright and Johnson (1975) have defined the early state in Mesopotamia using the criteria of a site size hierarchy which, they argue, would reflect a parallel hierarchy of decision making. Wright (1977) has observed that states are internally specialized, comprising more than one decision-making level within the centralized administrative hierarchy. Such systems entail a series of regional administrative centers and an efficient communication network for the transfer of information between levels of the administrative hierarchy.

Isbell and Schreiber (1978) have considered the Wari data in the context of these observations and have applied the Wright and Johnson (1975) site-size hierarchy model to the Wari data. They concluded that the distribution of Wari sites tends to conform to this model and, thus, supports the concept of a state-level political organization. They also cite evidence for a Wari highway network that provided the communications link between the various sites.

In order to increase our understanding of the nature and function of the Wari empire, the Pikillacta Archaeological Project, conducted between 1989 and 1991, examined the
largest and best preserved of the Wari provincial centers. This work has produced a large quantity of information about the Wari site of Pikillacta in the Valley of Cuzco in the southern Peruvian Andes. Since most of the data sets resulting from this project are still being analyzed, the purpose of this report is to provide a preliminary overview of the principal findings of the project.

The archaeological site of Pikillacta is believed to have been a provincial capital of the Wari empire during the Andean Middle Horizon (ca. A.C. 540–A.C. 900). Pikillacta (“flea-town” in Quechua) is located on the north side of the Lure Basin at the southern end of the Valley of Cuzco. Built at an elevation of 3250 m asl, the site rests on a series of low ridges that form the western flank of Cerro Huchuy Balcon (Figs. 1, 2).

Pikillacta is noted for its huge size, well-preserved architectural remains, and rigid geometric layout. The grid plan of Pikillacta forms a nearly perfect rectangle when viewed from the air (Fig. 2). This geometric symmetry is even more impressive when viewed on the ground; the steep undulations of the terrain were not modified to accommodate the architecture of the site. The NE side of Pikillacta is considerably higher in elevation than the SW side, and the ground rises and falls throughout the site.

The entire site measures approximately 1680 × 1120 m, the most prominent portion of the site consisting of a very large, rectangular enclosure (approximately 745 × 630 m) that contains most of the architectural features. Flanking the north and SE sides of this main architectural block are two groups of large, semi-rectangular enclosures (each approximately 400 × 600 m in size) that may have functioned as corrals. The individual structures within the main
enclosure are also built on a grand scale, with some of them measuring 50 m or more on a side. Some of the ruined walls still stand 12 m high.

In addition to its enormous size and strict adherence to a geometric plan, Pikillacta presents peculiarities that have stimulated much comment and speculation. For example, there are almost no surface artifacts to indicate that the site was ever occupied. This paucity of surface material stands in marked contrast to nearly all other sites in the Cuzco Valley and, for that matter, most ceramic-period sites in Peru. Another provocative question relates to the acquisition of water within the site. Although subterranean canals have been found, no sources of water were encountered during the site survey and excavations. Additional questions arise regarding access to the various structures. Although there are more than 700 individual structural units within the main architectural block, there are very few connecting corridors, doorways, or windows that would provide entries to these structures.

Without surface ceramics to assist in cultural interpretations, Valcarcel (1933) and Harth-Terre (1959) speculated that Pikillacta was an Inca site. It was not until the mid-1950s and early 1960s that John Rowe (1956: 149) recognized architectural similarities that linked Pikillacta with the site of Wari in Ayacucho. Sanders’ (1973) limited excavations, producing Wari style ceramics, confirmed Rowe’s observation that Pikillacta was in fact a Wari site. Sanders, however, found such a small quantity of artifacts that he concluded that Pikillacta had never, in fact, been occupied.

Recent work at Pikillacta by the author (1979, 1984, 1987) resulted in the first complete ground plan of the site (Fig. 3) and a typology of architectural units that could be used to define sampling strata for testing the site. An archaeological testing program established several crucial points. First, the site had definitely been occupied. A considerable number of artifacts remained in context within the structures and in the main trash midden discovered just outside the southeast side of the main enclosure wall. Second, the site was unquestionably a Wari construction with ceremonial ceramics of that type found in clear context with the structures. Third, test excavations in the numerous (501) small, conjoined structures on the northwest side of the site produced no evidence of a storage function. Thus there is no support for the widely-held view (Harth-Terre 1959; Rowe 1963; Menzel 1964; Lanning 1967) that these structures were analogous to Inca storage units (called qolqa’s) and that the entire site functioned as a storage center. The testing program demonstrated that site function could not be determined by superficial examination alone.

Instead, it is most likely that Pikillacta served as a major administrative node in the Wari empire, probably as a provincial or regional capital. This conclusion is based on several lines of evidence. First, the site is strategically located, with respect to both the local environment and topography and the imperial Wari domain and road system. Second, Pikillacta is the earliest large architectural complex to have been constructed in the southern Peruvian highlands; size alone would indicate the significance of Pikillacta during the Middle Horizon. Third, architectural remains, including polychrome ceramics, finely-carved bone objects, bronze implements, and objects of exotic materials (for example, spondylus shell and turquoise-colored stone) reveal evidence of elite occupation. Certain structures within the site have been interpreted as ceremonial in function, based on recovered offerings and specialized architectural forms (McEwan 1987: 39–40). Increasingly, the picture that emerges from the archaeological investigation is that Pikillacta served as a large, imperial, palace-like complex that housed high-ranking elites concerned with state administration and religious activities.

Architectural Investigations

In 1989, extensive architectural excavations were undertaken at Pikillacta. The purpose of these was to obtain evidence of structural function, which in turn would reflect total site function. The hypothesis that Pikillacta was an administrative center for the Wari empire was approached through this analysis. In selecting the locations of excavation units, several considerations were important. Pikillacta is divided by its own architecture into four sectors (Fig. 3). In order to study the construction sequence and function of the site’s main divisions, it was essential to sample various structural types within all sectors.

A Revised Typology for Pikillacta

The 1982 structural typology used in previous studies (McEwan 1984, 1987, 1991, 1992) has been redefined and simplified, based on the results of excavation. The 1982 typology contained five basic structural types (Fig. 4). Type A structures consist of a rectangular enclosure with peripheral galleries arranged symmetrically, two or more on each side. Type B structures comprise a rectangular enclosure with or without peripheral galleries, but always containing a rectangular building inside the enclosure. Type C structures have a rectangular enclosure with peripheral galleries laid out in an asymmetrical pattern (this asymmetry constituting the principal difference between Types A and C); thus, one or more sides of a Type C structure may have multiple galleries but all four sides never have the same number of galleries, except when only
Figure 3. Ground plan of the central part of the site of Pikillacta.
a single gallery is present on each of the four sides. Type D structures consist of only an empty, rectangular enclosure, while Type E structures are rectangular buildings with rounded corners that are unaccompanied by the other elements. A new three-part typology has been developed by McEwan and Couture for reasons explained below.

Examination of the 1982 data reveals no discernible difference in function between Types A and C, despite differences in structural size and the number of sub-units within each type. Although it is not possible at present to define the specific function of these structures, it is apparent that the artifact patterning in these two types is very similar. Types A and C both contain few hearths and only small amounts of refuse, composed of animal bones, broken pottery, and discarded artifacts of bronze, obsidian, and shell. Many chambers within both structural types are devoid of any artifacts, however. Differences between Types A and C seem to be more a matter of scale and elaboration than function. Due to their perceived similarity (particularly when compared with the other structural types at Pikillacta), Types A and C have been combined to form a single type using the new designation “Type I.”

Excavation of Types B and E indicated that these types are not analogous, as previously believed (McEwan 1987: 29–30). Further, it has become apparent that the original definition of Type B (which had included a free-standing structure inside an enclosure compound) was in error. Type B structures are found both free-standing and embedded in surrounding architectural units and do not appear to be necessarily linked with an enclosure compound. The definition of Type B has been revised to include only the rectangular structure with niches and internally-rounded corners; it has been renamed “Type II.” Structures formerly identified as Type E have been reclassified as “Type III.”

No type D structures were tested by excavation because
Excavations In Sector 1

Two excavations, designated Units 47-A and 47-B, were conducted in a Type II structure located on the SW perimeter of Sector 1 (FIG. 3).

Unit 47-A involved clearing an exterior stone staircase of 10 steps that led to the entrance of the building, which had been carefully blocked with stone in antiquity. The area surrounding and including the threshold of the doorway was excavated, exposing an offering of camelid bones and spondylus shell which had been placed in the floor of the threshold at the time of construction.

Unit 47-B, located in the western corner of the structure, consisted of a 2 x 4 m pit that was excavated to a depth of 3.95 m. No floor was identified, but an offering pit, measuring approximately 1 m in diameter, was encountered 1.28 m below the surface and continued to a depth of 3.95 m below the surface. At the bottom of this deep pit was an offering of camelid bone and spondylus shell.

Both excavations revealed that the interior walls of this structure had not been plastered with clay and white gypsum, as is commonly the case with finished structures at Pikillacta. This building appears to have been abandoned after the placement of dedicatory offerings but before construction was completed. Excavations conducted in 1982 in Unit 31, also in Sector 1 on the NE perimeter, produced similar results, indicating that Sector 1 was abandoned in the midst of construction.

Excavations In Sector 2

Four contiguous Type I and Type II structures, located near the center of Sector 2, were investigated by excavation (FIGS. 3, 5).

Unit 36 consisted of five excavations (labeled A through E) to sample a Type II structure that measures 10 x 30 m. Unit 36-A, the largest excavation in this structure, exposed about 60 sq m of the NE end of the building and revealed...
four large niches that had been partially preserved in the NE wall (FIG. 6). These niches are trapezoidal in the horizontal plane, with the narrow end opening into the interior of the building. This structure still had traces of the original wall finishing, composed of as many as seven layers of clay and capped with a final, surface coat of white gypsum plaster. Also exposed was a large section of the massive, gypsum-plastered floor at the NE end of the building. This was very smooth and had an original thickness of approximately 10 cm. Other excavations of the unit confirmed that it continued throughout the structure.

At each of the four corners of the structure was a sub-floor pit into which an offering may have originally been placed. All of these pits, however, had been looted at some point in the past, but those at the north and east corners of the structure were well-preserved and still contained some of their original contents. These were approximately 90 cm in diameter and 3 m deep, and at the bottom of each was found a number of partially-worked spondylus shells and green-stained camelid bones. The pits at the south and west were much more shallow and reached bedrock at a depth of approximately 60 cm. Unit 36 encountered evidence of an old looting episode near the center of the NE wall and in the threshold of the doorway, but there did not appear to have been an offering located in either location. Excluding the remains found in the offering pits, no artifacts were found in this structure.

Unit 36-F sampled a room adjacent to the NE wall of this structure, but neither plaster flooring nor artifacts were found.

Unit 38 tested the south corner of a Type II structure located across the large courtyard to the NW of Unit 36. This excavation revealed a shallow offering pit, approximately 20 cm deep, that had been looted in the past and contained no artifacts.

Directly SE and across a narrow corridor from Unit 36 was a small Type I structure measuring $10 \times 10$ m that was designated Unit 42. This showed evidence of a plastered
court yard, and the exposed interiors of the rooms contained the original gypsum-plastered floors and wall surfaces. The most interesting feature of this structure was the well-preserved, gypsum-plastered staircase in the western corner (FIG. 7), which consisted of a flight of six steps that led to a second floor landing. How entry was gained to this building is not clear: the main entrance seems to be in the southern corner but the corridor leading to the entrance from Unit 37 appears blocked by a cross-wall. Since the latter was plastered with clay and gypsum in the same manner as the rest of the structure, it appears to be an original feature.

Adjacent to Unit 42 and just to the SE is a larger Type I structure that measures 20 × 20 m. Designated as Unit 37, this building was sampled by means of nine excavation units (FIG. 5). Units 37-B1 through B3, Unit 37-C, Unit 37-D1, Unit 37-E1, and Unit 37-H1 exposed various rooms of this structure. All contained gypsum-plastered floors and walls beneath 2–3 m of overburden (FIG. 8). Additionally, they all contained remains of the collapsed upper floors that were apparently constructed of plaster and clay laid over a framework of wooden poles (FIG. 9). The few artifacts included parts of polychrome bowls and a fragment of a bottle with a modeled human face on its neck. Excavation also revealed large ash deposits and burned wooden beams, indicating that this building had likely been burned.

A stratigraphic cut in the south corner of the patio, just in front of the main entry to the structure, was designated Unit 37-P1. The profile of this excavation revealed that the patio floor level had been raised and re-plastered twice in antiquity. The second remodeling of the patio covered a bench that had originally run along the NE wall of Unit 37-A and Unit 37-B. To accommodate the raised patio, a short flight of four steps had been placed in front of the main entrance. Three entrances to this structure were located; two in the south corner and one in the east corner. The two doorways in the south corner appear to be the principal entrances and were carefully blocked in antiquity (FIG. 10), presumably at the time of site abandonment.

The north corner of the largest structure in the site intrudes into the south corner of Unit 37. This structure was sampled by three excavations, Unit 43-A3, Unit 43-A4, and Unit 43-B1 (FIG. 5). The first of these revealed finely-finished plastered walls and the remains of three separate gypsum-plastered floors (indicating the presence of what originally had been a three-story building). Large chunks of fallen floor showed the impressions of beams lashed with ropes that had formed the upper-story supports. In Unit 43-A3 we encountered a single, rectangular, dressed-stone block resting on the floor; this is the only cut stone ever found in an architectural context at Pikillacta (FIG. 11). This room was filled to a depth of 3 m with fine, gray ash mixed with burned wooden beams, suggesting a massive burning episode. In contrast to the excavations previously described, potsherds, needles, and clothing pins (tupus) of bronze, and obsidian fragments were common in the fill. In Unit 43-A3 were recovered fragments of the original wooden lintels that spanned the doorways in sockets on either side of the door frames. Resting in the doorway of the second story was a large chunk of fallen plaster floor that could only have come from a collapsed third floor as it rested well above the protruding second-floor supports.

Slightly to the north of Unit 43-A3 are two curious, triangular-shaped rooms, each measuring approximately 1 × 1 × 2.7 m, and designated Unit 43-A4 and Unit 43-B1. These were excavated to the ground floor (about 3 m below present surface) and revealed that each contained a low doorway (measuring 0.9 m in height × 0.6 m in width) for access. The fill within these units consisted of ash and burned wood. Resting on the floor of Unit 43-A4 were the remains of at least 30 beans, suggesting that these small rooms may have been used for food storage.

Within the NE and SE walls of this huge central structure are located two Type II structures (FIG. 3). Unit 45 sampled the Type II structure located within the NE wall. This unit was located in the western corner of this structure and revealed the characteristic, internally-rounded construction. The remains of a looted offering pit, measuring approximately 90 cm in diameter, were found beneath the gypsum-plastered floor. Unit 45 also revealed an extraordinary, full-height niche, (very different from the others seen at Pikillacta) that extended from the floor to the top of the ruined wall (1 m wide × 2.1 m high). The fill within this unit also consisted of finely-powdered, gray ash mixed with burned wood fragments.

Unit 46 sampled the north corner of the other Type II structure embedded within the SE wall of this same large, central building (FIG. 3). A characteristic rounded corner was exposed. Additionally, Unit 46 contained a large niche (trapezoidal in its horizontal plane) and a looted offering pit (about 90 cm in diameter) located beneath the gypsum-plastered floor. No artifacts were found within this unit, and the fill contained much less ash than was encountered in the previous excavations.

In sum, excavation indicates that before abandonment, Sector 2 had been completely constructed, with some buildings having multiple stories and probably roofs of thatch. Previous excavations, in 1982, also provided evidence that this sector was finished and occupied. A trash midden and hearths were found in several buildings. Un-
Figure 7. View of the staircase found in Unit 42.
Figure 8. Plaster floors in Units 37-D and E.
like Sector 1, Sector 2 seems to have been completed and occupied. It also seems to have been destroyed, at least in part, by fire.

**Excavations In Sector 3**

Sector 3 contains the smallest number of structures and shows the least evidence of finished construction in Pikillacta (FIG. 3). A Type II structure on the SW end of the sector, designated Unit 34, was sampled by means of 21 excavation pits. Internally-rounded corners and large niches with trapezoidal cross-section were exposed by excavation. This building had been completely filled with sterile clay soil. The floors had not been laid, the walls remained unfinished, and none of the usual offerings been placed in the corners and door threshold. The doorway had been carefully blocked in antiquity. This structure had apparently been abandoned during its construction and carefully sealed in clay.

Other finds of interest in Sector 3 consisted of two original entrances to the site and two burials, all located in the SW perimeter wall of Pikillacta. The Peruvian National Institute of Culture had been engaged in conserving the walls of Pikillacta when they came upon these features. Members of the Pikillacta Archaeological Project were asked to assist the archaeologists of the Institute in excavating and recording the burials. Entrance 1 appears to be a narrow gateway extending the full height of the wall. Entrance 2 was much lower and was capped by a lintel stone. Burial 1 contained the bodies of a man and a woman of about middle age (John Verano, personal communication, 1989). Associated with the burial were a number of small, turquoise-colored stone beads. These bodies appear to have been placed in the wall at the time of construction. Due to the slumping of the wall it was difficult to determine the precise original position of the bodies or whether there had been a prepared cyst within the wall; both individuals were in a flexed, seated position. Burial 2 was also found in a slumped portion of the mud and split-stone wall. The body was in a flexed position but had fallen onto its side. The remains were of an adolescent female with a severe facial deformity (John Verano, personal communication, 1989).

**Excavations In The Midden**

The midden at Pikillacta is located outside the SE perimeter wall and just above the southern approach avenue to the site (FIG. 3). Unit 39, Unit 40, and Unit 44 were excavated within this midden and more than 150,000...
artifacts were recovered. Most of these were potsherds but there were also quantities of metal, bone, shell, stone, and obsidian artifacts. Analysis of these materials is not yet complete but preliminary inspection has yielded some provocative data. One of the more unusual finds was the discovery a large fragment of a Nazca 6-style bowl (Patricia Knobloch, personal communication, 1989). About five sherd in the Cajamarca style were also recovered (fig. 12). A large number of metal implements (probably copper and bronze)—tupu pins, needles, chisels, and fragments—were also found, indicating that the use of metal objects was fairly common during the Middle Horizon.

Radiocarbon Dates From Pikillacta

Five radiocarbon samples collected during the 1989 excavations have been processed. Charcoal found directly on the floor of Unit 36 (Beta 43230) provided a date of 1150 ± 80 B.P. (an uncorrected date of A.C. 800 ± 80). Two samples from Unit 37 were processed. One (Beta 43234) was taken from a wooden beam support associated with the collapsed second floor and yielded a date of 1330 ± 60 B.P. (an uncorrected date of A.C. 620 ± 60). The second sample (Beta 43232) from Unit 37 was of charcoal from a burned upper-floor support beam. It provided a date of 1180 ± 60 B.P. (an uncorrected date of A.C. 770 ± 60). Two samples from Unit 43 were also processed. A fragment of a wooden lintel found in situ in a doorway (Beta 43231) provided a date of 1290 ± 60 B.P. (an uncorrected date of A.C. 660 ± 60). The second sample from this unit was of charcoal from a burned floor or roof support beam (Beta 43233), and yielded a date of 1060 ± 50 (an uncorrected date of A.C. 890 ± 50). Although there is always the possibility that the wooden architectural beams were reused from other earlier structures, the dates obtained from them fall within the expected range for the Middle Horizon. The dates from these samples are also consistent with those obtained in 1979 and 1982 (McEwan 1987).

Conclusions

Although the data recovered from Pikillacta are still being analyzed, it is possible to draw some preliminary conclusions from the excavation results. There are dates for the occupation, an indication of the sequence of construction, evidence for structural function, and some information regarding the circumstances of site abandonment. The site was begun possibly as early as A.C. 600 and may have been occupied until A.C. 850–900. Architectural evidence indicates that construction continued throughout the occupation and that the site was abandoned before much of the architecture was completed. Excavation illus-
Figure 11. View of Unit 43-A3. Note the column of ash fill in the doorway and the cut stone in situ on the floor.
trates that Sector 2 was the first to be built, and featured fully plastered walls and floors in multiple-story buildings with thatched roofs. This sector was occupied long enough for some buildings to have undergone at least two remodeling episodes.

Based on the degree of completeness, it appears that the other three Sectors were constructed in the sequence of 1, 4, and finally 3. Walls and floors were incomplete in Sector 1, but offerings had been placed in doorway thresholds and corner pits preparatory to laying the gypsum-plastered floor. In Sector 4, construction was also well advanced, with offerings in place (McEwan 1987: 35, 40), but walls were incomplete and floors were unfinished. Sector 3 was the least complete, with walls rising only a short distance above the foundation before being halted.

Structural function in Wari architecture remains enigmatic. The buildings are so unusual that they do not suggest any function recognizable by form alone. There is consistent placement of elaborately-prepared offering pits in the corners of Type II structures and, although these pits have all been looted, the few remaining artifacts suggest important offerings of human and animal bone, metal, and spondylus shell. It also seems likely that these offering pits originally contained sets of turquoise-colored stone figurines like those reported to have been looted from the site in 1927 (Valcarcel 1933; Cook 1992). Type II buildings also are unusual in Wari architecture in that they contain large wall niches. From this evidence it is possible to suggest that Type II structures are ceremonial in nature and represent shrines or temples. Type I structures only contain hints as to original function; the few remaining artifacts point to the storage and preparation of food and perhaps other goods, however. The multiple, small cellular rooms (like those of Unit 37) would have been difficult to light and seem cramped and inconvenient for living quarters; they would, however, have served admirably for storage. Among the few artifacts found in this type of structure are decorated ceramic serving bowls and metal pins usually associated in the Andes with textiles worn by women. Hearths have also been found in the chambers closer to the courtyards in some of these buildings. Direct evidence for storage of foodstuffs comes from the small triangular cell of Unit 47 in which the remains of beans were found on the floor. Analysis of the ceramic collection, currently underway, will shed more light on this question.

The abandonment of Pikillacta occurred during the construction of Sectors 1, 3, and 4. The abrupt cessation of construction in the midst of a major expansion of the site seems to reflect some sort of crisis from which the Wari never recovered. Although construction was halted abruptly, the abandonment of the site was orderly and
enough time was available for elaborate preparations. Among these was the sealing of a number of key doorways with stone blocks in what seems to have been an attempt to discourage unwanted visitors. Rooms were carefully emptied of valuable goods, which no doubt accounts for the clean, empty chambers that archaeologists encounter. Some buildings, such as Unit 34, were deliberately filled and sealed with clay, perhaps to protect sacred precincts from outsiders. Some offerings may have been removed at this time as well. The precision of the cuts through the floor in Unit 36 suggests prior knowledge of the exact location of each offering. No excess plaster was broken and the hole was cut directly over the pit. These precautions by the Wari also strongly suggest that they intended to return to Pikillacta and were seeking to protect it.

The final event in the abandonment seems to be a massive burning episode. It is unknown who lit these fires but it seems unlikely that the Wari would have burned down the site after taking such elaborate measures to protect it. More likely is the explanation that local peoples attempted to sack the site after the departure of the Wari. The extensiveness of the burning in the site, together with evidence of its intensity (with large, whole beams becoming completely carbonized and beams burned on the underside of floors) suggests that the fire was deliberately and not accidentally set. In sum, the evidence seems to suggest an abrupt end to the Wari occupation of Pikillacta and the Cuzco region, and perhaps an end to the empire.

The excavation results from Pikillacta correlate well with the basic chronology set forth by Menzel (1964, 1968) and the results of studies of the other major Wari sites. It is instructive to view Pikillacta in terms of the Wari chronology and data from the other two major sites that represent the imperial organization: the imperial capital at Wari in the Ayacucho Valley, and the site of Viracochapampa in the North Highlands.

In the 1960s Dorothy Menzel (1964, 1968) undertook ceramic studies of collections from Wari and other Middle Horizon sites and was able to identify and serialize several major styles involved in the Wari expansion. From these studies she was able to derive a generalized chronology of events in the history of the Wari empire. The portion of the Middle Horizon (A.C. 540–900) during which Wari ceramics were spread throughout Peru is divided into epochs 1 and 2, each spanning 100 years. Each of these epochs is further subdivided into parts A and B of approximately 50 years duration.

During Epoch 1A a new style of ceremonial pottery with iconographic similarities to Bolivian Tiahuanaco and other altiplano styles appeared in the Ayacucho region. This seems to imply the introduction of a new religion rather than a conquest by outsiders since few imported artifacts have been found.

During Epoch 1B Wari became the center of an expansion movement. This expansion is marked by both religious and secular ceramics and was likely military in character rather than religious because of the high proportion of secular artifacts found in areas influenced by the expansion. Radiocarbon and ceramic data from Pikillacta suggest that it was founded during the Epoch 1B expansion and that construction began between A.C. 600 and 650 (see also McEwan 1984: 131–133).

In Epoch 2A Menzel postulates a severe crisis, perhaps a revolt or epidemic that halted expansion of the empire. This is reflected in the change in settlement distribution and burial patterns in the Ayacucho Valley and in the South Coast. During this time sector 2 of Pikillacta had been completed and continued to be occupied.

This crisis was apparently resolved by Epoch 2B and the empire expanded very rapidly and reached its maximum extent. Expansion at Pikillacta was also undertaken and construction in sectors 1, 3, and 4 was begun. At the end of Epoch 2B the empire collapsed and the capital at Wari abandoned. At about this same time (the latest construction date determined by radiocarbon is A.C. 830 ± 42) Pikillacta was abandoned with sectors 1, 3, and 4 left uncompleted.

At the capital of the empire, the site of Wari in Ayacucho, a similar sequence is seen in the architectural construction phases of the site (Isbell, Brewster-Wray, and Spickard 1991). Construction of architecture in the style seen at Pikillacta seems to peak during Epoch 1B. This was followed late in Epoch 2 by a new and ambitious construction phase that was not completed before the site is abandoned. Thus the sequence of construction, occupation, expansion, and abandonment is paralleled at Wari and Pikillacta.

At the site of Viracochapampa in the North Highlands (Fig. 1) can be seen another set of interesting parallels to the situation revealed by the excavations at Pikillacta. This site is also laid out in a rigid grid plan and can be subdivided into four sectors. Like Pikillacta, Viracochapampa was abandoned before construction was completed. The end of construction however is rather tenuously dated to Epoch 1B, considerably earlier than at Pikillacta (Topic and Topic 1983; Topic 1991). A red clay deposit or fill is seen in many of the incomplete buildings at Viracochapampa which is reminiscent of the red clay fill seen in Unit 34 at Pikillacta. Although Topic (1991: 151) feels that these deposits may be the result of excavation for wall foundation trenches at Viracochapampa, this is not the case at Pikillacta where the wall foundations were also built.
in trenches. The red clay seems to be deliberately brought in and likely had some symbolic value in terms of the material and the color. Blocked doorways are another feature seen at both Pikillacta and Viracochapampa. At Pikillacta they have been interpreted as an effort by the Wari to discourage unauthorized entry after abandonment. At Viracochapampa, Topic and Topic (1983: 18; 1991: 151) have argued that the blocked doorways are the result of a construction technique representing temporary masonry supports for lintels that were never removed.

This unfinished construction activity seen throughout the Wari domain provides some interesting insights into the state of the empire at the time of its collapse. Rather than a state of decline or decay, the data reflect a state engaged in large-scale renovation and new construction. If future studies can decipher the function of the buildings under construction and demonstrate that they were part of the administrative apparatus of the state, then these abandoned construction projects may reflect a parallel expansion of the empire. This third great expansion seems to have failed however, with catastrophic results for the Wari, including the abrupt collapse of their empire.

Acknowledgments

The Pikillacta Archaeological Project was carried out under a grant from the National Science Foundation (BNS-8819481). The author gratefully acknowledges the help of the following individuals who participated in the excavations: Alana Cordy Collins, Nicole Couture, Mary Glowacki, Daniel Julien, Ann Hutflies, Nemesio Holguin, Donald McEwan, Roberto Perez, Rahilla Abbas, Kathy Reese, Wilbert Palomino, and Wilbert Vera. I would also like to thank Inga Calvin for editorial assistance.

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