PUMAMARCA; A LATE INTERMEDIATE PERIOD SITE NEAR OLLANTAYTAMBO

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The architectural remains at the site of Pumamarca (Department of Cuzco, Peru) represent a style not identical to any style discussed in the literature but most similar to Late Intermediate Period styles described by Kendall (1976). Comparison with Kendall's data suggests that Pumamarca belongs to the period immediately preceding the Inca Empire and that it served the higher social strata of the local population. The data on Pumamarca may contribute to a better understanding of certain problematical buildings at the site of Ollantaytambo.[1]

Pumamarca is located near the top of a hill on the north side of the Patacancha Valley. The site is reached by following a foot road leading north from the modern town of Ollantaytambo, a journey of some four hours on horseback. The road climbs steeply from the river valley and follows along the hillside several hundred meters above valley bottom. I visited the site in July, 1978, with my friend Anne Paul, an art historian. Because it took so long to reach the site I was able to stay only a few hours and did not have time to make a site plan. I was able to make observations of the architecture, however, and to document some of the features photographically. I spent relatively little time at the site of Pumamarca, so many of my impressions about the stylistic peculiarities I observed are based on little more than an overall site gestalt, although I do have comments on some specific building features.

Pumamarca has been examined by other researchers. Llanos assumed that the site was built in Inca style and interpreted it as an Inca palace complex (Llanos, 1949). His site plan is not completely accurate, but does at least indicate the correct number of buildings. Pardo presented a brief analysis of the site as an Inca military outpost (Pardo, 1956, pp. 214-218). The sketch plan accompanying his discussion is completely inaccurate (p. 217). Most recently, Gasparini and Margolies evaluated the site in terms of the canons of Inca architecture, noting that it deserves further study (Gasparini and Margolies, 1977, p. 300; 1980, p. 289). The site plan they offer, credited to Emilio Harth-Terré (Gasparini and Margolies, 1977, fig. 305; 1980, fig. 282) is inaccurate in many respects and should not be used uncritically. None of these works presents a satisfactory treatment of the architectural style at Pumamarca, but they can be used as references for further work.

Fig. 1 is a modification of the plan of Pumamarca presented by Llanos (1949, plan 1). I have redrawn his plan including what I consider to be necessary changes, and indicating approximate scale. In addition, I have numbered significant features to facilitate reference to the site plan. I have let stand Llanos' basic measurements. Readers may note that the walls as he draws them are of uneven thickness and many buildings are of an irregular shape. I had no time to check the measurements of the buildings. I present fig. 1 as the best approximation to a plan of the site.

In addition to those shown in fig. 1, there are several buildings that, because of their proximity to the site, might perhaps be considered to be part of it (Llanos, 1949, p. 19; Angles Vargas, 1978, p. 278). To the east of the site on the steep slopes of the side valley are the remains of four narrow rectangular buildings with multiple windows on the uphill side of the upper level. These buildings are reminiscent of storehouse structures at Ollantaytambo (Gasparini and Margolies, 1977, p. 181; 1980, pp. 172,178; Kendall, 1976, p. 71). To the south of the site is a pair of small, inconspicuous buildings which seem to have a circular floor plan. I did not inspect any of these buildings and cannot comment on their architectural style. I am concerned here only with the structures within the enclosure wall which delimits the site of Pumamarca as I define it here.

I believe that Pumamarca cannot be considered an Inca site, but must be viewed as a relatively high status site built before the spread of Imperial Inca style.[2] My argument rests on four points:

1. Pumamarca shows features of design concept which do not seem to be standard features of Inca design.
2. Other archaeological sites in the Pumamarca region clearly conform to Inca design concepts.
3. At Pumamarca one can see a number of architectural details which, while not foreign to the Inca style, are rendered in an unusual fashion.
4. Pumamarca shows some architectural details which do not appear in standard Inca architecture.

I shall examine each point in turn and develop my argument for the interpretation of the architectural style at Pumamarca.

The Design Concept of Pumamarca

The proportions of the buildings at Pumamarca and their orientation suggest a design concept which is not at home in standard Inca architectural style. As can be seen from fig. 1, there are several kinds of buildings present, not all of which can be equated with Inca building types. The plan shows one two-door rectangular structure (5), one multi-door kallanka-type building (8), a round building (9), and an area of wall stubs and niched terrace walls (15). In addition, there are several buildings which are roughly square in floor plan, some of which are shown with entrances in two walls. Although the two-door rectangular structure is the visual focus of Pumamarca, the square building is clearly the dominant architectural form at the site.

Certain details of the construction of these buildings do not show up in the site plan. In all cases where the building was well enough preserved to permit an observation, these buildings had more than one story. Floors of upper stories were formed by a series of poles inserted in the walls and extending across the building (fig. 2). Traces of wooden poles are visible in Building 11. In at least one case, there was evidence that a building (11) had originally had at least three levels. The doorways shown on the site plan actually enter different levels

of the building. I observed no staircases. In those cases in which doorways were preserved, it was apparent that access to the different building levels took advantage of natural variations in the terrain. Access to a given level was always at right angles to the entrance on a higher or lower level.

Inca buildings seldom have two full stories (Kendall, 1978, p. 24). The majority of two-story Inca buildings are rectangular structures built into a hillside with one or more openings on one of the long walls giving access to the building interior from the lower ground level, and openings on the other long wall giving access to the building from a higher ground level (Gasparini and Margolies, 1977, p. 182; 1980, p. 172). Other two-story Inca buildings have a second level beneath the eaves of a building with access through a narrow doorway in the gable and an exterior staircase (Gasparini and Margolies, 1977, p. 182; 1980, p. 172). It is interesting that this latter pattern of access to an upper level at a right angle to the main entrance to a building is reported for Inca buildings at Ollantaytambo and Patallacta, both in the Pumamarca region (Gasparini and Margolies, 1977, p. 181; 1980, p. 172). A three-story building reported at Huch'uy Qosqo, also in the Urubamba drainage, has a similar pattern of access to the lower stories through entranceways at different levels (Kendall, 1978, p. 24).

Other building types at Pumamarca have closer counterparts in Inca architecture. Building 5 is rectangular with proportions of roughly 1.5:1. It has two doorways symmetrically arranged on one of the long sides of the building. The proportions of the building and symmetrical placement of the doorways is in accord with Inca rectangular buildings (Niles, 1980, p. 58). Building 8 is a much longer rectangular building with five doors symmetrically arranged on one of its long sides. The building proportions of roughly 8:1 are within the range of Inca proportions for the kallanka type of building (e.g., structure CH.1 in the Capellanpampa complex at Chinchero, reported by Gasparini and Margolies, 1977, pp. 223-224; 1980, pp. 214,218, after Alcina Franch).

A round building, indicated in fig. 1 with dotted lines and numbered 9, appears on the plans of Pumamarca published by Llanos and by Gasparini and Margolies. I am not convinced that this building really exists. I saw only a more or less circular threshing floor built up with fieldstones in this area when I visited the site. I do not believe that there is a need to consider the round structure as another building type at Pumamarca. The two structures jointly numbered 13 in fig. 1 are shown as roughly square buildings with two compartments. I am not sure that this is an accurate portrayal of the buildings. Because of heavy vegetation and piles of rubble in this part of the site, I was unable to explore the area carefully. I saw only the square external form of the buildings. Divided buildings with a square floor plan are reported by Kendall (1976) for the Late Intermediate Period sites of Piquillacta Torechayoc (pp. 66-67), Alfafayoc Contaymocco (pp. 68-69), Ollantaytambo Pincuylluna (p. 71) and Pucara Pantilliclla (p. 86), so in any event, the structures do not contradict my interpretations.

Another unusual feature of Pumamarca is the orientation of the

buildings with respect to entrances to the site. As nearly as I could determine, the main entrance to the site in antiquity would have been the small one in the northern side of the wall that encloses the site. The plans presented by Llanos and by Gasparini and Margolies both indicate entrances in the south and east walls of the site. The plan published by Pardo shows the south entrance, but neither a north or east one. I looked for but did not find entrances on the south and east sides of the site. There is a break in the wall on the south through which one may enter the site. However, the area shows no traces of stairs or a finished doorway, and appears to be a result of weathering. I observed no break in the wall on the east side of the site, but this portion of the site is in a poor state of preservation and it is possible that a doorway which was once visible is now obscured. There is no evidence on either the south or east wall for any sort of elaboration of the doorway as seen at the north entrance. There is no trace of a road or causeway leading from the north doorway to the buildings that comprise the nucleus of the site. I observed no refuse in Area C, and the only architectural remnant is Building 14, a square building somewhat smaller than most of the others at the site. The surface of Area C shows the rough natural bedrock, in places covered with soil and a grassy vegetation. There is a gentle grade up from the back of the buildings to the doorway. The rise in ground surface is not so great that it obscures the view of the surrounding wall from the zone of buildings. Entrance into the site through the north door would have led across an unelaborated space with a view of the back of the buildings which are the focus of the site. This spatial arrangement does not seem to be in accord with the canons of Inca architecture.

The two spatial foci of the site are the open area in front of Building 8 (Area A) and the area onto which buildings 1 through 6 open (Area B). I could not determine the form of Area A because of heavy vegetation. A focus on Area B is suggested by the orientation of the surrounding buildings. As fig. 1 reveals, the angle of orientation of the square buildings is such that the space defined is neither rectangular nor trapezoidal. Gasparini and Margolies trace plaza outlines for several Inca sites (1977 and 1980, chap. 2). It is worth noting that none of the plazas in their presentation is shaped like this one at Pumamarca.

As far as I could determine, buildings at Pumamarca are built on the natural terrain. I have, however, retained Llanos' indication of building terraces (fig. 1) because it is possible that these features existed at the time of his visit. I did not observe any building terraces on the site. There is, in fact, quite a bit of topographical variation within the site, and a relatively large amount of unmodified terrain within the confines of the walled area. The Inca tendency to sculpture the terrain with terracing is not seen at Pumamarca.

In addition to building proportion and layout, some architectural details show design principles not typically associated with the Incas. Inca notions of symmetry are violated in the size and placement of interior niches at Pumamarca. Standard Inca niches are spaced equidistant on the walls, are usually at a height of 1.25 m. above floor level, and show little variation in size within a building (Kendall,

1978, pp. 38-39). Niches in the square buildings vary in size and number, and are not necessarily arranged symmetrically in a wall, though in general they are placed relatively high with respect to floor level. In Building 5 interior niches are more symmetrically placed, but are arranged in two tiers that do not correspond to different floor levels. Niches and windows in general are rectangular to slightly trapezoidal (figs. 2,3). The dimensions of a large niche in Building 5 are: base 45 cm., top 40 cm., height 55 cm., depth 35 cm. Niches have stone slab lintels. Kendall notes that niches and windows in the Late Intermediate Period sites she studied may be rectangular or trapezoidal, and that there is great flexibility in their proportions and their placement in walls. Niches in general seem to be located high in building walls at Ancasmarca (Kendall, 1976, p. 78) and Pucara Pantilliclla (Rowe, personal communication). The arrangement of niches in two tiers is mentioned for the fortification wall at the Late Intermediate Period site of Huata (Kendall, 1976, p. 73; Rowe, 1944, p. 53). The arrangement is also noted for several Inca sites in the Urubamba region (Qanchisraqay, Pisac, Huch'uy Qosqo, and Canamarca (Kendall, 1978, pp. 38-39). At Pumamarca doorways are also rectangular-trapezoidal. The doorways in Building 5 are much wider than those in the square buildings, where these have been preserved. I observed a door lintel of wooden poles in Building 11 and another of wooden poles topped by a worked stone slab in Building 5.

Inca buildings typically show an inward inclination of the walls as a structural or an aesthetic device. Walls at Pumamarca are inclined at an angle which is more acute than that of most Inca walls, though not outside their range of variation. This inclination, coupled with the rounding of interior building corners, gives the impression of an almost domelike interior space. This construction was observed in the square buildings where there was sufficient preservation of the fieldstone and mud walls to permit observation of the upper levels. Kendall has noted this type of internal rounding and inward inclination of walls at Late Intermediate Period sites in the lower Urubamba. She has suggested that at Ancasmarca, at least, a type of corbelling might have been used to roof small buildings (1976, p. 80). I do not believe that this sort of roofing would have been possible at Pumamarca, given the relatively large size of the area to be roofed, unless the buildings had full stories beyond those I observed. It is not difficult to imagine thatched or stone slab roofs of a conical or pyramidal form. The rectangular building (Building 5) did not show as marked a degree of inclination of the walls, but almost certainly had an adobe superstructure originally. It was not possible to reconstruct the original form of the roof with any certainty.

Inca Sites in the Pumamarca Region

On the four-hour trek from Inca Ollantaytambo to Pumamarca, one is never out of sight of archaeological remains of some sort. For much of the journey the "Inti Watana" part of Ollantaytambo is within sight. The road passes agricultural terraces of different styles. Most are the narrow terraces with fairly rough fieldstone masonry typically

associated with Inca agriculture. In the river valley and toward the tops of hills where the slope is not particularly steep, there are wider terraces of more playful shapes. These terraces are not unlike other terrace systems I have observed in such Inca sites as Tipón, Chinchero, and parts of P'isaq. Where irrigation is available, the terraces along the route are still in use. It is almost impossible to date agricultural terraces without reference to contextual features such as proximity to datable sites, relative order of construction of terraces and roads or irrigation systems, and rarely, distinctive features of masonry. In the case of the terraces I observed, I am uncertain of the date of construction. It is clear that at some point in the past there was intensive use of terraces for agriculture. Certainly the Incas used these terraces, but it is not clear that they constructed all of them.

In addition to the terraces, one passes sites which conform to the canons of Inca architecture outlined by Kendall (1974; 1978) and Gasparini and Margolies (1977; 1980). One such site, located on a hilltop, appeared to consist of two rectangular buildings on a flattened open area with some tombs in a rock outcrop in front of the buildings. I passed another site which was located on a saddle of a hill with systems of agricultural terraces both above and below it. The site appeared to consist of perhaps a dozen rectangular buildings of fieldstone and clay construction oriented along building terraces. There was in addition at least one slightly larger building on top of an adjacent rock outcrop. The arrangement was not unlike the pattern I have observed in Inca farming communities near Cuzco (Niles, 1980, pp. 68-70). There is a site that I believe to be Inca within view of Pumamarca. It consists of several walls which appear to have been part of rectangular fieldstone buildings located around a rock outcrop near the edge of the drop to the river valley. These wall stubs are below the ruins of Pumamarca and perhaps 1 km. away across what is now a pasture. There was not time for me to make detailed observations of these sites, but the regularity of arrangement of the wall stubs, the placement of the buildings on terraces, and the style of wall construction I observed suggest that the sites were built in Inca style (Niles, 1980).

Llanos comments on the proximity of Pumamarca to Ollantaytambo and its terrace systems (1949, p. 19). He also notes the presence of a small archaeological site above Pumamarca which he calls Huanacauri and interprets as a temple structure (p. 19). Pardo locates Huanacauri more precisely as being to the north of Pumamarca on top of Cerro Huanacauri (1956, p. 216). His claim that the lone building which makes up the site is a military post is in accord with his interpretation of Pumamarca as an Inca military outpost. I did not explore the zone in which he places this site and observed no buildings when I looked in that direction. It is not clear from these brief descriptions whether the site of Huanacauri is similar in architectural style to Pumamarca.

There are sites in the Pumamarca region that are of standard Inca design, but Pumamarca itself is not easily identified as an Inca site. If the Pumamarca region was sufficiently fertile to sustain farmers under the Incas, it is possible that it sustained a farming population in pre-Inca times. Pumamarca is best viewed as a site constructed

for some sector of this population.

Interpretation of Inca Architectural Details

Pumamarca must be viewed as a site designed for high status people. The number of component buildings and the relatively small size of most of them suggests that the site could not have housed a large number of individuals. The fact that the site was walled suggests, architecturally, that some people were excluded from the enclosed area. High prestige walled sites are indeed known for the Inca (e.g., the Temple of Viracocha at Cacha, the site of Tipón near Oropesa, and parts of the site of Ollantaytambo), but the treatment of building proportion and open space in these Inca sites is unlike that at Pumamarca, as discussed previously. It is worth noting that the Late Intermediate Period fortress of Huata is also surrounded by a wall (Kendall, 1976).

Other architectural features, if found in what was indisputably an Inca context, would have to be interpreted as indicative of high prestige architecture. The façade of Building 3 contains niches with small windows recessed in them (fig. 3). I have observed exterior niches at Rumi Wasi near Cuzco, and at the Inti Watana group of Ollantaytambo, and have noted frontal windows at Tipón. Because of the distribution of the features, I believe they are indicators of high status for an Inca building. The recessing of the small windows in an exterior niche, a combination reported for oversized niches at Pulpitayoc by Kendall (1978, p. 37), gives the effect of double jambs, a recognized feature of prestige in Inca architecture (Kendall, 1978, p. 47). Llanos mentions the use of double jambs in upper level doorways throughout the site. These are not indicated on his site plan and I did not observe this feature at the site.

The treatment of water at the site was probably spectacular in ancient times. A channel which originally conducted water into the site penetrates the enclosure wall adjacent to the northern doorway (fig. 4). This canal consists of a shallow, squared channel polished in a slab of roughly worked stone. It leads through the wall above the modern ground level, and the water would apparently have spilled from the channel into a canal or receptacle at or below the ground level. Llanos' plan indicates a small bath in front of the doorway where there should have been a recptacle for the water. There is no trace of this bath today. Llanos also indicates an apparent water channel leading from this bath toward the site through Area C. I did not observe this channel but it is where I would have expected a channel to be. The confusing zone of niched terrace walls and wall stubs numbered 15 on the plan comprises various constructions I have identified as a series of baths. The bath chambers are oriented at right angles to one another. A portion of the original water channel which brought water to these baths is visible behind Building 6. I suspect it was part of the same system of irrigation discussed above. The treatment of water is not completely in accord with the canons of high status Inca architecture. In my experience, an Inca site important enough to have a decorative water system has one elaborated with polished stone channels, for example, at Tipón and at

Machu Picchu. A totally functional water system would be designed to carry more water. The style of construction of the waterworks at Pumamarca is not quite fancy enough to be part of a high status Inca water system, nor is it ample enough to move water for the masses. The idea of moving water through a wall rather than beside it or underneath it also seems alien to Inca design concepts. Kendall does, however, report a water conduit passing through a wall at the Late Intermediate Period site of Huata (Kendall, 1976, p. 73).

Another architectural feature found at Pumamarca is the barhold. There is a barhold device on the interior of the left side of the doorway giving access to the site. The barhold consists of a small squared recess with a vertical slab of stone in the center of the recess. The device is located at about chest height. Presumably there was a matched pair of barholds in the past. At the present time, the other side of the doorway is not well enough preserved to show the presence of a barhold. Although conceptually similar to barhold devices at Inca sites (e.g., the Temple of Viracocha at Cacha), the rendering of the barhold at Pumamarca is much more rude. The vertical element is merely a flattish slab of rock placed on end. It may have been roughly worked; it was not polished. The squared recess was not elaborated either. It is simply formed by leaving a gap in the natural course of the masonry. The lintel of the recess is a flat stone.

Barhold and barhole devices are reported for many Inca sites (Kendall, 1978, p. 72), including a number in the Cusichaca region (Kendall, 1974). I agree with Kendall's assessment that these characteristics were native to the architectural style of the Urubamba region and were later adopted into the official Inca architectural style (Kendall, 1976, p. 98). Baths are also particularly common in sites along the Urubamba, as discussed by both Kendall (1974) and Fejos (1944). I think it likely that baths in series are also part of a regional substyle of Inca architecture localized in the Urubamba region.

Non-Inca Architectural Details

I have argued that Pumamarca should be considered to be a high-status site of some sort. Yet the wall construction found in the buildings is of a particularly rude style. Walls are of unworked or slightly worked fieldstone set in a matrix of clay. There is proportionately more clay in the walls at Pumamarca than in Inca fieldstone construction. In addition, the builders of the site paid scant attention to the amount of extra material that found its way into the mortar, perhaps because the buildings were originally covered on both the interior and the exterior with thick, pinkish clay. Where this covering has worn off, it is possible to see chunks of wood and stone in the clay matrix of the wall. In one case, the wood inclusion was the size of a small branch. Even low prestige Inca sites near Cuzco have more carefully constructed fieldstone walls, i.e., the proportion of mud to stone is less than that at Pumamarca and there is little tolerance of extraneous material in the mortar (Niles, 1980, p. 59), and my observations of fieldstone walls at higher-prestige Inca sites near Cuzco suggests that these walls are even

more carefully constructed. It is therefore not possible to interpret the wall construction at Pumamarca as fitting for high-prestige Inca buildings.

The wall construction of Building 5 differs qualitatively from that of other buildings at the site. The stones are somewhat smoother, and there seems to be more careful construction of door jambs and building corners than in other structures. In this building the wall remains are a perfectly even level, a pattern of weathering unusual in a wall constructed solely of fieldstone and clay, and suggestive of an original adobe superstructure. While the wall construction in Building 5 is appropriate for Inca style, there are other features of the masonry that do not suggest Inca work. Exterior corners of the buildings observed are constructed by stacking stones in a nearly columnar fashion. These external corners usually form a sharp angle. By contrast, interior corners are nearly rounded. I have observed this method of constructing corners at sites near Cuzco which I believe to be Late Intermediate Period or at least early Inca sites.

In her consideration of architectural styles at Late Intermediate Period sites in the Urubamba region Kendall has noted that rectangular buildings may have either rounded or sharply angled exterior corners and commonly have rounded interior corners. In addition, building corners are not typically bonded. Wall construction at Late Intermediate Period sites is qualitatively different from Inca wall construction. Kendall and Rowe have both noted that in Late Intermediate Period sites, walls may be built of relatively smaller stones than walls in Inca sites. The stones are not typically coursed, and may include relatively more clay matrix than is seen in Inca walls (Kendall, 1976, p. 73). Kendall reports traces of plaster in some building interiors for sites in the Lower Urubamba.

Conclusions

It should be clear to the reader that the site of Pumamarca does not conform to the canons of standard Inca architecture. It may be less clear that the site is best considered to be a pre-Inca site of the Late Intermediate Period, rather than an example of provincial Inca or even Colonial architecture. Because I observed no surface ceramics at Pumamarca, it is impossible for me to relate the site to a particular occupation on the basis of ceramic evidence. However I believe that the architectural evidence is sufficient to allow the interpretation of Pumamarca as a Late Intermediate Period site. Pumamarca shows its closest architectural affinities with certain sites described by Kendall and dated to the Late Intermediate Period (Kendall, 1976) on the basis of K'illki and K'illki-related ceramics in surface collections and in excavations. The attribution of a K'illki occupation for the site of Pucara Pantilliclla is demonstrated by surface collections made by Rowe (personal communication) and Dwyer (1971, p. 45) and by excavations made by Dwyer (1971, p. 69). Inca-related sherds were reported for the surface and for upper levels of the excavation (Dwyer, 1971, p. 69).

Kendall's examination of Late Intermediate Period sites in the Lucre region and in the Urubamba region has revealed consistent differences in architectural details and building canons (Kendall, 1976, pp. 94-97). The site of Pumamarca is geographically closer to the Urubamba sites, and it is not surprising to find that it shares a number of stylistic features with them. Features which are also found at Pumamarca and noted by Kendall in some of these sites include the following: square and rectangular buildings, enclosure wall, rectangular-trapezoidal niches which are not necessarily symmetrically placed, niches arrayed in two tiers, distinctive fieldstone wall construction, rounded internal corners, conduit through an enclosure wall, barhold devices, nonbonded building corners, full multiple stories, and plastered interiors. A conspicuous absence at Pumamarca is the round-oval building form. Kendall found that this building type predominated in the Late Intermediate Period sites she studied. She notes consistent differences in design features between the round-oval and the square-rectangular building types (1976, pp. 88-91), but notes that the two types may occur in the same site. She suggests that the Late Intermediate Period architecture can be seriated and that the rounded buildings precede the rectangular buildings in sites with a continuous occupation.

If we accept Kendall's architectural seriation, Pumamarca must have been built relatively late in the Late Intermediate Period. In general, I agree with her argument that the rounded building forms become rectangular as the style develops. I would like to extend the interpretation to suggest possible social reasons for the change in architectural form. In Kendall's Urubamba sites, some sites have only rectangular buildings (Pincuylluna, Miradorpata, Alfafayoc). In sites with both rectangular and rounded buildings, the round buildings are the dominant architectural form and the rectangular buildings may be restricted to one sector of the site. At Huata, for example, they are found close to the perimeter walls (Kendall, 1976, p. 90), while at Pucara Pantilliclla they are centrally located (p. 88). At Ancasmarca and Piquillacta Torechayoc the few rectangular buildings are in the upper portions of the sites (pp. 88-89). It is possible to interpret this spatial arrangement as indicative of a status difference both between sites and within a site.[3] Since the rounded buildings predominate in sites where they are present, they can be considered to be associated with the majority of the population of the sites. The rectangular buildings can be considered to be associated with a restricted group or a specialized activity of the whole group. The increase in proportion of squared to rounded buildings at later sites might suggest increasing social complexity and more marked social stratification during the course of the Late Intermediate Period. This interpretation seems to be in accord with what we know about the culture history of this region.

In order to define more precisely the function of Pumamarca, we must, by my argument, compare it to those sites that are closest to to it in form. This might suggest that Pumamarca was a site with social functions similar to Huata and perhaps to Pucara Pantilliclla. Huata, at least, is called a fort (Rowe, 1944, p. 53; Kendall, 1976). On the basis of similarity of form we might consider Pumamarca to be a fort, too (Gasparini and Margolies, 1977, p. 300; 1980, p. 289). However, to

call a site a fort is more a statement of formal typology than a description of the function of the site. As has been noted by others, the attribution of function is problematical.

The different architectural forms at Pumamarca probably filled different functions for the users of the site. Building 5, slightly larger and more carefully constructed than the square buildings and located within the central portion of the site may have served as a residence or a place of work for the spiritual or secular leader of the group using other buildings in this area. Building 8, removed from the majority of the buildings and oriented away from them, probably met different needs. Based on an analogy to Inca kallankas, Building 8 could have been used for celebrations and dances (Gasparini and Margolies, 1977, p. 206; 1980, 199, quoting Garcilaso), or to provide shelter for guests (Gasparini and Margolies, 1977, p. 208; 1980, p. 200, quoting Cristóbal de Molina [Bartolomé de Segovia]). Open areas of the site could accomodate large numbers of people not normally using it, but gathered for a special purpose such as a festival, a market, or refuge from an enemy.

I shall conclude with a few speculations on the place of Pumamarca in regional culture history. I have suggested that Pumamarca shows an architectural style which is best considered to be a part of or at least a near relative of the Late Intermediate Period style described by Kendall for the Urubamba region. I would argue that the social stratification of the Urubamba region during the Late Intermediate Period is reflected in the presence of two traditions within the architectural style. The higher prestige tradition stresses squared architectural forms and the lower prestige tradition stresses rounded forms. Early Inca architectural style must have developed from a Late Intermediate Period predecessor related to but distinguishable from the Urubamba style. This predecessor may have been localized in the Lucre Basin as Kendall suggests (1976, p. 98). As the Imperial Inca style crystallized, it borrowed from the Urubamba style as noted by Kendall (1976, p. 98), but borrowed traits from the high prestige tradition of this style. The plebian architectural tradition may have continued as Kendall implies, or it may have been replaced by official Inca style as the Inca policy of resettlement was enforced.

The exact place of Pumamarca in regional culture history is impossible to determine with any certainty without further survey and excavation data, but some comments can be offered. Sarmiento's depiction of the Ollantaytambo region would suggest that there were powerful local rulers based in specific towns, who had jurisdiction over the people within a certain territory. These local chiefs were toppled early in the history of the Inca Empire. Sarmiento places the conquest of the Ollantaytambo region in the reign of Pachacuti (Sarmiento, cap. 35; 1943, pp. 99-100; and see Kendall, 1976, pp. 96-97). It seems likely that Pumamarca would have been included in the conquered region. The exact impact of the Inca conquest on specific archaeological sites is not clear. Sarmiento mentions that Huata was burned by Pachacuti (cap. 35; 1943, p. 100) and the town of the Cuyos (Pucara Pantilliclla) was also destroyed by him (cap. 35; 1943, p. 99). Kendall mentions that Huata

showed signs of having been destroyed by fire (1976, p. 75). Pumamarca also shows traces of having been burned, although there is no way to establish a date for this event. Kendall has noted that ceramic remains suggest a continuous occupation or reuse of some Late Intermediate Period sites (1976, p. 99). There is architectural evidence for modification of parts of Pumamarca at some point after its original construction. I saw no surface ceramics, so cannot suggest a date for these modifications.

Archaeologists are only now beginning to understand the cultural sequence in the Cuzco area prior to the Inca Empire. The architectural evidence from the Ollantaytambo region would suggest that the culture history of this area immediately prior to and during the Inca Empire is particularly complex and interesting. Much work remains to be done to determine the exact limits of local styles and to interpret the architectural and ceramic remains in light of historical events reported to Spanish chroniclers. It is my hope that this paper will help to further research done by Kendall and others, and that the description and analysis of architectural style presented here will help in the interpretation of other problem sites in the area.

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NOTES

[1]Among these problematical buildings I include the "Palace of Ollantay" complex discussed by Alan Sawyer. His preliminary description of the style of this architectural group, presented at the Annual Meeting of the Institute of Andean Studies in January, 1979, included reference to many of the peculiarities of design that are also seen in Pumamarca. Sawyer's interpretation of these features as provincial Inca inspired me to reexamine the evidence from Pumamarca. I offer the interpretation of a Late Intermediate Period placement for the style.

[2]The argument presented in this paper is complicated somewhat by the necessity of contrasting the Inca style with Late Intermediate Period styles. Inca style was most widely diffused during the Late Horizon, but was almost certainly well-established in the Cuzco region during the Late Intermediate Period. The conquest of the Ollantaytambo region is attributed to Pachacuti, a Late Intermediate Period Inca ruler. The stylistic

developments and historical events discussed in this paper all pertain to the Late Intermediate Period. I am reluctant to give a style name to the architecture at Pumamarca because I am not sure whether it is a new style or whether it is best considered as belonging to one of the Late Intermediate Period styles described for the general area.

[3]I am grateful to Patricia J. Lyon for pointing out that the pattern of dual architectural traditions is reported for other parts of the Andean area. In Pacajes, Bolivia, the majority of the population lived in small, round buildings, while the caciques lived in larger, squared houses (Mercado de Peñalosa and others, 1965, p. 340); and in Guamanga, people lived in small, usually round, houses and used larger buildings for social gatherings (Bandera, 1965, p. 176).

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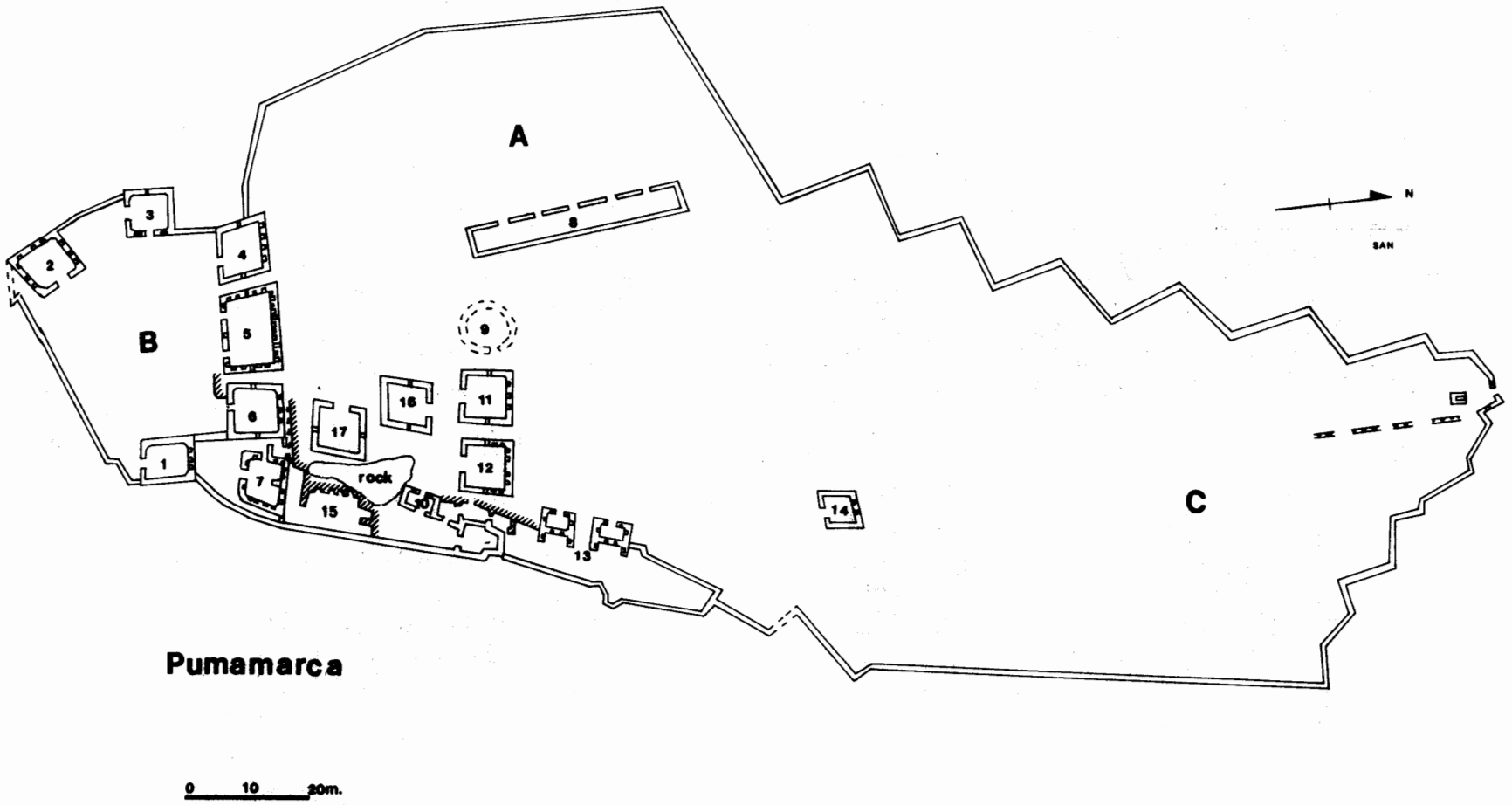
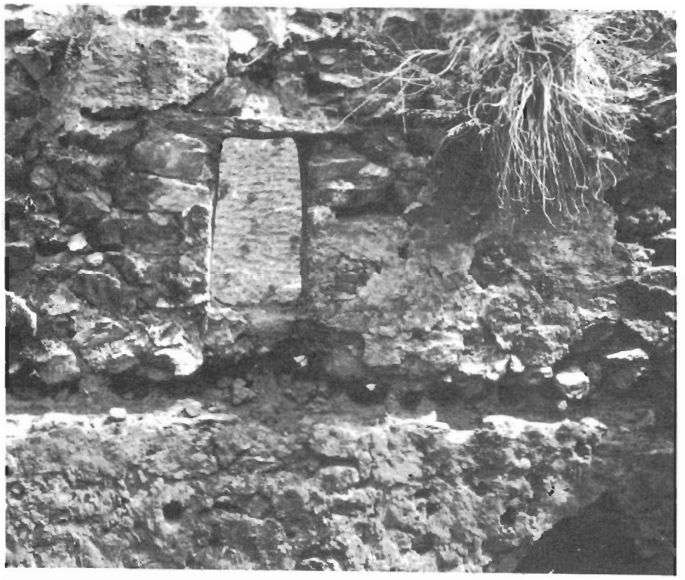


Plate V. Fig. 1, redrawn by the author from Llanos (1949), retaining most architectural features he presents, but corrected on the basis of field observations. Changes are primarily in spacing of windows and niches, representation of interior rounding on buildings 1-7 and 10, and an elaboration of zone 15 and the area of the north entrance to the site. Features looked for but not found were omitted, including the south and east entrances, terracing by buildings 8 and 9. Scale is approximate.



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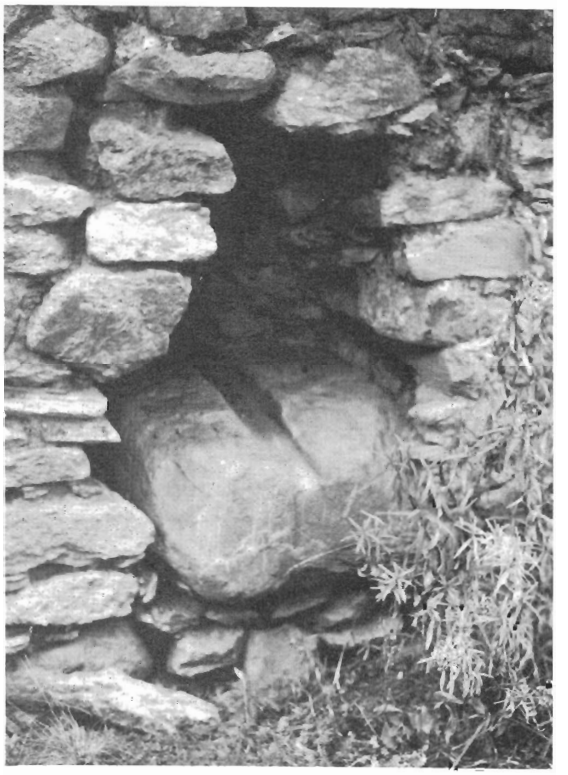

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Plate VI. Fig. 2, interior of Building 11 at third floor level showing holes to support wooden floor. Note also construction of the window; fig. 3, Building 3 showing exterior niches with small windows and a larger window in rear wall overlooking the valley; fig. 4, water channel through the wall near north entrance to site. Photographs by the author.