The Significance of Chiripa in Lake Titicaca Basin Developments

KAREN L. MOHR CHÁVEZ

The site of Chiripa is located in Bolivia on the southern shore of Lake Titicaca. A series of structures revealed by excavation there have long been interpreted as ordinary houses of a residential village belonging to a relatively localized culture named Chiripa after the site. Using available published data as well as unpublished evidence, I have reinterpreted this unusual Late Chiripa architectural complex (ca. 600-100 B.C.), with its structures surrounding a sunken court, as a temple-storage complex. In this article I examine how it served as a direct model for the monumental temple complexes belonging to the later Pucara culture (ca. 100 B.C.) that are found in Peru at Pucara in the northern Titicaca Basin. The occupants of the high-prestige temple/storage complexes at Chiripa and Pucara may have been involved in the administration of ritual and worship, and even of production, distribution, and consumption, perhaps regulated by periodic ceremonies associated with the temples.

Chiripa was part of the widespread Yaya-Mama Religious Tradition, defined here for the first time, that appears to have unified populations in the Lake Titicaca Basin. This tradition directly contributed to Pucara, and in many ways persisted into later, more powerful Tiahuanaco, Huari, and perhaps even Inca societies (see map and chronology, pp. 2-3). Beginning at least by Late Chiripa times, the Yaya-Mama Religious Tradition, named after the style of associated stone sculpture, was characterized by: (1) temple-storage centers such as at Chiripa, (2) Yaya-Mama style stone sculpture having supernatural images, associated with the temples, (3) ritual paraphernalia including ceramic trumpets and ceremonial burners, and (4) a supernatural iconography including heads having rayed appendages and a vertically divided eye.

Tiahuanaco and the local societies that preceded it were set in the altiplano, a high, virtually treeless plateau that surrounds Lake Titicaca at over 3800 m. above sea level. This region provides both limitations and advantages in terms of subsistence (see Erickson, this issue). The most salient limitation of the cold and altitude was on agriculture, so that crops included only native grains, like quinoa; and tubers, such as the potato. The open grasslands, however, were ideal for the hunting of wild guanaco, vicuña, and deer, and for the herding of domesticated llama and alpaca. In addition, the lake provided abundant resources like fish, fowl, and reeds used for such things as rafts for transport, roof thatching, and food.

The Tiahuanaco polity flourished between about A.D. 300 and 1200 and extended from southern Peru to parts of Chile and Argentina. It is named after the large urban and ceremonial site in the southern Lake Titicaca Basin that surely must have been its administrative and religious

1 Exposed north face of the Chiripa mound, Bolivia, in the area of Coe's excavation, 1955. The distance from the edge of the mound at right to the left (east) edge of the stone structure is 11 m. This stone structure belongs to the Middle Chiripa Level (900-600 B.C.).
capital. Tiahuanaco religion, if not other aspects of the society, had a strong impact on the Huari society that expanded over much of highland and coastal Peru between ca. A.D. 550 and 750, all preceding by many hundreds of years the invasion of the well-known Incu empire between A.D. 1439 and 1532. Because the two areas were far removed from each other, Chirpa and Pucará, preceded and were related to Tiahuanaco, only are crucial in understanding the origins of the Tiahuanaco state. My aim is to demonstrate a much more important role for Chirpa, and the system of which it was a part, in integrating Lake Titicaca Basin societies prior to both Pucará and Tiahuanaco.

Chirpa

Located in the Department of La Paz on the Taraco Peninsula overlooking Lake Titicaca (Fig. 1), Chirpa is dominated by an artificial mound measuring 60 m north-south by 55 m east-west and about 6 m high, the top of which is some 25 m above the lake level (see Bibliographical Note). Excavation of this mound by Wendell C. Bennett in 1934 revealed two Chirpa levels: (1) "pre-mound" strata and (2) the mound or "house" strata. Bennett felt the two were indistinguishable. He completely excavated two of the Chirpa structures of the upper "house" stratum, each part of a third (Fig. 2). These rectangular, once-topped buildings have double walls of adobe and stone set in mud, and form a rough square or octagon around a central open area (Fig. 3). Bennett estimated there were 14 such structures, but more recent estimates include 15 (Kidder 1964), 16 (Browman 1978), and 18 (Browman 1978). His interpretation of these structures as houses of a village has persisted in the literature. Finally, in the central depression of the mound, Bennett also defined a rectangular/subterranean temple structure that he, and later Kidder, regarded as Decendent Tiahuanaco. The site yielded Incas and immediately pre-Incas remains as well.

The later excavations of Alfred Kidder II and William B. Coo in 1955 (Fig. 3) revealed structures below the upper "house" strata. They confirmed that there were two superimposed Chirpa levels that were clearly distinguishable based on architectural features, and revealed evidence of a third, even earlier occupation (Kidder 1956, Mohr 1969). These excavations also yielded a series of radiocarbon dates indicating that the "Sub-Lower House Level" dated to ca. 1400-900 B.C., the "Lower House Level" to 900-600 B.C., and the "Upper House Level" to 600-100 B.C. (Fig. 2). This evidence links the mound to several cultural and architectural traditions. These three phases are as follows: (1) Early, Midlithic, and Late Chirpa, respectively.

Chirpa sites are distributed primarily around the southern part of the lake. They are found near Chucuito on the northwest, on the Copacabana Peninsula, along the south western lake (including Chirpa and Pariti), on the east of the lake across from the Copacabana Peninsula, and northeast of Tiahuanaco somewhat further inland.

There are several characteristics of the Late Chirpa architectural structures and associated features that suggest that the structures were part of a planned temple storage complex. Brownman discovered a rectangular/subterranean temple structure that he, and later Kidder, regarded as Decendent Tiahuanaco. The site yielded Incas and immediately pre-Inca remains as well.

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Specifically, 38 percent of the total internal open floor area of Bennett's structure was taken up by open doorways and ringed with wall structures, and the central room constitutes 62 percent. Expressed another way, wall structures are 57 percent of the potential living area (using internal dimensions of the outer walls) the central room comprises 43 percent of that area, while 57 percent is devoted to storage, inner walls to constitute 20 percent of the floor area. Structures 2, 5, and C show this same proportion in the use of living space. The central room is only 57 percent of the total floor area, but it is also restricted by windows that are relatively small and certainly quite ornate. These characteristics argue against storage of items for use in ordinary domestic activities.

One could walk into any of the bins; rather, all bins were accessible only through small windows about 60 by 80 cm, and rooms above the floor. A person would have to bend over and kneel and reach across the approximately 130 cm wide windows to get to the storage area. The building's structure, in fact, indicates a house that could not stand upon earth. Bulky items, such as cooking vessels, would be very difficult to maneuver through these ornate windows, and frequent deposition of trash would very likely lead to rapid window destruction. Photographs (Kidder's Structure 5) seem to indicate lack of use around the windows. Items would most easily be stored if they were small and readily manipulated. The impression is, however, that access was restricted to specific persons and occasionally—perhaps during periodic use such as seasonal or as determined by ceremonial cycles. In addition, the stones that have no windows to the outside, and the front door that faces the sunken court provides the only access into them. The doors, perhaps of wood or reed, were unique; when open they would slide into a slot in the inner wall, on the left side of the doorway viewed from inside. When closed the door would sit flush against a vertical groove on the opposite side of the doorway. Structures 1 and 5 show that the sliding doors had two panels, each only 50-60 cm in height, one above the other and separated by a ledged stones across the door slot; a stone in the vertical groove on the opposite side supported the upper panel when closed (Bennett notes and 1808-424, Kidder notes). In Structure 1 there was also a second row of stones above what would have been the upper door panel. If this upper row of stones marks total door height, then the door opening would be only ca. 1.10 m high by about 30 cm wide. Structure 1 also has an awkward sill 30 cm high to step over as a person bends to enter. The curious double panel suggests that the upper half could be open while the lower was closed. This arrangement would serve well for receiving or distributing stored materials, such as between persons inside (likely seated or kneeling because of low door height) and outside in the inset entryway. Both door and entryway elaboration suggest some important function.

In broader perspective, one could argue that access to stored materials, and hence their protection, within the entire complex was controlled on three levels. First, based on current evidence, passage into the complex was restricted—shared only by inhabitants between the three eastern structures (1-4), adjoining walls in two western ones (4 and 5), and patting interior corners of two to three diagonal structures (1 and C and apparently G) prohibited entrance. Second, access to each structure was restricted by the low, specially constructed doorways. Third, access to the contents of each bin was limited by a single small, ornate window.

High-status individuals likely resided and carried out special activities in the structures. The considerable amount of refuse found in and around the Chiripa structures (especially behind them), the symbolic food remains and sooty cooking pots, suggests residence, but such refuse may also have accumulated during seasonal public gatherings for ceremonial and economic activities, for example. If these structures were not ordinary houses, then such houses may be located elsewhere for a long time. Russell Bennett noted that Bennett needed to the Chiripa refuse. Associated remains also support the inferred ceremonial function of the complex. Sergio Chávez and I (1978) isolated and defined the Yaya-Mama style of stone sculpture based on a group of slabs and stelae, the most important of which is the Chiripa. (Fig. 4), found all around the lake but concentrated at its southern end. The style of these slabs is similar to that of the small stela found at Taraco, Peru, at the northern end of the lake (Fig. 5). We thus believe that the stone slab (Pucara) in date, and iconographically antecedent to Pucara, and was related to Late Chiripa pottery. It heat dates to Early Horizon 9-10, and is at least partially contemporaneous with Epoch I at Taraco (Early Horizon 10). This pre-Pucara position and Chiripa association were confirmed by the discovery at Chiripa of a carved grinding slab in the Yaya-Mama style (Fig. 6), with the same raised border forming a cross formée as decorated slabs (Fig. 10). This slab was found at Coe 10 cm above the floor of a Middle Chiripa structure on ash from a Late Chiripa structure, and under the Late Chiripa structures. While it could belong to Middle Chiripa times, it could also have been placed there by Late Chiripa builders. In any case, it is no later than the Late Chiripa occupation of natural status—a divided eye and a tear band or eye ornament (Fig. 10). This face, in my knowledge, displays the earliest known occurrence of the vertically divided eye in Andean iconography (the sherds also has grass temper, typical of Chiripa pottery). Moreover, there are other sherds that may indicate the beginnings of grooves emanating from around the face that might represent ayre rhytons, another indicator of supernatural status. Heads with such appendages are a prominent constituent of Yaya-Mama religious iconography and occur on slabs (Fig. 4) and on stela (Fig. 5). The use of these appendages as a significant element of ceremonialism is also indicated by the association (modeling) of the anthropomorphs, also occur on Yaya-Mama style sculpture (Fig. 4) and as modeled appliqués on Chiripa ce- ritic trumpets (Fig. 7) and vessels. The front-faced, profile-bodied felines, although clearly spotted (unlike pumas), also occur on Epoch I (Yaya-Mama style) pottery (Poces 1971). Other religious elements that occur on Chiripa pottery or Yaya-Mama style sculpture include checkered crosses, relief incised serpents, fellows, and a cross formée formed by raised borders of slabs (Figs. 4 and 6).
Pucara

Characteristics of the Yaya-Mama Religions Tradition. The term "Pucara" is especially exemplified at the site of Chiripa, continued into and contributed toward the Late Intermediate Period Pucara culture (see chronology, p. 2). The Pucara culture is named after the site located on the Pucara River some 60 km from the northern end of Lake Titicaca in the Department of Puno (see cover of this issue). Pucara includes both residential and ceremonial areas and is one of the largest and earliest sites in the region. It is known for its elaborate stone sculpture, facies incised polychrome pottery, and finely dressed stone masonry resembling Tiahuanaco materials in Bolivia.

Alfred Kidder excavated six areas at the site in 1939 (Fig. 8; see Kidder biography in this issue). Excavations I, II, and III in river bank midden deposits; IV in a complex of structures on the plain west of the river and south of the modern village; V in the largest structure (as the Pucara 2 Excavation); and VI where he completely exposed Enclosure 2 (Chavez 1959). He mapped six such enclosures, each a building complex interpreted as a temple. Enclosure 2 was built on a massive stone platform system he called Qalasaya, nestled at the foot of an adobe ridge.

The plan of Enclosure 2, where Excavation VI took place, is shown in Figure 9. There are some similarities in overall plan and conception to the Late Chiripa temple complex (Fig. 3). On the top construction level (Kidder's Level 1) a series of structures or rooms enclose a central sunken court below (Level 2), with a level in between (Level 2). Except for passageways from the exterior that provide entry into the enclosure, the adjoining structures (Divisions A-I of Kidder) share walls at Chiripa (Structures 4 and 5 and D, E, and F, respectively). Divisions A through I repeat in general plan, and form U with three rooms on the west, two on both north and south, and a diagonally oriented division 6 present between the two. This difference is the U-shaped of the Pucara complex, its open side over-

looking the terrace wall and facing the river. Based on surface indications, other Pucara enclosures may have had four sides, however. Pucara, unlike Chiripa corner structures that open onto exterior spaces on each side, the corner divisions at Pucara have inner spaces accommodated within an enclosed outer wall. The prepared floors of Level divisions are smoothly plastered, pebbly red adobe.

The overall plan of the enclosures at both Chiripa and Pucara is slightly trapezoidal, and outside dimensions are very similar, averaging 65.35 percent at Chiripa and 64.30 percent at Pucara. While these internal areas at both sites overlap, there is a tendency for Pucara floor spaces to be larger. At both sites, floor areas of corner compartments are larger than other interior structures. The peripheral compartments at Chiripa were more accessible than those at Chiripa since entrance to them was through doorways, frequently having raised sills, rather than through windows. But large function bands, and blackened interiors also show the impression of the widespread use of the enclosures.

In addition, more elaborate ceramic pedestal-based bowls or ceremonial basins appear (Kato 1984). Qalasaya-style pottery and Qalasaya-style ones and pre-

Pucara ones from Taraco. There is a tradition of iconography found on Qalasaya-Mama style stone sculpture and Chiripa and Qalasaya pottery. One of the Pucara stone slabs, stepped stones from front and rectangular doors behind (Fig. 12). Perhaps, on either side of many doorways into the back, side, or front peripheral compartments have been vertically notched, creating insets or double jambs. The doorway into Division E had a vertical notched jam on its exterior.

In the center of each short wall of each division are flat-topped blocks Kidder called altars, although they essentially form niches between two compartments. The niches are in evidence they were boxed on three sides and open toward the central room; there is though not very realistic, the relief features on Chiripa pottery resemble Pucara-style ones (Ponce 1971). The occasional occurrence of what appear to be spots, and in their place on trumpets (Fig. 7) and bowls (although without pedestal bases) apparently in pairs. Qalasaya-

styles pottery (Ponce 1971) comes closer to Pucara in having profile-based, front-faced (but not in relief) spotted felines in color outlined by incision; these vessels were associated with the pedestal-based bowls noted previously. Pucara-style pottery, however, is more complex than Chiripa or Qalasaya-style pottery and possesses new mythical themes.

Antecedents and Continuities of the Yaya-Mama Religious Tradition

Excavating the Late Chiripa structures, Cofe encountered remains of two structures belonging to the Middle Chiripa occupation (900-1000 B.C.), with features antecedent to the Late Chiripa periods. The two Middle Chiripa structures were single-walled, oriented north-south, and separated from one another. They were beneath but not coincident with Structures 1 and 2 of the Late Chiripa Level, and the one under the diagonally oriented Structure 2 was not so oriented. Simi-}

larities include an interior niche in the corner of the north wall of one structure, measuring 31 cm deep by 33 cm wide and at least 60 cm in height. As with Late Chiripa bins, its floor approximately coincided with the floor of the room itself. Other niches may have existed, but only one quarter of this structure was uncovered. The niche was plastered with yellow clay on its floor and walls, and the floor of the room was painted red on yellow clay. This kind of plastering and use of color continued in the Late Chiripa constructions, and suggests a special function that may have been at least in part ceremonial. Each deep and richly colored in width would have the form of the Late Chiripa bins, but necessitate a double-wall construction since the niche structurally weakened the wall. The size increase suggests a greater storage capacity was required.

In a cross-section of the Chiripa mound in the same area he excavated, Cofe recorded a red clay floor, probably representing the upper or inner surface of the Late Chiripa structures. This floor extended eastward toward the center of the
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10. Modeled applique head on Chiripa pottery vessel. Note the diced eye and tear hand or eye ornament elements that were omitted in Bennett's original publication (1936, fig. 25a). Some grooves contain post-firing paint. Excerpted by Bennett from a Chiripa vessel (1936, fig. 25a).

11. Pacara-style trumpets from Pucara. Like Chiripa trumpets (Fig. 7), the incised and relief figures face the trumpeter when the instrument is being played and remain upright when suspended from the belt end.

Elaborate window-style ceramic trumpets from Pucara. The elaborate style is unique to Pucara. The incised and relief figures face the trumpeter when the instrument is being played and remain upright when suspended from the belt end.

Plan of Enclavement 2 (temple) at Pucara (Kidder's Excavation VI). (Based on Kidder's plan, Chaves and Chaves n.d.)

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Miniature of the Middle Horizon. The associated ceramic trumpets and Yaya-Mama style sculpture further reinforce the ceremonial nature of the complex and relate it to other altiplano sites that, in addition to trumpets and sculpture, also had ceremonial burials.

Chiripa was a significant part of a regional religion system, the Yaya-Mama Religious Tradition, that unified groups around and near Lake Titicaca who appear to have used different pottery styles (e.g., Chiripa and Qulasaya styles). The site provides a unique opportunity to examine the development of this tradition from Late Chiripa, and earlier, to post-Chiripa times, a span of some 1000 years or more. Chiripa must have been a sacred center for hundreds of years, serving as a source for later, more centralized Pucara and Tiahuanaco developments. Detailed similarities between Chiripa/Yaya-Mama and Pucara temple complexes, ritual paraphernalia, and stone sculpture demonstrate that the tradition persisted in many ways. Storage of some significant kind, and high-status activities appear to have occurred at the temple complexes at both sites, and at Pucara the remains of at least six enclosures were involved.

Many questions emerge about what kinds of social, political, and economic organization were involved in the unification that the shared religious ideology reflects. What was being stored in the compartment at Chiripa and Pucara, who controlled these stores and how? Careful contextual data, bin by bin, are necessary to answer such questions, but the quinoa and basketry impression at Chiripa are suggestive of the work of Erickson (this issue) suggests that raised fields were being constructed at least in the northern part of the lake during the Yaya-Mama and Pucara periods while they were used in the southern part at least until Tiahuanaco times (Kolata, 1987). This raises additional concern about how the storage at both Chiripa (although in the youth) and Pucara is related to the identified Late Chiripa trumpets.

Discussion

The evidence supports the interpretation that Chiripa was a temple-storeroom complex planned as a unit. The central sunken temple was linked by colored floors to the enclosing structures that were decorated on their front exterior. Elaborate doorways, up to 2.5 m wide, opened into halls, and wall niches, each housing a double jamb with steps, as well as doorways, yellow plastered interior walls, and yellow clay floors, argued against ordinary domestic use of the structures. Similarly, storage space is abundant and yet made relatively inaccessible by elaborate window-style ceramic trumpets and Yaya-Mama style sculpture further reinforce the ceremonial nature of the complex and relate it to other altiplano sites that, in addition to trumpets and sculpture, also had ceremonial burials.

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this food may have been used in ceremonies, offerings, public feasting, and maintenance of the high-status authorities and their families, as well as other activities. Special seeds for planting, sacred objects, wool, textiles, or other goods may also have been stored. The predominantly lakeside localities for the Yaya-Mama Religious Tradition (riverine for Pucara) would have provided a setting with diverse and abundant resources for these developments. The Yaya-Mama religious ideology may have served to unify otherwise diverse groups by exacting participation in ceremonies, determined by a ritual cycle and coordinated by persons of high rank, that also involved economic and social activities.

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Wendell C. Bennett of the American Museum of Natural History in New York first excavated the site of Chiripa in 1934. Bennett (1936:43-48, 502, 1948) was the first to define the Chiripa culture based on his excavations here and at Pariti, a nearby island where Chiripa refuse also occurred. In 1955 Alfred Kiddler II (1956), assisted by William R. Coe, conducted excavations at Chiripa as part of a University museum expedition. Alan R. Sawyer also participated, as did Gregorio Cordero Miranda of Bolivia. This investigation provided data that clarified many of the issues raised by Bennett, but also posed new questions. In 1974-75, David L. Brown of Washington University conducted excavations at Chiripa that led him to propose three phases of Chiripa occupation that likely correspond to the three components discovered by Kiddler and Coe: Condori Phase, 1300-850 B.C.; Lluso Phase, 850-600 B.C.; and Mamani Phase, 600-200/000 B.C. (Brown 1978, 1981:412-414). Other excavations have been carried out at Chiripa that also remain unpublished. The unpublished 1934 field notes of Bennett in the American Museum of Natural History, and the 1955 materials of Kiddler, Coe, and Sawyer have been consulted and are referenced in the text as "notes to identify unpublished information. A full report on Kiddler's Chiripa work is to be published as a monograph, "Chiripa, Chiripa, and Chalipan: The 1955 Excavations of Alfred Kiddler II" by Karen and Sergio Chávez.

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Karen L. Mohr Chávez received her B.A., M.A., and Ph.D. in Anthropology from the University of Pennsylvania. Field work in Northern Ireland, England, and with the Tikal Project in Guatemala preceded her own Andean research in the south highlands of Peru beginning in 1966, stimulated by Kiddler's work there. Her own projects involved excavations in Cuzco and Puno focusing on regional socio-economic interaction among earliest food-producing, ceramic-using societies dating to ca. 1300-500 B.C. Her research interests also include subsequent developments such as Pucara, and ethnographies involving the study of traditional pottery in the south highlands of Peru. She has taught archaeology at Central Michigan University since 1969, where she is Professor in the Department of Sociology and Anthropology.