

## From Tiwanaku to Machu Picchu: *Ushnus* and the Architecture of Creation

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The power of imperial authority in both ancient and modern societies has been routinely justified as divinely sanctioned and continuous from the creation of the universe—as part of a timeless order—through the performance of rituals that invoke, reenact, and perpetuate the process of creation in the making of the present world. This was understood by President Alejandro Toledo of Peru, whose inauguration on July 28, 2001, began at dawn at Machu Picchu, from which he was flown by helicopter to Sacsayhuamán for continuing ceremonies. In presenting himself as an heir to an ancient tradition, he was duplicating strategies similar to those used by unnamed rulers at Tiwanaku and by Pachacuti, a fifteenth-century Inca emperor. These included the use of architectural forms that framed the ruler within a tableau of ordered creation and evoked a specific mythology as a tool of statecraft. The centerpiece of this tableau was the *ushnu*, a stepped pyramid and basin that represented the Andes in microcosm. Its use can be traced to the architecture of Tiwanaku, as well as more ancient antecedents.

Shortly after his 1911 discovery of Machu Picchu (fig.1), Hiram Bingham identified it as the Inca place of origin. While his impossibly early date of 4000

B.C. has been rejected, his theory of the purpose and importance of Machu Picchu may express the exact intent of Pachacuti Tupac Yupanqui, the Inca emperor responsible for its construction. Machu Picchu was constructed in the early 1400s as a stage upon which the emperor performed rituals evoking the sacred landscape of creation in an outward theater of authority while at the same time assuring himself of his own role in the process of “world-making.” Inca emperors justified their authority through a state-sanctioned myth of the origin of both the universe and the royal lineage. In so doing, they duplicated an effective strategy of ideological predecessors, the rulers of the ancient city of Tiwanaku in highland Bolivia, who had in turn adapted their rituals from far older traditions. This strategy linked architecture and landscape to give material form to cosmological concepts about mountains, water, and a cyclical flow of life force whose perpetuation was in the hands of the practitioners of these rituals.

The material settings of ritual performances were in the form of stepped pyramids—artificial sacred mountains that served as thrones, altars, and speaking platforms for the Inca nobility. The settings included pits, basins, drains, and other



Fig. 1. Machu Picchu, Peru. Photo by author. ©2007 John W. Hoopes.

cavities into which flowed water, *chicha* (maize beer), and blood. The Inca designed a combination of pyramid and pit, both to evoke earlier monuments from a remote past, and simultaneously, to confer a sense of sacredness upon the mountainous landscape settings. The stepped platform and circular, sunken pit combination was used in Preceramic times, as evidenced by structures at Caral (Shady Solís 2000, 2003; Shady Solís et al. 2001) and sites in the Norte Chico region (Haas and Ruiz 2004). As noted by Frank Meddens (1997, 12), “the truncated pyramid structure itself and the concepts of mountain worship and a water cult appear to be of great antiquity, with clear links to the Early Horizon Chavín culture and the Middle Horizon Tiahuanaco state.” Indeed, historical continuity is implied by Inca references to Lake Titicaca and increasing evidence

for either actual or mythological ties between the Inca royal family and royal lineages of Tiwanaku.

The mountain associated with Creation<sup>1</sup> was also evoked by Wanakauri, a hill prominent in Inca creation stories. This hill was a *pacarina*, a point of origin and emergence. The stepped pyramid represented an archetypal terraced mountain—a landscape shaped by human hands—which was the source of water, agricultural production, and human life. When combined with a receptacle for water or libations, it represented both land and sea. By standing, sitting, or performing rituals atop a stepped pyramid and offering flowing liquid libations that evoked water from melted glaciers running to the ocean or the Amazon—as well as water flowing into canals or terraces—the Inca ruler represented himself as a timeless “world maker,” perpetuating the act of creation within a cyclical notion of time. This illusion was further enhanced when these structures were used to observe celestial events.

The structures used to portray architectural microcosms are called *ushnus* (Gasparini and Margolies 1980, 264–280; Hyslop 1990, 69–101; Meddens 1997; Pino M. 2005; Zuidema 1989). Considering Machu Picchu an *ushnu* will help illustrate how the Inca emperor Pachacuti utilized rituals of ancient Tiwanaku rulers to interpret, legitimize, and strengthen his imperial authority, and reinforce his identity as a timeless Creator with supernatural qualities.

### Concept of the *Ushnu*

The Inca *ushnu* represented an axis mundi, the metaphysical center of the world associated with origins, experience, and destiny. However, its precise form and meaning during the Late Horizon was complex. Different sources refer to the *ushnu* as a throne, a seat, a shrine, a fountain, or a pit. The *ushnu* has also been identified as an astronomical observatory. There are reasons to believe it was all of these, as well as a stage for ritual performances.

Tom Zuidema, in an exhaustive analysis of references to *ushnus*, concludes that Cuzco’s central *ushnu*, in the principal plaza called Haukaypata, was primari-

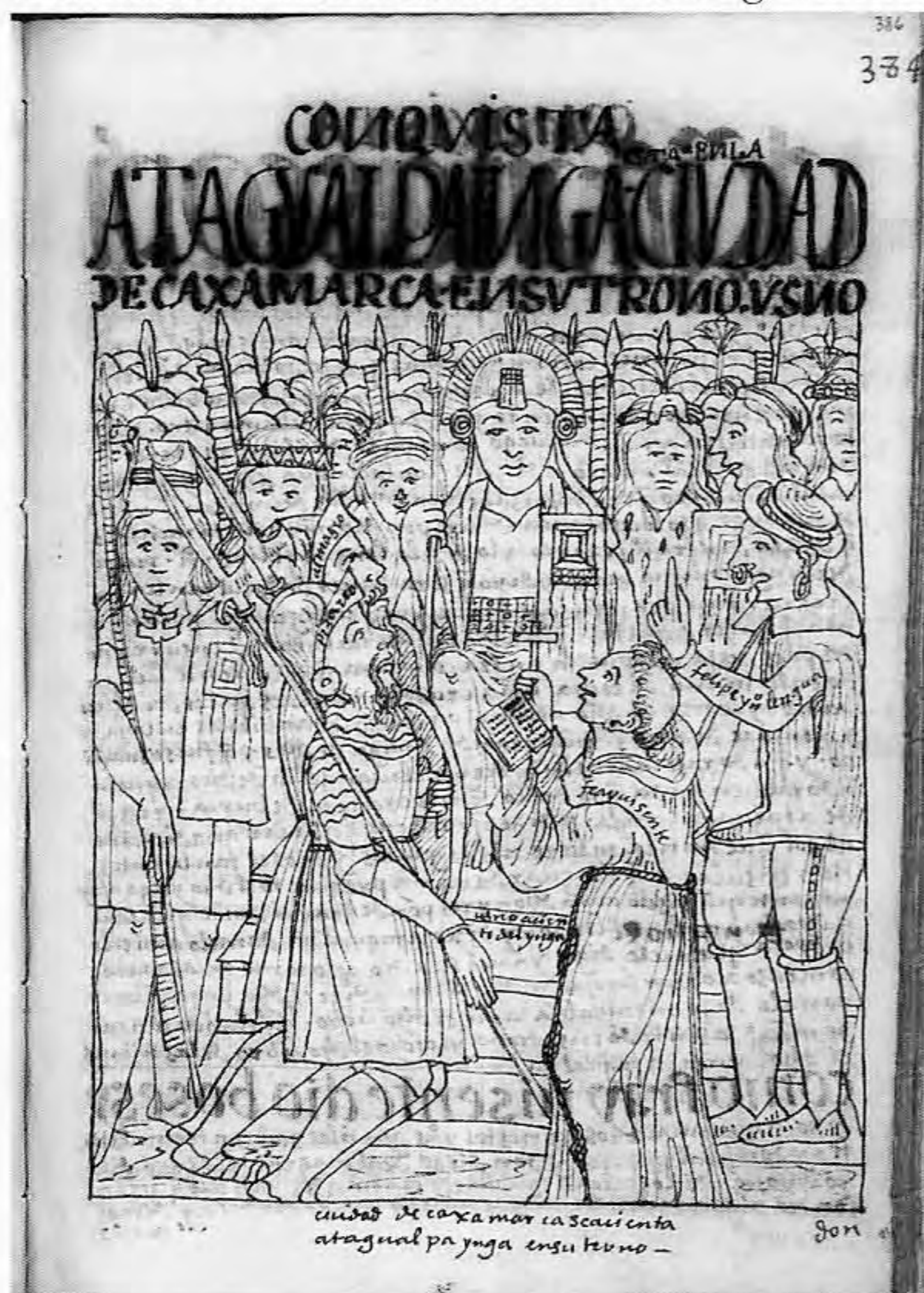


Fig. 2. “Conquista Atagualpa Inga está en la ciudad de Caxamarca en su trono, Usno.” Handwritten script on step below the Inca reads “usno asiento del ynga” while the caption at the bottom reads, “ciudad de Caxamarca se asienta atagualpa ynga en su trono.” Manuscript page 386, Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.



Fig. 3. "Conquista Levántose por rei Inga Mango Inga." Handwritten script on bottom steps reads, "Trono y asiento del ynga llamado usno – en Cuzco." Manuscript page 400, Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.

ly a hole in the earth that "sucks" (*chupa*) rainwater and other libations (Zuidema 1989, 452). He asserts this depression was associated with a gnomon for making observations of the movements of the sun. José Luís Pino (2005) asserts that the pre-Inca *ushnu* functioned specifically as a place for making offerings of liquids, but also offers evidence that its use for making observations of solstices, equinoxes, and other celestial events was well-developed in Inca contexts. However, Zuidema also notes several references to the *ushnu* as an *escaño* (formal seat, as in "parliamentary seat") or *pila* (fountain), a stepped platform or pyramid.

Felipe Guaman Poma de Ayala ([1615] 1993) describes the *ushnu* as a "throne," a "seat," and a site for sacrifices. He mentions *ushnus* in Cajamarca, Cuzco, and Willka Waman and illustrates the first two. One occurs (fig. 2) in a depiction of a scene from the

Conquest labeled "Atagualpa Inga está en la ciudad de Caxamarca en su trono, Usno" (Atahualpa Inca is in the city of Cajamarca on his throne, Usno) with the comment "usno asiento del ynga" (*usno*, seat of the Inca) written on one of the steps and the caption "ciudad de Caxamarca se asienta atagualpa ynga en su trono" (city of Cajamarca; Atahualpa Inca is seated on his throne) below. Another appears (fig. 3) in a depiction of the rebel king Manco Inca, with the identifying label "Trono y asiento del ynga llamado usno—en el Cuzco" (Throne and seat of the Inca, called *usno*) written on the bottom two steps. Juan Ossio provides another illustration of Atahualpa greeting Francisco Pizarro from atop a stepped platform throne in Cajamarca (fig. 4) from the manuscript of Fray Martín de Murúa (Ossio 1998, fig. 1).<sup>2</sup>



Fig. 4. Atahualpa addressing Francisco Pizarro atop an *ushnu* in Cajamarca (handwritten script on the top step reads "atahualpa ynga" and on the shield reads "pizarro"). Illustration from Ossio 1998, fig. 1). Photo from the Loyola manuscript of Fray Martín de Murúa, reproduced courtesy of Juan Ossio. Original document is in the hands of Sean Galvin.

Cristóbal de Molina in 1552 described platforms that were used for public address: “and in each town there was a large royal Plaza, and in the middle of it was a square high platform with a very high staircase; the Inca and three of his lords ascended it to speak to the people, and see the army when they made their reviews and assemblies” (quoted in Morris and Thompson 1985, 59). These were probably *ushnus*.

Meddens, who has undertaken the most exhaustive survey of structures identified as *ushnus*, acknowledges that the concept combined a truncated, stepped pyramid with a hole or place for liquid offerings. The *ushnu* represents the relationships among the sun, mountains, and water in the circulation of water and the rejuvenation of the world (Meddens 1997, 7–8). The sun causes glaciers to melt into water that flows down mountain slopes and charges lakes and irrigation systems. The *ushnu* had a metaphorical relationship with the human body, relating the circulation of water to that of blood and other vital fluids, including those associated with fertility. One might even identify an *ushnu* as a gravity device, providing energy for the downhill flow of liquids that must first be ceremonially carried upward by world makers and creators. The *ushnu* was associated with ancestor spirits and *wamanis*, or mountain deities (Meddens 1997, 8), who were an essential part of this process.

Many *ushnus* were gnomons, used for astro-

nomical observations (Zuidema 1989). Pino (2005) offers evidence that the Inca *ushnu* at Huánuco Pampa was utilized as an astronomical observatory tied to the official calendar. Several architectural structures at Machu Picchu were also used as observatories (Dearborn et al. 1987; Dearborn and White 1982, 1983). The phenomena observed and celebrated were cyclical celestial events that recent research by Robert Benfer at the site of Buena Vista, Peru, has confirmed were known and worshiped since Late Preclassic times, around 2200 B.C. (<http://rcp.missouri.edu/bobbenfer/index.html>).

The gnomon function, however, may not have been universally predominant. While some *ushnus* have astronomical orientations, others appear to have been oriented principally to natural features of the landscape, although it seems likely that there was a combined effort to create alignments with the sky or “world above” (*Hanan Pacha*), the earth on which humans dwell (*Kay Pacha*), and the “world below” (*Uku Pacha*). The gnomon function would correspond to the sky, the stepped platform to the earth, and the hole or drain to the “world below,” although the central concept that connected all of these was that of circulation and vitality. Meddens notes, “A location where a ruler mediates between the world above, this world, and the world below, to ensure continued fertility and the circulation



Fig. 5. Sabacurinca or “Throne of the Inca,” Sacsayhuamán. Photo by author. ©2007 John W. Hoopes.

of water, at a location which symbolically represents a mountain, would therefore make eminent sense" (Meddens 1997, 8). This symbolism of the ruler's function gave the *ushnu* its significance.

Large, public Inca *ushnus* still exist at Willka Waman and Huánuco Pampa, while many other smaller ones are found at sites from Ecuador to Chile (Hyslop 1990, 69–101; Meddens 1997, fig. 4). While countless searches have so far been unsuccessful in identifying remains of the central *ushnu* in Cuzco, Graziano Gasparini and Luise Margolies (1980, 269) were probably correct in their identification of the famous "Throne of the Inca" on Suchuna (Rocadero Hill) at Sacsayhuamán (fig. 5) as an *ushnu*. Writing in the seventeenth century, Jesuit priest Bernabé Cobo (in Bauer 1998, 167) identified this feature as a *huaca* (a sacred location with mythological origins) called Sabacurinca. His remark, "On account of this seat, the whole fortress was venerated," affirms its significance as a central focus of ritual activity. This rock-cut, stepped platform's location on the otherwise largely unmodified Suchuna outcrop at Sacsayhuamán (fig. 6) recalls the large sacred rock on the Island of the Sun in Lake Titicaca, from which Manqo Qhapaq, the legendary founder of the Inca royal lineage, is said to have emerged. The rock on the Island of the Sun, about which John Hyslop (1990) writes, "it would have been difficult to

find a more sacred rock in the entire Inka Empire," was also mythologically linked to the Sun's origins.

What was the origin of the *ushnu* concept? Pino (2005, 144) suggests an etymological origin in the region between Junín and Ancash on the basis of ethnographic and toponymic data. He cites common use of the term in the area between Chavín de Huantar and Wari, where its specific meaning would have been "el lugar compuesto de piedras donde se filtra el agua" (the place composed of stones where the water is filtered) (Pino 2005, 146). Meddens (1997, 11) notes that a drainage canal at Chavín de Huantar ran from under a staircase in the Temple beneath the floor of the circular plaza and writes, "It is possible that this canal served to channel water drained from the temple complex into the plaza, forming a basin, with the temple representing a mountain metaphor and the plaza a *cocha* or lake." The Temple at Chavín de Huantar may have been an *ushnu*, and Meddens draws specific parallels between Chavín de Huantar and Inca *ushnus*. "These are: a possible truncated pyramid shape, the presence of elaborate drainage canals, evidence for human sacrifice, including that of children, and iconographic links with a cat-like creature" (Meddens 1997, 11). These features are all found at Late Preceramic sites in Norte Chico. They are also present at Tiwanaku, where the Akapana pyramid may have served the func-



Fig. 6. Suchuna (Rocadero Hill) at Sacsayhuamán. The "Throne of the Inca" is located atop the large bare stone face at center right. Photo by author. ©2007 John W. Hoopes.

tion of an *ushnu*, as I will discuss later in this article.

The *ushnu* was a defining center to the planning and layout of Inca sites. It could utilize a large stone found *in situ*, a relocated natural stone, or an artificial construction of cut and dressed stone and appears to have conditioned the planning and orientation of other architecture, including the integration of astronomical phenomena. Lawrence Coben (2006) identifies this as part of the process of replicating “theaters of power” by which the Incas created “other Cuzcos” for performances affirming the power of the emperors. This was accomplished through rituals that affirmed a specific mythology.

### Inca Dynasty Origin Myths

The significance of the concept of the *ushnu* can be explored through its relationship with creation mythology. There is no single source or text of the Inca creation myth, portions of which exist in several different versions. Gary Urton (1990, 13–14) cites several sources (especially Pedro Sarmiento de Gamboa’s 1572 *Historia de los Incas*) that narrate the emergence of Manco Qhapaq and his three brothers and four sisters from the central window (cave) of the mountain Tampu T’oqo (Window House) at Pacariqtambo, south of Cuzco. The siblings, along with *ayllus* (kinship groups of common ancestry) of people of the Tampu T’oqo area, traveled north to search for fertile land. Miraculous signs (including a rainbow) brought them to Cuzco Valley, where Manco Qhapaq became founder-king of the Inca empire and his family the ancestors of the Inca people.

Cobo (1979) presents another pertinent story, the creation fable he identifies as “the most widely accepted of all.” In it, Manco Qhapaq summoned residents of the Cuzco region to receive proof that he was truly the son of the Sun. When he stood “at the top of a mountain” in the Cuzco Valley, his polished silver breastplates and backplates and the diadem on his head reflected the sun’s rays and “he appeared to be so radiant that no other argument was necessary.” As a result of “this enchantment,” the assemblage acknowledged him to be son of the Sun and hence-

forth their leader. Thus he reigned in Cuzco Valley and from there began to conquer the adjacent towns.

Bingham gives special importance to an account by Pachacuti Yamqui Salcamayhua written in 1620 (translated by Clements Markham) that says Manco Qhapaq and his brothers set out “towards the hill over which the sun rose” (Bingham 2002, 58). He carried with him a staff and two golden cups (*keras*). This was “executed at the place of his birth, consisting of a masonry wall with three windows, which were emblems of the house of his fathers whence he descended.” These myths find visual representation in works by Guaman Poma (fig. 7) and Murúa (fig. 8).

The valley “discovered” by Manco Qhapaq and his entourage was not empty, so this story is not the same as the creation of all humanity. Rather, it is the myth of origin of what became the dominant moiety of Cuzco and the Inca Empire’s royal lineage. An



Fig. 7. “De Ingas, Mango Capac Inga.” Shown with a staff and parasol. Manuscript page 86, Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.

appropriate analogy in the Western tradition is the story of Romulus and Remus and the founding of Rome. There are also parallels with both the Jewish tradition's story of the Exodus and the occupation of the land of Canaan and with the Aztecs' travels from a mythical home in Aztlan to their "promised land" in the midst of Lake Texcoco. The Mormons' travels and settlement near the Great Salt Lake also come to mind, as the story asserts the legitimacy of a ruling dynasty in the midst of peoples of distinct origins. Although elements of this and other stories existed in earlier myths, Pachacuti in particular appears to have sought to reconcile several stories as part of his policy of reformation and reorganization.

Wanakauri, a large hill overlooking the Cuzco Valley where Manqo Qhapaq was believed to have stood upon his legendary arrival, was enshrined at some point prior to the arrival of the Spanish by the construction of a large idol of which no trace remains. Guaman Poma illustrates the Incas worshipping at Wanakauri and Tampu T'oqo (fig. 9). These rituals included observations of the sun, the moon,



Fig. 8. Manqo Qhapaq atop Wanakauri Hill, from drawing reproduced by Fray Martín de Murúa (Urton 1990, cover illustration).

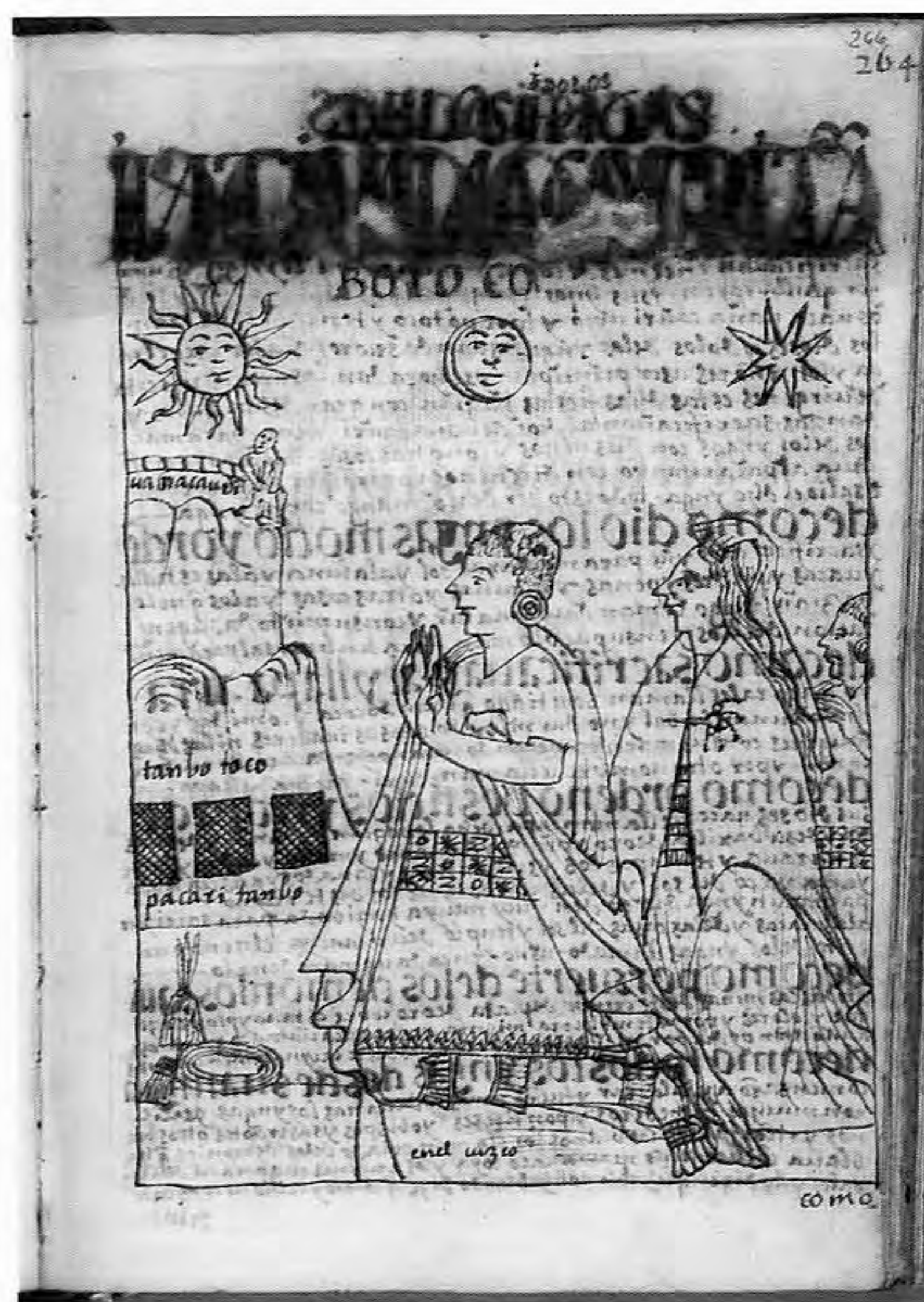


Fig. 9. Inca emperor and wives worshipping at sacred locations, visually conflated into a single unit that recalls the architectural complex at Machu Picchu. Handwritten labels on the hill at left read, from top to bottom, "uanacauri," "tambo toco," and "pacari tambo." Words beneath the central figure read "en el cuzco." Manuscript page 266, Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.

and the planet Venus, as well as sacred places (fig. 10). Places of origin figured prominently in state ritual, but their worship often occurred on artificial replications of landscapes described in myths, not the specific places that were believed to have been the actual landscapes upon which mythological events occurred. Architecture at Machu Picchu suggests Tampu T'oqo and Wanakauri were replicated elsewhere. These also evoked elements of Tiwanaku mythology.

Another myth traces the origin of the Incas to the Island of the Sun in the middle of Lake Titicaca in highland Bolivia. According to this story, which exists in several fragments with far less detail, the Sun departed the Island of the Sun in the form of a brightly shining man who prophesized to Manqo Qhapaq



Fig. 10. Inca royal crest with depictions of the sun, moon, Venus, and a conflation of sacred places. Manuscript page 79, Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.

that he would eventually subjugate many lands. One version describes the origin of the son and daughter of the Sun on this island, whence they traveled to Cuzco by way of Pacariqtambo. The “shining man” is sometimes identified as Manqo Qhapaq himself, who is described as clothed in plates of silver or gold.

How much was myth and how much history? These stories may refer to specific performances at historical locations modified by the Incas for ritual use. For example, the mountaintop temple at Wanakauri was reportedly modified by the Incas with a large idol on top (fig. 11). Unfortunately, few traces remain. Gary Urton (1990, 32–4) and Brian Bauer (2004) have identified the landscapes of the Incas’ origin myths with Maukallaqta, where ruins of stone architecture have been dated to the Middle Horizon (A.D. 500–1100). A nearby rock outcrop called Pu-

maurqu, named for two pre-Columbian carvings of pumas, overlooks the ruins and has several caves in the cliff face that these authors suggest inspired the myth of Tampu T’oqo. The people of the nearby town of Mollebamba also consider Pumaurqu to be the original site of Tampu T’oqo, the origin caves of the Inca royalty. Urton argues that Maukallaqta is the original Pacariqtambo. Juha Hiltunen and Gordon McEwan (2004; G. F. McEwan 2002) offer an alternative interpretation, identifying Tampu T’oqo with Chokepukio, a site with Middle and Late Horizon occupations east of Cuzco near Pikillacta. Both Maukallaqta and Chokepukio have evidence of subsequent Inca modification. The Incas also modeled the Island of the Sun, a locus of earlier Middle Horizon veneration, into a major pilgrimage site (Bauer and Stanish 2001). In so doing, they enshrined historic locations in accordance with official state mythology.

Manqo Qhapaq was the mythical founder of a dynasty that probably began in the twelfth or early thirteenth century and lasted through the arrival of Viceroy Francisco Toledo in Peru in 1572. The first

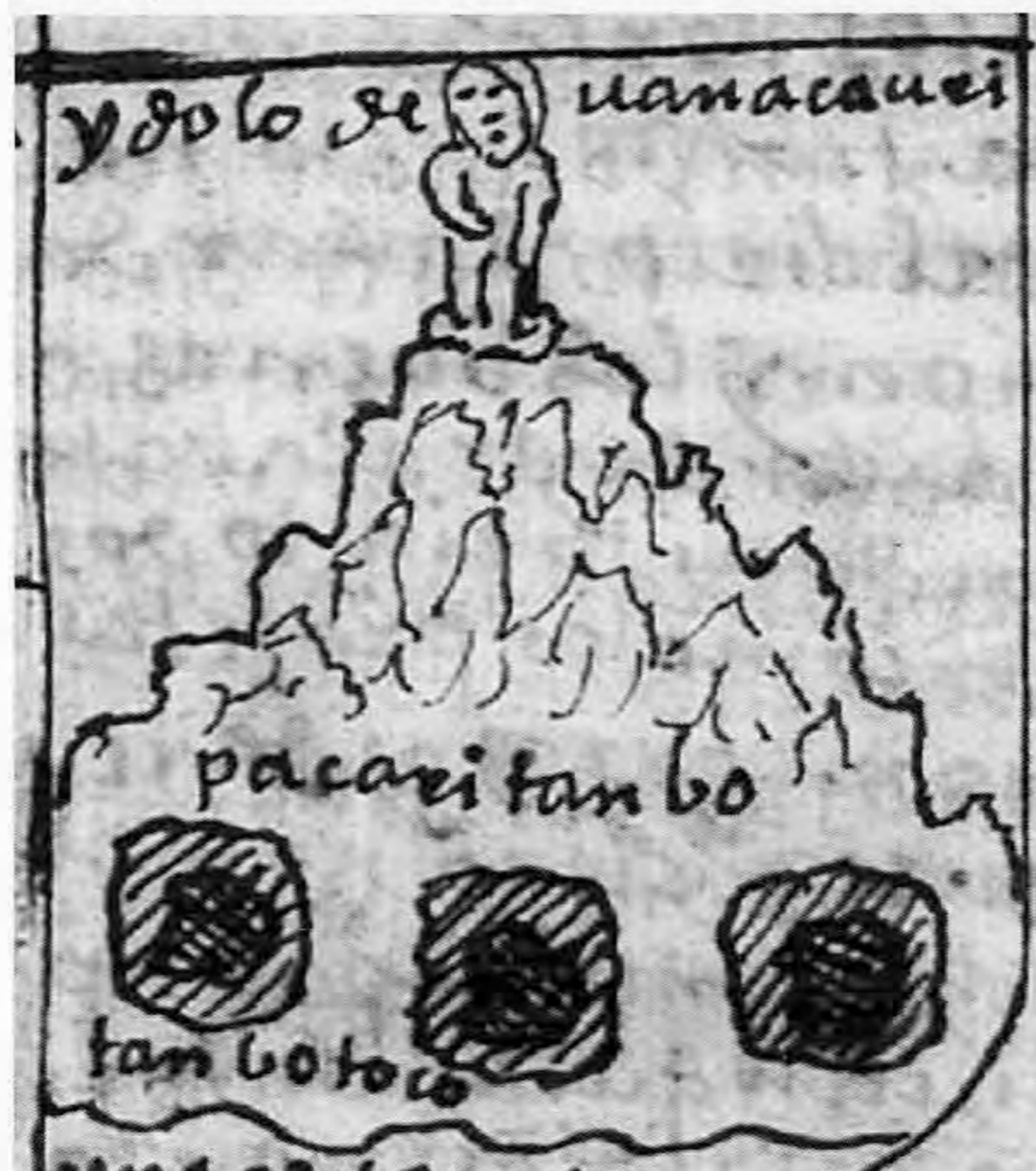


Fig. 11. “Ydolo de uanacauri” shown atop “pacaritambo” and “tambotoco.” Manuscript page 79 (detail), Felipe Guaman Poma de Ayala, *Nueva crónica y buen gobierno* (1615), call no. GKS 2232 4to, Royal Library, Copenhagen. Digital image from <http://www.kb.dk/elib/mss/poma/>. Reproduced courtesy of the Royal Library, Copenhagen, Denmark.



eight rulers in a succession of seventeen named rulers between Manqo Qhapaq and Tupac Amaru Inca (who reigned 1571–72) are especially laden with myth. These are followed by four “historical” rulers who ruled during the century prior to the arrival of Francisco Pizarro and his men in 1532 and five rulers of the period of the Spanish Conquest, beginning with the ill-fated Atahualpa. As with other mythical dynasties, it is not certain that these represent a lineal succession. The social system of Cuzco was divided into two moieties, upper and lower, and some of these individuals may have ruled as contemporary heads of moieties. The stories of the legendary earlier rulers—especially the founder Manqo Qhapaq—may have been codified into state ideology by Pachacuti and later rulers, who attributed to them accomplishments that resonate more with evidence from the later fifteenth and early sixteenth centuries than from the thirteenth through early fifteenth centuries. These appear to have drawn upon elements from earlier stories that refer to dynasties with apparent ties to Tiwanaku. For example, Hiltunen and McEwan have recently suggested that Inca Roca initiated the Hanan Cuzco dynasty, which had ties to the Titicaca Basin (Hiltunen and McEwan 2004; G. F. McEwan 2002).

Pachacuti is identified by various sixteenth-century sources as the ninth Inca and by John Rowe (1946) as the first of the four “historical” Incas whose reign began in 1438. Pachacuti, whose name means “world change,” is regarded as having been responsible for a major reorganization of Inca society and politics. He is said to have been the first ruler to expand Inca territory beyond the Cuzco Valley, conquering lands of the Chancas to the northwest and the Lupaqá in the Titicaca Basin. He is credited with instituting feast days and standardizing a ritual calendar, originating laws and punishments, and expanding and intensifying agricultural production through the construction of canals and terraces. Pachacuti is also identified with major construction projects. Among these were his private palace in Cuzco (on Hatun Rumiyaq), the Coricancha (Sun

Temple), the temple/fortress of Sacsayhuamán, and several ritual sites including Pisac, Ollantaytambo, and Machu Picchu. The architecture at these sites represents some of the finest known Inca masonry. Its quality suggests it was at least inspired by masonry at Tiwanaku, if not executed by stonecutters from the Lake Titicaca region (Protzen and Batson 1993; Protzen and Nair 2002). Susan Niles (2004, 62) notes Pachacuti “devoted himself to the superior power of Pachayachachic, the Creator, to whom he dedicated his temples and handiworks. It does not seem too far a stretch to suggest that Pachacuti was emulating the creator god in his handiworks. He may also have been emulating his legendary predecessors at Tiwanaku, who were inspired by their own mythology.

### Tiwanaku Origin Myths

There are several different accounts of Creation from the region of Tiwanaku. The best-known come from Inca sources, but may reflect earlier local traditions. In one Inca version, the creator god Wiracocha (or Viracocha) rose from the waters of Lake Titicaca and emerged from the Island of the Sun. At Tiwanaku he “designed *on a great piece of stone* all the nations that he intended to create” [author’s italics] (Sarmiento in Kolata 2003, 176). Two messengers named different groups of people who emerged directly from the landscape. In another version Contiti Wiracocha emerged from Lake Titicaca to create the sun, moon, and stars at Tiwanaku, where he also created time by commanding the sun to move in the sky. The Creator also fashioned a group to rule over others, and sent them forth from Tiwanaku. Cristóbal de Molina (in Kolata 2003, 176) recounts a similar myth, but one in which a man and woman at Tiwanaku have dominion over the people they call forth from the landscape. The woman controls the mountains, while the man controls the plains. Cobo (in Kolata 2003, 176) tells us the original name for Tiwanaku was *Taypi Kala*, or “stone in the center.”

As Kolata (2003, 176) points out, *taypi* is a convergence zone, the melding of two qualities of which it is in the middle. It seems that Pachacuti sought to exploit this same central quality in the construction

of royal estates like Machu Picchu. Official Inca creation myths became a synthesis of the earlier origin myths of Tiwanaku and the Inca dynastic story of Tampu T'oqo, with Manqo Qhapaq receiving his charge at the Island of the Sun and departing from there before emerging at Tampu T'oqo. Machu Picchu, located at the transition from highland valley to tropical *ceja de la montaña*, was also a convergence zone.

### Examples and Analysis of *Ushnus*

The preceding creation mythology was concretized in the construction and use of *ushnus* by the Incas, especially under the auspices of Pachacuti. Although many of these structures were apparently destroyed, Meddens (1997) describes several surviving Inca examples, including platform-style *ushnus* in the Cuzco Valley at Inquilltambo. Others may have been "*ushnus* writ large," as the concept was evoked in large-scale construction. The most significant examples, in Cuzco as well as at royal estates such as Pisac, Ollantaytambo, and Machu Picchu, appear to have been constructed under Pachacuti's direction. This was also true of the *ushnu* at Willka Waman, although it may have been further modified by Pachacuti's successor, Topa Inca.

The *ushnus* at Pachacuti's royal estates represent a variety of expressions of stepped platforms. They

also provide insight into how Pachacuti may have seen himself, especially since the spatially restricted contexts of some suggest that rituals at the royal estates may have been performed before a small, elite group or even in private. Of the royal estates, Niles (2004, 68) writes, "It is in such spaces that we come closest to seeing the builder's self-image, and where we can approach an understanding of the historical and social challenges that shaped him—and, by extension, the structures he created."

*Ushnus* were evoked at different scales. Pisac, with its huge expanse of terraces capped by a ceremonial precinct, was an early expression of a form later echoed by Machu Picchu (Rowe 1990). A comparison of the two sites shows a similar layout with respect to the presence of extensive agricultural terraces, a tall, pointed peak, and a Sun Temple that encloses a sacred stone within a finely dressed, curved wall. The site as a whole fits the model of an *ushnu* "writ large," while a small stone in the form of a flattened stepped pyramid that stands outside the curved wall at Pisac may have been used as a private *ushnu* (fig. 12). Ollantaytambo relied upon terraces to complete the sense of an enormous stepped pyramid. A series of large terraces topped by a platform that contains the Sun Temple, built of enormous blocks of pink porphyry, is an *ushnu* built at a grand



Fig. 12. Stepped monolith in central precinct at Pisac, Peru. Photo by author. ©2007 John W. Hoopes.

scale. The massive, precisely cut stones used in walls and buildings at Ollantaytambo recall the quality of masonry at Tiwanaku. One shrine, now known as the "Baño de la Ñusta" (Bath of the Princess) probably represents a small *ushnu*. It is a constantly flowing fountain decorated with a relief, stair-step design that visually conflates both the rising stepped platform and the downward flow of water. As will be discussed below, this theme is also present at Machu Picchu.

### Willka Waman (Vilcashuamán)

The *ushnu* at Willka Waman merits a detailed consideration as the most intact example of a stepped pyramid/throne of the Inca rulers. The ruins of this site represent the remains of one of the largest Inca settlements, with an estimated population of 40,000 inhabitants at the time of the Conquest (Hemming 1970, 377). Willka Waman is said to have been built, like Machu Picchu, by Pachacuti and his son Topa Inca Yupanqui. It is mentioned by *corregidor* Pedro de Carvajal in 1586, who reported that these rulers "founded in this location of Vilcas Huamán a city and frontier post with thirty thousand Indians as garrison" (quoted in Hemming and Ranney 1982, 181). Pedro de Cieza de León noted that the buildings were made by local laborers, but that there were "masters from Cuzco to measure out the plans and show the way in which they must lay the stones and bricks in the building" (quoted in Hemming and Ranney 1982, 181). However, the site was not originally Inca.

Instead, Willka Waman was first a major settlement within the territory of the Chancas, bitter enemies of the Incas, who are said to have attacked Cuzco around 1440. The military defeat of the Chancas was attributed to Pachacuti, whose heroic victory became legendary in Inca mythology. The defeat and subsequent subdivision of Chanca territory is identified as the first victory in what became a century-long legacy of imperial expansion. The ruins suggest that it had an earlier Middle Horizon occupation whose administrators may have derived their authority from ties with Wari, near Ayacucho to the north. Pachacuti, or perhaps Topa Inca, may

have constructed its principal Inca structure, the stepped *ushnu*, as an architectural statement of political and ideological domination. Construction of the *ushnu* may have carried more symbolic significance than just an Inca victory over the Chancas. It may have also been an assertion of the dominance of a lineage derived from Tiwanaku over a people whose own ancient heritage may have been tied to the rival state of Wari (Hiltunen and McEwan 2004; G. F. McEwan 2002; but see Bauer and Covey 2002 and Covey 2006 for an alternative interpretation).

The *ushnu* at Willka Waman was part of a larger sun temple complex, most of which has been destroyed. It is made of the finest cut and dressed stone that is found at the site, rising in four terraces. The stepped pyramid is oriented directly east (Gasparini and Margolies 1980). This is different from the orientation of the basal platform of an earlier structure, which was almost 45° different, recalling the orientation of Cuzco to intercardinal directions (Bauer 2004). Construction of the *ushnu* therefore represented an assertion of a new ideology, one connected directly with Inca origin myths. There is a double-seated throne cut from a single stone at the top of the pyramid. Meddens (1997, 5) notes that a large stone with an elaborate channel may be the remains of a fountain associated with the structure. It therefore exemplifies a combination of salient features. The central piece of ceremonial architecture was

a platform surrounded by masonry, five *estados* high. It had a stone staircase, admirably made and cut in a theatrical manner. This is where the Inca used to go in person to be seen, and on top of it were two large stone seats, covered in gold at the time, where the Inca and his wife used to sit, as if on thrones, and from which they worshipped the sun. When he was on his theater or throne, all his guard protected its gates with much vigilance. He would sit there under a great canopy of plumage of a thousand colors, and the posts on which this awning rested were of gold (Gaspar Carvajal in Hemming and Ranney 1982, 184).

The Inca throne at Willka Waman may also have been a rainbow-viewing stand. Rainbows, which appear when sunlight is refracted through a fine mist, always appear directly opposite the sun. In sitting on the throne, the Inca and his wife became Manqo Qhapaq and Mama Oqllu, looking out upon the Cuzco Valley from Wanakauri hill as a rainbow arched across the sky to the east, illuminated by the sun setting in the west behind them. The arching “canopy of plumage,” perhaps a fine textile decorated with thousands of hand-sewn feathers from colorful Amazonian birds, was the mythical rainbow of the founders of Cuzco. Both Cieza de León (1959) and El Inca Garcilaso de la Vega (1963, 276) noted that one of the buildings of the Coricancha was dedicated to the rainbow “for they had ascertained that it proceeded from the Sun.” This *ushnu* therefore evoked elements of the origin myth of Cuzco and its ruling lineage.<sup>3</sup>

### Cuzco

Where were the *ushnus* in Cuzco? It seems likely that there were at least three. As noted earlier, one was located in the Haukaypata, or main square. A second was represented by the Sabacurinca or “Throne of the Inca,” a stepped platform at Sacsayhuamán carved out of the living rock. The third was “a stone named Usno,” the first *huaca* on the fifth *ceque* of Antisuyu, which Zuidema suggests was located in the plaza of Limacpampa Grande, east of the Coricancha (cited in Bauer 1998, 86).

Unfortunately, references to the Haukaypata *ushnu* are scant and contradictory. Pizarro described the *ushnu* in Cuzco’s principal plaza as a place for the “seating of the sun” (Meddens 1997, 10), which Zuidema (1989) interprets as a reference to the placement of idols on special occasions. Meddens (1997, 10) interprets this as evidence for two types of *ushnus*, one (a gnomon) as a location for the “seating” of the sun (as a celestial observation) and the other (a throne) as a location for the seating of the son of the Sun (the Inca himself). Some sources tell us that this plaza was filled in Inca times with

beach sand that had been transported either from the Pacific Ocean or the shores of Lake Titicaca. If so, this sand would have contributed to the illusion of the *ushnu* as a mountain rising from a primordial sea or lake. However, despite Guaman Poma’s illustration, descriptions as well as the discovery of footings suggest that there was *not* a stepped platform in the Haukaypata. Instead, as noted above, Zuidema identifies the large *ushnu* in the central plaza as the combination of a gnomon and a basin with a drainage system. This was associated with the Cuyusmanco, a large meeting hall or *kallanka* that served the politico-religious functions associated with *ushnus* elsewhere (Zuidema 1989). Meddens (1997, 12) has suggested that the Haukaypata *ushnu* was identified as the seat of the Sun itself rather than a structure used by the ruling Inca as his descendant. This may explain the necessity of other *ushnu* “seats.”

The principal stepped platform *ushnu* of Cuzco may not have been in the plaza, but at Sacsayhuamán,

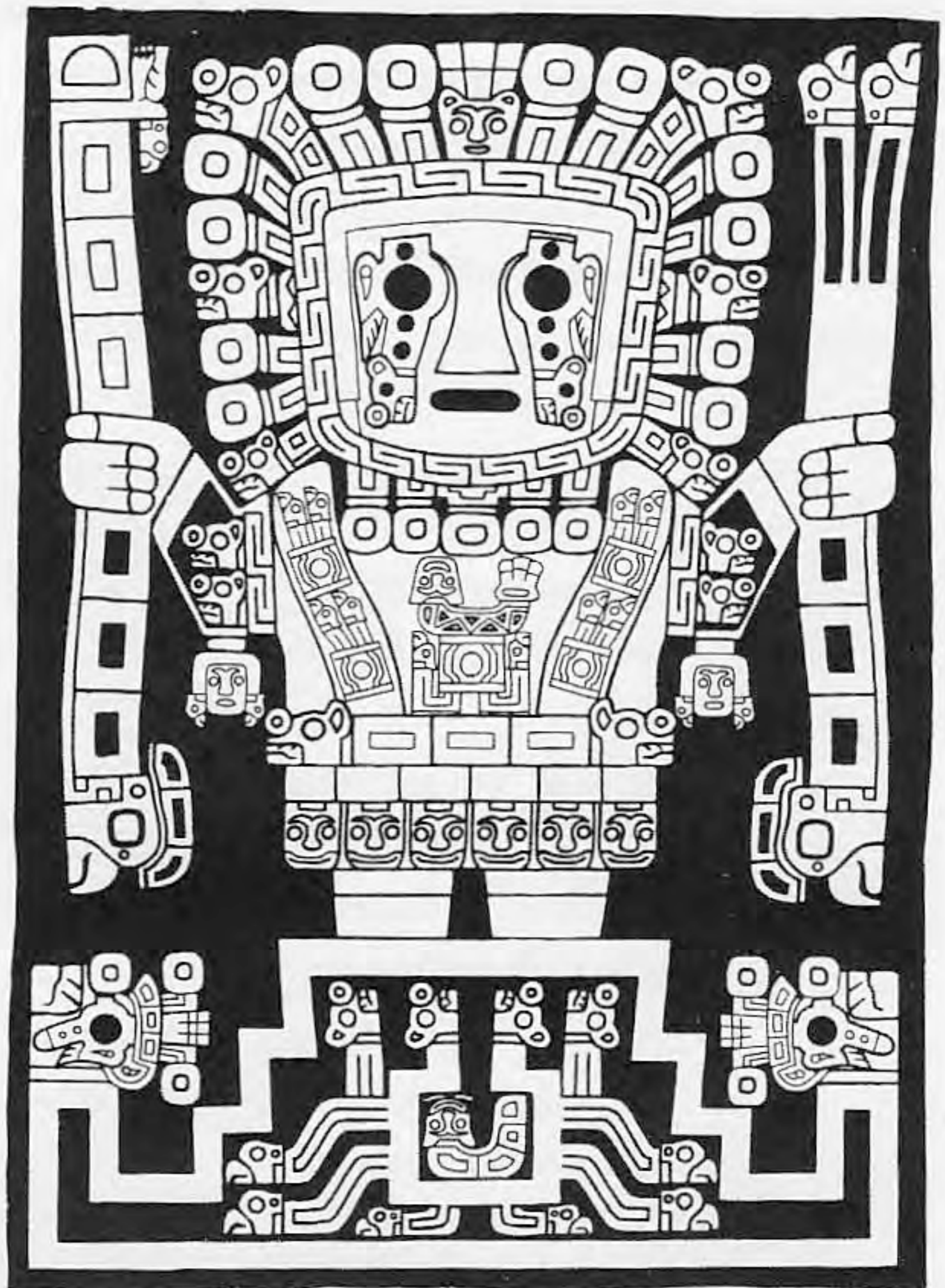


Fig. 13. Drawing of the central figure of the Gateway of the Sun, depicted standing atop a stepped platform (Moseley 1992, fig. 94).

a temple and fortress complex first constructed under the direction of Pachacuti. As noted above, Cobo identified a *huaca* called Sabacurinca, the "Throne of the Inca," carved from the living rock of Suchuna (Rocadero Hill), as the reason why the location of Sacsayhuamán was venerated. In rituals there, Pachacuti could have emphasized through visual representation his identity with the high god atop a mythical mountain. By standing upon this platform, the Inca emperor would also step into a sacred tableau that duplicated the motif at the center of the Gateway of the Sun in Tiwanaku (fig. 13).

To the north of Suchuna and Sabacurinca is the large, circular reservoir associated with a small group of buildings of fine masonry. Bauer (1998, 55; 2004, 99) has identified this as what the Incas called Calispuquio (Spring of Good Health), a location he reports Juan de Betanzos says was used by young men for a ritual bath at the end of the Qhapaq Raymi festival. If Sabacurinca was the stepped platform, this reservoir may have been the basin of the *ushnu* complex at Sacsayhuamán. The Suchuna/Saba-

curinca and the Calispuquio together replicate the stepped platform and circular pit complexes of great antiquity in the Norte Chico region. They also echo the predominant architectural features at Tiwanaku.

### Tiwanaku

Stepped platforms with reservoirs and sunken plazas at Tiwanaku in highland Bolivia (fig. 14) may have directly inspired the *ushnus* of the Inca nobility. The Akapana was an enormous structure, measuring 204 meters north-south, 192 meters east-west, and rising almost 17 meters in height (Kolata 2003, 183). The Akapana and its companion structure, the Puma Punku, may have served as the prototypical *ushnu*/mountains upon which Inca examples were modeled (Meddens 1997). Both were constructed in the mid-500s, almost a thousand years earlier than known Inca *ushnus*. By creating replicas of these ancient structures, Pachacuti constructed architectural tableaux that were used to reinforce his mythological identification with ancient lineages of the Lake Titicaca Basin, the Island of the Sun, and the ancient Tiwanaku state. These, in turn, evoked even more ancient origins.

As noted above, the *ushnu* at Willka Waman faces directly east and may have been associated with rainbows. At Tiwanaku, the Akapana and Puma Punku also face directly east. The view eastward from the summit of the Akapana would have been especially spectacular. In the morning, the sun rose directly over the white-capped mountain of Illimani. In the afternoon, when the atmospheric conditions were right, a rainbow would appear framing the same highland scene.

The symbolism of Tiwanaku pyramids played a central role in Inca creation rituals atop *ushnus*. The Akapana was first and foremost a symbol of the creation of the universe, an event linked in the mythology of the Bolivian *altiplano* to the emergence of the Island of the Sun from the waters of Lake Titicaca. The architecture of Tiwanaku replicated a sacred landscape of creation. The ceremonial core of Tiwanaku was enclosed by a moat intended to

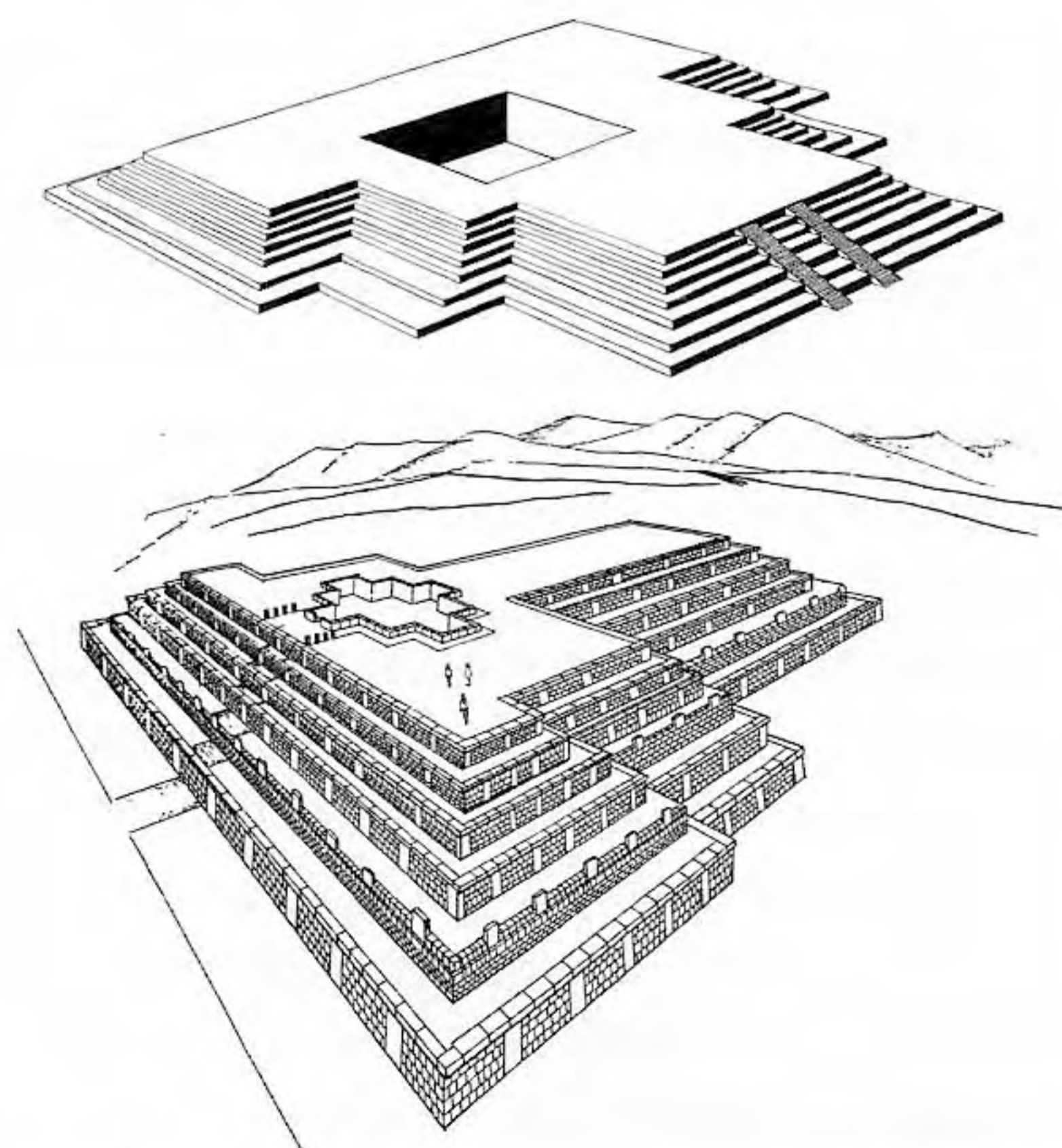


Fig. 14. (top) Idealized partial reconstruction of the Akapana pyramid (not to scale), as illustrated by Kolata (2003, fig. 7.7). Drawing courtesy of Alan L. Kolata. (bottom) Artist's reconstruction of the Akapana pyramid, drawing by Javier Escalante M. (Kolata 1996, 132). Drawing courtesy of Javier Escalante, National Institute of Archaeology, La Paz, Bolivia.

restrict access to its buildings and also create the impression of an artificial “island” surrounded by water (Kolata 2003, 178).<sup>4</sup> The city was oriented to the cardinal directions and divided by a solar path that ran from Illimani to Lake Titicaca, both of which would have been simultaneously visible from the top of the pyramid (Kolata 2003, 179). The Akapana stood at the center of the Tiwanaku universe, a focal point of political power and religious ritual. The Puma Punku, a similar, smaller terraced platform located outside the central precinct, may have been constructed for simultaneous use by a separate moiety (Kolata 2003, 193).

Apparently never completed, the Akapana was nonetheless an engineering wonder. Most of its facing has been removed, but clearly its exterior was constructed from precisely cut stones joined with metal clamps. Excavations directed by Alan Kolata have conclusively demonstrated that the Akapana was a huge fountain. A large, central reservoir collected water that could be released into a complex, stone-lined drainage system of surface and sub-surface canals designed to carry water throughout the structure, exiting through openings at its base (Kolata 2003, 184). Thus water conducted from the sunken courtyard atop the pyramid would have been distributed to the stepped sides of the pyramid. On each terrace, “the water emerged from inside the Akapana onto an exterior stone channel on the terrace, flowed for a few meters on the surface, and then dropped back into the interior of the structure to the next lower terrace through a vertical drain. This process of alternating subterranean and surface flow on the stepped terraces repeated itself until the water finally debouched from the basal terrace of the Akapana through beautifully constructed tunnels” (Kolata 2003, 185). The water eventually drained through a trunk line buried 3–4 meters below the surface of the ceremonial area and flowed into the Tiwanaku River, which in turn feeds Lake Titicaca. Kolata likens the effect to that of mountain water rushing through streams and springs. However, the principal symbolism of the Akapana was as the primordial

mountain of creation. The visual effect of the fountains was intended to make the Akapana appear as if it had been suddenly thrust up from the depths of a primordial lake, with water dripping off as it rose into the air. With its reservoir and canals, it also represented a ceremonial application of the technology of irrigated agricultural terraces that had been perfected as a form of agricultural intensification in the highlands. The release of water from reservoirs may have been similar to rituals documented ethnographically by Paul Gelles (2000) as performed within communities of central Peru. The elaborate drainage systems of these structures and their incorporation of green gravel from mountain ranges to the south (with similarities to the use of ocean sand in the Haukaypata) reinforced their identifications as artificial mountains (Kolata 1993, 109–43; Meddens 1997, 11).

The stepped pyramid itself was a microcosm of the Andes, replicating the archetypal mountain landscape from the coast to the highlands, while the reservoir atop the Akapana replicated Lake Titicaca (a model that may have been enhanced by the addition of *boga*, a fish species from Lake Titicaca that is prominent in the iconography of Tiwanaku). This combined the symbolism of initial creation and ongoing modification, reinforcing a cyclical notion of time and human agency in the ongoing process of creation.

The Akapana’s drainage system was dependent upon rainfall. However, the drainage system of the Akapana ceased to function sometime in the tenth century (Kolata 2003, 193). Prolonged periods of drought not only brought about an end to the water-based rituals of the Tiwanaku nobility, but also resulted in the abandonment of Tiwanaku and the ultimate collapse of this highland civilization about A.D. 1200 (Kolata 2003). The collapse of the Tiwanaku civilization resulted in the migration of populations away from the Titicaca Basin, but the powerful symbolism of the Akapana survived in myth and ritual.

The role of a central deity in Tiwanaku ritual remains the object of debate. Kolata (1993) asserts that the central deity in these rituals was derived directly from a Tiwanaku high god sometimes referred to as

Tiki Wiracocha Pachayachachic and also associated with Inti (the Sun) and a weather deity called Illapa (lightning) in Quechua or Thunupa (thunder) in Aymara. Pachayachachic was the object of Pachacuti's famous vision at Susurpukio on the eve of his battle with the Chancas. This deity is best-known from the relief carving on the Gateway of the Sun. This figure also appears in a relief carving on the back of the Bennett monolith, where it is accompanied by a pair of similar figures and flanked by individuals shown in profile and carrying staffs, and on various Tiwanaku textiles, including the Gateway Tunic (Young-Sánchez 2004, 46–49). On both the Gateway of the Sun and the Bennett monolith, this deity is depicted as standing atop a stepped pyramid, assumed to be the Akapana. The bird-headed "rays" that emerge from the head of the figure, almost like a halo or aura, suggest that this is a representation of the sun. Such a depiction of the sun over the Akapana may be a metaphorical representation of sunrise over Illimani, a set of massive 6,470-meter-high snow-capped peaks that looms on the horizon above the Bolivian capital of La Paz, and could be seen directly east of Tiwanaku from the summit of this pyramid. Alternatively, it could represent the pyramid's function as a gnomon for equinox and solstice observations.<sup>5</sup>

The eastern sunrise is associated with the "dawn of Creation" in many cultures. Pachacuti and his successors, in reenacting a ritual performance of Tiki Wiracocha standing atop the Akapana (a metaphorical representation of the sunrise over Illimani), were symbolically placing themselves at the beginning of the world. This permitted Pachacuti to assume authority over the world and take credit for creating and perpetuating cosmic order.

In worshiping Illimani, the Tiwanaku nobility may have been making a specific local identification with a mountain deity that had a very ancient history in the central Andes, perhaps dating back almost 4,000 years earlier to ideologies of water control in the Late Preceramic period, when irrigation systems and stepped pyramid/circular pit complexes first appeared. Urton's (1990) interpretation of the relation-

ships between Maukallaqta, Pacariqtambo, and Cuzco provides one example of how a creation story that reinforced the authority of a specific lineage could be "mapped" onto different local landscapes. In a process duplicated multiple times throughout the Andes, local populations mapped mythical landscapes onto local landforms and archaeological features, identifying specific settings as sacred landscapes. Mythical landscapes were often constructed from a combination of natural and modified landforms, creating tangible "proof" for the veracity of creation myths. We should not assume that Illimani or any specific mountain was identified as "the" primordial mountain of creation throughout the Andes. Instead, it seems likely that communities along the length of the Andes mapped the landscape of creation onto specific local landscapes in which the features of their own ancestral world were identified using categories specific to the dominant political ideology.

As noted above, when Pachacuti stood upon the Sabacurinca, or Throne of the Inca, at Sacsayhuamán, he duplicated the pose of the central figure in the Gateway of the Sun at Tiwanaku. The Sabacurinca may have been interpreted as a duplicate of the sacred stone on the Island of the Sun, which in turn was replicated by the stair-step platforms of the Akapana and Puma Punku. Its masterful stonecutting represents a tradition that can be traced to Tiwanaku. It may even have been carved by masons from Lake Titicaca.

The ritual performed atop the Sabacurinca may have been associated specifically with the irrigation of terraced agricultural plots. It also recalls other Middle Horizon rituals. Inca *ushnus* were associated with libations, especially the drinking of *chicha*. These specific mountain/water/flowing *chicha* rituals may have roots in Wari and Tiwanaku practices. For example, Ryan Williams's description of massive walls and terraces at Cerro Baúl suggests that this site may have been a Wari "stepped mountain," the location of major libation ceremonies in which red-colored *molle chicha* flowed like water (Williams 2001, 2002, 2003).

### Machu Picchu: An *Ushnu* “Writ Large”

The concept of stepped mountains with flowing water as a stage for ritual performances (either public or private) was embedded by Pachacuti in the execution of his private royal estates at Pisac and Ollantaytambo, but it had its grandest expression at Machu Picchu. The site was constructed in the 1400s under the auspices of Pachacuti as one of several private estates (Niles 2004). In addition to being a location for the Inca’s rest and relaxation in the company of his court, Machu Picchu, with its stepped/terraced mountain rising from a sharp bend of the Urubamba River in the combination of a natural platform and depression with astronomical orientations, was designed as an *ushnu* “writ large.” It was the most visually spectacular of the stages created for royal reenactment of origin stories, with a natural, public *ushnu* in the form of Putucusi hill, a manmade public *ushnu* atop Huayna Picchu (fig. 15), and a small, private *ushnu* in the form of a stepped monolith within the Temple of the Three Windows. At each of these places, the Inca ruler seated or standing atop a stepped pyramid assumed the role of both an ancestral deity who had ruled the world since the beginning of mythical time and the founder of his royal lineage.

### Temple of the Three Windows

In his work at Machu Picchu, Bingham was especially preoccupied with a structure known as the Temple of the Three Windows (fig. 16) and its relation-

ship to the mythical Tampu T’oqo (Bingham 1913; 2002, 59, 260–66). This stemmed in part from a seventeenth-century statement by Pachacuti Yamqui Salcamayhua that Manqo Qhapaq, the founder of the Inca dynasty, “ordered works to be executed at the place of his birth, consisting of a masonry wall with three windows, which were emblems of the house of his fathers whence he descended” (Bingham 2002, 59). As noted earlier, the founders of the Inca ruling dynasty reportedly emerged from Tampu T’oqo (Window House), then made their way into a rich valley where they founded Cuzco. Bingham went so far as to suggest that the original name of Machu Picchu was “Tamputocco” and that “it was probably the birthplace of Manco Capac” (Bingham 1913, 179; 2002, 264). While the identity of the original Tampu T’oqo—if it corresponded to an actual location—remains an issue of debate, we know it was *not* Pachacuti’s fifteenth-century royal estate at Machu Picchu.

The Temple of the Three Windows gets its name from three large, square openings in a wall that overlooks the main plaza of Machu Picchu. This building was part of a compound that contained the finest stone masonry at the site (fig. 17), and its central location told Bingham that it was the site’s most important structure. Bingham thought that this structure had given rise to the creation myth of Tampu T’oqo and that Machu Picchu was therefore the most ancient of the Inca sites. (He estimated it



Fig. 15. Sunrise at Machu Picchu, Peru, July 2002. Note how the first rays of the sun strike the top of Huayna Picchu, which is topped by a small temple. Photo by author. ©2007 John W. Hoopes.





Fig. 16. Temple of the Three Windows, Machu Picchu, Peru (view from Main Plaza). Photo by author. ©2007 John W. Hoopes.

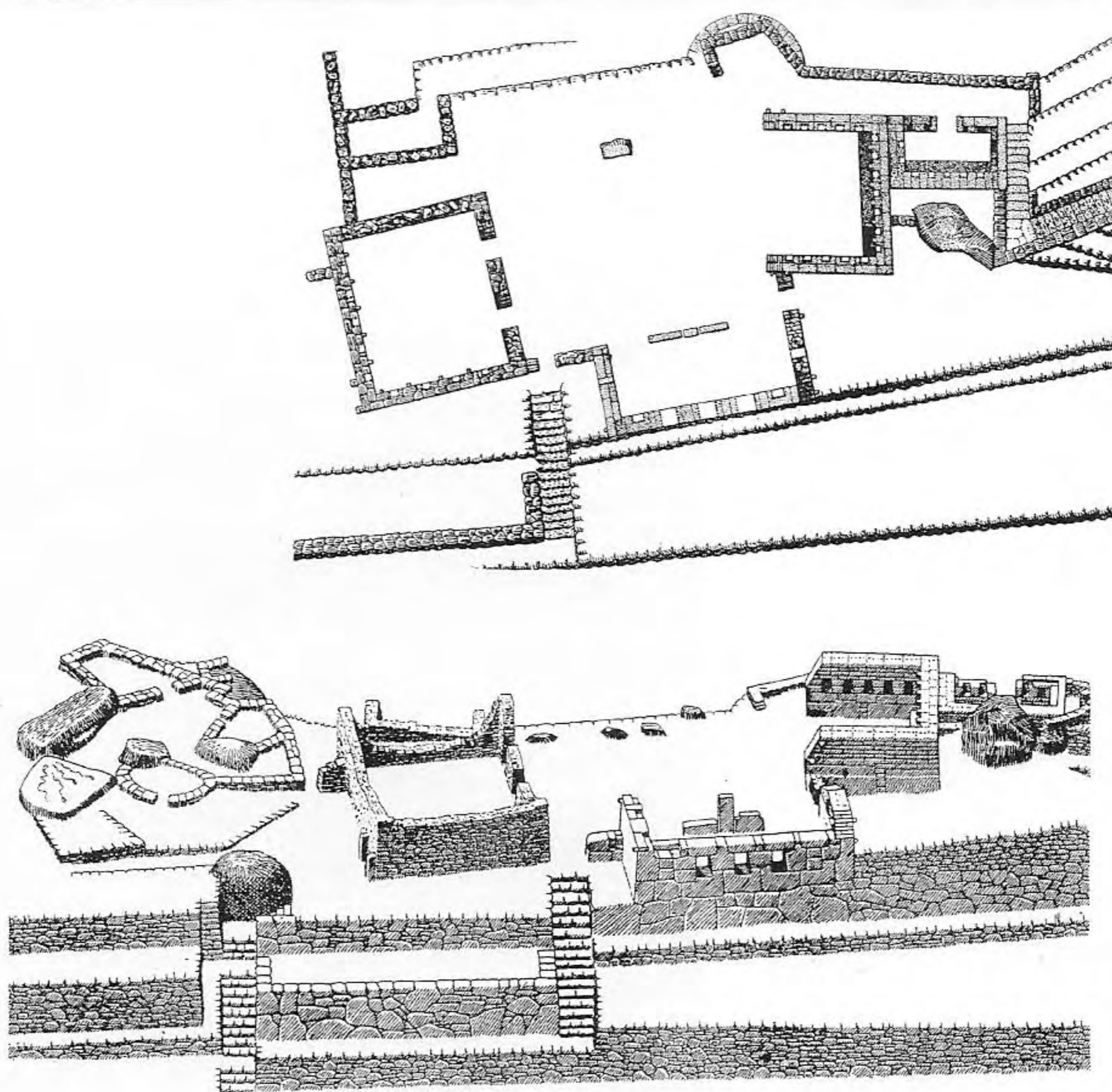


Fig. 17. Plan view (top) and isometric drawing (bottom) of the Sacred Plaza and Temple of Three Windows complex at Machu Picchu (Bingham 2002, 212). Note the location of the stone monoliths. ©2002 Estate of Hiram Bingham.

to be about 6,000 years old.) Subsequent research has shown that Bingham's chronology, like Posnansky's dates for Tiwanaku, was far off the mark.

Bingham's original interpretation has often been brushed off as fantasy born in the enthusiasm of his discovery of a truly spectacular site. However, it may not have been completely wrong. An alternative interpretation is that Machu Picchu was constructed in the 1400s under the auspices of Pachacuti as a sacred site for the performance of rituals reenacting the origins of the world and the Inca nobility. The Temple of the Three Windows was a place where the Inca king celebrated the sacred origin of humans in the context of rituals to a small audience in order to sustain an atmosphere of spiritual legitimacy for the ruling dynasty. It was not an *actual* place of origin for the Incas, but a theater or stage constructed for the emperor to place himself within origin myths.

### Creation Reenactment Rituals

Meddens (1997) has detailed how Inca creation reenactment rituals were performed publicly at a number of locations, often accompanied by spectacular feasts. The specific story that these rituals told was a synthesis of creation stories at two levels: 1) the origin of the authority of the Inca ruling dynasty in the Lake Titicaca region, a story that can be traced to Tiwanaku; and 2) the origin of a specific lineage that originated at Tampu T'oqo, probably in the twelfth century. Both levels incorporate elements of primordial myths and recount the stories of the origins of humans. Each also served to legitimize the lineage of Pachacuti and his successors.

Machu Picchu represents a compressed version of the landscape of myth, a compression that also appears in other media. For example, the relative size and shape of the three windows in the temple at Machu Picchu are echoed in the illustration of Tampu T'oqo by Guaman Poma (fig. 9). He depicted the windows at the base of a mountain labeled as Wanakauri, the hill near Cuzco mentioned in the royal origin myth. This was a means of "folding up" the landscape of creation into a compact unit

to facilitate telling the tale. Pachacuti may have compressed the sacred landscape of creation myths in the architecture of Machu Picchu in a fashion analogous to how Guaman Poma compressed it in his drawing.

A natural monolith at Machu Picchu was part of the set on this sacred stage. Putucusi is a massive rock formation over 300 meters tall that stands by itself within a sharp loop of the Urubamba (fig. 18). When seen from high upon an Inca road that ascends from the site of Machu Picchu, Putucusi appears to be encircled by water, establishing a visual metaphor for the mountain of creation. Putucusi is also a visual focal point of the Temple of the Three Windows, a point that will be explored further below. Putucusi's name, from *pututu*, or conch trumpet, alludes to the spiral path that leads to its summit. Putucusi is likely to have been a central object of veneration as an equivalent of an actual place enshrined in myth, such as Wanakauri Hill, the Island of the Sun, or Illimani: an archetypal mythical mountain associated with creation.

The identification of Putucusi with Wanakauri is suggested by a sixteenth-century painting of

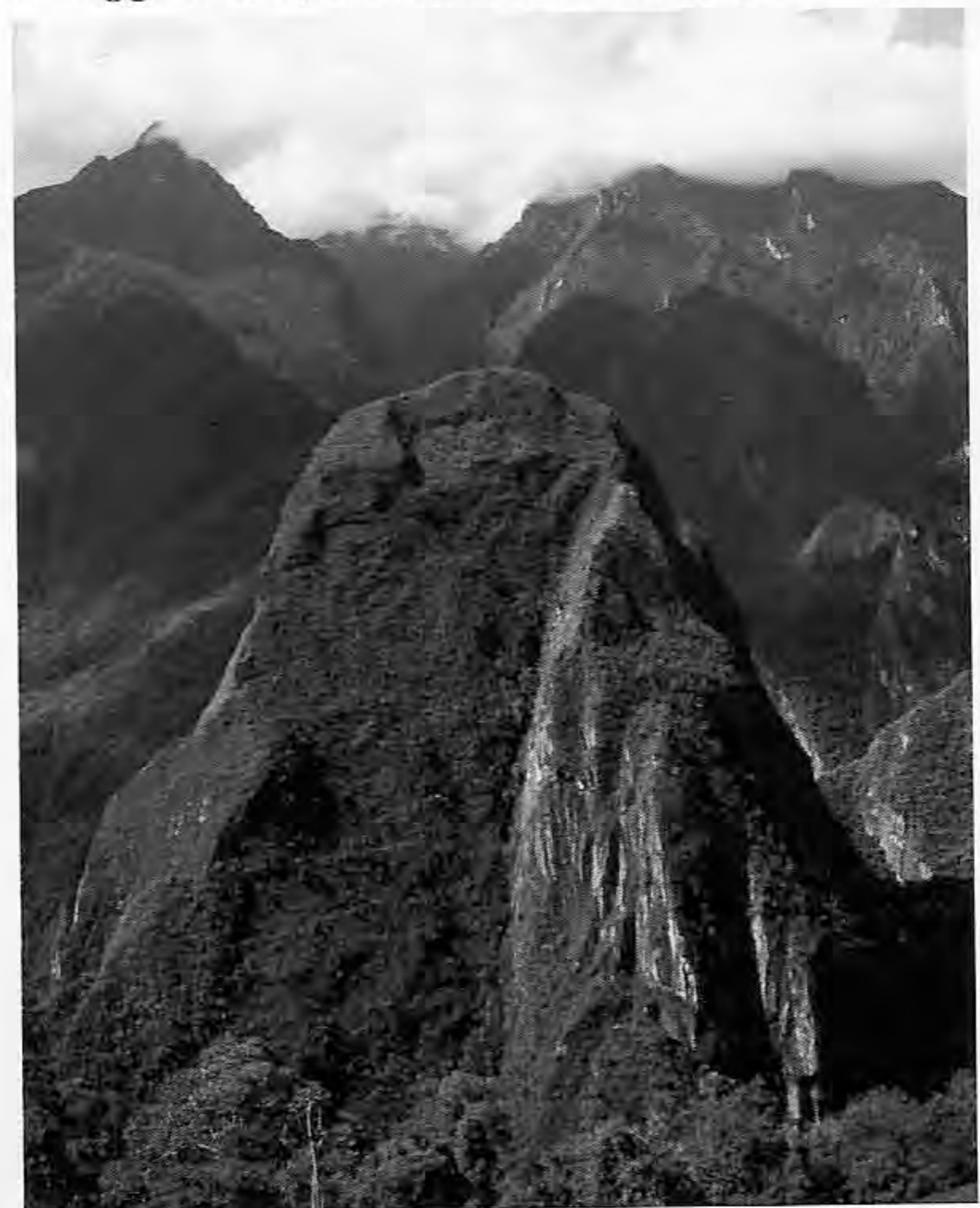


Fig. 18. Putucusi monolith, Machu Picchu, Peru. Photo by author. ©2007 John W. Hoopes.



Fig. 19. Stepped monolith and standing stone in the Temple of Three Windows, Machu Picchu, Peru. Putucusi can be seen through the middle window. An individual standing on the stepped monolith would be seen directly in front of this natural feature. Photo by author. ©2007 John W. Hoopes.

Manqo Qhapaq, shown holding his gold staff as he stands atop an idealized representation of this geographical feature (fig. 8). The mountain illustrated in Murúa's painting looks nothing like the natural hill of Wanakauri outside Cuzco. However, it does have a close resemblance to Putucusi, raising the possibility that detailed knowledge of Machu Picchu—perhaps communicated through oral history—may have informed his illustration.

It is no wonder that Bingham identified the Temple of the Three Windows with the mythical caves of origin at Tampu T'oqo. The three square windows are the largest known in any Inca building. They are distinctive for their shape, which differs from the trapezoidal windows and doors more typical of Inca royal architecture. The combination of Putucusi and the Temple of Three Windows collapsed the two most significant locations in the narrative: the caves of origin and the hill where the founders of the *ayllus* "discovered" the Cuzco Valley. Pachacuti's success in communicating this narrative through architecture is emphasized by the likelihood that Bingham arrived at this conclusion without knowledge of Guaman Poma's illustrations. Although originally completed in 1615, his manuscript was not discovered until 1908—by Robert Pietschmann in the Royal Library of Copenhagen—

only three years prior to Bingham's expedition. It remained unpublished until Paul Rivet's edition in 1936.

The Temple of the Three Windows also contains what is probably a principal, but private, *ushnu* of Machu Picchu—a large stone carved in the shape of a stepped pyramid (fig. 19). (It is similar to the small monolith at Pisac mentioned above and illustrated in fig. 12.) Bingham's expedition photographs show that the stone was in its present location at the time of the site's discovery. It stands at what would have been the entrance to the temple, with a large, rectangular monolith standing immediately to its right. This vertical stone may have been a roof support, or it may have represented the "golden staff" that Manqo Qhapaq used to test the soil of the Cuzco Valley. An individual of medium height standing atop the stepped monolith in the temple appears directly in front of Putucusi, suggesting a ritual performance using this monolith as a natural *ushnu* (fig. 19).

The central architectural complex at Machu Picchu was thus Pachacuti's most private artificial stage for performances of rituals reenacting royal origins. Machu Picchu was unlike *ushnus* in Willka Waman, Huánuco Pampa, Tomebamba, Cajamarca, and elsewhere that were constructed as stages for performances that asserted the authority of the Inca state (Coben 2006; Meddens 1997) to public audiences. In-

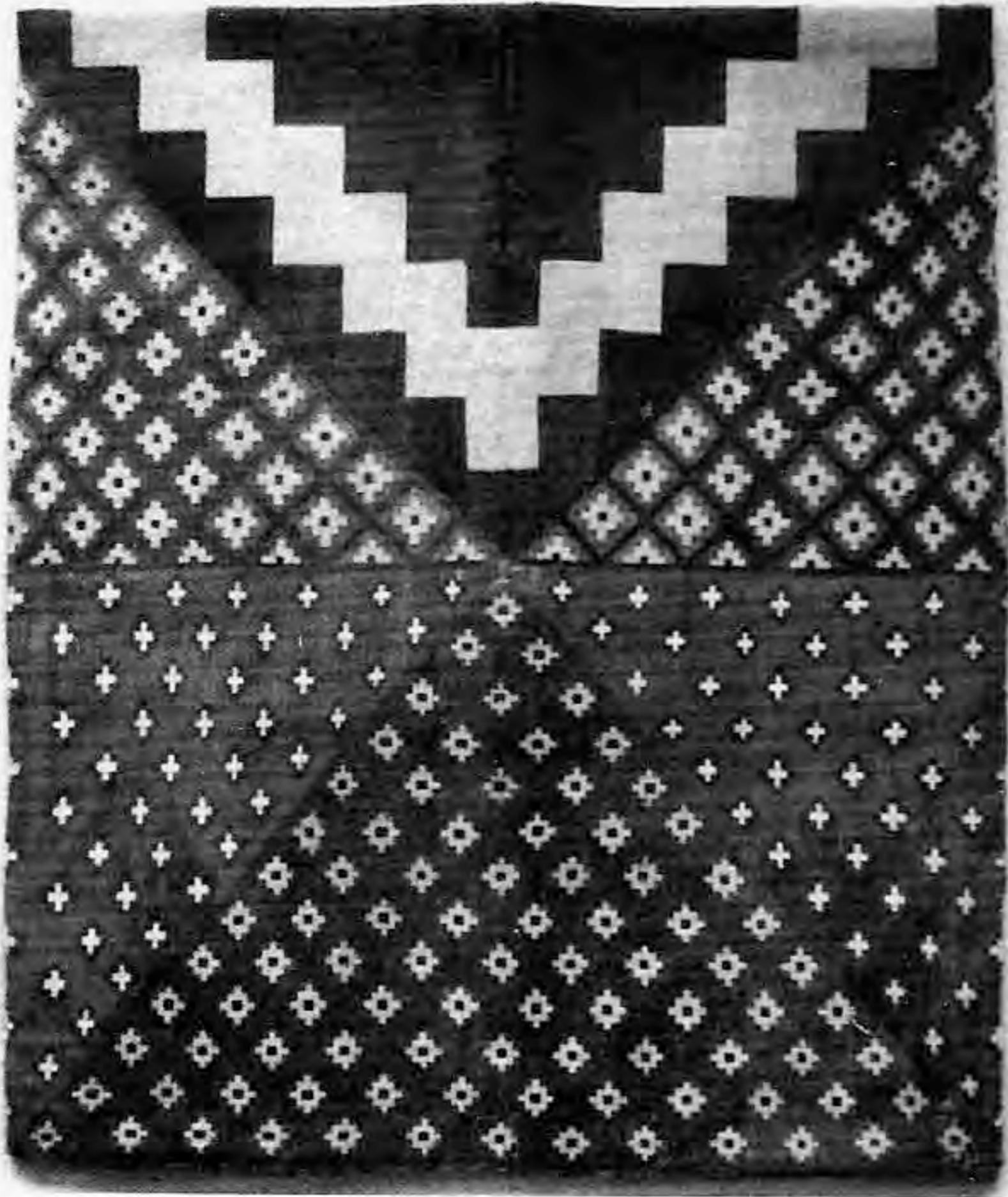


Fig. 20. Inca *uncu*, American Museum of Natural History. AMNH Cat. no. 41.2/7037. Photo courtesy of the American Museum of Natural History.

stead, Machu Picchu may have been what Coben calls a “replicated theater” of patterned forms and settings in which Pachacuti used private performances of rituals to undertake magico-religious acts and to persuade himself of, and assert to his courtiers and close relatives (his *panaqa*), his divine role as Creator incarnate.

### Other Elements of Inca Creation Rituals

An Inca *uncu* (tunic) in the collection of the American Museum of Natural History (fig. 20) demonstrates how the Inca emperor through visual representation communicated his identity with earlier deities and ancient Tiwanaku. Marianne Hogue (2006) comments on the common etymology of “textiles” and “tectonics” in weaving, fabrication, and, by extension, the process of creation in Andean thought. The “Andean Cross” at the center is the plan of an idealized *ushnu*, which places the emperor at the axis mundi, giving him centralized authority over the entire world. The reservoir at the center of the Akapana may have had this shape (fig. 14, bottom), which in turn has much older roots in Chavín iconography. This motif appears on the Tello obelisk, where it

is also identified as an *ushnu*, or portal (C. McEwan 1992). The *uncu* itself is designed so that the head of the wearer is at the center of a large *ushnu*. An Inca emperor wearing it while standing atop his stepped throne at Sacsayhuamán would have completed the tableau of the Creator atop his primordial world-mountain. This garment visually centered the emperor at the axis mundi and gave him authority over all creation. It could also have served as a kind of portable *ushnu*, linking him to these features even when he was not actually standing or seated upon one.

The garment echoes the likely function of the Tiwanaku Gateway Tunic, which identified its wearer with the deity on the Gateway of the Sun (Young-Sánchez 2004). As noted above, an individual standing atop an *ushnu* would have evoked images of individuals standing atop stepped pyramids on the Gateway of the Sun and the Bennett monolith at Tiwanaku. Pachacuti may have recreated a sacred tableau as the embodiment of Pachayachachic, an avatar of a major Tiwanaku deity. He thus asserted his authority, his role in the cosmos, and his lineage. Other *ushnus* that served in a similar fashion are the shrine at Choquequilla, near Pachar, and the Baño de la Ñusta at Ollantaytambo, where the Inca could position himself above a rushing stream of water (Hemming and Ranney 1982).

The emperor atop his mythical mountain represented much more than the embodiment of the power of the Sun. The mountains of the Andes were quite literally the source of life, principally in the form of glacial meltwater that ran down their slopes or bubbled up from springs. Mountains were also active participants in the physical creation of the world. There are parallels to be found between the mythical Mountain King of the Incas and the Hindu deity Shiva, a world maker and destroyer. Shiva’s home is in the high Himalayas, to which the Andes are only second in height. Like the Himalayas, the Andes are a relatively young mountain chain. Devastating avalanches, during which the world collapses and is remade, are common to both. Pachacuti, whose name is sometimes translated as “cataclysm,”



Fig. 21. Stepped agricultural terraces at Machu Picchu, Peru. Photo by author. ©2007 John W. Hoopes.

likely sought to link his authority to the same geological processes represented by Shiva the Destroyer.

While the *ushnu* represented material, earthly phenomena of mountains and flowing water and situated these within Inca mythology, it also helped Inca rulers to explain their own identities within the cosmos as a whole. Ritual performances within a theater of cyclical cosmology would have further reinforced the identity of the Inca ruler as Creator. A growing body of astroarchaeological data from Tiwanaku (see Benitez, this volume) confirms the roles that celestial bodies played in the ritual theater there. The principal actor was the Sun, playing on a stage that included a mythical mountain/island rising from a primordial ocean/lake whose principal role was the perpetuation of life in a perennial act of creation. This was framed within a body/mountain metaphor that “equates the circulation of blood with that of water and links aspects of fertility and productivity” (Meddens 1997). The human body, and perhaps the specific body of the Inca, served as a cosmological metaphor. *Ushnus* were used to explain and interpret these multiple, concentric layers of meaning and experience, from the individual ruler to the earth and the cosmos. The platform steps not only represented the shape and altitude of the mountain, but also were a direct visual reference to agricultural terraces (fig. 21). The sacred mountain

is a source of life—the water that flows from the snow-capped peaks of the Andes to become the life-blood of irrigation systems that had watered crops since Late Archaic times. The relationship between sacred mountain and watered basin was asserted by Cuzco itself (fig. 22), the center of the Inca world.

### Conclusion

The Inca emperor Pachacuti’s principal identity in Inca oral history was that of a reformer. Among his accomplishments was the codification of a state-sponsored mythology that explained the origin of the world and humankind together with the specific origin of the Inca ruling lineage in order to articulate, define, and reinforce specific structures of power and domination. This imperial mythology was accompanied by a set of rituals linked to official creation stories. These included both private rituals, performed in the context of sacred architecture at sites such as Machu Picchu, Pisac, and Ollantaytambo, and public rituals, performed for a large audience in the context of sacred architecture such as that of Sacsayhuamán and presumably the Hāukaypata in Cuzco. Subsequent Inca emperors continued these rituals at highland administrative centers such as Huánuco Pampa. Places such as Willka Waman were also the stages for public rituals that reinforced an association with a specific heritage linking it to pre-Inca authority.

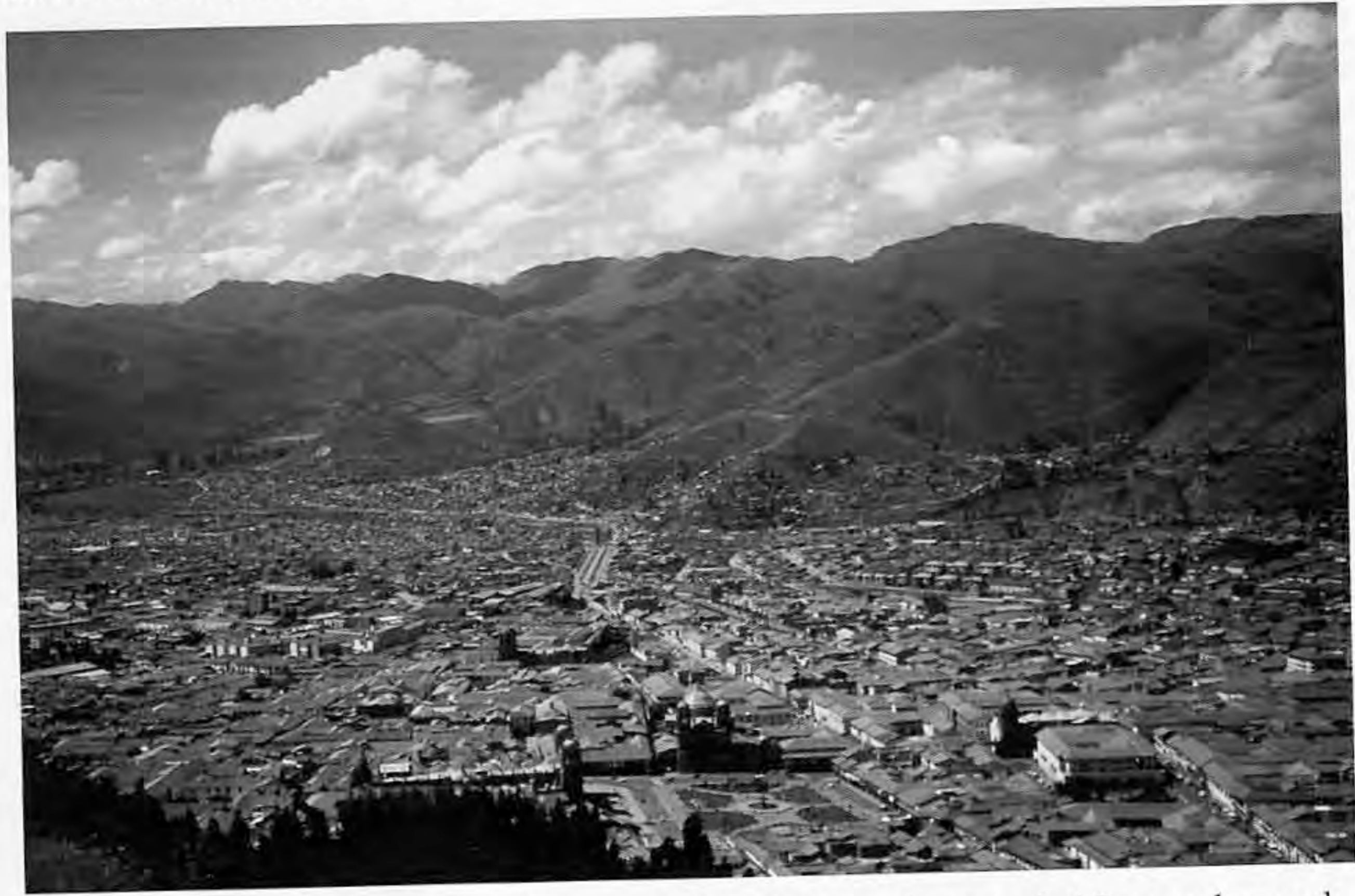


Fig. 22. View of Cuzco from Sacsayhuamán. Photo by author. ©2007 John W. Hoopes.

For Zuidema (1989), the *ushnu* was the quintessential axis mundi, a place designed for a ruler to articulate the realms of the underworld (of ancestors and creator spirits), the human world, and the heavens. An axis mundi is the center of multiple narratives, especially those that relate the present to the past and the local to the remote. The specific creation stories that became codified in state rituals centered on *ushnus* were derived in part from very ancient, pre-Inca traditions about the origins of the world. These may have included the concept of a formalized posture that has become associated with the iconography of the Staff God, a specific posture representing the position of the equinoctial sun between its solstitial extremes. Imagery suggests that this was enacted upon a sacred platform that represented a mythical, primordial mountain—the source of fresh water for irrigation.

The emphasis on Tiwanaku in Inca origin myths suggests that the Inca *ushnu* was derived specifically from the Akapana at Tiwanaku. This association is most likely to have occurred during the reign of Pachacuti, who derived his magico-religious or spiritual power both from his association with Pachayachachi and the notion of a continuous remaking of the world. How did this become a part of Inca tradition? Some of the mythology may have been present among Middle Horizon populations near

Cuzco. When Pachacuti expanded Inca rule southward into the territory that included Tiwanaku, these stories may have been revived. They represented the emergence of a primordial mountain from a primordial sea/lake as well as the importance of the high Andean peaks as a source of the water that was essential for irrigation. The specific imagery of the sun and mountain were associated with male and female life forces whose union was manifest in creation and as both a past event and an ongoing process in the perpetuation of human existence. “The usnu was the main ceremonial focus in relation to the leader’s role in social, political, economic and religious events. It was from the usnu that the Inca would address people, and deities, in any formalized context involving the state and its relations with certain deities, or in terms of events concerning the organisation of major social or economic importance” (Meddens 1997, 11). It was also a *pacarina*, or place of emergence, and a panopticon (Foucault 1977) from which a ruler could see the landscape that was his responsibility and the context for his creative endeavors.

These ancient creation stories became linked with the specific origin myths of the Inca nobility, who, Urton (1990) suggests, conflated pre-Western empirical observations of the remains of ancient human activity in caves with the story of founders of *ayllus* who migrated from the vicinity

of the Middle Horizon site of Maukallaqta and nearby caves of Pumaurqu (the original Tampu T'oqo). This mythology emphasized a migration of the ancestors of Inca royalty into the Cuzco Valley, where Wanakauri hill gained a specific association with the primordial mountain of origin, the rainbow, and the promise of Inca prosperity.

Beginning with emperor Pachacuti in the early 1400s, the official state myth became the basis for rituals performed in the context of sacred architecture. "Center stage" was the *ushnu*—a shrine and throne upon which the Inca sat or stood in a metaphor for the Sun standing above the primordial mountain of Creation. At Pisac and Machu Picchu, the *ushnu* was represented as a small, stepped stone monolith situated in the midst of sacred architecture that was, nonetheless, adjacent to dramatic, plummeting natural basins through which there was a constant flow of water. In these contexts, verbal descriptions of private rituals witnessed by only a small audience, probably of court officials and guests, would have affirmed the emperor's performance of sacred rituals to individuals who did not witness them directly, contributing to the mythology of the living emperor as an actor in his remade, state-sanctioned myth of Creation.

The codification of a specific creation myth through architecture that was used to legitimize the power of Inca emperors has strong parallels in the construction of the *witz* (mountain) pyramids of the ancient Maya and the Templo Mayor of the Aztecs. This latter was built as a reconstruction of Coatepec, the "Snake Mountain" of creation stories that explained the cosmos and Aztec legitimacy, perhaps recalling the Feathered Serpent Pyramid of Teotihuacan in a fashion parallel to Inca recollections of the Akapana at Tiwanaku. In constructing these monumental stages, the leaders of these societies were not only orchestrating performances that helped them to establish their own legitimacy and authority to others, but also they probably persuaded themselves that they were participating in magical rituals that provided them with actual supernatural

power. The associations between mountains and water (including Tollan, the "place of reeds") represented by stepped pyramids suggest the messages in ancient Mesoamerica were similar, although perhaps not historically related, to those of the Andes.

Using ancient or archaic architectural forms to evoke a sense of the past in order to legitimize the present is nearly universal in modern states. Inca use of Tiwanaku-derived architecture and iconography has specific parallels in the use of neo-classical architecture and iconography for seats of government in Washington, D.C., and the use of Egyptian-style monuments such as the obelisk in the Washington Monument. Several of the founding fathers of the United States were Freemasons who traced their own intellectual heritage to the establishment of the Temple of Solomon in Jerusalem and to the even more ancient Egyptian pyramids (Ovason 2000). Their use of classical architecture was a conscious evocation of the origins of enlightenment.

It is critical to note that the "myth of eternal return" (Eliade 1949) is one that is constantly being rewritten and reinterpreted in the present. Probably, just as the architects of Washington, D.C., and Peruvian President Toledo selected a veneer of antiquity while rejecting specific ideologies (polytheism, human sacrifice, etc.), the ancient Inca emperor remade his mythology—and utilized the "magic" of ancient places—in a selective fashion. The creation of a new order by Pachacuti drew upon the power of ancient symbols in a fashion echoed by many societies at different points in history. As has happened in these other cases, he likely modified the story of ancient Tiwanaku and its more ancient predecessors for his own purposes, evoking Creation and ancient gods and heroes while imbuing his lineage with additional prestige and remaking both the world and himself.

### Notes

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<sup>1</sup>The capitalization of "Creation" is used to refer to the mythological origin of the universe, rather than an ongoing process. Similarly, the capitalization of "Creator" is used to indicate a specific supernatural being.

<sup>2</sup>Note that the illustration of the original is reversed in Ossio's publication.

<sup>3</sup>A ritual occurred at Willka Waman's *ushnu* that also represented with clear finality the transfer of power from the ancient Inca lineage to the Spanish crown. Felipe Guaman Poma describes how the Viceroy Francisco de Toledo, upon his arrival in Peru, made a grand tour of the conquered territory. He landed in Lima and from there went to Huamanga and Cuzco, then traveled north. According to Guaman Poma, "llegó a Vilcashuamán, y subió al asiento y gradas, *ushnu*, del Inga; y así fue recibido como el mismo Inga todos los señores principales" (he arrived at Vilcashuamán and went up the stairs to the seat, the *ushnu*, of the Inca, and so was received as the same Inca by all of the principal lords) ([1615] 1993, 342, orig. p. 445 [447]). As a gesture of magnanimity, Toledo invited Don Alonso Nacchauarcaya, the oldest and most important of the local lords and principal of the Lucanas, Andamarcas, and Soras, to climb the *ushnu*. It is not recorded whether Toledo shared the throne with Don Alonso, but

the power of this symbolic gesture—inviting the principal of several local non-Inca ethnic groups to sit in the Inca's throne—was certainly not lost on the honoree.

<sup>4</sup>William Isbell (in press) and others have challenged this interpretation.

<sup>5</sup>William Conklin (1991) has suggested that the Gateway of the Sun may have once stood in front of the Puma Punku pyramid (something Jean-Pierre Protzen and Stella Nair [2002] have not been able to either support or refute). This would have placed it in a position similar to that of the massive double-jamb "gateway" at the base of the eastern staircase of the stepped pyramid at Willka Waman, which may have been inspired by the structures at Tiwanaku. The original locations of the Bennett and Ponce monoliths are unknown, but it seems likely the principal three-dimensional visages on each faced both east and west, with the smaller, two-dimensional reliefs facing the opposite direction in the solar path. The east-west imagery on the statues coincides with the orientation of the Akapana and the Puma Punku. The image of a figure standing atop a stepped platform in the central relief on the Gateway of the Sun suggests these two statues may have been at one time positioned atop the eastern staircases of each pyramid, the larger images (the three-dimensional faces) facing east and the smaller ones (the relief carving on the backs) facing west. However, this is impossible to confirm or refute with available data.

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