Mimesis and monumentalism in native Andean cities

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Introduction

The premodern city was frequently organized as a self-reflexive representation of universal order; the perceived design of the cosmos was inscribed in the ideal order of society, and from this ideal flowed moral authority and social stability (Townsend 1979; Wheatley 1971; Wright 1977). Certain pre-Hispanic Andean capitals, such as Inca Cusco, Chan Chan, the capital of the Kingdom of Chimor, and Tiwanaku are exemplars of this process of the metaphoric identification of nature with society objectified and instantiated in the built form of the urban environment (fig. 1). Nature and society (and more specifically the processes of social reproduction) were entangled in a mimetic relationship. The rulers of these Andean states assiduously attempted to perpetuate their legitimacy by reconfiguring social space both within their capitals and in the rural reaches of their domains. They created *de novo* or greatly modified preexisting centers to publicly proclaim, sanctify, and make tangible the sources of their right to rule. Andean kings and their elite cadre of kinsmen, retainers, and clients constructed and inhabited majestic centers accoutered with monumental representations of space and time that they themselves conceived. Such centers were embued with the signs and spatial framework of sacred authority: enormous plazas for public ritual, visually salient temples, palaces and thrones (the centrally located *usnus,* or "thrones," of the Inca are emblematic of this), and great urban gardens, all for the purpose of symbolically expressing their identification with the order of the natural world. The capitals of these kings were simultaneously cosmograms, architectonic representations of universal order, and what we might call sociograms, or idealized representations of human social order. At the same time, these artfully designed urban spaces were not merely inert stages for the pageantry of regal power.

These kings were dwellers in cities of their own design, and from these cities they circulated into the countryside, in effect extending the ideological grounds of their created cosmopolitan culture into the rural interstices. As Henri Lefebvre (1991:235) remarked:

> The city state establishes a fixed centre by coming to constitute a hub, a privileged focal point, surrounded by peripheral areas which bear its stamp. From this moment on, the vastness of pre-existing space appears to come under the thrall of divine order. At the same time the towns seem to gather in everything which surrounds it, including the natural and divine, and the earth's evil and good forces. As image of the universe (*imago mundi*), urban space is reflected in the rural space that it possesses and indeed in a sense *contains*. Over and above its economic, religious, and political content, therefore, this relationship already embodies an element of symbolism, of image-and-reflection: the town perceives itself in its double, in its repercussions or echo; in self-affirmation, from the height of its towers, its gates, and its campaniles, it contemplates itself in the countryside that it has shaped—that is to say in its work. The town and its surroundings thus constitute a *texture* [emphases in the original].

As Lefebvre recognizes, the city of the archaic state actively shapes its countryside, constituting a fabric of social relations. The city's shaping of its hinterland proceeds conceptually, symbolically and, of course, materially through commissioned public works, such as the great irrigated terrace complexes constructed by the Inca, the sprawling intervalley canal systems of Chimor, and the regional agricultural landscapes of raised fields developed by Tiwanaku, and through the reorganization of autochthonous populations in the provinces (the *mitimae* colonization schemes being perhaps the most radical Inca instance of this process) (Rowe 1982).

Although they share certain structural and symbolic features with cities elsewhere in the premodern world, we may discriminate a number of characteristics of these Andean capitals that distinguish them (in degree if not always in kind) from their non-Andean counterparts. The first of these characteristics, the lack of either price-fixing or administered markets, is likely the single most important feature of the Andean city that sets it structurally apart from other premodern cities in the Americas and elsewhere in the world. The second distinguishing feature of Andean capitals is their relative lack of social heterogeneity. Lack of heterogeneity is reflected in and flows from two additional defining characteristics of the ancient Andean city: low urban population size and intense development of instruments of social control within the urban environment. The Andean capitals and their secondary urban settlements were essentially regal and religious in nature. They were seats of royal lineages and centers of cults. The symbolic intersection of political and religious authority is expressed materially in the native Andean city in an exaggerated form of necrolatry. Many of the great temples and palaces of Cusco, Tiwanaku, and Chan

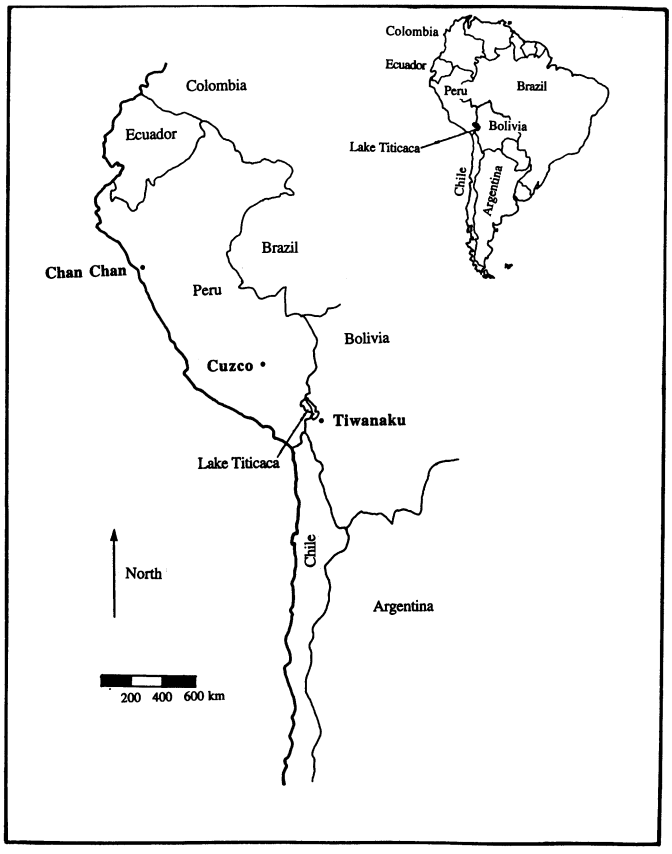

Figure 1. Location map of Chan Chan, Cusco, and Tiwanaku in the Central Andes.

Chan were repositories for the mummified remains of deceased kings. In an ideological sense, Andean kings never died. An essential core of native Andean religiosity was ancestor worship, and the dead royals occupied the summit in a hierarchy of deceased lineage and ethnic-group ancestors. These cities were centers of and for elite cultural definition and self-expression. A large, resident population of commoners was inimical to their purpose and function. Apart from the commoners who were incorporated into the cities in a retainer capacity, the masses rarely participated in urban culture at all except on the occasion of public rituals.

Not surprisingly, several, and perhaps most, of the Andean capitals were simultaneously regional focal points of pilgrimage (Silverman 1993). Commoners flowed into these cities at prescribed moments. In a real sense, they were religious tourists in an elite theme park that was carefully orchestrated to impart to them a sense of emotional participation in, but social segregation from, the esoteric world of the elite.

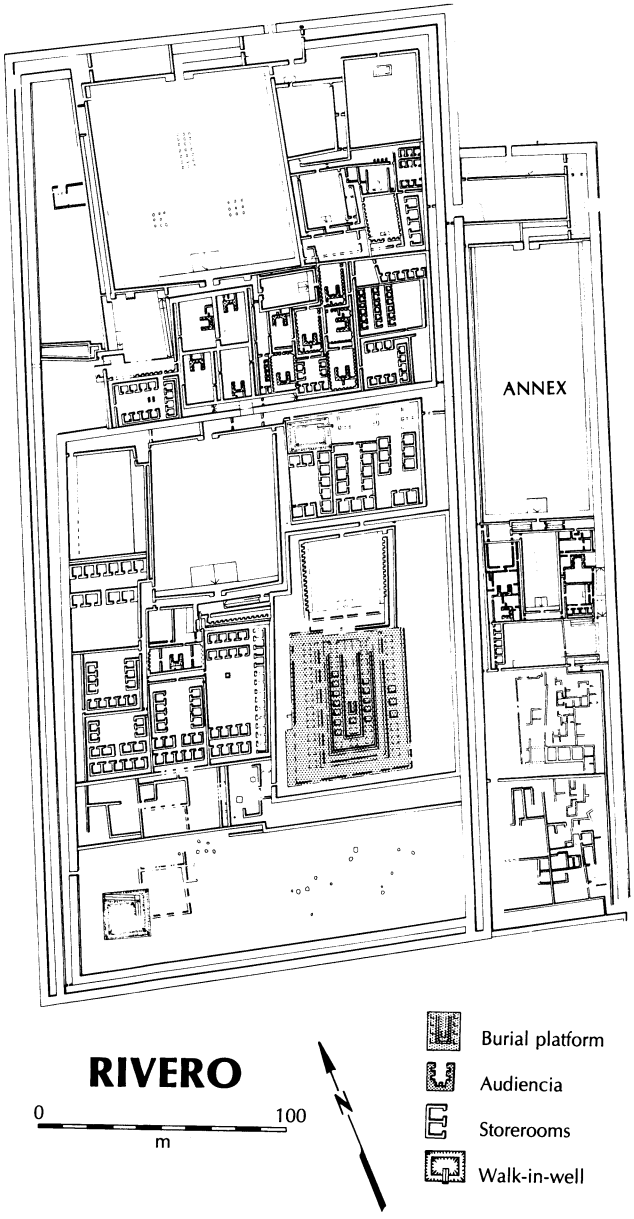

Figure 2. Plan of the Rivero palace at Chan Chan. The adobe walls of this palace reach nearly 10 m in height. Note in particular the restricted, highly orchestrated circulation patterns and access points to important internal architectural features, such as storerooms, administrative structures (*audiencias*), and the royal burial platform. Such architectural vehicles of social control are common to native Andean capitals such as Chan Chan, Cusco, and Tiwanaku.

Physical and social access to and within the Andean capitals was consciously restricted by artificial physical means, such as soaring palace and ward boundary walls

and tortuous pathways of circulation within the great residential and temple compounds (fig. 2). Instruments of social control are vividly reflected in the exceptional development of sumptuary laws and well-articulated theories of separate descent for elites versus commoners (Zuidema 1990).

The *raison d'être* of the Andean city was not fundamentally economic but rather political and ideological in nature. Not surprisingly, these Andean cities displayed an intense concern for public symbolism that connected city to countryside, and urban elites to rural commoners. These capitals were the distilled essence of elite belief, the focal points of publicly expressed concepts of universal order. The life of farms and fields in the countryside provided the model for the essential relationship between humankind and nature that profoundly influenced the internal design and social order of these cities. The symbolic text written into the design of cities such as Cusco and Tiwanaku was one which attempted to identify or to harmonize the productive (yet potentially destructive) forces of nature with the culturally created order of human society. To understand the nature of Andean cities then, we must grasp the symbolic armature that shaped urban form and invested it with cultural significance and public meaning. In what follows, I will explore the form and meaning of public, politico-religious symbolism in two native Andean capitals: Cusco and Tiwanaku.

Politics, religion, and symbols in native Andean cities: the case of Cusco

Cult and command in the native Andean states interpenetrated to an extraordinary degree. The essence of that interpenetration was expressed visually and conceptually in Andean capitals by the spatiotemporal organization of public shrines and their constituent social groups. The capital of the Inca empire, Cusco, offers us our best (ethno)historically documented example of interplay among politics, religion and the built form of the Andean capital (Zuidema 1986, 1990).

In Cusco, the principal social instrument for conceiving and experiencing the interpenetration of cult and command was the *ceque* system. In essence, the *ceque* system was a sacred landscape of the city, and by extension the Inca empire itself, organized in a complex collection of shrines arrayed along lines of sight (fig. 3). This sacred landscape was central to the Inca people's notions of their own identity as an ethnic group and to their belief in their right to rule other nations. The system originated from the centrally located temple of Qorikancha which contained idols of the Inca state cults, and incorporated niches in its interior precincts for housing the sacred mummy-bundles of Inca royalty. Bernabé Cobo's description of *ceque* system of Cusco provides us with an entrée into this fascinating aspect of Inca political and religious belief:

> From the Qorikancha, as from the center, there went out certain lines which the Indians call *ceques*. They formed four parts corresponding to the four royal roads that went out from Cusco. On each one of those *ceques* were arranged in order the shrines which there were in Cusco and its district, like stations of holy places, the veneration of which was common to all. Each *ceque* was the responsibility of the *parcialidades* [the Spanish name for

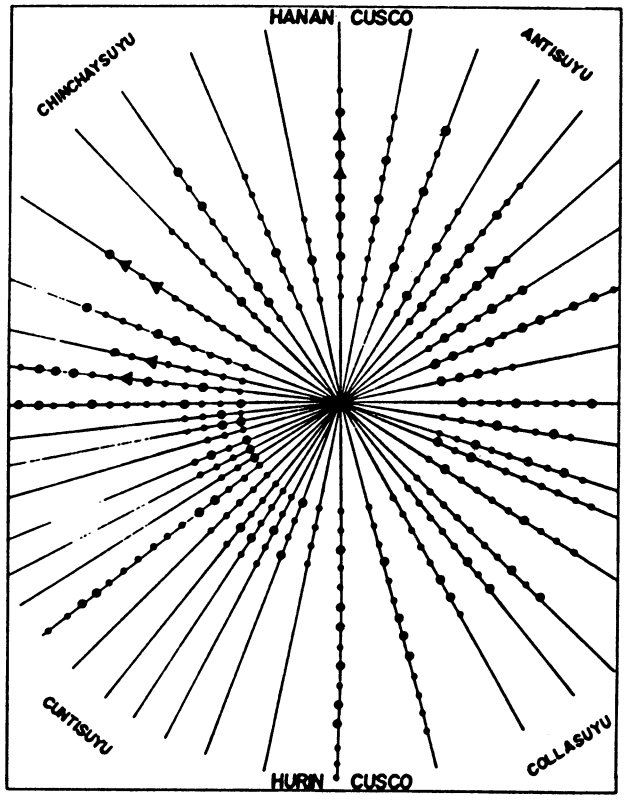

Figure 3. Schematic diagram of the *ceque* system graphically depicting the radial organization of landscape shrines (*huacas*) and sacred space in Cusco. In this diagram, *huacas* indicated by large dots are associated with water sources; *huacas* indicated by triangles are major irrigation canal sources. Small dots represent *huacas* without explicit water associations. After Sherbondy 1982, 1992 and adapted from Hyslop 1990:66.

> groups of people who formed related parts of a larger ethnic whole] and families of the city of Cusco, from within which came the attendants and servants who cared for the shrines of their *ceque* and saw to offering the established sacrifices at the proper times.
>
> *cited in J. Rowe 1979:59*

This remarkable conceptual organization of Cusco and its near environs incorporated a total of 41 directional sight lines, or *ceques*, radiating out from the origin point at the Qorikancha along which the Inca recognized 328 individual *huacas*, or shrines, which were conceived as places or objects embued with sacred power. As Cobo notes, different sets of related lineages (*ayllus*), or larger social groups (*parcialidades*), were charged with the responsibility of maintaining the *huacas* along the *ceque* line designated to that group. Responsibility for the *ceque* line included the obligation of offering periodic, ritually prescribed sacrifices at these shrines.

The *ceque* system of Cusco carried multiple layers of significance that bound Inca concepts of geographic and symbolic space, time, history, and social organization in a recursive hierarchy. Among the most important meanings embedded in the *ceque* system was its role as the physical expression of the Inca's sidereal-lunar agricultural calendar. Each of the 328 *huacas* may have represented one day in this agricultural calendar. Throughout the agricultural cycle of the seasons, members of at least one of the Inca *parcialidades* resident in Cusco were engaged in daily communal rituals designed to ensure abundant harvests and the fertility of camelid herds. These increase ceremonies, organized according to the principles of the *ceque* lines, served as a trenchant reminder to the Inca classes of Cusco that their success as a people destined to rule other nations hinged on group solidarity and on their ability to sustain a symbolic concordance between the social and natural orders.

We can further discriminate two salient classes of symbolic associations of the 328 constructed shrines and landscape *huacas* arrayed along the ritual *ceque* paths of Cusco and its near environs: water sources and irrigation associations on the one hand and dynastic lore and "history" on the other (Sherbondy 1982, 1992). The first of these associations relates symbolically to the autochthonous people of Cusco—the original inhabitants of the valley who lived and cultivated lands in the region before their domination by the Inca elite. Fully 109, or one-third, of the *ceque* shrines relate directly to springs, streams, rivers, and pools that are actually or symbolically sources of flowing water for irrigating adjoining lands. These water-related *ceque* shrines can be interpreted in one sense as boundary markers, delimiting and sectioning arable land among various social groups (Sherbondy 1992; Zuidema 1986). The sacrifices made at these water shrines emphasize associations with telluric phenomena and with the fertility and genesic properties of land fed by flowing water. The principle of legitimate authority expressed by these associations emerges from the rights of the autochthonous populations as the original holders of usufruct title to the land.

The second dominant set of symbolic associations in *ceque* system shrines relates to the event-history of the Inca kings and queens, or the class of royalty as a whole. This "history" includes those mythical events relating to the origins of the Inca as a distinct ethnic group and as a royal dynasty which derived its authority from outside of the Cusco environs. It also includes events that commemorate significant actions and achievements in the lives of (possibly historical) Inca kings. This latter group of historical commemorative shrines are especially, although not exclusively, concentrated along the *ceque* paths of Chinchaysuyu, the northwest quarter of Tawantinsuyu (the "Realm of the Four Quarters"), the Incas' name for their empire.

The various Inca origin myths, eloquently analyzed by Zuidema in a variety of pathbreaking papers, share the feature of emphasis on migration and ritualized peregrinations or movement along a vector commemorated by landscape markers. In one version of the origin myth recorded by Juan de Santacruz Pachacuti Yamqui (cited in Zuidema 1990:7), Manco Capac, the royal ancestor and founder of the Inca dynasty, migrates from Lake Titicaca to Cusco, conquers the two principal native lords of the valley, and appropriates their lands and irrigation waters. Another version of the myth recounts the origins of the Inca as an ethnic group and as a royal caste through the emergence of four couples, specifically four pairs of brothers and sisters, from sacred caves at Pacariqtambo. This is the story of the brothers/sisters Ayar (Urbano 1981; Zuidema 1990:9–10). After an extended migration northward to Cusco and the magical lithification of several brothers en route, Manco Capac establishes authority over the non-Inca natives of the valley and again appropriates effective title to the lands and waters of Cusco.

These versions of the Inca origin myth share both the emphasis on migration from a sacred landscape feature (Lake Titicaca or caves, both of which have aqueous, telluric, and fertility associations) to the valley of Cusco

and the subsequent conquest and subordination of a preexisting indigenous population. The special sociological characteristic of the first Incas is that they are all outsiders; the source of their authority stems from their very foreignness and their aggressiveness. They are archetypal *sinchis*, or warlords. They are not originally possessed of legitimate authority to rule, rather they must appropriate that authority by force. Further, they must continue to assert and reaffirm their authority by virtue of continuing peregrinations through their conquered territory. This, of course, is nothing other than the Inca version of Sahlins's (1985) "stranger king." As Sahlins (1985:78–80) remarks in specific reference to Polynesian kingship:

> It is a remarkably common fact that the great chiefs and kings of political society are not of the people they rule. By the local theories of origin, they are strangers . . . power is not represented here as an intrinsic social condition. It is a usurpation, in the double sense of a forceful seizure of sovereignty and a sovereign denial of the prevailing moral order. Rather than a normal succession, usurpation is the principle of legitimacy.

I would argue that the tension between these two dichotomous poles of legitimate authority (possessed versus appropriated) lies at the political core of archaic states generally and accounts, at least in part, for the apparent fragility of these traditional state formations. The *ceque* system, in some sense, was the Inca solution to integrating these opposing forces, or principles, of authority into a cohering, if not completely coherent, social and symbolic whole. By encapsulating or incorporating (in the case of those communities granted the status of Inca-by-privilege) non-Inca groups in the *ceque* system, the Inca, via collaborative, habitual social and spatial practice, effectively dampened, or at least glossed over, the natural tensions and contradictions that arose from their usurpation of authority. That is, conquered and conquerors came to share an ideology of worship focused on the *ceque* shrines of Cusco and its environs. Encoded in this monumental, symbolic landscape of shrines were metaphorical and literal referents to both the autochthonous inhabitants of the land who were possessed of legitimate authority and to the foreign *sinchis* who, by virtue of force-of-arms, came to usurp and appropriate legitimate authority. This is the dialectic of the inside-outside principles of authority expressed materially within the Inca-constructed sacred geography of Cusco.

In Lefebvre's (1991) terms, by means of the *ceque* system, the people of Cusco conjoined spatial practices, the representation of space and representational space (that is, space as perceived, conceived, and lived) in a cohesive and, to one degree or another, coherent system. By representational space, Lefebvre (1991:39) specifically means "space as directly lived through its associated images and symbols . . . [representational space] overlays physical space making symbolic use of its objects." Just so, the *ceque* system and its constellation of shrines overlaid the physical space of Cusco, investing the urban and rural landscape with cultural and historical meaning. A similar kind of lived representational space gave structure to the urban concept of Tiwanaku.

Politics, religion, and symbols in native Andean cities: the case of Tiwanaku

The mystique of the city of Tiwanaku in late pre-Hispanic Andean society was intimately associated with its role as a place of origin in cosmogonic myths. According to the various sixteenth-century accounts of Betanzos (1551), Sarmiento (1572), and Molina (1553), it was in Tiwanaku that the creator god Viracocha ordained a new social order. It was from Tiwanaku that the primeval couple were sent out along symmetrically opposed migratory paths to call forth the nations of the Andean world from the *huacas* of springs, rivers, rocks, and trees. In these myths of creation and radiation, Tiwanaku was simultaneously origin point, the place of human emergence, and the symbolic center of the universe where the complementary halves of nature and society were conjoined (Kolata 1993:7–9). These myths identify Tiwanaku as the origin point of space, time and human society, and Cobo's ([1653] 1939:30) remark that the autochthonous name for Tiwanaku was Taypikala, or "Stone in the Center," is clearly reflective of this native belief.

The architectural form of Tiwanaku, together with its public ensemble of monumental stone sculptures, intensified the mythic aura of the city embuing it with a quality of the supernatural. The ceremonial core of Tiwanaku was surrounded by a series of artificial moats that restricted easy access to its centrally located public buildings (fig. 4). The intent behind this reshaping of the high-status urban landscape through construction of physical barriers of water was not primarily utilitarian—to create a defensive posture, for instance, as has been suggested by Posnansky (1945)—but rather to evoke the image of the city core as an island. The notion was to create, at the cost of enormous investment in human

Figure 4. Aerial photograph of Tiwanaku's central ceremonial precinct. The Akapana earth shrine is at the center of the image. Immediately north and west of the Akapana are the Semi-subterranean Temple and Kalasasaya ceremonial complexes and the Putuni and Kheri Kala elite residential compounds (cf. fig. 5). The well-preserved remains of the principal moat surrounding Tiwanaku's central ceremonial precinct can be seen to the east and along the railroad bed immediately to the south of the Akapana shrine.

labor, an image of the sacred islands of Lake Titicaca which were the situs of cosmogonic myth: the points of world creation and human emergence. The moats generated dramatic visual cues that emphasized the ritually charged nature of social actions that were played out in the center. In essence, moving from the outer ring of Tiwanaku's vernacular architecture across the moats into its interior island circle of temples and elite residences, the visitor to the city moved from the space and time of ordinary life to the space and time of the sacred. The interior sacred core was symbolically a human recreation of the place and time of human origins.

In the Andean world, as in many other indigenous cosmologies, the time of origins was not a vague, temporally distant historical event to be remembered and commemorated in yearly ceremony. Rather, cosmological time was cyclical, regenerative, and recreated by human agency; the time of origins was then, now, and anticipated to recur in the future. Humans existed in the sacred time of cosmology, as well as in the profane time of daily life. The ceremonial inner core of Tiwanaku, in some sense, was constructed as the theatrical backdrop for the recurrent social construction of cosmological order. Of course, the parallel message embedded in this architectonic text was the appropriation of the sacred by a subconstituency of society: the Tiwanaku elite.

Within the ceremonial core of Tiwanaku were constructed not only the principal temples of the city but also the palatial residences of the ruling class (fig. 5). By living within this sacred inner precinct of the city, these elites were claiming for themselves the right (and

assuming the obligation) to intercede on behalf of society with supernatural forces to maintain concordance between the natural and social orders. The lineages of the elites, in essence, conjoined historical time (the linear experience of time lived here and now) with cosmogonic time (the cyclical, regenerative time of myth) (Ellwood 1973). The peculiar architectonic and sculptural arrangements within the inner regal core of Tiwanaku permit us to explore certain aspects of the character and meaning of Tiwanaku as an urban center: how it was structured internally in terms of global architectural planning and the kinds of cultural meaning that we can impute to individual structures, specifically the temples of Akapana and Puma Punku.

Tiwanaku's principal, innermost moat served to physically demarcate the concentrated, sacred essence of the city. The moat acted as a psychological and physical barrier, setting up by its very shape, dimensions, and symbolic associations, a concentric hierarchy of space and time. If the meaning that I impute to the moat is correct, passage across the circle of water represented a change of both spatial and temporal frames of reference, a movement into the place and time of ethnic origins. The contradiction inherent in its meaning for the people of Tiwanaku must have been clear to them; the central island of cosmogonic myth was believed to be the point of origins for *all* humans, but at Tiwanaku, only *some* humans, the elites of Tiwanaku society, appropriated the special right of residence in this sacred core. The barrier of water, then, also marked a point of transition that distinguished the residences of elites from those of commoners. Thus just as in the *ceque* system of Cusco, social hierarchy and ultimately social inequality were encoded in Tiwanaku's urban form.

There was, in other words, a principle of urban order at Tiwanaku that we might describe as a concentric cline of the sacred that diminished in intensity from the city core to its far peripheries. Within this framework of urban order keyed to conceptions of the sacred, the

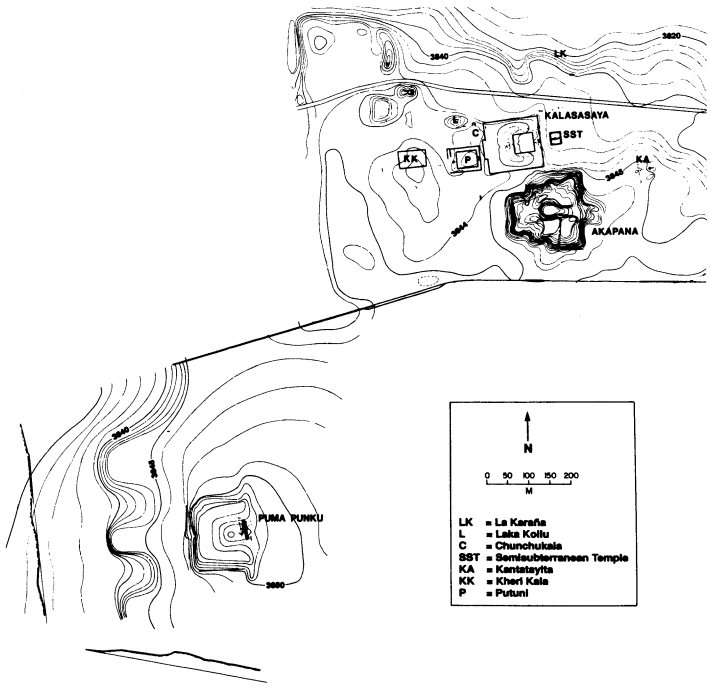

Figure 5. Sketch map of Tiwanaku's major visible architectural complexes. Although not indicated on this map, many of the residential quarters of Tiwanaku, such as La Karaña to the north of Akapana, were originally enclosed within massive, adobe-walled compounds to form distinct *barrios* or neighborhoods. Circulation patterns within these *barrios* were complex and, as at Chan Chan, highly controlled.

inhabitants of Tiwanaku occupied physical space in accordance with their relative social and ritual status. At the highest level, ritual status was identified and partially merged with political authority. Not surprisingly, the upper echelons of the Tiwanaku elite monopolized for their residences the innermost (and most sacred) core of their artificial island enceinte. The notion that there was some image of hierarchical concentricity in the mind of the people of Tiwanaku which shaped conceptions of "proper order" within their capital is reinforced by the presence of two additional, although partial, moats situated farther to the east of the primary moat completely encircling Tiwanaku's monumental architecture. These moats do not have obvious technological functions, although it is possible that they served to drain excess groundwater and seasonal rainfall away from inhabited portions of the urban landscape. But, if my interpretation of the meaning of Tiwanaku's principal moat is correct, I would suggest that the essential purpose of the moats toward the city periphery was also to symbolically mark social boundaries, further differentiating the ritual status of the urban residents by their relative positions along what I have referred to as the concentric cline of the sacred. Excavations in spatially distinct barrios of Tiwanaku confirm significant variation in architectural elaboration and possession of wealth objects according to location relative to the civic-ceremonial core (Janusek 1994). Movement from the east of Tiwanaku toward the civic-ceremonial core of the city, then, entailed passage across a nested, hierarchical series of socially and ritually distinct spaces (Kolata 1993).

Individual public structures at Tiwanaku were embedded within the field of cultural meaning demarcated by this symbolic island. The structures themselves carried symbolic valences that were intensified by their positional relationships within the imagery of the island core. At the center of the island enceinte stood the temples of Akapana and Puma Punku, the largest and most imposing buildings in Tiwanaku. The Akapana, an artificial construction of earth, clay, gravel and cut stone rises up in seven superimposed terraces (fig. 6). The structure itself is approximately 200 meters on a side and rises to nearly 17 meters in height. The basal terrace is a monumental revetment of cut stone with rounded, beveled edges at the joins between blocks. The upper six terraces of the Akapana differ substantially in architectural detail from this foundation. They lack the distinctive rounded, beveled edges of the stones employed in the basal terrace and make less frequent use of vertical pillars to mark facade intervals. Instead, they incorporate large, highly visible stone panels into their facades. Based on similar architectural elements in the Kheri Kala, Chunchukala, and Kantatayita complexes, we can assume that these panels were covered with

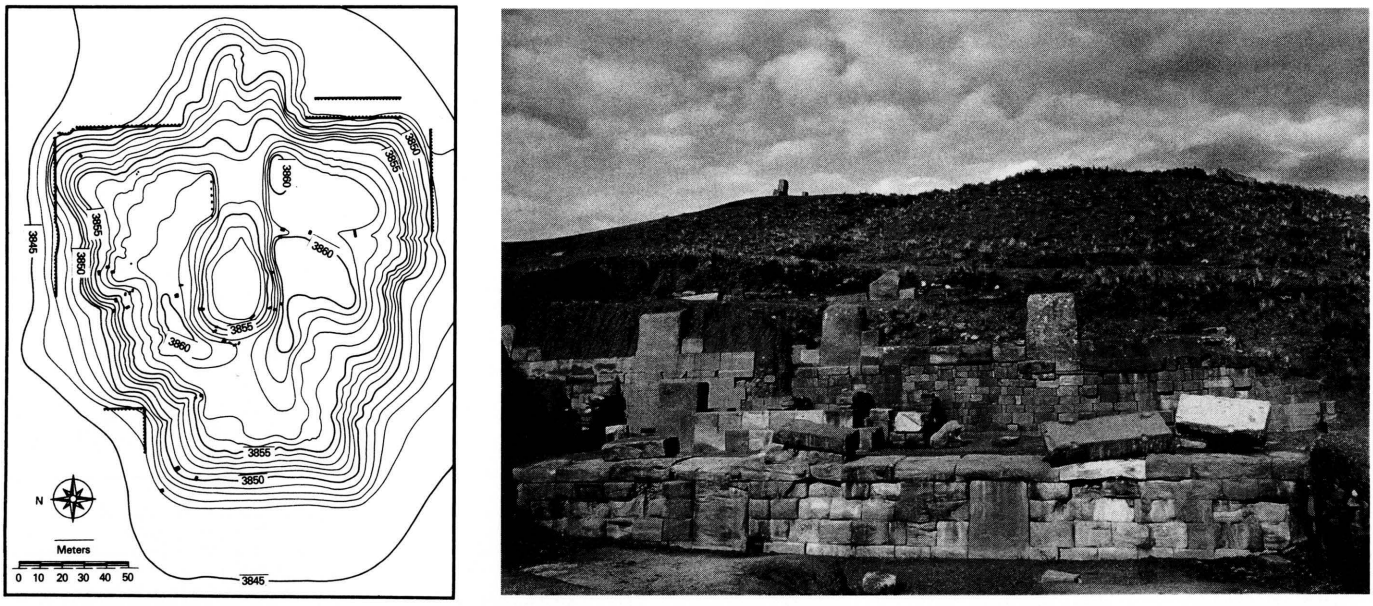

Figure 6. (a) Plan of the Akapana earth shrine. (b) View of the partially excavated eastern facade of the Akapana.

iconographically rich metal plaques and textiles or may themselves have been carved and painted. The upper terraces may have constituted a kind of public, symbolic text, the specific content of which is now irrevocably lost to us. Given the ritual meaning that I ascribe to the Akapana, the "public texts" of the upper terrace panels most likely made reference to the role of this structure in Tiwanaku's cosmogonic myths.

Behind the retaining walls of the seven superimposed terraces, the builders of Akapana laid tons of earth and clay. As suggested by Posnansky (1945) decades ago, the bulk of the clay and earth transported to construct the Akapana was excavated from the moat surrounding the civic-ceremonial core. One class of materials used in the construction of the Akapana is unique and provides us with an intriguing insight into the meaning of this structure for the people of Tiwanaku. Within the construction fill of the uppermost terrace are thin lenses of a blueish-green gravel. These small, water-worn pebbles completely cover the summit of the Akapana. Posnansky (1945:74) attributed this gravel on the summit of Akapana to the detritus left behind by "the great flood which covered Tihuanacu after its destruction." In fact, its presence on the Akapana can result only from human agency. Why would the architects of Akapana go to such great lengths to incorporate this green gravel into the fill and on the surface of the structure's summit?

It is apparent that this gravel had no structural role, and it would have been exceedingly tedious to collect and transport to the construction site. The fact that the gravel occurs in distinct lenses within the structure and on its summit indicates that it was not simply a byproduct or accidental inclusion in the structural fill. What, then, is it doing there, and why would Tiwanaku's architects invest so much labor in purposefully distributing this gravel on top of the Akapana? The answer, I think, stems from the origin and distinctive color of this gravel. This gravel is an erosional product of the Quimsachata and Chila mountain ranges to the south of Tiwanaku, and it occurs naturally in a number of quebradas and intermittent streams that flow down from these mountains. The source of the gravel is clear to anyone who lives along the base of the Quimsachata range, and its exotic, visually arresting green color immediately attracts even the most casual observer's eye. I believe that the architects of the Akapana selected this gravel for inclusion in the structure precisely because of its potent symbolic associations with the sacred mountains of the Quimsachata range which were important spiritual points of reference, or *huacas*, for the people of Tiwanaku (Reinhard 1987). The gravel was embued with the spiritual essence of the mountain *huacas*. But, even more, the exotic green color of these stones conveyed an association with the life-giving springs, streams, and subterranean seeps which have their origin in the southern mountain ranges. Not only is the gravel the color of flowing water, it is brought down to the broad plains of the Tiwanaku Valley within these same surface streams and subterranean flows that furnish fresh water to most of the Valley. This green gravel, in short, condensed in one material the symbolic essence of two Tiwanaku sacred elements: mountains and water.

Such an inference, although it is what I would term informed conjecture, is not without parallel in the ancient Andean world. One of the two principal plazas in Inca Cusco (Haukaypata) was covered with a layer of sand brought from the Pacific coast nearly 500 kilometers away. The sand was apparently sacred because of its association with the waters of the Pacific ocean. As Sherbondy comments, "by bringing the sea sand to Cusco, the Inkas ritually situated the sea in the religious and political center of the Inka empire" (1982:16). One of the places to which the original earth from the Huakaypata plaza may have been carried was the main plaza of the Inca sanctuary on the Island of the Sun in Lake Titicaca. Hyslop (1990:77) notes that "the most detailed historical commentary on the area relates that the plaza [on the Island of the Sun] was called Huakaypata and that it was covered with loose dirt, brought in from elsewhere, wherein gold figurines and pottery vessels were buried."

If we accept that the architects of Tiwanaku shared similar concepts regarding the need to sanctify their capital's ceremonial structures through these audacious, labor-intensive schemes of symbolic transference, the question remains, why cover Akapana, and not other structures, with this green gravel? Apart from the obvious, general fact that the Akapana is the most imposing structure at Tiwanaku, I believe that this structure was specifically conceived by the people of Tiwanaku as an emblem of the sacred mountain. That is, Akapana served as a human-created simulacrum of the highly visible, natural mountain *huacas* in the Quimsachata range. I infer this symbolic association for several interrelated reasons. Most simply, the Akapana mimics the form of a mountain, ascending in seven stepped terraces to visually dominate the urban landscape. Throughout the archaic world, there are countless instances of this kind of symbolic mimesis between pyramidal structures and mountain peaks

(Townsend 1979; Wheatley 1971). Then too, the layers of green gravel, as I have indicated, physically link Akapana with the Quimsachata range; pieces of the mountains are quite literally built into the structure. But, more subtly, certain structural features of the Akapana intensify the mountain association and, even more specifically, the link between mountains and sources of water.

Our recent excavations at Akapana revealed a monumental system of interlinked surface and subterranean drains (Kolata 1993). The system begins on the summit with sets of small, subterranean, stone-lined channels that originally drained Akapana's central sunken court. The sunken court on Akapana's summit was not roofed, and enormous amounts of water collected in it during the altiplano's rainy season between December and March. These stone channels conducted water from the sunken court to a major trunk line that was buried deeper beneath the summit surface. This trunk line probably extended around the four sides of Akapana's summit, but we have direct evidence for it only on the north and west sides (Manzanilla 1992). The drain is rectangular in cross section, and finely crafted of large, precisely fitted sandstone blocks. It has an interior dimension of 45 cm, which would have accommodated an enormous flow. This elaborate subterranean trunk line collected water flowing from the channels draining the sunken court on the summit and conducted it inside the structure to the next lower terrace. Here the water emerges from inside the Akapana onto an exterior stone channel tenoned into the vertical terrace face. The water poured over the edge of the tenoned drain onto a 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. Eventually, water flowing from the Akapana's summit merged into a subterranean sewer system that was installed three to four meters under the civic-ceremonial core of Tiwanaku. This system itself drains into the Rio Tiwanaku and, ultimately, Lake Titicaca.

There is clearly a dimension to this elaborate drainage network that goes beyond simple utility, a dimension that we can approach by posing a single question: why is the water repeatedly and alternately threaded inside and on the surface of the structure? The answer to this question lies in considering a more profound visual and conceptual mimesis between Akapana and the natural mountains of the Quimsachata range than the general morphological similarity of stepped-terrace mounds and mountain peaks. This deeper symbolic association is grounded in certain ecological processes that characterize the Quimsachata range (fig. 7). During the rainy season, clouds swollen with rain well up in the deep ravines and intermontane basins of the Quimsachata range. Thunderstorms sweep the slopes with torrential rains, driving hail, and violent claps of thunder and lightning. Water rapidly pools in the saddles and peaks along the summit of Quimsachata and then begins to flow down to the valley floor. But the flow is not direct. Surface water quickly drains into subterranean streams which periodically reemerge down slope, gushing and pooling in natural terraces only to tumble again down inside the mountain. The peculiarities of mountain geology and the erosive power of water combine to create this natural alternation between subterranean and surface streams. Runoff from the rains finally emerges from the foot of the mountains in streams, springs, and marshy seeps. This fresh water recharges the aquifer of the Tiwanaku Valley and is the source for virtually all of the valley's irrigation and drinking water. In fact, the altiplano rainy season is also the principal growing season for major food crops, and the success of agriculture is tied to this critical period of rainfall. Vast tracts of raised agricultural fields developed by the people of Tiwanaku were dependent on this seasonal recharge of surface streams and groundwater (Kolata 1993). At the most primal level, the mountains were sacred because they were the source of water that nourished people and their fields.

The analogy I wish to draw is transparent. Akapana was the sacred mountain of Tiwanaku. It partook of the spiritual essence of the Quimsachata mountain range, the image of which was evoked by Akapana's stepped-terrace shape, by its green gravel mantle, and by its cleverly constructed mimicry of the natural circulation of mountain waters in the rainy season. The course of water flow on the Akapana replicated the pattern of nature: pooling, dropping out of sight, gushing onto terraces, and emerging at the foot of the mound. Extending the analogy, Akapana was Tiwanaku's principal earth shrine, an icon of fertility and agricultural abundance. Although it may have had a particular association with the mountains of the imposing and immediately visible Quimsachata range, Akapana's location in the civic-ceremonial core of the city suggests yet another kind of symbolic

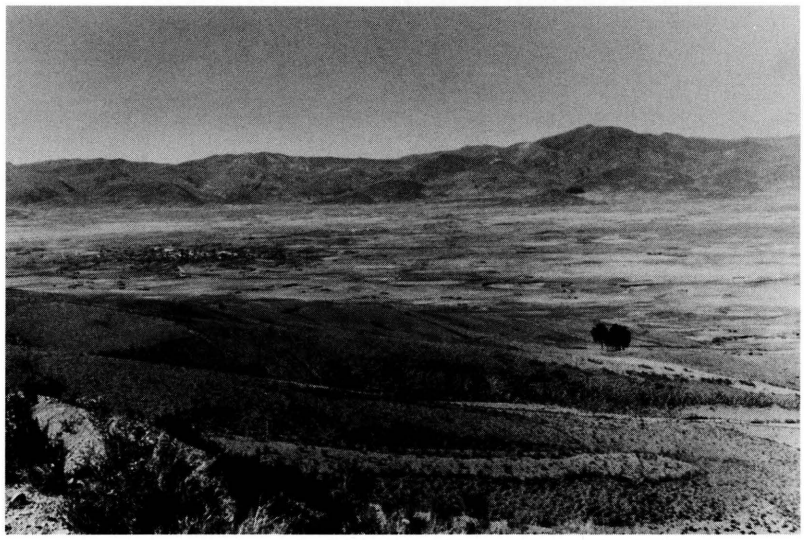

Figure 7. View of the Quimsachata mountain range. The modern village of Tiwanaku and the surrounding archaeological site can be seen on the left side of the image. The Akapana earth shrine is visible at the central left margin.

representation. Recall that Akapana rests in the center of the island enceinte carved out by Tiwanaku's great ceremonial moat. Viewed in the larger context of its setting, Akapana becomes the mountain at the center of the island-world and may even have evoked the specific image of sacred mountains on Lake Titicaca's Island of the Sun. Here another signification is layered onto the meaning of Akapana. In this context, Akapana is the principal shrine of cosmogonic myth, the mountain of human origins and emergence. From this perspective, it takes on specific mytho-historic significance.

Much of this analysis can be profitably extended to the temple of Puma Punku, which replicates the essential architectural and contextual elements of the Akapana. Puma Punku was a stepped pyramid with a central sunken court, axial staircases, lavishly embellished gateways, and an identical internal drainage network that reproduces, on a smaller scale, that of Akapana. In fact, the architectonic arrangement of a stepped-terrace mound located in the center of an artificial island-city extends beyond the boundaries of Tiwanaku itself. This concept of urban spatial order, which evoked the place and time of cosmogonic (and ethnic) origins, extended to important regional Tiwanaku centers such as Lukurmata, Pajchiri, and Khonko Wankane (fig. 8). In each of these regional cities, artificial features (canals or moats) carve the urban landscape into a ceremonial core of temples and elite residences arrayed within an island enceinte counterposed against extensive sectors of vernacular architecture. Moreover, at Lukurmata, the most intensively investigated of the Tiwanaku regional cities, the central ceremonial complex, organized around a terraced mound, was furnished with a drainage network similar to that of the Akapana. Here, too, rain water collecting on the summit of the ceremonial complex was threaded through carved stone drains to the base of the artificially modified rock outcrop on which the complex was constructed. Water from the summit flows into the principal canal demarcating the island-core of the site and, ultimately, into Lake Titicaca. At Lukurmata, this canal also drains an adjacent sector of raised fields, thereby associating the summit ceremonial complex with agricultural productivity through the connecting thread of flowing water.

Space constraints do not permit me to present all of the supporting evidence that this concept of urban order keyed to island and sacred mountain imagery was reproduced in Tiwanaku's satellite cities, or to extend my analysis to explore the important role of Tiwanaku's corpus of monumental stone sculptures in this concept. But the implications of this symbolic pattern are clear; the Tiwanaku elite who lived within the sacred, moated precincts of their cities were appropriating images from the natural world and merging them with their concepts of hierarchical social order. They were publicly

Figure 8. View of the acropolis at the archaeological site of Lukurmata. Note in particular the moat that surrounds the acropolis and converts this elite ceremonial and residential complex into an island, replicating the architectural design at Tiwanaku described in the text.

asserting, through a constructed, mimetic program of architectonic display, their intimate affiliation with the life-giving forces of nature and their central role in the perceived natural order of the universe. At the same time, they may have been appropriating the right to represent themselves as key actors in ceremonies that commemorated Tiwanaku ethnic origins and identity, symbolically recapitulating central events in cosmogonic myths.

Mimesis of natural forces, particularly those relating to the genesic properties of agricultural production, and the actualization or ceremonial performance of cosmogonic and ethnic origin myths were central dimensions of the purpose and meaning of monumentalism in the native Andean capitals of Cusco and Tiwanaku. I suspect that the same processes of symbolic transference between the natural and social worlds, intended to express the "naturalization" of social life as embodied in the built human environment, operated throughout indigenous South American societies, and perhaps even more generally. In fact Turner's (1993:11) analysis of Central Brazilian Kayapo cosmology describes precisely the importance of this reciprocal identification of the natural and social worlds:

> The village is the center point of both horizontal-concentric and vertical-diametric dimensions of space-time. The structure of cosmic space-time exemplified by its layout, at the same time, embodies the form of the everyday processes of social production and reproduction through which the social life of the village community, the human life cycle, and the developmental cycles of families and households are reproduced. . . . The cosmological terms in which this traditional Kayapo view of the social world are cast, however, exclude a consciousness of the structure of this form as itself a social product. It is, rather, seen as the natural structure of the cosmos, which human (social) beings follow naturally in their everyday individual secular productive activities and their periodic collective performances of sacred ritual.

Just so, the Inca and Tiwanaku elites intended their capitals and provincial cities to be seen and experienced as extensions, or reflections, of the natural structure of the cosmos. The fundamental distinction between these Andean capitals and their Kayapo village counterparts is one of scale and relative complexity. The pre-Hispanic Andean social order was one characterized by intense social hierarchy and the emergence of full class-stratified societies grounded in the exploitation of human labor to generate economic

surpluses. In the Andean case, the expression of the symbolic mimesis between the natural and social worlds took on monumental proportions in the design of elite-conceived civic-ceremonial centers.

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