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REBUILDING THE STATE IN HIGHLAND PERU: HERDER-CULTIVATOR INTERACTION DURING THE LATE INTERMEDIATE PERIOD IN THE TARAMA-CHINCHAYCOCHA REGION

Jeffrey R. Parsons, Charles M. Hastings, and Ramiro Matos M.

We address the general problem of sociopolitical evolution in highland Peru during the Late Intermediate period (ca. A.D. 1000–1470) from the perspective of changing relationships between herders and cultivators in the Tarama-Chinchaycocha region. First, we use ethnographic and ethnohistoric information to help model central Andean herder-cultivator interaction. Here we emphasize the ecological and sociological foundations for economic specialization, the ritually based integration of pastoral and agricultural groups in the absence of strong state organization, and how the ritually interactive units define and maintain their borders. Second, in the light of these perspectives, we examine archaeological settlement pattern data from our study area in the central highlands of Peru. We conclude that the Late Intermediate period was a time of significant organizational change that included new forms of ritually based local and regional integration of pastoral and agricultural economies. Third, we briefly consider the general implications of our findings for understanding organizational change throughout the central Andean highlands during the Late Intermediate period. We suggest that the largest and most complex Late Intermediate highland polities depended on the full integration of specialized pastoralists and agriculturalists in those regions where both economies could attain maximal combined productivity in the aftermath of the breakdown of large states at the end of the Middle Horizon (ca. A.D. 600–1000).

Nuestro interés general es la evolución sociopolítica en la sierra peruana durante el periodo Intermedio Tardío (ca. 1000–1470 d.C.). Tomamos en cuenta datos sobre patrones de asentamiento regional, que nos informan sobre cambios en las interacciones entre pastores y agricultores. En la primera se intenta formular un modelo para los Andes centrales, que versa sobre la interacción entre pastores y agricultores durante el periodo Intermedio Tardío utilizando la información etnográfica y etnohistórica. Ponemos énfasis en los fundamentos ecológicos y sociológicos para explicar la especialización en la economía, basada ritualmente en la integración entre grupos de pastores y agricultores, frente a la ausencia de una poderosa organización estatal. En la segunda, a la luz de esta perspectiva, con los datos arqueológicos, analizamos el patrón de asentamiento de la región Tarama-Chinchaycocha, en la sierra central del Perú. Aunque se pone especial énfasis en el periodo Intermedio Tardío, consideramos oportuna una breve explicación sobre los antecedentes en el horizonte Medio (ca. 600–1000 d.C.) y en el periodo Intermedio Temprano (ca. 300 a.C.–600 d.C.). Concluimos señalando que el periodo Intermedio Tardío fue un tiempo en el cual ocurrieron serios cambios en la organización, que incluyeron a las nuevas formas locales como base de ritual y de la integración regional en la economía de pastores y agricultores. En la tercera, consideramos brevemente las implicaciones generales de nuestras conclusiones sobre los cambios en la organización en la sierra central durante el periodo Intermedio Tardío. Sugerimos que los más grandes y complejos señoríos de esta época fueron dependientes de los mecanismos de integración de pastores y agricultores, especialmente en las regiones serranas favorecidas, en las cuales ambas economías habrían sido beneficiadas por el máximo potencial productivo en la región, dando lugar, con este hecho, a la ausencia o fracaso de grandes estados regionales después del horizonte Medio.

The Late Intermediate period (ca. A.D. 1000–1470) in the central Andean highlands has generally been characterized as a time of fragmented, small-scale polities following the collapse of large states in the Middle Horizon (ca. A.D. 600–1000) (Parsons and Hastings 1988) (Table 1). Nonetheless, this period contains the

immediate developmental antecedents of the Inka empire, and thus some measure of large-scale organization must have been achieved in highland Peru at that time. Inka origins have traditionally been seen in terms of intensive militaristic competition among small highland polities, out of which context Cuzco emerged as dominant by the mid-fif-

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Table 1. Central Andean Prehispanic Chronology and General Developmental Sequence.

Dates	Pan-Andean Chronology	Developmental Era
A.D. 1532	Late Horizon	Inka Empire
A.D. 1460		
	Late Intermediate	transition
A.D. 1000		
	Middle Horizon	large states
A.D. 600		
A.D. 0	Early Intermediate	initial state development
300 B.C.		

teenth century because of its superior military and alliance-building skills (Rowe 1946). These traditional interpretations have been formed largely on the basis of ethnohistory. Without increased archaeological input, it is impossible to obtain a sufficient understanding of key processes in the development of pre-Inka organizational complexity that must extend back in time well before the fifteenth century. This paper addresses this general problem by examining archaeological settlement patterning from the Tarama-Chinchaycocha region in the Peruvian central highlands (Figures 1 and 2).¹ We focus on the relationships between pastoralists and agriculturalists during the Late Intermediate period because they provide a particularly good perspective on both local and regional sociopolitical organization. To obtain a view of long-term change, we also explore the antecedents of the Late Intermediate period patterns.)

Our study cannot deal directly with the specifics of how or why the Inka state came to be centered at faraway Cuzco. Nevertheless, this effort may suggest some useful lines of inquiry into how organizational complexity developed generally throughout the central Andean highlands after the Middle Horizon. This might, in turn, provide a basis for thinking in new ways about why and how a uniquely large and complex polity emerged in the Cuzco region during Late Intermediate times.

The Cultural Ecology of Historic Central Andean Herders and Cultivators

Here we attempt to discern the key relationships between economy, social structure, and ritually

based integration of herders and agriculturalists in the absence of strong state organization. We are particularly interested in developing a sense of the expectable relationships among the size, composition, location, and boundary definition of interactive social units. We do not expect that any of these historically documented characteristics and relationships will necessarily find specific manifestations in our archaeological data. Rather, we seek a conceptual framework that will help us interpret the archaeological data at our disposal.

The Complementarity of Herding and Cultivating Economies

In the central Andean highlands two main traditional economies are deeply rooted in the Prehispanic past: (1) camelid herding² in the high puna grasslands (ca. 3,800 to 4,700 m asl), and (2) cultivation of tubers, cereals, legumes, and cucurbits in the intermontane *kichwa* valleys (ca. 1,500 to 3,700 m asl) (Troll 1958, 1968). Although some local communities and individual households effectively combine herding and cultivation, a notable degree of spatial separation also exists between specialized herders and cultivators.³

Access to both herding products and cultivated plants is essential for highland populations (Flores 1979; Harris 1985; Nachtigall 1975; Thomas 1976; Tomoeda 1985; Winterhalder and Thomas 1978; Yamamoto 1985). Without herding, the entire puna zone would have remained marginalized and peripheral. Without access to dependable supplies of tubers and cereals pro-



Figure 1. Peru, showing location of Tarama-Chinchaycocha region.

duced in the *kichwa*, the diets of most puna herders would have remained nutritionally incomplete. Without access to the textiles, pack-animal transport, meat, skins, and dung (for fertilizer and fuel) produced in great quantities only by puna herders, *kichwa* cultivators would have lacked adequate supplies of some of their most basic raw materials for tools and clothing and would have found their diets much less varied and appealing.

Ecological Basis for Separation of Specialized Herders and Cultivators

The central Andean puna provides large expanses of good pasture but is only marginally suitable for plant cultivation (especially at elevations above ca. 4,000 m asl); conversely, large numbers of llamas and alpacas are rare in the intensively cultivated *kichwa* valleys below ca. 3,700 m asl (Troll 1958, 1968; Winterhalder and Thomas 1978).

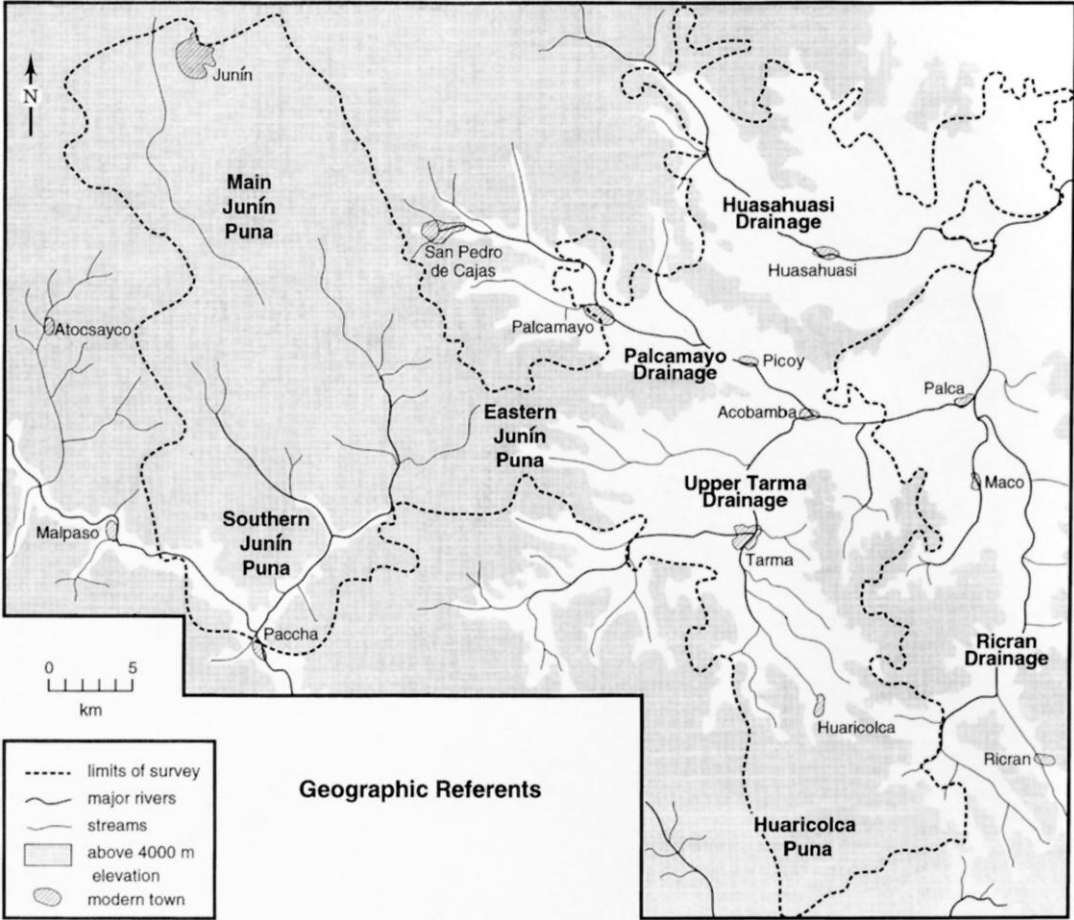


Figure 2. The Tarma-Chinchaycocha region, showing major modern settlements, streams, and outline of survey area.

Generally speaking, where puna and *kichwa* zones interdigitate closely, and local vertical relief is relatively high, there is a greater tendency for herding and cultivating to be combined at the household and settlement levels (e.g., Brush 1976; Inamura 1986; Valle 1970; Webster 1973; Yamamoto 1981). Where the two zones are separated by greater distances, and where local vertical relief is relatively low, herders in the puna and cultivators in the *kichwa* are more likely to be specialized and separated (e.g., Browman 1974; Flannery et al. 1989; Flores 1979; Fujii and Tomoeda 1981; Harris 1985; Platt 1982; Yamamoto 1985). In part, this has to do with the high labor demands for each set of activities, and that these demands often conflict with each other in terms of both scheduling and the adequacy of local labor pools (McCorkle 1987).

Domestic camelids must be penned up in walled corrals at night and taken out to pasture each day. Flocks must be moved around with some frequency in order to have access to adequate pasture throughout the annual cycle (Flores 1979; Orlove 1977). Adult male animals must be periodically separated from groups of females and young in order to control reproduction, and different varieties of camelids must be kept separate in order to prevent interbreeding and the consequent loss of such desirable traits as large physical size, hair color, or hair quality (Custred 1977; Flores 1986; Palacios 1977). The lambing season is a particularly critical time, when pregnant female animals and their vulnerable young demand special attention.

Agriculturalists, on the other hand, must be concerned with the demands of field preparation,

planting, weeding, caring for growing crops, guarding and harvesting mature crops, and maintaining an infrastructure of terraces, irrigation canals, and field walls (Matos et al. 1958). Many of these tasks must be performed at the same times as some of the most demanding activities related to herding. Furthermore, crops can be seriously menaced by the predations of domestic animals. Consequently, where herding and cultivation are locally combined, cultivated fields must be strongly fenced and/or the daily movements of local flocks must be carefully controlled (McCorkle 1987).

Traditional Andean agriculture depends on a variety of sectorial fallowing regimes that maintain long-term soil fertility and minimize the risk of poor harvests for individual households (e.g., Camino 1980; Goland 1992; Guillet 1981; Mayer 1985; Orlove and Godoy 1986). These regimes demand considerable investment in administration, definition and protection of community territory, and walking back and forth between scattered fields. If some members of agricultural households also need to devote themselves to the care of domestic animals in higher pastures well away from their main residences, then additional walking and prolonged camping would be necessary.

Ritual Integration of Specialized Herding and Cultivating Economies

Andean ethnography and ethnohistory contain numerous descriptions of the ritual interaction between herders and cultivators. In this section we highlight some of the components of this interaction that seem most useful in modeling prehistoric social relationships over space between these groups.

Anthropomorphic Landscapes. Ethnographic studies of the isolated Qollahuaya in Bolivia (Bastien 1978) describe local groups (*ayllus*), typically of many hundreds of individuals who occupy well-defined territories extending over areas measuring several dozen kilometers in length and width.⁴ These *ayllu* groups incorporate dispersed settlements of specialized puna herders and *kichwa* cultivators into integrated socioeconomic units. *Ayllu* borders are defined by major *quebradas* (valleys) where ritual performances linking adjacent *ayllus* occur.

Qollahuaya *ayllus* maintain their territorial integrity and socioeconomic integration through belief systems that emphasize the role of human beings as components of anthropomorphized landscapes. Both living and dead human beings are key agents in maintaining the well-being of these landscapes. The living accomplish this essential task by adhering to rules about marriage, residence, exchange, burial, and ritual. People, places, and products are all endowed with complementary qualities that derive in large part from their origin in different elevation zones, and all components of the living landscapes are "nourished" by their associations over time and space with people, products, and places possessing ecologically complementary qualities.

It is by means of ritual offerings at *ayllu* shrines that the living landscape is nourished. Each such ritual offering involves products from all of the main ecological zones, as well as the presence and participation in the ritual of people who are associated with each of these zones. The largest shrines and the most important rituals typically occur at intermediate locations on, or near, the puna-*kichwa* border.

Burial Ritual. The importance of deceased ancestors and their mummified or interred remains in household, community, and imperial ritual is well documented (Allen 1982; Bandelier 1904; McEwan and van der Guchte 1992; Salomon 1995; Zuidema 1973, 1977, 1990). These sources describe the public veneration of ancestor mummies, public feasting, and public renewal of burial offerings.

Regional Pilgrimages. Several studies (e.g., Poole 1982, 1991; Reinhard 1985; Sallnow 1987, 1991; Zuidema and Poole 1982) emphasize the importance of major ecological junctures (often where principal puna and *kichwa* zones border one another) as the loci of regional pilgrimage shrines. These pilgrimages typically incorporate multicomunity groupings of puna herders and *kichwa* cultivators who interact at these strategic loci to ensure continued productivity and interaction through feasting, dancing, material exchanges, and ritual offerings.

Ritual Fighting. An extensive literature (e.g., Gorbak et al. 1962; Hopkins 1982; Orlove 1994; Platt 1986; Skar 1982) describes practices, extending back at least 200 years, of regularly

scheduled intracommunity and intercommunity ritualized conflicts (*tinku*). These feature confrontations between groups of young men armed with slings, bolas, whips, or clubs, who are supported by groups of women and older men who perform dances, prepare feasts, and encourage the fighters. The total number of participants varies from several dozen to several hundred. Serious injuries and even deaths occur, and there is some indication that these, and the flow of human blood in general, are esteemed as signs of future good harvests or successful animal breeding.

These ritual battles are often competitions between moieties of dually structured communities. When intravillage moieties are involved, the settlement itself becomes the "stage" for ritual fighting, and the centrally located cemetery and church situated on the border between the two divisions are the loci for fighting, feasting, or avoidance. Ritual conflicts also are reported (Hopkins 1982; Platt 1986; Skar 1982) between more distantly linked, multivillage groupings that share common sociopolitical borders along which ritual fighting occurs.

Duviols (1973) notes a deep-seated distinction in the seventeenth century between adjacent groups of puna herders ("los lacuaz") and *kichwa* cultivators ("los huari") in the Peruvian central highlands. This dual opposition was manifested in several ways, including occasional physical violence; marked distinctions in language, costume, and association with different supernatural forces and different sacred places; exchange of complementary products; and bi-ethnic communities.

Of particular interest is Duviols's (1973:175) mention of the "Danza de Guari-Libiac" ("Danza de Guerra"), an important ceremony in the integration of potentially hostile groups of herders and cultivators. This ritual-fighting performance appealed to the long-standing differences between puna herders and *kichwa* cultivators, emphasizing their traditional enmity while providing a ritualized basis for enduring interaction. The Danza de Guari-Libiac might be an ancestral form of modern ritual fighting, and perhaps a descendant of Prehispanic forms of ritualized herder-cultivator interaction.⁵

Structures of Duality and Tripartition

There is an extensive literature on Andean structural duality and tripartition at all organizational levels (e.g., Gow 1978; Harris 1985; Izko 1992; Murra 1968; Netherly 1990, 1993; Paerregaard 1992; Palomino 1971; Rostworowski 1983; Sallnow 1991; Wachtel 1973). We already have noted the significance of structural duality in ritual fighting and in the performance of other integrative Andean ritual. We also have referred to the differentiation between puna herders and *kichwa* cultivators in the conceptualization and definition of this duality. Any formal distinction between two sectors can create a formally defined border that may function as a third division. In some cases this becomes the location where public ritual linking the two sectors is performed at cemeteries, churches, shrines, processional routes, or feasting rooms.

Summary

Based on the above, we have reached the following conclusions:

(1) Herding and agriculture are basic, complementary components of central Andean highland economy. Neither is complete or sufficient in isolation.

(2) Herding and agriculture may be combined within a single household or settlement. However, several factors encourage specialization and physical separation between puna herders and *kichwa* cultivators.

(3) Ideology and ritual play a major role in the integration of specialized puna herders and *kichwa* cultivators. Ecological variability, structural duality and tripartition, and the metaphor of living landscapes provide the conceptual foundation for this integrative ritual. The fundamental purposes of ritual performances are (a) to define and maintain social borders and (b) to ensure continued productivity of the bordered units and ongoing interaction between them. Moiety borders and the junctures of puna and *kichwa* zones stand out as the loci where these rituals are performed. Rituals range from simple material offerings at modest shrines, to feasting and dancing in association with ancestral tombs or mummies, and to elaborate ritual battles and pilgrimages.

Archaeological Record of Preinkaic Herders and Cultivators in the Tarama-Chinchaycocha Region

In this section we discuss Late Intermediate-period settlement patterns and their antecedents. In addition to residential settlements, we also consider the distributions of camelid corrals, “defensive” walls, storage facilities, and cemeteries—all of which contribute to an understanding of public ritual and sociopolitical integration at local and regional levels. We are particularly interested in archaeological data suggestive of different levels of interaction between bordered units. Our data indicate that new forms of ritually sanctioned integration developed during the Late Intermediate period. We suggest that these new integrative mechanisms were founded in (a) the economic complementarity between herders and cultivators and (b) an ecologically based cosmology that emphasized boundary definition and maintenance through burial ritual and ritual fighting.

The Regional Survey: Objectives, Design, and Limitations

Systematic, full-coverage archaeological surface survey was carried out in two six-month field seasons during May–December 1975 and 1976.⁶ Our immediate goal was to cover as much terrain as possible in each of three distinct zones (Figures 1 and 2): the Junín puna (prime camelid pasture, ca. 3,900–4,600 m asl, and the principal zone of Chinchaycocha occupation); the deep *kichwa* valleys (intensively cultivated terrain, ca. 2,800–3,800 m asl, the principal zone of Tarama occupation) immediately east and southeast of the Junín puna; and, farther south, the main Mantaro Valley (an extensive agricultural zone, ca. 3,400–3,800 m asl) around the modern town of Jauja (the core of Wanka occupation, a region that we do not consider in this paper). The surveyed puna and *kichwa* zones occur in two main, interdigitating blocks (Figure 2). These two zones are separated by distances of up to several dozen kilometers; only along the bordering interface is there close proximity between them. Working in teams comprising two to three members walking at intervals of 20–50 m over all surveyable terrain, we examined approximately 800 km² of puna and

500 km² of *kichwa*. The borders of our survey coverage are arbitrary, defined simply by how much terrain could be examined from our field bases.

Our inferences are founded on data that remain chronologically imprecise, especially for the long Early Intermediate period and Middle Horizon, which we are usually forced to lump together (as EIP/MH) (Table 1).⁷ Nevertheless, our distinct impression is that most of what we label EIP/MH pertains to the late Early Intermediate and Middle Horizon. When Inka-style pottery co-occurs with local Late Intermediate ceramics, we cannot be sure whether the occupation is pure Late Horizon (ca. A.D. 1460–1532) or a mixture of Late Intermediate and Late Horizon (we usually label such sites LIP/LH).

On the positive side, surficial preservation of stone architecture throughout the survey area is often extraordinarily good at Late Intermediate sites. Thus, we are particularly confident about our ability to recognize Late Intermediate residential, storage, and burial structures.

Settlement Categories

Most of our Late Intermediate settlements fall into two general categories: “herding settlements” in the puna, and “agricultural settlements” in the *kichwa* (Table 2). Residential occupation is inferred from the ubiquitous presence at these sites of numerous well-made circular structures, averaging 4–6 m in exterior diameter, for which excavations in several highland areas have revealed domestic functions (e.g., Hastings 1985; Hastorf et al. 1989; Lavalley 1973; LeBlanc 1981). For most Late Intermediate puna settlements, with their clusters of stone-walled corrals around the outer margins of hilltop residential areas, it is easy to infer a herding function. Late Intermediate *kichwa* settlements never have such associated corrals, and so we label them “agricultural,” and assume the absence of a significant herding function. Late Intermediate settlements, both in the puna and the *kichwa*, occur in the full range of size classes (Table 2).

Particularly intriguing are 15 unusual Late Intermediate settlements—all at elevations of ca. 4,000 m asl near the ends of high, narrow ridges that extend eastward from the edge of the main

Junín puna. These sites, all with evidence of substantial residential occupation, are unusual in three ways: (1) they include some of the very largest Late Intermediate settlements in our survey area; (2) they lack associated camelid corrals (which virtually all other such puna settlements have); and (3) the *local* productive potential of both herding and plant cultivation is quite limited. These settlements occupy the narrow crests of high ridges (Figure 3), many hundreds of meters above the prime agricultural lands at lower elevations in the surrounding *kichwa* valleys, and several kilometers east of the extensive grasslands in the main Junín puna. We categorize these sites as “special function settlements.”

It is more difficult to infer residential, herding, or agricultural functions for our more poorly preserved EIP/MH sites. In most cases we simply assume that vague mounding, rock rubble, and surface pottery are indicative of domestic occupation. We differentiate herding vs. agricultural settlements on the basis of site elevation, attributing herding functions to puna sites and agricultural functions to *kichwa* sites (we recognize the potential circularity of this reasoning). In only a few cases do we have corrals that can be dated to the EIP/MH. However, the inhabitants of our EIP/MH “concentric-ring sites” (Table 2) in the main Junín puna, with their two or three concentric rings of stone-walled enclosures, may have penned up camelids within the outermost enclosing wall of these compact hilltop settlements.

Long-Term Trends in Population Growth

We estimate that between ca. A.D. 500 and 1450 population expanded two to four times (Tables 3 and 4). With roughly 1,200 households for the EIP/MH and 5,000 households for the Late Intermediate (Table 4), and assuming five persons per household, the population may have increased from ca. 6,000 to 25,000.

The Subsistence Economy

During the EIP/MH what appear to have been generalized agricultural-herder groups increased in some *kichwa* valleys. At the same time, in the main Junín puna herding activity intensified and expanded markedly (Figure 4).

The Late Intermediate saw intensification in both puna herding and *kichwa* cultivation (Figure

Table 2. Settlement Typology.

Category	Defining Characteristics
Agricultural settlements	below 3,800 m asl; absence of associated corrals
Class A	more than 100 households
Class B	51–100 households
Class C	21–50 households
Class D	6–20 households
Class E	1–5 households
Herding settlements	above 3,800 m asl; associated corrals
Class A	more than 100 households
Class B	51–100 households
Class C	21–50 households
Class D	6–20 households
Class E	1–5 households
Special function settlements	above 3,800 m asl; no associated corrals; puna- <i>kichwa</i> contact zone
Class A	more than 100 households
Class B	51–100 households
Class C	21–50 households
Concentric-ring sites	above 3,800 m asl; 2–3 massive concentric stone walls; all EIP/MH
Very large	5.75–8 ha
Large	1.75–4 ha
Small	.6–1.5 ha
Very small	.1–.5 ha

5). Virtually every puna settlement (except for the special function settlements noted above) is closely surrounded by clusters of corrals, and numerous isolated corrals and small herding camps with associated corrals are scattered throughout the main Junín puna (not shown in Figure 5). Similarly, in the adjacent *kichwa* a comparatively dense concentration of Late Intermediate ridge-top settlements, completely lacking corrals, lies along the margins of the valley floors.

Multisettlement Clustering

A simple inspection of overall settlement configuration suggests that different regional organization for our Early Intermediate/Middle Horizon vs. Late Intermediate occupations.

Early Intermediate Period/Middle Horizon (EIP/MH). We can define seven spatial clusters of EIP/MH concentric-ring sites: six in the main Junín puna (Clusters A, B, C, D, E, and F), and one farther east on the puna fringe (Cluster G) (Figure 4, Table 5). Nine other such sites may be



Figure 3. Facing southeast over Site 298, an example of a Late Intermediate special function settlement. Arrow points to site atop high ridgecrest.

associated with still unidentified clusters that extend outside the arbitrary survey borders. Each of the identifiable clusters contains three or four concentric-ring sites. All of the “very large” and “large” sites are found within three clusters (A, B, C) in the main Junín puna; the other clusters contain only “small” and “very small” sites (Tables 2 and 5). These data suggest that (1) Cluster A con-

tained the largest camelid herds and the most powerful local EIP/MH elites; (2) Clusters B and C occupied a second tier in this regional hierarchy; and (3) Clusters D, E, F, and G made up a third tier.

Our EIP/MH *kichwa* occupation is highly concentrated in the Palcamayo Valley (Figure 4). Most of these settlements are small, low-lying

Table 3. Number of Sites and Occupied Hectares, Early Intermediate/Middle Horizon vs. Late Intermediate.

Period	Settlements						Total	
	Agricultural		Herding		Special Function			
	Sites	Ha	Sites	Ha	Sites	Ha	Sites	Ha
Early Intermediate/ Middle Horizon	33	70.2	46	99.4	6	13.5	85	183.1
Late Intermediate	55	93.0	69	174.2	15	53.7	139	320.9

Table 4. Estimates of Numbers of Households, Early Intermediate/Middle Horizon vs. Late Intermediate.

Period	Agricultural		Herding		Special Function		Total	
	Sites	Households	Sites	Households	Sites	Households	Sites	Households
Early Intermediate/ Middle Horizon	33	423	46	824	6	170	85	1,241
Late Intermediate	55	1,249	69	2,513	15	1,300	139	5,053

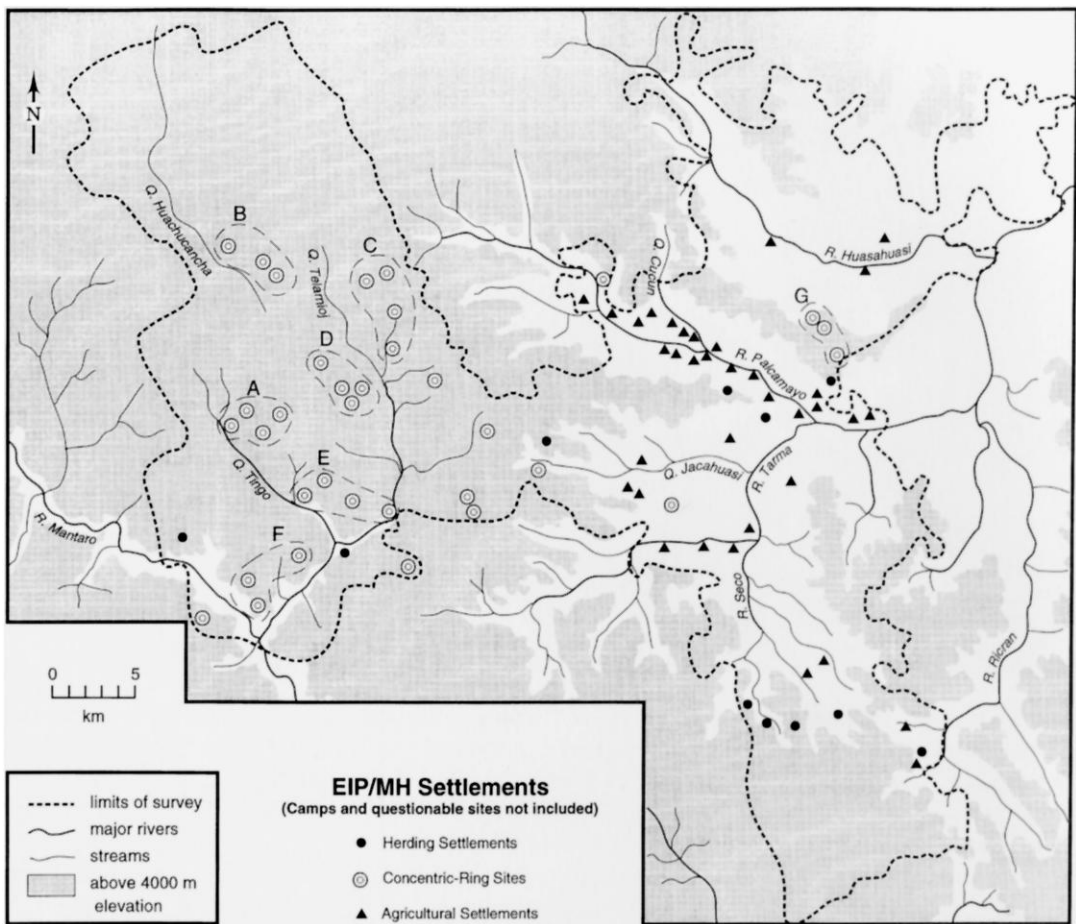


Figure 4. Early Intermediate/Middle Horizon settlement in the region.

sites. The apparent scarcity of EIP/MH settlement in other parts of the *kichwa*, plus the absence of an obvious site-size hierarchy, suggests an occupation much less hierarchical than that in the adjacent puna. The near-absence of EIP/MH settlement along the puna-*kichwa* juncture suggests limited contact between puna herders and *kichwa* agriculturalists.⁸

Late Intermediate Period. Within the Junín puna there are four major clusters of Late Intermediate herding settlements (Figure 5). Each cluster contains one or two large settlements (Class A or B) and several smaller settlements within an area roughly 8–10 km long and 4–5 km wide—approximately 200-plus households within an area of 30–50 km², surrounded by extensive grasslands. Each of these clusters might be considered a local territorial unit.

The three large Late Intermediate herding settlements in the Huaricolca puna (near the far southeastern edge of our survey area) may represent another comparable cluster. The dearth of any small herding settlements in this latter region, and the very sparse Late Intermediate occupation of the entire Río Sico drainage to the north of the Huaricolca puna (Figures 2 and 5), might be attributable to the uncertain sociopolitical conditions along this Tarma-Wanka frontier zone.

The Late Intermediate agricultural settlements in the *kichwa* east of the Junín puna tend to form local clusters along several of the principal valleys (Figure 5). Each cluster measures approximately 10–15 km long and 3–5 km wide, containing 10 to 15 settlements belonging to several different class sizes, with a total population of roughly 200-plus households. Late Inter-

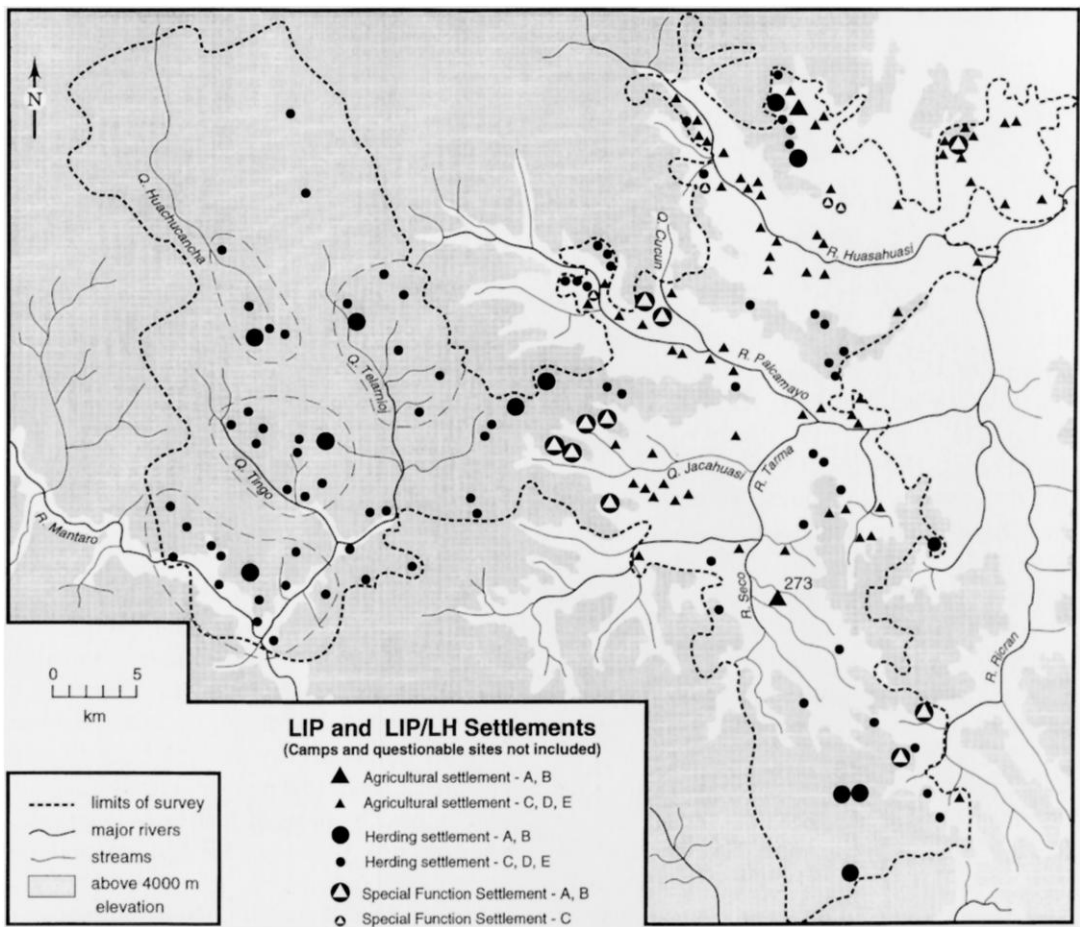


Figure 5. Late Intermediate settlement in the region.

mediate puna herders and *kichwa* cultivators thus tended to be grouped in clusters of similar size and population.

There is a buildup of large Late Intermediate special function settlements along the same puna-*kichwa* juncture that had been almost empty during the antecedent EIP/MH (Figures 3, 4, 5). As previously noted, despite their large size these sites are situated in some of the locally least-productive terrain in the entire region. This contrasts markedly with the relatively dense concentrations of Late Intermediate agricultural settlements close to the region's best agricultural lands in the *kichwa* valleys, and with the largest Late Intermediate herding settlements that are invariably closely surrounded by large expanses of good pasture land in the puna. This suggests that the Late Intermediate special function settlements

were concerned with regional-level, as opposed to local-level, economy and polity. They had limited direct access to good agricultural land or good pasture, but maximal accessibility to the natural and demographic resources of the entire region. The placement of these sites may reflect their key integrative role in new kinds of relationships between puna herders and *kichwa* cultivators. The close similarity between Late Intermediate ceramic assemblages across the puna, *kichwa*, and *ceja de montaña* zones also suggests close interzonal linkages (Hastings 1985, 1987).

Settlement Pairing: Hints of Duality

Approximately half of all Late Intermediate settlements occur in closely spaced pairs (Tables 6 and 7) (Figure 6). Nearly all such pairs consist of functionally equivalent settlements—i.e., agricul-

Table 5. Composition of Early Intermediate/Middle Horizon Concentric-Ring Site Clusters by Site Number.

Cluster	Very Large	Large	Small	Very Small
A	219, 220	209	211	—
B	240	238	239	—
C	—	174, 186	176	178
D	—	—	193, 195	190, 191
E	—	—	307, 310, 315	309
F	—	—	323, 322, 337	—
G	—	—	79, 80, 81	—

tural or herding or special function settlements of comparable size. This suggests a dualistic structure in which the equivalent “halves” of a local community were physically separated. Archaeological indications of duality (usually paired architectural features inside individual sites) have been noted elsewhere (e.g., Anders 1986; Brown 1991; Matos 1994; Moore 1995; Netherly and Dillehay 1986); however, we know of no other reports of paired settlements within a systematically surveyed region.

Our definition of “closely spaced” is based on simple inspection of our maps. Some sites are less than 500 m apart (measured mid-point to mid-point), and the mean intersite distance within the settlement pairs approximates 1 km (Table 6). However, some paired sites are separated by nearly 2 km, and in two extreme cases the mid-points are 2.8 and 5.7 km apart. Furthermore, if Late Intermediate society had a dual structure, and paired settlements are manifestations of that duality, why are not all Late Intermediate settlements paired?

One potential difficulty is that our chronological control cannot fully capture site contemporaneity. This may produce an impenetrable overlay of noncontemporaneous sites with some erroneous pairings and/or nonpairings. Furthermore, because of the arbitrary borders of our survey area, seemingly unpaired settlements near its edges may actually be paired with still unknown sites outside the survey limits. We also suspect that our smallest (Class E) herding settlements, only about a quarter of which are paired, may have been occupied on a temporary or irregular basis and therefore not have been sociologically equivalent to larger settlements.

Another consideration is that multiple levels of site pairings may manifest duality through structural and spatial oppositions that exist contempo-

raneously at different organizational levels (Izko 1992). Consequently, our focus on closely spaced sites ignores the possibility that lower-order pairings might be more obvious than higher-order pairings—because the latter might have larger intersite spacing detectable only within a larger survey area.

Despite the uncertainties, our data suggest that structural duality permeated and defined all levels of the Late Intermediate organizational hierarchy, including (1) individual nucleated settlements defined by subdivisions (moieties?) separated by “internal” walls (see below); (2) individual local communities defined by pairs of closely spaced settlements; and (3) multicommunity regional units defined by pairs of unusually large settlements (such as Sites 181-231, 347-355, and 378-379 in Figure 6).

About a third of our EIP/MH settlements occur in “pairs.” However, it is difficult to assess the degree to which structural duality as an organizing principle precedes the Late Intermediate period.

Distribution of Late Intermediate Storage Structures

These are two- or three-story rectangular structures, with each story consisting of one undivided

Table 6. Distances (Mid-point to Mid-point) between Categories of Paired Late Intermediate Settlements.

Category	No. of Pairs	Mean	S.D.
Overall	40	.93	.43
Agricultural settlement-to-agricultural settlement	15	.70	.15
Herding settlement-to-herding settlement	21	1.10	.49
Special function settlement-to-special function settlement	4	.80	.37

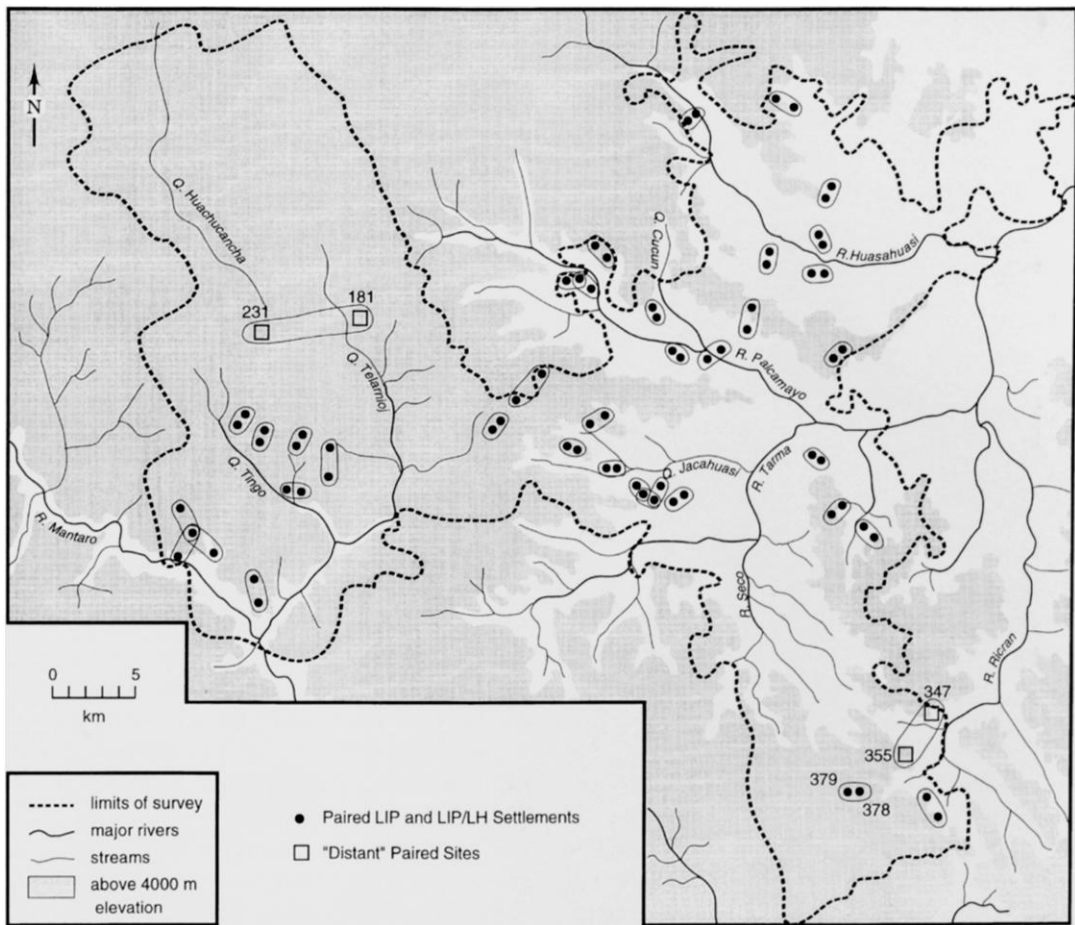


Figure 6. Paired Late Intermediate settlements in the region.

chamber about 1.2 m high. One of the long sides of each chamber has an entrance about 50–60 cm², and the buildings are typically ca. 2.5 by 4 m in area and ca. 3 m high. When found inside settlements, they usually occur as single, isolated buildings, or in conjoined pairs, and typically comprise 10–15 percent of the total architectural remains (Figure 7). The absence of human skeletal material inside or around any of these distinctive structures indicates they are not tombs. By virtue of their size and form, they also seem to be unsuitable for residential functions.

Five very unusual sites, classified as “regional storage facilities,” consist almost exclusively of rectangular storage buildings. Each of these non-settlement sites contains up to 70 individual and conjoined storage structures; they occur in two widely spaced clusters, one in the puna (Sites

332, 338) and one in the *kichwa* (Sites 123, 144, 145).

This patterning suggests two different levels of storage: (1) a suprahousehold, local-community level, manifested by the inside-settlement storage structures, and (2) a multicomunity level, manifested by the isolated regional storage facilities.

Distribution of Late Intermediate Tombs

Modern looting has produced a litter of human bone around many ancient graves, and we can identify Late Intermediate tombs with some confidence. We distinguish three basic types of Late Intermediate tombs: (1) Type I, formed by walling up the fronts and sides of *quebrada* rockshelters to create irregular chambers ca. 1–1.5 m on a side and 1–1.2 m high; (2) Type II, subsurface stone-lined cylindrical shafts ca. 1 m deep and 60–80

Table 7. Numbers and Proportions of Late Intermediate Settlements in Pairs.

Category	No. of Sites	No. of Sites in Pairs	%
Agricultural settlement			
Class A	1	—	0
Class B	1	1	100.0
Class C	17	9	52.9
Class D	31	12	38.7
Class E	13	8	61.5
Subtotal	63	30	47.6
Herding settlement			
Class A	6	5	83.3
Class B	6	4	66.7
Class C	22	15	68.2
Class D	24	11	45.8
Class E	27	7	25.9
Subtotal	85	42	49.4
Special function settlement			
Class A	5	2	40.0
Class B	5	5	100.0
Class C	5	2	40.0
Subtotal	15	9	60.0
Total	163	81	49.7

cm in diameter; and (3) Type III, one-story, aboveground structures, usually square to rectangular in exterior form, measuring 1–2.5 m on a side and 1–1.3 m high. The subsurface and rock-shelter tombs occur exclusively in isolated cemeteries, well removed from any individual settlements. Most aboveground tombs occur inside settlements, except at a major cluster of isolated cemeteries at the far southeastern corner of the survey area, and a minor cluster of the same features in the northeastern sector (Figures 8, 9).

Most Late Intermediate settlements contain some identifiable Type III (aboveground) tombs. Most of these occur as freestanding individual structures or in small clusters of 2–4 tombs; some individual tombs are appended to the exterior sides of residential structures; some tombs occur in lines of up to 15 conjoined or closely spaced structures; other tombs are built along the inner and/or outer sides of outer “defensive” walls (see below). These inside-settlement tombs probably reflect both household-level and suprahousehold-level burial ritual within the local community.

All our Type I (rockshelter) tombs are concentrated in isolated cemeteries well down in the

kichwa at an average elevation of ca. 3,400 m asl along the bottom of the Quebrada Cucún (Figures 8 and 9). Over a horizontal distance of ca. 2.7 km, we identified some 8–10 discrete tomb clusters, with a total of many dozen individual tomb chambers. On the other hand, most of the Type II (subsurface) tombs occur in isolated cemeteries well up in the puna along the Quebrada Tingo (Figures 8 and 9) at an average elevation of ca. 4,300 m asl. In this area, there are nearly 100 individual tombs arranged in 10 discrete clusters distributed across a horizontal distance of ca. 5 km.

There also are some isolated cemeteries of subsurface tombs outside the Quebrada Tingo (Figure 9). These occur exclusively in the main Junín puna, with a characteristic pattern of 1–5 small cemeteries within a radius of .5–2. km of several individual Late Intermediate herding settlements. These cemeteries may define the boundaries of some form of “close-in” space relevant only to local concerns.

The presence of three distinctive, spatially segregated Late Intermediate tomb forms suggests a significant linkage between tomb form, burial ritual, and local ethnic/*ayllu*/polity identification. This inference dovetails with Zuidema’s (1977:154) observation that the eastern and western sectors of the Inka heartland around Cuzco were distinguished on the basis of different tomb forms (aboveground burial towers vs. subterranean shaft tombs, respectively) that played a role in ceremonial processions. The coexistence of two tomb types at only three different Late Intermediate isolated cemeteries (Sites 54, 228, and 357) (Figures 8 and 9), one situated in each of the three major subareas within our survey region, also suggests that locally distinctive burial rituals were performed in a few key localities *outside* the areas where such ritual forms predominated.

The clustering of each of our three different Late Intermediate tomb types in widely separated groupings of isolated cemeteries might indicate that each of these cemetery groupings defined an important ritual zone that marked a sociopolitical border where different categories of people, including puna herders and *kichwa* cultivators, interacted in public ceremonies. The close proximity of regional storage facilities to our Type I and Type II isolated cemetery clusters is another

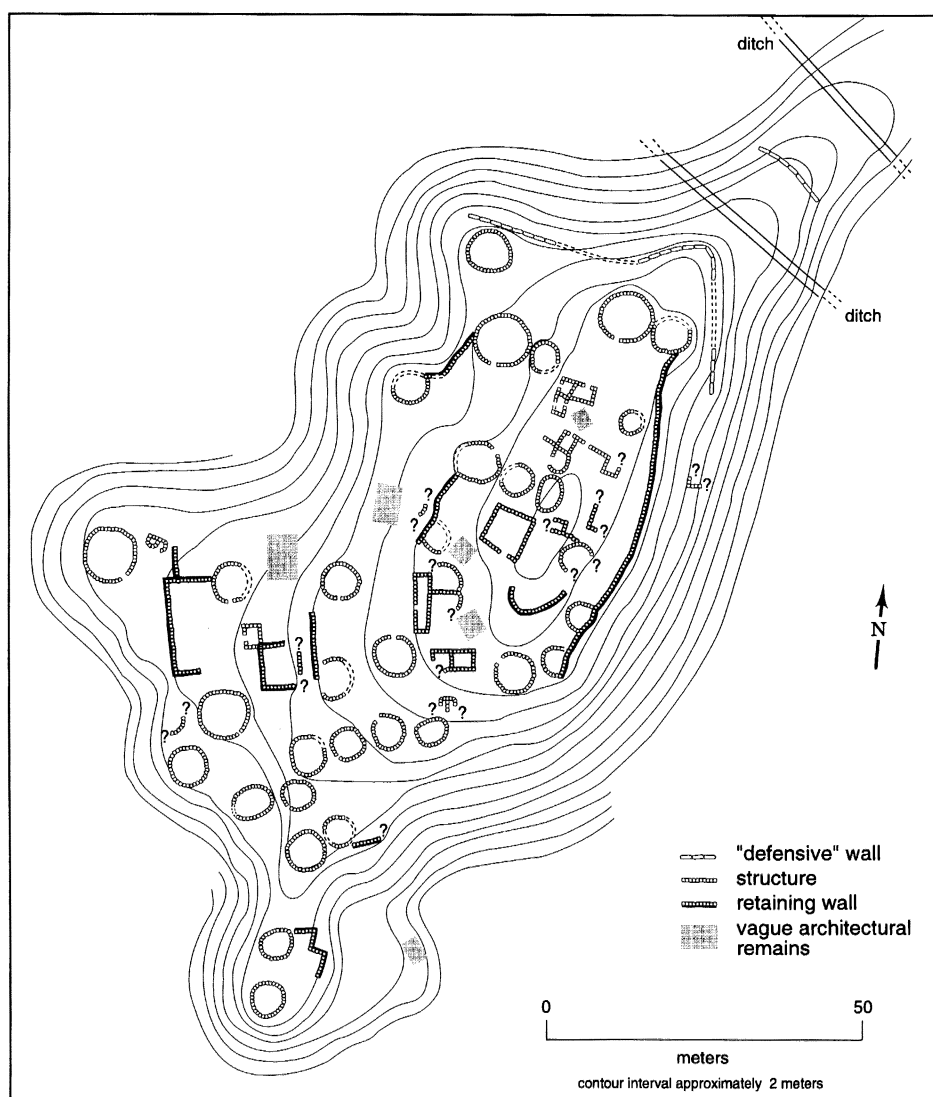


Figure 7. Plan of Site 292, a typical Late Intermediate *kichwa* agricultural settlement (Class C) in the region.

indication of the supracommunity significance of these zones, marked as they are by the co-occurrence of these unusual features that occur virtually nowhere else (Figure 8). This co-occurrence might reflect major feasts, assemblies, dancing, processions, and ritual offerings along “sacred” *quebradas* demarcated by the linear clusters of isolated cemeteries, using foodstuffs and other materials stockpiled in the nearby regional storage facilities. Duviols (1976:287) reports a 1614 document from the Chinchaycocha region that

refers to just such ritual feasting by local inhabitants at their ancestral tombs.

Two Late Intermediate isolated cemeteries are noteworthy because of their unusually large size: Site 228, in the main Junín puna, and Site 261, in the *kichwa* (Figures 8 and 9). These occur along the northwestern (puna) and southeastern (*kichwa*) edges of the more intensively occupied parts of our survey area; they may denote some sort of boundary-marking function at the regional or interregional levels.

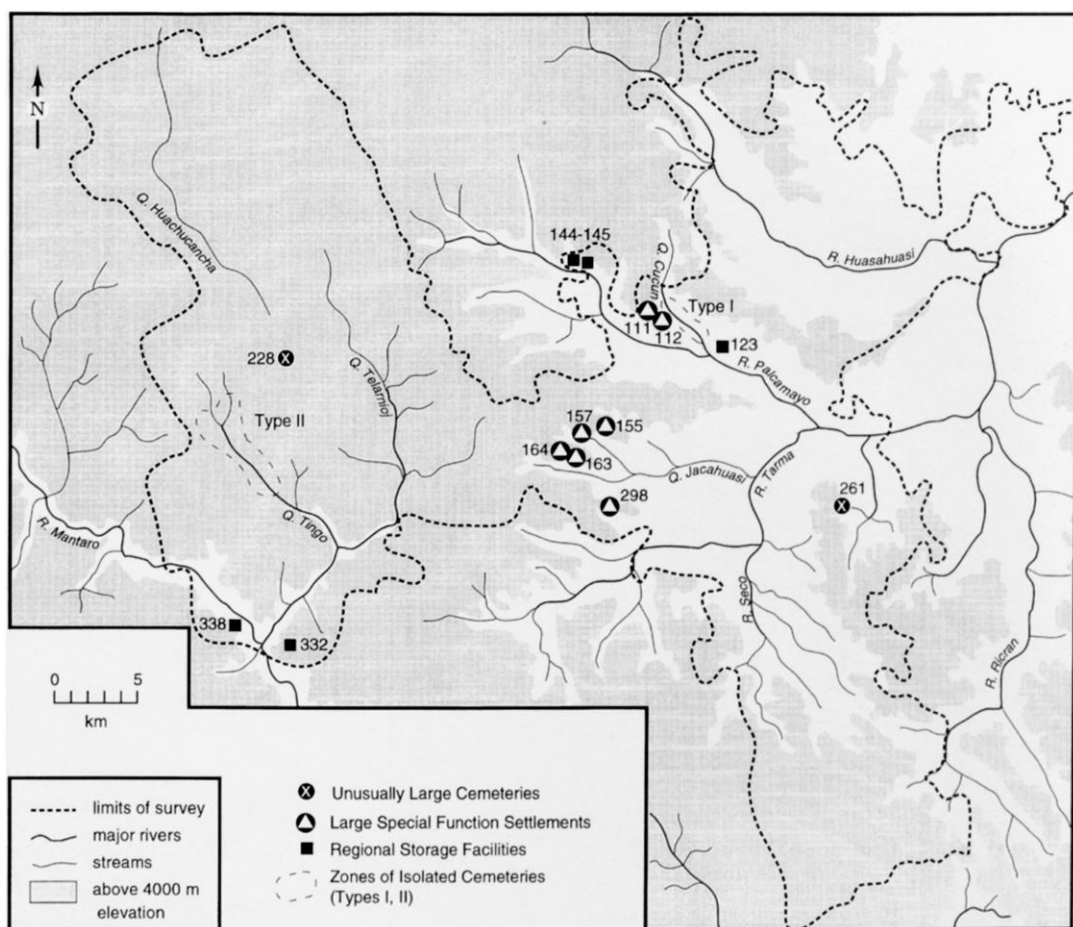


Figure 8. Distribution of Late Intermediate isolated cemeteries, regional storage facilities, and special function settlements in the region.

Site Walls as Social Borders

There is a strong tradition of associating walled highland hilltop settlements of the Late Intermediate period with defensive functions in a context of intensive warfare (e.g., D'Altroy 1992; Earle et al. 1987; Hastorf et al. 1989; Parsons and Hastings 1988; Stanish 1992; Thompson 1971). Virtually all our Late Intermediate settlements are hilltop sites, and about 80 percent of them are walled. In addition, most outer walls are directly associated with ditches, and often there are double wall-ditch complexes (Figure 7).⁹

We do not doubt that warfare occurred during the Late Intermediate in our survey area. Neither do we doubt that outer walls and ditches could have slowed the entry of intruders into settle-

ments under attack. However, several features seem inconsistent with a strictly utilitarian-defense model of wall function: (1) site walls do not effectively protect a settlement's inhabitants; (2) a few Late Intermediate sites have outer walls but apparently lack residential occupation; (3) some sites have both external and internal walls; (4) at least one site has its external wall on the steep-slope side; and (5) external walls and tombs are consistently associated. Whatever defensive functions these settlement walls may have had, we believe they also played some significant role in public ritual. Our data may support Urbano's (1988:213-214) suggestion that the ethnohistorically documented "war" between the Inka and their Chanka neighbors in the early fifteenth cen-

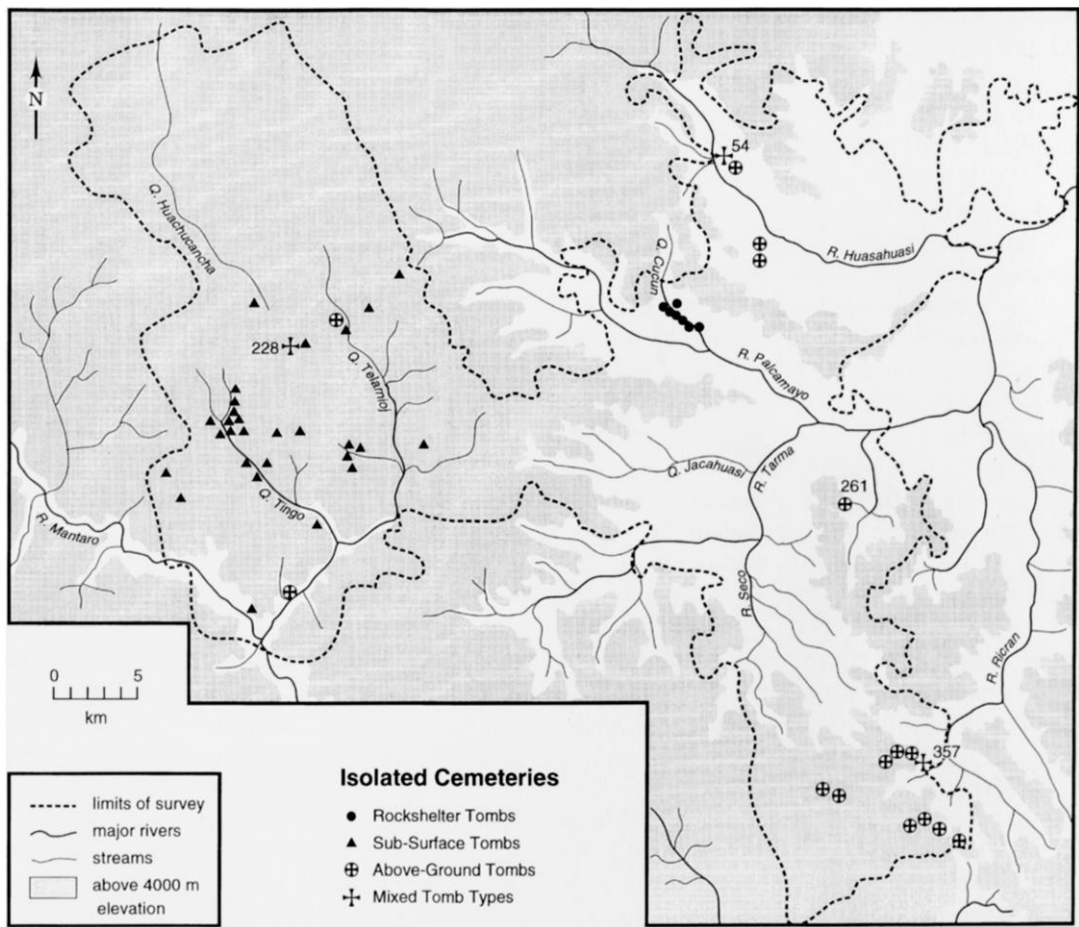


Figure 9. Distribution of Late Intermediate isolated cemeteries in the region.

tury was a form of ritualized interaction.

Walls without Protection. None of our Late Intermediate hilltop sites is surrounded by walls. Rather, only the topographically “easy” approaches to certain sites (typically along the top of a connecting ridge or saddle) are blocked by walls or wall-ditch complexes. Often at these sites, the rest of the occupation’s moderate-to-steep-sided perimeter remains open (Figure 7).

Walls without Inhabitants to Protect. Four *kichwa* walled sites appear to lack residential occupation: two are isolated complexes of agricultural terracing, and two are regional storage facilities (Sites 144 and 145). If outer walls served to defend a settlement’s inhabitants, how are we to understand these sites where, seem-

ingly, there were no inhabitants to defend?

Internal Walls. There are seven settlements with massive “internal” walls that divide the site into two major sectors.¹⁰ This pattern suggests that a major function of large walls—whether “external” or “internal”—was to demarcate moiety-like units within a single local community (e.g., LeBlanc 1981:391).

A Steep-Slope Wall. We found one nonresidential site (144, a Late Intermediate regional storage facility) with its external wall at the top of a steep slope and its topographically accessible entry left “undefended.” Furthermore, this wall “faces” the outer wall of its paired “mate” (Site 145), situated a few hundred meters away (Figure 8). This architectonic configuration suggests that outer walls of

paired "moiety" sectors were placed so as to directly face each other, whether across a gentle or steep approach, and, together with that of the walled agricultural terraces noted above, hints at an association between bordering walls and public ritual that might have been common to both settlements and some types of nonsettlements.

Walls and Tombs. Twenty-one Late Intermediate settlements include external walls that are closely associated with tombs. In some cases the tombs are built directly into the inner or outer sides of the walls; in others the walls and tombs are physically detached, but aligned and separated by no more than a few meters. The outer edges of another five unwalled settlements are likewise defined by alignments of tombs placed across the topographically accessible entry. We feel (see Note 10) that a more detailed reexamination would reveal a much higher proportion of Late Intermediate settlements with these wall-tomb or edge-tomb associations. This association suggests the importance of public ritual associated with group ancestors. This combination of walls and/or tombs in "border" settings would have provided powerful symbols of the social distinction of individual settlements (moieties). The burial niches in the outer wall at the Late Intermediate Kuelap site in the north highlands of Peru might imply a similar function (Bandelier 1907:27–28).

Summary and Conclusions: The Definition of Late Intermediate Community and Regional Structure

No single line of evidence adduced in this section is persuasive in isolation. However, considered together these complementary data on population, economy, settlement configuration, and the distribution of outer walls, cemeteries, and storage buildings suggest that the Late Intermediate period was a time of significant change in the structure and integration of society at local and regional levels.

(1) For this period we can differentiate between specialized herders living in the puna and specialized cultivators living in the *kichwa*. For the antecedent EIP/MH we also seem to have specialized puna herders, although agriculturalists in the *kichwa* also may have maintained small

flocks of camelids along the puna fringes.

(2) The presence of a distinct EIP/MH site-size hierarchy in the Junín puna, and the apparent absence of such a hierarchy in the *kichwa*, suggests that puna herders were organizationally more complex than their *kichwa* neighbors.

(3) The scarcity of EIP/MH settlement at the puna-*kichwa* juncture and the apparent contrasts between *kichwa* and puna pottery during that era are together suggestive of the absence of any close linkage between puna herders and *kichwa* cultivators before the Late Intermediate. This may have been related to the above-noted difference in sociopolitical complexity.

(4) The Late Intermediate period saw substantial population growth and an intensification of specialized agricultural and herding production in both *kichwa* and puna zones. A notable buildup of special function settlements along the puna-*kichwa* juncture, and the ceramic similarities across puna, *kichwa*, and *ceja de montaña* zones, imply a closer integration of puna herders and *kichwa* cultivators than during the antecedent EIP/MH. The special function settlements at the puna-*kichwa* juncture may have been Late Intermediate regional foci. Some of the impressive population growth might be attributable to the expanded overall productivity attained by the closer integration of pastoral and agricultural economies.

(5) There are suggestions of structural duality at settlement, community, and multicommunity levels during the Late Intermediate. The most obvious evidence consists of (a) massive "internal" walls that divide individual nucleated settlements into two equivalent sectors and (b) pairs of closely spaced settlements suggestive of a moiety-like community structure. The presence of a few "pairs" of large, more distantly spaced settlements hints at the existence of a higher-order dual organization comprised of multiple herding or cultivator communities.

(6) The complexes of associated walls, ditches, and tombs at the edges of individual Late Intermediate settlements may have functioned to formally demarcate moiety boundaries by providing stages for the performance of integrative public ritual within bifocal local communities. This may have included some form of ritual fighting,

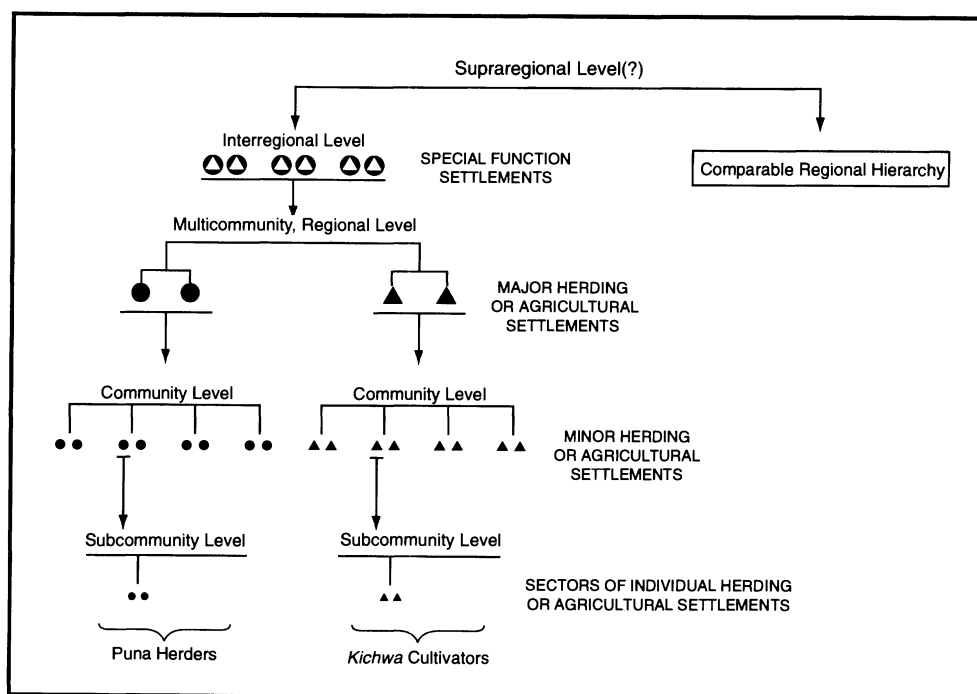


Figure 10. Proposed Late Intermediate organizational hierarchy in the region.

together with feasting and dancing at the associated ancestral tombs. The suprahousehold storage facilities inside many settlements may have functioned to stockpile materials to support such ritual activities.

(7) It is more difficult to define a Late Intermediate interregional organizational level that subsumes the settlement, local community, and multicommunity levels considered above (Figures 10 and 11). Nevertheless, it is only at this level that the integration of specialized puna herders and *kichwa* cultivators can be adequately comprehended.

The linear cluster of special function settlements along the puna-*kichwa* juncture is one hint of Late Intermediate interregional organization (Figure 8). In much the same way that external settlement walls may define formal moiety borders between paired settlements at the community and multicommunity levels, so too might the "line" of special function settlements along the physical border between puna and *kichwa* define a formal relationship between the inhabitants of these two zones. Wall-ditch-tomb complexes at

the borders of individual settlements may have provided the stages for ritual fighting, feasting, and dancing performances that integrated settlement moieties within local communities and multicommunity entities. In much the same way, ritual performances associated with the special function settlements may have integrated regional groupings of puna herders, on the one hand, and *kichwa* cultivators, on the other.

(8) The distribution of our regional storage facilities and isolated cemeteries further illuminates the structure of Late Intermediate interregional organization. These sites are most comprehensible in terms of multicommunity and/or interregional relationships. In effect, these facilities may provide the public architecture associated with interregional integration that seems to be "missing" inside the special function settlements.

The spatial separation of the two main tomb styles suggests that puna herders and *kichwa* cultivators defined themselves, in part, on the basis of distinctive burial ritual. If so, this raises important (and still unanswered) questions about the

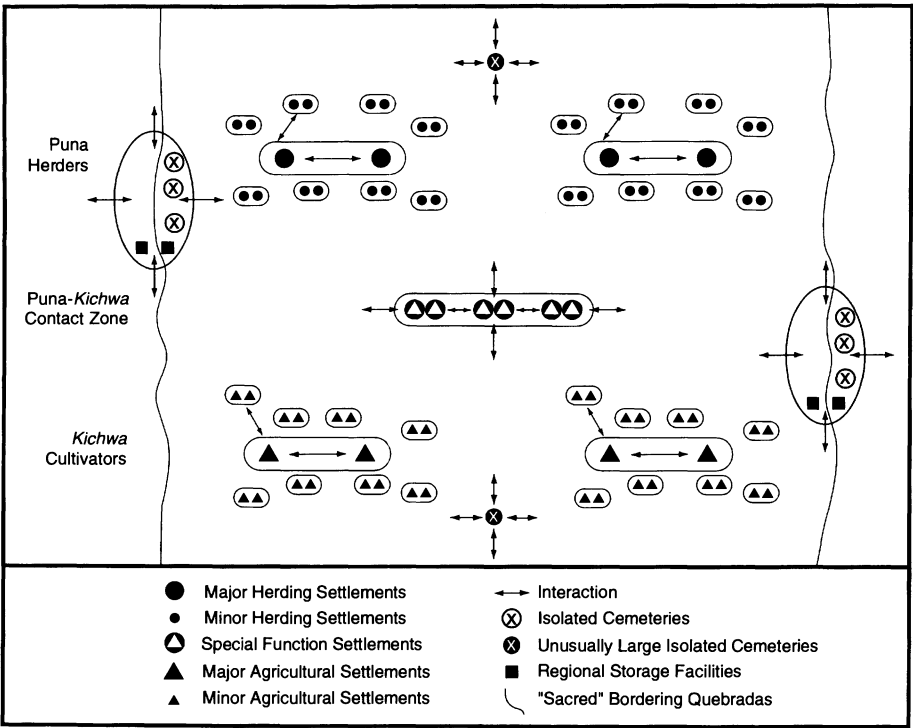


Figure 11. Schematic plan of Late Intermediate organizational hierarchy in the region.

relationships between social status and burial location: who was being buried where and why? Were higher-status individuals buried inside their settlements or along the strategic and sanctified regional borders? Were only puna herders buried in subterranean tombs in the “upper” isolated cemeteries in the Junín puna, while only *kichwa* cultivators were interred in rockshelter tombs in the “lower” isolated cemeteries in the *kichwa*? Does the existence of three widely spaced isolated cemeteries with mixed tomb types (Figure 9) indicate that these places played a special role in interregional integration based on ritual associated with the burial of some individuals outside their zones of origin?

(9) The proximity of Late Intermediate isolated cemeteries and regional storage facilities might indicate that the storage capacity represented by the latter was intended to facilitate the performance of ritual feasting, sacrifice, fighting, dancing, and ceremonial exchange along “sacred” processional routes through *quebradas* flanked by linear tomb clusters. Such ritualized activities

may have been critical in forging regional and interregional solidarity. Comparable functions may have been served by the two unusually large isolated cemeteries (Sites 228, 261) that lie along the northwestern and southeastern edges of our core-region Late Intermediate “polity” (Figures 8, 9, 10, and 11).

One obvious problem with any attempt to associate our two linear groupings of Late Intermediate isolated cemeteries and regional storage facilities with major integrative and border-marking rituals is the apparent absence along the two proposed borders of any obvious architectural manifestation of large-scale ritual. On the other hand, ethnographic studies (e.g., Dillehay 1990; Poole 1982; Sallnow 1987) have shown that ritual activities at the multicommunity and inter-regional levels may be undertaken in the open, well away from settlements and without any monumental architectural accoutrements. The two tomb-lined *quebradas* in our survey area seem admirably suited for guiding, channeling, and orienting such open-air activities.

(10) Our data suggest the existence of a Late Intermediate regional “polity” within the core of our survey area. The borders of this polity are defined by unique linear clusters of isolated cemeteries and regional storage facilities. The polity comprises an area some 40–50 km long by 30–40 km wide, containing roughly 1,000 *kichwa* agricultural households, 2,000 puna herder households, and 1,000 households in special function settlements along the puna-*kichwa* juncture (Figures 5, 8, 10, and 11). The contemporaneity and compositional overlap of these households remain to be ascertained. The relatively high number of herder households, for example, may reflect that one such unit occupied multiple household sites during an annual cycle as flocks were periodically moved to different pastures. It is conceivable that some (most?) houses in the special function settlements were occupied only during special, festive occasions (as Topic and Topic [1991] suggest for Marcahuamachuco in the highlands of northern Peru). Nevertheless, these figures suggest a very rough order of magnitude for what might be termed a basic Late Intermediate regional sociopolitical “building block.”

Concluding Speculations

We are faced with two basic, and still unanswerable, questions: (1) what caused the changes we observe between EIP/MH and Late Intermediate settlement patterning? and (2) why did these changes take the specific forms that they did? Since we cannot yet deal with these questions in any concrete way, we conclude with the presentation of a general developmental scenario that goes well beyond the limits of the data available to us. We recognize weaknesses in this scenario, but its key aspects may be testable through future archaeological fieldwork.

Following the collapse of large states at the end of the Middle Horizon, organizational decentralization throughout the central Andean highlands set the stage for new forms of local and regional integration. Some of the key players on this stage would have been groups of puna herders and *kichwa* cultivators previously linked, directly or indirectly, to Wari or Tiwanaku or other major Middle Horizon centers. The collapse

of these major centers would have been accompanied by the dissolution of center-dependent alliances or exchange networks that had previously facilitated access to critical nonlocal materials and information. Consequently, during the Late Intermediate these groups of herders and cultivators would have found it necessary to devise new mechanisms for accessing each other's products. In the absence of centralized state administration, or of alliance networks ultimately dependent on such administration, new types of public ritual would have played crucial roles in integrating puna and *kichwa* groups.

We do not contend that the changes we delineate in the Tarama-Chinchaycocha region were necessarily replicated elsewhere. We realize, for example, that the Late Intermediate witnessed the development in some other highland regions of nucleated centers much larger than ours: e.g., the Titicaca Basin (Hyslop 1976; Lumbreras 1974; Stanish 1992; Stanish and Steadman 1994); the main Mantaro Valley (the Wanka region) (D'Altroy 1992; Earle et al. 1987; Hastorf et al. 1989); and the Cuzco region (Bauer 1992; Dwyer 1971; Kendall 1976).

The most precocious Late Intermediate developments in the central Andean highlands occurred in those regions that combine unusually large expanses of *both* herding and agricultural terrain. The Tarama-Chinchaycocha region contains an unusually large expanse of camelid pasture, but is much less well endowed with agricultural land. Herding potential declines notably north of the uppermost Marañón and Huallaga drainages along the northern edge of the Peruvian central highlands (Figure 1) (Troll 1958, 1968). Only within particularly favored highland portions of the southern half of the central Andes could developments have gone beyond our basic Late Intermediate “building block” in terms of organizational complexity. Only in such central Andean areas would it have been possible to attain maximal, combined levels of productivity of both puna herders and *kichwa* cultivators within the core of a large polity.

Zuidema (1990:7–9) has noted that in one version of the Inka origin myth, the dynasty's founding ancestor (Manco Capac) united two “kingdoms,” “Hanan Cuzco” and “Hurin Cuzco.”

Might we one day learn that these "kingdoms" derived from an original (Late Intermediate period) division between puna herders and *kichwa* cultivators?

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References Cited

- Allen, C.
1982 Body and Soul in Quechua Thought. *Journal of Latin American Lore* 8:179–196.
- Anders, M.
1986 *Dual Organization and Calendars Inferred from the Planned Site of Azángaro*. Ph.D. dissertation, State University of New York, Binghamton. University Microfilms, Ann Arbor.
- Arellano, C.
1994 Los títulos de comunidades como fuentes para una reconstrucción histórica de límites de las antiguas etnias andinas: el ejemplo de Tarma en la sierra central del Perú. *América Indígena* 54:99–132. Mexico, D.F.
- Bandelier, A.
1904 On the Relative Antiquity of Ancient Peruvian Burials. *Bulletin, American Museum of Natural History* 20:217–226.
1907 *The Indians and Aboriginal Ruins near Chachapoyas in Northern Peru*. New York.
- Bastien, J.
1978 *Mountain of the Condor: Metaphor and Ritual in an Andean Ayllu*. Monograph No. 64. American Ethnological Society, Washington, D.C.
- Bauer, B.
1992 *The Development of the Inka State*. University of Texas Press, Austin.
- Browman, D.
1974 Pastoral Nomadism in the Andes. *Current Anthropology* 15:188–196.
- Brown, D.
1991 *Administrative and Settlement Planning in the Provinces of the Inka Empire: A Perspective from the Inka Provincial Capital of Pumpu on the Junín Plain in the Central Highlands of Peru*. Ph.D. dissertation, University of Texas, Austin. University Microfilms, Ann Arbor.
- Brush, S.
1976 Man's Use of an Andean Ecosystem. *Human Ecology* 4:147–166.
- Camino, A.
1980 Tiempo y espacio en la estrategia de subsistencia andina: un caso en las vertientes orientales sud-Peruanas. *Senri Ethnological Studies No 10: El hombre y su ambiente en los Andes centrales*, pp. 11–38. National Museum of Ethnology, Osaka, Japan.
- Classen, C.
1993 *Inca Cosmology and the Human Body*. University of Utah Press, Salt Lake City.
- Custred, G.
1977 Las punas de los Andes centrales. In *Pastores de puna*, edited by J. Flores, pp. 55–85. Instituto de Estudios Peruanos, Lima.
- D'Altroy, T.
1992 *Provincial Power in the Inka Empire*. Smithsonian Institution Press, Washington, D.C.
- Dillehay, T.
1990 Mapuche Ceremonial Landscape, Social Recruitment, and Resource Rights. *World Archaeology* 22:223–241.
- Duviols, P.
1973 Huari y Llacuaz: agricultores y pastores, un dualismo prehispánico de oposición y complementaridad. *Revista del Museo Nacional* 39:153–191. Lima.
- 1976 Une petite chronique retrouvée: erreurs, ritos, supersticiones y ceremonias de los yndios de la provincia de Chinchaycocha y otras del Perú. *Journal de la Société des Americanistes* 63:275–297. Paris.
- Dwyer, E.
1971 *The Early Inca Occupation of the Valley of Cuzco, Peru*. Ph.D. dissertation, University of California, Berkeley. University Microfilms, Ann Arbor.
- Earle, T., T. D'Altroy, C. Hastorf, C. Scott, C. Costin, G. Russell, and E. Sandefur
1987 *Archaeological Field Research in the Upper Mantaro, Peru, 1982–1983: Investigations of Inka Expansion and Exchange*. Monograph 28. Institute of Archaeology, University of California, Los Angeles.
- Flannery, K., J. Marcus, and R. Reynolds
1989 *The Flocks of the Wamani: A Study of Llama Herders on the Punas of Ayacucho, Peru*. Academic Press, New York.
- Flores O., J.
1979 *Pastoralists of the Andes: The Alpaca Herders of Paratía*. Institute for the Study of Human Issues Publications, Philadelphia.
1986 The Classification and Naming of South American Camelids. In *Anthropological History of Andean Politics*, edited by J. Murra, N. Wachtel, and J. Revel, pp. 137–148. Cambridge University Press, Cambridge.
- Fujii, T., and H. Tomoeda
1981 Chacra, laime, y auquénidos: explotación ambiental de una comunidad andina. In *Estudios etnográficos del Perú meridional*, edited by S. Masuda, pp. 33–63. University of Tokyo Press, Tokyo.
- Goland, C.
1992 Field Scattering as Agricultural Risk Management:

- A Case Study from Cuyo Cuyo, Dept. of Puno, Peru. *Mountain Research and Development* 12:317–338.
- Gorbak, C., M. Lischetti, and C. Muñoz
1962 Batallas rituales del Chiarje y del Toqto, de la provincia de Kanas (Cusco, Perú). *Revista del Museo Nacional* 31:245–304. Lima.
- Gow, D.
1978 Verticality and Andean Cosmology: Quadripartition, Opposition, and Mediation. *Actes du XLII Congrès International des Américanistes*, 1976, 4:199–211. Paris.
- Gow, D., and R. Gow
1975 La alpaca en el mito y el ritual. *Allpanchis* 8:141–164. Cuzco.
- Guillet, D.
1981 Land Tenure, Ecological Zone, and Agricultural Regime in the Central Andes. *American Ethnologist* 8:139–156.
- Harris, O.
1985 Ecological Duality and the Role of the Center: Northern Potosí. In *Andean Ecology and Civilization*, edited by S. Masuda, I. Shimada, and C. Morris, pp. 311–355. University of Tokyo Press, Tokyo.
- Hastings, C.
1985 *The Eastern Frontier: Settlement and Subsistence in the Andean Margins of Central Peru*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan, Ann Arbor.
- 1987 Implications of Andean Verticality in the Evolution of Political Complexity: A View from the Margins. In *The Origins and Development of the Andean State*, edited by J. Haas, S. Pozorski, and T. Pozorski, pp. 145–157. Cambridge University Press, Cambridge.
- Hastorf, C., T. Earle, H. Wright, L. LeCount, G. Russell, and E. Sandefur
1989 Settlement Archaeology in the Jauja Region of Peru: Evidence from the Early Intermediate Period through the Late Intermediate Period: A Report on the 1986 Field Season. *Andean Past* 2:81–129.
- Hopkins, D.
1982 Juego de enemigos. *Allpanchis* 20:167–187. Cuzco.
- Hyslop, J.
1976 *An Archaeological Investigation of the Lupaca Kingdom and Its Origins*. Ph.D. dissertation, Columbia University, New York. University Microfilms, Ann Arbor.
- Inamura, T.
1986 Relaciones estructurales entre pastores y agricultores de un distrito altoandino en el sur del Perú. In *Etnografía e historia del mundo andino: continuidad y cambio*, edited by S. Masuda, pp. 144–190. University of Tokyo Press, Tokyo.
- Izko, X.
1992 *La doble frontera: ecología, política y ritual en el altiplano central*. Hisbol/Ceres, La Paz.
- Kendall, A.
1976 Preliminary Report on Ceramic Data and the Pre-Inca Architectural Remains of the (Lower) Urubamba Valley, Cuzco. *Baessler-Archiv* 24:41–149.
- Lavalley, D.
1973 Estructura y organización del habitat en los Andes centrales durante el período Intermedio Tardío. *Revista del Museo Nacional* 39:91–116. Lima.
- LeBlanc, C.
1981 *Late Prehispanic Huanca Settlement Patterns in the Yanamarca Valley, Peru*. Ph.D. dissertation, University of California, Los Angeles. University Microfilms, Ann Arbor.
- Lumbreras, L.
1974 Los reinos post-Tiwanaku en el área altiplánica. *Revista del Museo Nacional* 40:55–85. Lima.
- McCorkle, C.
1987 Punas, Pastures, and Fields: Grazing Strategies and the Agropastoral Dialectic in an Indigenous Andean Community. In *Arid Land Use Strategies and Risk Management in the Andes*, edited by D. Browman, pp. 57–70. Westview Press, Boulder, Colorado.
- McEwan, C., and M. van der Guchte
1992 Ancestral Time and Sacred Space in Inca State Ritual. In *The Ancient Americas: Art from Sacred Landscapes*, edited by R. Townsend, pp. 359–371. Art Institute of Chicago, Chicago.
- Matos, J., T. Guillen de Boluarte, J. Colter, E. Soler, and F. Boluarte
1958 *Las actuales comunidades de indígenas: Huarochiri en 1955*. Instituto de Etnología y Arqueología, Lima.
- Matos, R.
1971 El período Formativo en el Valle del Mantaro. *Revista del Museo Nacional* 37:41–51. Lima.
- 1973 Ataura: un centro Chavín en el Valle del Mantaro. *Revista del Museo Nacional* 38:93–103. Lima.
- 1975 Prehistoria y ecología humana en las punas de Junín. *Revista del Museo Nacional* 41:37–80. Lima.
- 1978 The Cultural and Ecological Context of the Mantaro Valley during the Formative Period. In *Advances in Andean Archaeology*, edited by D. Browman, pp. 307–325. Mouton, The Hague.
- 1980 La agricultura prehispánica en las punas de Junín. *Allpanchis* 14:91–108. Cuzco.
- 1994 *Pumpu: centro administrativo Inka de la puna de Junín*. Editorial Horizonte, Lima.
- Matos, R., and J. Rick
1980 Los recursos naturales y el poblamiento pre-cerámico de la puna de Junín. *Revista del Museo Nacional* 44:23–68. Lima.
- Mayer, E.
1985 Production Zones. In *Andean Ecology and Civilization*, edited by S. Masuda and C. Morris, pp. 45–84. University of Tokyo Press, Tokyo.
- Moore, J.
1995 The Archaeology of Dual Organization in Andean South America: A Theoretical Review and Case Study. *Latin American Antiquity* 6:165–181.
- Murra, J.
1968 An Aymara Kingdom in 1567. *Ethnohistory* 15:115–151.
- Nachtigall, H.
1975 Ofrendas de llamas en la vida ceremonial de los pastores. *Allpanchis* 8:133–144. Cuzco.
- Netherly, P.
1990 Out of Many, One: The Organization of Rule in the North Coast Polities. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by M. Moseley and A. Cordy-Collins, pp. 461–487. Dumbarton Oaks, Washington, D.C.
- 1993 The Nature of the Andean State. In *Configurations of Power: Holistic Anthropology in Theory and Practice*, edited by J. Henderson and P. Netherly, pp.

- 11–35. Cornell University Press, Ithaca, New York.
- Netherly, P., and T. Dillehay
1986 Duality in Public Architecture in the Upper Zaña Valley, Northern Peru. In *Perspectives on Andean Prehistory and Protohistory*, edited by D. Sandweiss and D. Kviatok, pp. 85–114. Latin American Studies Program, Cornell University, Ithaca, New York.
- Orlove, B.
1977 Integration through Production: The Use of Zonation in Espinar. *American Ethnologist* 4:84–101.
1994 Sticks and Stones: Ritual Battles and Play in the Southern Peruvian Andes. In *Unruly Order: Violence, Power, and Cultural Identity in the High Provinces of Southern Peru*, edited by D. Poole, pp. 133–164. Westview Press, Boulder, Colorado.
- Orlove, B., and R. Godoy
1986 Sectorial Fallowing Systems in the Central Andes. *Journal of Ethnobiology* 6:169–204.
- Paerregaard, K.
1992 Complementary and Duality: Oppositions between Agriculturalists and Herders in an Andean Village. *Ethnology* 31:15–26.
- Palacios, F.
1977 Pastizales de regadío para alpacas. In *Pastores de puna*, edited by J. Flores, pp. 155–170. Instituto de Estudios Peruanos, Lima.
- Palomino, S.
1971 La dualidad en la organización sociocultural de algunos pueblos del área andina. *Revista del Museo Nacional* 37:231–260. Lima.
- Parsons, J. R., and C. Hastings
1988 The Late Intermediate Period. In *Peruvian Prehistory*, edited by R. Keatinge, pp. 190–229. Cambridge University Press, Cambridge.
- Platt, T.
1982 The Role of the Andean Ayllu in the Reproduction of the Petty Commodity Regime in Northern Potosí (Bolivia). In *Ecology and Exchange in the Andes*, edited by D. Lehman, pp. 27–69. Cambridge University Press, Cambridge.
1986 Mirrors and Maize: The Concept of Yanantin among the Macha of Bolivia. In *Anthropological History of Andean Politics*, edited by J. Murra, N. Wachtel, and J. Revel, pp. 228–259. Cambridge University Press, Cambridge.
- Poole, D.
1982 Los santuarios religiosos en la economía regional andina. *Allpanchis* 19:79–116. Cuzco.
1991 Rituals of Movement, Rites of Transformation: Pilgrimage and Dance in the Highlands of Cusco, Peru. In *La Peregrinación: Pilgrimage in Latin America*, edited by N. Crumrine and A. Morinis, pp. 307–338. Greenwood Press, New York.
- Reinhard, J.
1985 Sacred Mountains: An Ethnoarchaeological Study of High Andean Ruins. *Mountain Research and Development* 5:299–317.
- Rostworowski, M.
1975 La visita a Chinchacocha de 1549. *Anales Científicos de la Universidad Nacional del Centro del Perú* 4:71–88. Huancayo, Peru.
1983 *Estructuras andinas del poder: ideología religiosa y política*. Instituto de Estudios Peruanos, Lima.
- Rowe, J.
1946 Inca Culture at the Time of the Spanish Conquest. In *Handbook of South American Indians*, vol. 2, edited by J. Steward, pp. 183–330. Bureau of American Ethnology Bulletin 143, Smithsonian Institution, Washington, D.C.
- Sallnow, M.
1987 *Pilgrims of the Andes: Regional Cults in Cusco*. Smithsonian Institution Press, Washington, D.C.
- 1991 Dual Cosmology and Ethnic Division in an Andean Pilgrimage Cult. In *La Peregrinación: Pilgrimage in Latin America*, edited by N. Crumrine and A. Morinis, pp. 281–305. Greenwood Press, New York.
- Salomon, F.
1995 "The Beautiful Grandparents": Andean Ancestor Shrines and Mortuary Ritual as Seen through Colonial Records. In *Tombs for the Living: Andean Mortuary Practices*, edited by T. Dillehay, pp. 315–354. Dumbarton Oaks, Washington, D.C.
- Skar, H.
1982 *The Warm Valley People: Duality and Land Reform among the Quechua Indians of Highland Peru*. Columbia University Press, New York.
- Stanish, C.
1992 *Ancient Andean Political Economy*. University of Texas Press, Austin.
- Stanish, C., and L. Steadman
1994 *Archaeological Research at Tumatamani, Juli, Peru*. Fieldiana: Anthropology No. 23 (new series). Field Museum of Natural History, Chicago.
- Thomas, R. B.
1976 Energy Flow at High Altitude. In *Man in the Andes*, edited by P. Baker and M. Little, pp. 379–404. Dowdon, Hutchinson, and Ross, Stroudsburg, Pennsylvania.
- Thompson, D.
1971 Late Prehispanic Occupation in the Eastern Peruvian Andes. *Revista del Museo Nacional* 39:116–123. Lima.
- Tomoeda, H.
1985 The Llama Is My Chacra: Metaphors of Andean Pastoralists. In *Andean Ecology and Civilization*, edited by S. Masuda, I. Shimada, and C. Morris, pp. 277–299. University of Tokyo Press, Tokyo.
- Topic, T., and J. Topic
1991 The Meaning of Monuments at Marcahuamachuco. Paper presented at the 56th Annual Meeting, Society for American Archaeology, New Orleans.
- Troll, C.
1958 *Las culturas superiores andinas y el medio geográfico*. Instituto de Geografía, Lima.
1968 The Cordilleras of the Tropical Americas: Aspects of Climate, Phytogeographical and Agrarian Ecology. In *Geocology of the Mountainous Regions of the Tropical Americas*, edited by C. Troll, pp. 15–56. UNESCO, Bonn.
- Urbano, H.
1988 Thunupa, Taguapaca, Cachi: introducción a un espacio simbólico andino. *Revista Andina* 6:201–224. Cuzco.
- Valle, L.
1970 La ecología subjetiva como un elemento esencial de la verticalidad. *Revista del Museo Nacional* 37:167–175. Lima.
- Vokral, E.
1991 *Qoni-Chiri: la organización de la cocina y la estructura simbólica en el altiplano del Perú*. Ediciones Abya-yala, Cotesu, Ecuador.
- Wachtel, N.
1973 *Sociedad e ideología: ensayos de historia y antropología andina*. Instituto de Estudios Peruanos, Lima.

- Webster, D.
1973 Native Pastoralism in the South Andes. *Ethnology* 2:115–133.
- Winterhalder, B., and R. B. Thomas
1978 *Geoecology of Southern Highland Peru: A Human Adaptation Perspective*. Occasional Paper No. 27. Institute of Arctic and Alpine Research, University of Colorado, Boulder.
- Yamamoto, N.
1981 Investigación preliminar sobre las actividades agro-pastoriles en el distrito de Marcapata, depto. de Cuzco, Perú. In *Estudios etnográficos del Perú meridional*, edited by S. Masuda, pp. 85–137. University of Tokyo Press, Tokyo.
- 1985 The Ecological Complementarity of Agro-Pastoralism: Some Comments. In *Andean Ecology and Civilization*, edited by S. Masuda, I. Shimada, and C. Morris, pp. 85–100. University of Tokyo Press, Tokyo.
- Zuidema, R. T.
1973 Kinship and Ancestor Cult in Three Peruvian Communities: Hernández Príncipe's Account of 1622. *Boletín del Institut Français d'Etudes Andines* 2:16–33. Lima.
- 1977 Shaft Tombs and the Inca Empire. *Journal of the Steward Anthropological Society* 9:133–178.
- 1983 The Lion in the City: Royal Symbols of Transition in Cuzco. *Journal of Latin American Lore* 9:39–100.
- 1990 *Inca Civilization in Cuzco*. Translated by J. Decoster. University of Texas Press, Austin.
- Zuidema, R. T., and D. Poole
1982 Los límites de los cuatro suyos incaicos en el Cuzco. *Boletín del Institut Français d'Etudes Andines* 9:83–89. Lima.
- regard, but comparable anthropomorphized landscapes in other parts of the central Andes also have been described (e.g., Allen 1982; Gow and Gow 1975; and Vokral 1991). Classen (1993) and Zuidema (1983) suggest that a living landscape metaphor is deeply rooted in Andean cosmology and polity.
5. We recognize that ritual fighting finds very little mention in sixteenth-century ethnohistoric sources. These sources pertain largely to the Late Horizon, a time when Inkaic imperial policies may have greatly reduced the importance of this activity at the local level.
6. Our project, in turn, had its foundation in several decades of earlier work in the region, including that of Ramiro Matos, who laid the groundwork in ceramic chronology, the definition of developmental and ecological issues, and the location and testing of several key sites (Matos 1971, 1973, 1975, 1978, 1980; Matos and Rick 1980). Charles Hastings (1985, 1987) subsequently carried out regional studies in the adjacent *ceja de montaña* zone. Unsettled conditions during the 1980s and early 1990s have discouraged follow-up fieldwork in the area.
7. Because local archaeological phases and phase names have not yet been fully defined for the survey area, we use the general pan-central Andean chronological terminology.
8. Although our ceramic surface collections from puna sites are small and badly weathered, our impression is that there are marked differences between EIP/MH ceramic assemblages in the puna and *kichwa* zones.
9. These walls vary considerably in size. A few are truly massive, standing up to ca. 7 m high and measuring ca. 2 m thick, occasionally with several attached towerlike features. Others are only ca. 2 m high and less than 1 m thick. Approximate modal dimensions would be ca. 2–3 m high and 1–1.5 m thick. Most appear to have been constructed with mud masonry. Future field studies should give greater attention than we did to variability in wall form.
10. Many more sites may have such internal walls. Our observations of architecture inside most sites were typically rather cursory, and we would have tended to overlook such walls unless they were unusually prominent. This observation also applies to inside-settlement tombs.

Notes

1. The Tarama-Chinchaycocha region takes its name from the terms employed in ethnohistoric documentation for the two Inka administrative provinces centered, respectively, around the modern town of Tarma and Lake Junín (Arellano 1994; Hastings 1985; Rostworowski 1975; Rowe 1946).
2. Llamas (*Lama glama*) and alpacas (*Lama pacos*) are the two main domesticated Andean camelids. Over the past 450 years introduced sheep, goats, and cattle have modified Prehispanic herding patterns. Nonetheless, llamas and alpacas remain important, even predominant, in many areas.
3. These may not be true specialists in the classic economic sense, but rather groups who devote most of their subsistence/productive energies to herding or farming.
4. The Qollahuaya are particularly well described in this

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