Rise of Andean Civilization
November 17, 1999 T. D'Altroy

Late Intermediate Period in the Highlands

1. LIP in highlands: generally a very volatile period
   a. large-scale population growth
   b. intense warfare
   c. urbanization

2. political fractionation
   a. many small political groups: incipient states or complex chiefdoms
   b. emergence of polities in southern highlands and altiplano of a hundred thousand or so
      1. e.g., Inka, Lupaqa, Chanka, Colla
   c. central and northern highlands
      1. e.g., Yuraccama, Xauxa, Wanka, Yauyos, Taruma

Historical Sources

1. sources on LIP sociopolitical organization
   a. inspections
   b. Toledan visitas

2. relevant information pertains to two topics
   1. leadership: *zinchi*
      a. extent of authority
      b. compensation and obligations associated with positions of leadership
      c. selection of individuals to hold positions
   2. warfare

3. leadership
   a. chosen on basis of military skills
   b. succession to able sons
   c. spatial extent of authority was limited
   d. *zinchi* also said to have governed in times of peace
   e. preferred access to the spoils of war

4. warfare
   a. seen as normal state of affairs
   b. conflicts internal among ethnic groups: not with other groups
   c. alliances of communities
   d. objectives
      1. primarily to get more land
      2. also women and livestock

Lake Titicaca Region

1. good early documentation
   a. esp. visita de Chucuito [1567]

2. series of late prehispanic "kingdoms": followed collapse of Tiwanaku
   a. Lupaqa: SW of L. Titicaca
   b. Qolla: NW
   c. Pacasa, Omosuyu, Uros, etc.
   d. linguistic evidence: Aymara speakers may have replaced Puquina speakers after MH

3. sociopolitical organization
   a. hierarchically organized
   b. tombs: mortuary groupings recognized [Tschopik]
      1. may reflect social groups

4. settlements: basic settlement trends [Hyslop]
   a. significant population expansion
   b. well-defined settlement hierarchies
      1. largest site: 150 ha
      2. several others quite large: 4 >30 ha
      3. several >10 ha
      4. others <10 ha
   c. settlement hierarchies appear to have emerged in LIP
   d. post MH shift from lakeside dwelling: to walls hilltop communities
      1. over 4,000 m
   e. appearance of elite cemeteries
      1. chullpas: large burial towers
      2. may have replaced temples and shrines as primary ceremonial locations after MH

5. economy
   a. mixed pastoral and tuber
   b. may have controlled distant colonies
      1. south coast
      2. eastern lowlands

The Cuzco Region

1. late pre-imperial era in southern Peruvian sierra: referred to as Killke period
   a. after ceramic style: distinguished by Rowe
      1. An Introduction to the Archaeology of Cuzco
   b. corresponds to Late Intermediate Period
   c. following collapse of Wari and Tiwanaku polities

2. current radiocarbon evidence: Bauer's review
    a. still scant
    b. AD 1000-1400

3. Cuzco region summary: oral accounts
    a. consonant with dynamics of pre-state formations
        1. alliance and warfare
        2. forging of regional unions through marriage
        3. localized scope of conflicts through first seven paramounts
        4. booty: key rationale for warfare
        5. followed by shift toward establishing relationship of dominance
            a. without acquisition of territory or direct administration
    b. abilities of the elites to remain in power: mix of
        1. inducements
            a. ability to deliver or at least offer goods through combat
            b. peacetime leadership mediated by ceremonial exchanges
        2. ideological reinforcement
            a. privileged leadership deriving from genealogical relationships
            b. consolidation of power through marital alliances
        3. outright coercion
    c. i.e., social ranking
        1. but little in narratives to suggest formation of social classes

4. sites identified almost exclusively by Killke pottery
    a. found in significant quantities up to 60 km or so from Cuzco basin
    b. nature of society poorly understood
    c. regional surveys beginning to fill in picture
        1. Cuzco Valley: Dwyer
        2. Cusichaca: Kendall
        3. Paruro: Muelle's and Bauer
        4. Limatambo: Heffernan
        5. Chinchero: Rivera Dorado

5. to date, Killke archaeology has yielded few of the kinds of material remains we might expect in emergent state society
    a. recorded settlement hierarchy is less well-developed than that of the contemporaneous Lake Titicaca Basin
        1. where largest coeval sites were much bigger
    b. known Killke sites
        1. more comparable in scale to Upper Mantaro or Huamachuco regions
        2. LIP societies: less complex than we would expect from a state
    c. key missing features
        1. monumental constructions
        2. economic specialization
        3. significant residential differentiation
        4. mortuary differentiation

d. aggregate scale of described Killke sites
    1. only hints at formation of powerful expansive polity
e. maybe massive Inka remodelling in imperial era wiped out most architectural traces of Killke era
    1. but lack of published information on the scale or nature of Killke-era Cuzco is special concern for explanations of state formation
    2. elsewhere in valley: lack of description of other material remains troublesome for efforts to interpret formation of Inka polity

6. Killke settlement: Cuzco
    a. Cuzco basin
        1. Kencha-Kencha: Rowe calls very large town
            a. no details
        2. 12-60 ha site range
            a. Dwyer [see Parsons and Hastings]
        3. implies site hierarchy
        4. Choquepuquio and Minas Pata: notable as only sites Dwyer thought to be more than small town
        5. only two sites in topographically defensible locations
            a. Saqsayhuaman
            b. Old Choqo
    b. Cuzco itself
        1. nature of pre-imperial Cuzco remains puzzle
        2. Guaman Poma: settlement called Acamama, before renamed Cuzco
        3. four sectors: Sarmiento's informants
            a. Quinti Cancha (hummingbird sector)
            b. Chumbi Cancha (weaver sector)
            c. Sairi Cancha (tobacco sector)
            d. Yarumbay Cancha (a mixed sector)
        4. early settlement: situated in swampy area at foot of prominence of Saqsaywaman
        5. Saqsayhuaman
            a. Valcárcel: large quantities of excavated ceramics
            b. Rowe found to contain 1/4-1/3 Killke pottery
            c. ergo, likely substantial pre-imperial occupation

7. outside Cuzco basin
    a. Killke-era settlement patterns paralleled core area in important ways
        1. but differed in scale and hierarchy
    b. Cuzco basin likely becoming center of regional settlement system
        1. may have formed core of emergent polity in late pre-imperial era
    c. Limatambo: to west
        1. unfortified settlements
        2. usually situated on low rises along valley flanks
    d. Paruro region: to south
        1. similar pattern
        2. wide topographic distribution of sites

        a. parallels Cuzco area: 3,100-3,750 m
    3. larger sites
        a. situated on small knolls or lower valley slopes
        b. near rich bottom lands: suitable for maize farming
    4. smaller sites
        a. possibly only occupied temporarily
        b. higher elevations: potatoes or herding
        c. lower elevations: 2,850 m
    5. 87 Killke sites
        a. none >3.5 ha
        b. 5-6% size of largest Cuzco Killke site
d. Cusichaca Valley: Kendall
    1. numerous Killke sites on high ridgetops
    2. Huata and Pantilliclla
        a. fortified with surrounding walls
        b. Huata: evidence of having been burned
    3. by late LIP
        a. populace took greater advantage of lower elevation locations
        b. continued to fortify and occupy the higher elevations sites

8. architecture at pre-imperial settlements
    a. forms that led into imperial Inka architecture may have been fairly widely associated with Killke pottery
        1. circular and rectilinear floor plans
    b. pattern contrasts with imperial era
        1. rectilinear plans favored in residential settlements
    c. Pumamarca architecture
        1. early imperial antecedents
        2. C-14 dates: AD 1282, 1371, and 1368
9. artifacts: mostly defined on basis of ceramics
    a. plates
    b. bowls: straight, curved-sided, and incurving
    c. variety of jars
        1. jars with high-arching handles
        2. face-neck jars
        3. jars with conical necks
    d. keros
    e. motifs
        1. largely geometric
        2. most often in black
        3. less frequently in red
        4. rarely in white
    f. Killke pottery appears in Cuzco region apparently without local antecedents: Rowe
        1. maybe Lake Titicaca basin
        2. accords with Inka origin myths of a migration from the south
    g. contains apparent forerunners to imperial Inka style

1. motifs: nested triangles, pendant rows of solid triangles
2. vessel shapes: e.g., keros

h. much stylistic variation over fairly limited space

Central Peruvian Highlands

1. Upper Mantaro Valley: Xauxa and Wanka
   a. area in which UMARP has done research since 1977
   b. one of the larger ethnic groups in the central Andes
   c. important logistical position
      1. contact with the coast
      2. main route north-south through intermontane valleys
      3. direct routes to montaña

3. background to UMARP research
   a. Matos: settlement pattern study, since 1958
   b. Browman: 1969-70 dissertation work
      1. settlement pattern survey
      2. refined chronology
      3. pastoralism and settlement changes
   c. Parsons and Hastings
      1. broader scale research
      2. settlement changes in a variety of environmental zones throughout ceramic periods
         a. evolutionary synthesis for Junín
         b. changes in population density
         c. resource use
         d. settlement pattern
      3. research area chosen: included significant expanses of all four kinds of principal highland environments
         a. Huaricolca puna: 3900-4700m
         b. Upper Mantaro: broad valley floor and slopes: 3300-3800m
         c. Tarma: deep, narrow valleys and intervening ridges on eastern side of sierra: Río Tarma drainage, 2900-4200m
         d. uppermost montaña around Huasahuasi: 1900-4700m
   d. UMARP: Upper Mantaro
      1. Earle et al., since 1977
      2. settlement patterns
      3. relationship between political and economic change

UMARP: LIP settlement pattern research

1. focus now on major trends in area
   a. settlement patterns
      1. implications for social organization
      2. warfare
   b. agricultural systems
   c. organization of production, exchange and consumption
      1. variety of commodities
      2. e.g., ceramics, food, lithics, metals

2. geographic and environmental setting
   a. lower valley: 3150-3400m
      a. temperate mild climate
      b. 600mm precipitation/yr
      c. crops: maize, beans, garden vegetables
         tubers (potatoes, ulluco, mashua, oca)
      d. until 1954: irrigation only by simple canals from tributary valleys
   b. hillslopes and tributary valleys: 3400-3800m
      a. glacial lakes in upland valleys
      b. more humid than valley bottom
      c. mostly agriculture
         1. Andean tubers and European frost-resistant grains
      d. fallowed fields grazed by livestock
   c. puna: 3800-4800m
      a. high, rolling grassland
      b. primarily used for pasturage: llamas, alpacas
      c. occasional fields of tubers: macca

3. Wanka I settlement patterns: Yanamarca Valley
   a. Early LIP: c. 1000-1250; maybe 1000-1350
      1. 13 Early LIP components in valley
      2. 3.4 ha average size
         a. 0.4-4.8 ha range
         b. mean population: 504
      3. relatively little variation in size
      4. well-spaced throughout valley
         a. several on valley floor: 3450m on edge of Laguna Tragadero
         b. others on puna to the north of valley up to 3900m
         c. fairly evenly distributed throughout the valley
      5. variety of topographic settings
         a. valley floor
         b. low hills and ridges

c. about half on higher ridges and hills: 100-400m above the surrounding terrain
    1. possible indication of security considerations
    2. not surprising considering Late LIP warfare
d. dichotomy in location may reflect
    1. shift in settlement location
    2. differential perception of threat

6. no major population centers
    a. no modality in site size distributions
    b. no civic-ceremonial architecture
    *c. implies that communities were autonomous units
    *d. regional organization integrating several communities had not yet developed

4. Wanka II (Late LIP): ca. A.D. 1250 (1350?) - 1460
    a. general trends
        1. population growth
        2. nucleation of population
        3. emergence of settlement hierarchies
        4. emergence of civic-ceremonial architecture and public space
        5. shift to defensive organization and location of communities
    b. 8 communities: Yanamarca
        1. 19.5 ha average size: 8x Early LIP
            a. range: 2.6 - 73.7 ha
    c. in region: 38 settlements
        1. 1,602 per settlement
        2. 3.2 x Wanka I in Yanamarca
    d. 5 of Wanka II communities are larger than the largest Wanka I community
    e. considerably more variability in site size
        1. modality in size distributions
        2. Hatunmarca: 73.7 ha of habitation
        3. Tunanmarca: 25.4 of habitation
    f. shift in settlement location to northwest side of valley
    g. increasing concern with warfare
        1. population agglutination into major settlements
        2. shift to more defensible locations: hilltops
        3. construction of fortification walls

5. population trends
    a. five settlement types discerned
        1. hamlet: <100 people, dispersed
        2. small village: 100-500; no public or ceremonial architecture
        3. large village: 500-2,000; generally no public or ceremonial architecture

4. town: 2,000-10,000
    a. Wanka II: public or civic-ceremonial space not present in Wanka II
    b. Wanka III: c-c space present
    c. differentiated into areas of high and low quality residential architecture
5. center: 10,000+
    a. c-c architecture and public space differentiated from residential architecture
    b. Wanka II only
    c. Wanka III: not present
        a. political functions taken over by towns

b. population ranges given in UMARP II report
c. LeBlanc
    1. given a reasonable population growth rate: there must have been a large influx of population into the valley in Late LIP
    2. 20-40%
    3. but no apparent discontinuity in cultural remains
        a. e.g., no abrupt changes in architectural style
        b. or in material culture
        c. implies that immigrants were neighboring Wankas

6. social stratification within communities
    a. focus on Late LIP: first time period where real differentiation shows up
    b. internal organization of larger communities shows architectural differentiation
        1. and differences in use of space
    c. variation in size of buildings
        1. differences in quality of masonry
    d. development of settlement hierarchies
        1. histograms of site size show multimodality
        2. breaks interpreted as levels within a settlement hierarchy
        3. different functions seen for different levels
        4. population centers are focus of political power
            a. higher order services to regional population

7. agriculture
    a. fertile expanses of lower main Mantaro Valley: were essentially uncultivated
    b. rolling uplands 10 km away: intensified
        1. construction of irrigation systems
        2. associated with large nucleated settlements: esp. Tunanmarca
    c. heavy emphasis on highland diet in Wanka II
        1. consistent recovery of high-elevation food crops: in residential compounds
        2. relative lack of maize-complex crops

3. elites had preferred access to maize in compounds
4. and to camelid and deer meat

d. Hastorf and Earle: intensification of production during Wanka II
   1. consequence of demand set by political economy
   2. did not result from requirements of feeding rapidly increasing population

e. ergo, warfare over resources: may be explained
   1. more reasonably as a political process
   2. than as consequence of subsistence pressure

8. craft production
   a. organizational divisions occurred along community and hierarchical lines
   b. <u>generally accessible</u> materials: community specialization
   c. <u>restricted consumption</u>: attached specialists

9. example: <u>lithics</u>
   a. Pomacancha chert quarry: principal reduction activities
   b. flake tools: by-products found at all households
   c. blade tool preparation: Umpamalca and Hatunmarca
      1. i.e., communities nearest the source
      2. suggests efficiency played a role in organization
         a. i.e., transport costs of unusable materials
         b. and local control over access to isolated resources
      3. and extensive intercommunity exchange: before and under Inka rule
   d. elite and commoner households participated
      1. slight proportional increase in elite production under Inka rule

9. <u>metals</u>: probably elite-controlled
   a. production probably occurred off-site
   b. arsenic bronze
   c. <u>lead</u> production

<u>Parsons and Hastings' Survey</u>

<u>Tarma Region</u>

1. 90 sites defined
   a. great majority <2.5 ha
   b. largest = 7 ha
   c. very difficult to distinguish separate site-size categories
      1. nearly continuous distribution between largest and smallest sites
      2. maybe three site-size categories could be distinguished
         a. 0.1-2.5 ha: 74 sites
         b. 2.6-4.5 ha: 11 sites
         c. 5.1-7.0 ha: 5 sites

2. most small sites (<0.5 ha): limited purpose occupations

3. >0.5ha: clearly residential
   a. ridge top sites
   b. surrounded by massive stone walls: often reinforced by buttresses and gateways
   c. only a few low-lying residential sites without walls: all in Palcamayo district
      1. where valley is unusually wide

4. major sites clustered in upper reaches of Leticia and Palcamayo subvalleys
   a. along the juncture of these valleys with the main Junín puna to the north and west
   b. weak occupation along eastern margin of Tarma region survey
      1. where sierra valleys do not abut against the puna
      2. similar situation in Huasahuasi area: where adjacent puna in very rough with few large expanses of continuous, rolling grassland

5. region is stylistically linked to Huasahuasi and Junín areas
   a. ceramics and architecture
   b. quite distinct from Jauja region

<u>Junín region</u>

1. single most outstanding feature of LIP occupation on puna is association of a large cluster of corrals with practically every one of the 50 residential sites located
   a. not present at any sites outside the puna
   b. convincing evidence for strong puna specialization in camelid herding
   c. also widely scattered corrals throughout entire area: generally LIP
   d. sites are usually clusters of circular houses on ridge top
      1. with corrals on the slopes below

2. one highly unusual site
   a. no circular buildings
   b. over 70 two-storey rectangular structures
      1. many joined in groupings of two to four units

3. sites are small
   a. do not readily segregate into discrete size groupings
   b. continuum from 0.5-8.0 ha
      1. distinct break at about 2.5 ha
      2. 41 smaller than this size
      3. one other small break from 5.5-6.5 ha

4. comparability of Junín and Tarma settlement patterns suggests that both areas were similarly organized during LIP

5. largest sites situated along the puna-valley juncture

a. three of the four sites with areas of 5.0+ ha were only a few km NW of the upper reaches of the Leticia and Palcamayo subvalleys
    1. well within main puna
    2. but also within easy reach of the valleys
b. easier to get to valley ridge-top sites from puna than from valley floor below
c. ceramically and architecturally linked to Tarma

Huasahuasi region

1. 44 sites with major LIP components
    a. an additional 17 sites with insufficient ceramic material for dating also probably belonged to this period
    b. ceramics similar to those from Tarma and Lake Junín

2. sites range from 0.1-9.0 ha
    a. most <3.0 ha
    b. preponderance of sites about 1.0 ha
    c. relatively steady decrease in the frequency of large sites

3. no clear site-size hierarchy
    a. but one 9 ha site stands out as considerably larger than all the others: Paraupunta

4. building counts taken for 28 exceptionally well-preserved sites definitely LIP
    a. no clear hierarchy for numbers of buildings
    b. 6 sites with 48-63 buildings: stand out as large
    c. Paraupunta: 120 buildings makes it a separate class
    d. density ranges from 5-47 buildings/ha
        1. site-size categories are not particularly apparent on the basis of differential building density
        2. building density tends to decrease with increasing site size

5. predominant LIP site type
    a. nucleated, walled settlement situated on high ridges
    b. between 3800-4100m
        1. somewhat lower than the highest ridge crests
        2. about 1000 above main valley floors
        3. most lie within 100m of the modern transition from primarily agricultural to primarily pastoral land
    c. three LIP sites in upper Huasahuasi are at lower elevations: only a few hundred meters above the river
    d. several sites on steep NW side of the deep Tarma valley are below 3100 m: still 600-1000m above the river
        1. all near or within dense forest: may be determining factor

6. most are in highly defensible locations: narrow, steep-sided ridges

   a. access impeded by deep trenches and/or massive, high walls
      1. sometimes with towers, battlements, and parapets
   b. surface area in walls 0.5-9.0 ha
   c. most structures are circular: 3-5m diameter
   d. two-storey rectangular buildings are also present at two sites
7. about 20 small sites midvalley on spurs of main ridges
   a. all have fewer than 15 structures
   b. some have substantial fortifications
   c. well within prime potato land

8. two large and more complex sites
   a. Chupas: just west of modern Huasahuasi
      1. 61 buildings on 2.2 ha
      2. basically San Blas Red-on-Buff pottery
      3. about 25% of buildings were 2-storey rectangulars otherwise infrequent in region
      4. large detached cemetery and two large reservoirs at the lower end of the site
   b. Paraupunta: 14 km NE of Chupas
      1. 120 well preserved buildings within a walled area of about 9.0 ha
      2. stands out as large LIP residential focus in an otherwise sparsely occupied area
      3. lies at sierra-ceja de montaña juncture
      4. size may in part be due to position on major sierra-montaña route

9. western edge of Huasahuasi region abuts on a very rugged, highly dissected section of puna
   a. quite different from open, rolling grassland that adjoins the Tarma region further SW
   b. reflected in occupation: virtually empty area
   c. evidence for specialized herding is confined to five small herding camps along high, narrow ridges
      1. well above limits of modern cultivation

Summary: LIP in Central Sierra

[Parsons and Hastings]

1. general outlines of a major cultural florescence are fairly apparent
   a. still do not understand
      1. how population growth begins to occur
      2. at what point the essential elements of the settlement configuration were attained

2. general element #1
   a. pronounced tendency for settlements to occur on tops of high steep-sided hills and ridges
   b. fortification
   c. settlement away from best agricultural and herding land
      1. especially pronounced in Tarma, Huasahuasi and Junín
   d. probably indicative of hostility radically different from any earlier kind of conflict or unsettled conditions

3. #2: very great population increase relative to the antecedent EIP/MH everywhere in the survey area
4. #3: close linkages between puna and valley populations
    a. particularly noticeable in Tarma-Junín regions
        1. maximum population buildups and largest sites occur along puna-valley juncture
        2. single ceramic assemblage in both puna and valley sites
    b. similar pattern in Jauja region: less well-defined
        1. maximum population is at a similar puna-valley juncture
        2. puna and valley sites share a common ceramic assemblage
    c. EIP/MH puna-valley dichotomy
        1. LIP integration may have served as major element in population growth
            a. and in increasingly hierarchical organization of society
    d. importance of relatively large-scale herding in LIP
        1. emphasized by scarcity of occupation where access to substantial puna grassland is absent or restricted
            a. e.g., upper reaches of Huasahuasi
            b. e.g., along E and SE sites of Tarma region

5. #4: major cultural division
    a. main Mantaro and adjacent Huaricolca puna in SE separated from
    b. main Junín puna and adjacent eastern valleys around Tarma and Huasahuasi
    c. marked by distinctive differences in
        1. ceramics, architecture, settlement pattern
    d. conforms to ethnohistoric distinction between Huanca and Tarma ethnic groups
    e. implies major differences in sociopolitical organization
        1. Tarma-Junín: more fragments, less centralized
            a. no clear indication of dominant centers
        2. Jauja: settlement configuration conforms to notion of hierarchical, centralized polity
            a. enough authority to control hostility and monopolize force so that many people were able to settle in undefended, easily accessible locations
            b. low sites may belong to a late Pax Huancaina
    f. relations between Tarma and Jauja are unclear
        1. almost no Tarma pottery in Jauja
        2. but little bits of Jauja pottery through other region: may be significant difference

6. #5: first reasonable evidence for sierra-montaña links
    a. Huasahuasi region key to understanding this problem
        1. site of Paraupunta near the upper end of a probably LIP route to the lowlands
        2. may be analogous to large sites along puna-valley juncture in Tarma area
    b. both types of sites may have had comparable functions in supplying communities in the adjacent areas with outside products
        1. e.g., coca grown at Chanchamayo: 20 km from Paraupunta