

The Middle Horizon: Comparison and collapse

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- Comparison of Wari and Tiwanaku (from previous notes; should have been here)
 - Wari and Tiwanaku were contemporary
 - Tiwanaku in the south, Wari in the north
 - roughly 500 - 1000 cal AD
 - came from very different ecological regions
 - Tiwanaku: altiplano, Wari: steep highlands
 - and so emphasized different agricultural technologies, especially in their heartland areas
 - were in contact at least in Moquegua
 - but interacted very little or not at all there
 - had similar (but distinct) iconographies on pottery and textiles
 - presumably shared some religious ideas
 - but different ritual architecture, and practices of smashing sets of large, fancy ceramics
 - so they presumably also differed a lot in religious practices and probably ideas
 - Tiwanaku: more monumental
 - large, sunken rectangular courts
 - broad but low platforms
 - complexly shaped stepped Akapana "pyramid"
 - open-feeling public spaces, some with long views
 - carved monoliths
 - lots of massive, precisely cut stonework
 - probably attracted pilgrims who worked on ongoing construction projects, participated in feasts, etc.
 - Wari: more divided, enclosed, less monumental
 - high walls separating courtyards and sectors of sites (especially Huari), in provincial sites also enclosing most or all of the site
 - almost no large platforms, pyramids, or other obvious large public spaces; the only examples are probably early and associated with high-status residences of nobility (Vegachayoc Moqo)
 - small to medium-sized D-shaped ritual spaces, enclosed in warrens of surrounding rooms and enclosure walls
 - much less cut stone but lots of very tall fieldstone construction, smoothly plastered, painted white or red
 - no monoliths known
 - Huari seems unlikely to have been a pilgrimage destination, without obvious facilities for much public ritual
 - Tiwanaku: some pot-smashing and human and animal offerings
 - Wari: more frequent, larger, more formalized offerings of smashed ceramics, apparently sets of large, impressive vessels perhaps made to be destroyed
 - Tiwanaku: no particularly spectacular tombs known (yet), although some individuals were buried with multiple fine ceramics, gold, etc.

- Wari: at least two complexes of multi-roomed, cut-stone, extremely high status tombs known, unfortunately all looted
- their secular architecture also differed in layout and technology
 - probably indicating different social organization and state activities
 - Tiwanaku's residential areas may have been high-walled and subdivided into courts and sectors, more like Huari than they currently appear, because Tiwanaku's adobe and sod buildings have not survived as well as Huari's fieldstone construction
 - Wari: many buildings up to 3 stories tall
 - Tiwanaku: probably all single-story buildings, but some on stone-faced platforms
- at least some of their expansion into peripheral regions seems quite different
 - Tiwanaku: rural farming colonies producing for export, vs. Wari: big, planned centers
 - Tiwanaku: a few limited places, vs. Wari: many places, over a much broader area
- Explaining the origins of Wari and Tiwanaku
 - both derived from a shared common cultural "ancestor", like Pukara?
 - one inspired by the other?
 - maybe suggested by the early sunken rectangular court at Huari?
 - intense interaction between the two, so that they developed similarities in parallel?
 - virtually no evidence of it
- there is a lot to still be worked out here...
- In any case, the Middle Horizon was the time of growth of large, regional states
 - among earlier cultures, only the Moche are known to have developed to a comparable scale and complexity, but with less long-distance regional control
 - how would you compare these societies?
 - Wari, especially, laid the social and to some extent physical foundations for the Inka
 - because Wari was essentially a highland culture, like the Inka
 - and because the Cuzco area was within the Wari sphere of influence
- The problem of the relationship between Wari and Tiwanaku
 - Was there a buffer zone between the two states (other than at Cerro Baúl)?
 - How did they interact?
 - Trade, religious exchanges, intermarriage?
 - Competition, even military conflict?
 - they may have had tensions over access to the huaca of Cerro Baúl
 - But evidence for any interaction at all is weak
 - virtually no Wari goods at Tiwanaku sites, and vice versa
 - suggests that they may not have been on good terms
 - but the Tiwanaku sites in the Moquegua area, right near Cerro Baúl, are not in defensible locations and do not have defensive walls
 - suggests that there was probably not an active military threat on either side
 - on the other hand, Wari ceramics from Conchopata show warriors on reed boats... could this be military activity on Lake Titicaca?

- Andean rivers are generally not navigable
- it is hard to imagine Wari warriors needing to use reed boats on the ocean
- and the figures are elaborately dressed, and shown on very fine pots, suggesting that they show something that was considered important

- The collapse of Tiwanaku
 - some of the major issues are well laid out in the readings
 - the correct answer is, of course, in my paper!
 - best to start by looking separately at what happened in the altiplano right around Tiwanaku, and what happened in the peripheral colonies, like Moquegua
 - in the altiplano
 - what actually happened in the altiplano when Tiwanaku "collapsed"?
 - people stopped making and using the Tiwanaku corporate style of ceramics
 - monumental building at Tiwanaku itself ceased
 - around 1000 cal AD, a dog (or fox) was ceremonially placed in the mouth of one of the Akapana pyramid drains
 - so the water-spouting function of the Akapana clearly was not working by then, or was stopped at that point
 - numerous offerings of smashed ceramics and partial human bodies may date to this same time
 - Kolata sees this as a reorientation of the Akapana by a new militaristic elite, who controlled and used it for another 150 years
 - but it could also be the end of its use altogether
 - maybe at this time or up to two centuries later, the floor of one of the rooms on the summit of the Akapana was covered with camelid carcasses, as well as some ceramics and other objects
 - these were carefully placed; this was ritually done, not dumping
 - maybe a closing ceremony that ended the use of the pyramid?
 - a strong chance that the core of Tiwanaku was sacked, but the moment is hard to date
 - the Putuni palace
 - roof burned and collapsed on top of...
 - large liquid-storage vessels that had been smashed in place
 - and many uncooked, unbutchered camelid carcasses that would have represented a lot of valuable meat
 - many of the Tiwanaku style monoliths and other sculptures are damaged specifically around the face
 - except for the tennoned heads in the semi-subterranean court
 - many are naturally eroded, but those that are not tend to be undamaged
 - this may mean that vandalism was directed specifically at the rulers and/or religion of Tiwanaku, but not at the people represented by the "captured huacas"
 - at the secondary center of Lukurmata, cut stones from the sunken rectangular court were used to build ordinary people's stone-lined tombs, mixed with unworked rocks
 - suggests that the sunken court at Lukurmata was out of use and no longer respected
 - the city of Tiwanaku was largely abandoned

- population dispersed, presumably back to smaller, scattered farmsteads and villages
- the regional settlement hierarchy disappeared
 - that is, virtually all sites were of the same, small type
 - no more primary, secondary, and tertiary centers
 - suggests loss of political organization, economic complexity, etc.
 - and reversion to self-sufficient rural communities
- why did it happen?
 - two models: drought, and social upheaval for unknown reasons before the drought
- Ortloff and Kolata blame a long drought that lowered the lake level, dried out the raised fields, and basically starved the Tiwanaku state
 - Evidence for the drought
 - Thinner layers of ice in the Quelccaya glacier
 - layers from 750-1040 cal AD vary from the long-term average to well above it
 - indicating unusually high rainfall (and snowfall on the glacier)
 - after reaching a peak thickness at 1010 cal AD, the layers start getting thinner again
 - reaching the long-term average around 1040 cal AD
 - and dropping below it for the next several centuries
 - indicating an overall dramatic decrease in rainfall starting around 1010 cal AD, getting really serious around 1040 cal AD
 - the level of Lake Titicaca was reconstructed by looking at the pollen content at different depths of cores of lake sediment
 - different pollens present show expansion of the lake over the coring site, then withdrawal again
 - the withdrawal can be roughly dated to around 1000 cal AD
 - Overall temperature can be estimated from the oxygen isotope content of ice layers from the Quelccaya glacier (don't sweat the details here!)
 - suggest 1/2 to 1 degree rise in average temperature during 1000 - 1400 cal AD
 - also known for this period in Europe ("the Medieval Warm Epoch")
 - they date the abandonment of the raised fields to the first century or two of the drought
 - dating construction and abandonment of fields is very hard to do
 - they date the construction and/or use of the fields by dating charcoal from below the planting surface
 - but this charcoal could be from plant material that was already old at the time the fields were built up
 - they date the abandonment using charcoal from the soil laying on top of the planting surface
 - but this soil could have been deposited any time from the day after the last harvest, to centuries after the field was abandoned (giving dates that are too recent)
 - and the charcoal in it could already have been old (giving dates that are too old)
 - this abandonment supposedly reduced the food production that supported Tiwanaku, leading to tensions and problems that finally toppled the state
 - Kolata dates the end of Tiwanaku around 1150 cal AD, when the fields were being abandoned

- But as you know from my paper, the dates from Tiwanaku itself suggest that it was largely abandoned by 1000 cal AD, before the drought had even started
 - so I suspect that there was some kind of rebellion, factional conflict, or other social problem that had nothing to do with the drought
 - people probably kept on using the raised fields after the state collapsed, but then were dried out by the drought a generation or so later
- in Tiwanaku's periphery
 - what actually happened in the periphery when Tiwanaku "collapsed"?
 - especially clear in Moquegua
 - in Moquegua, the collapse dates around 1000 cal AD or up to a few decades earlier
 - Tiwanaku sites were destroyed
 - the Tiwanaku temple at Omo was intentionally destroyed
 - walls pushed over
 - cut-stone facing smashed
 - stones reused along with unworked material for building ordinary people's tombs in the following period
 - even residential villages were reduced to "pitted rock piles"
 - a massive, organized sort of vandalism
 - but only done to Chen Chen style villages and temple; the Omo style villages and temple were left untouched
 - suggests civil upheaval
 - maybe between Omo and Chen Chen subgroups?
 - or could Wari people have been involved?
 - settlement and farming shifted
 - "plantation" fields, canals, village, storage pit complex, and cemetery at Chen Chen were abandoned
 - most or all Tiwanaku colonial sites in Moquegua were abandoned
 - people moved to defensible hillslopes, and/or built defensive walls around their villages
 - instead of being clustered as they were under Tiwanaku, villages were fairly evenly spaced apart
 - this pattern suggests that each wanted to control some land right around it, and new settlements could not get too close
 - this move was not only within the same valley, but also involved emigration to entirely different areas
 - such as some neighboring highland valleys
 - upriver sections of the Osmore drainage, where Tiwanaku people had not lived before
 - and the coastal portion of the Osmore valley
 - where there were already a lot of people living
 - the Chiribaya culture, probably a complex chiefdom
 - suggests a shift from peaceful, state-regulated agricultural colonies to fighting factions that did not need to produce a large surplus
 - ceramics changed

- certain highly iconographically charged motifs disappeared
 - the Staff God
 - eagle head (often has the same headdress as the Staff God, may be closely related)
 - suggesting loss of interest in, or even rejection of, Tiwanaku ideology
- ceramics become more variable from site to site
 - suggests a loss of frequent interaction with an altiplano standard
 - also suggests less interaction between neighboring sites
 - "balkanization" of small groups, no longer linked by Tiwanaku state?
- quality (labor investment and training) declined
- some motifs got so garbled that potters may have forgotten what they originally represented
- why did it happen?
 - Don't pay much attention to Ortloff and Kolata's detailed discussion of which water supplies would fail first, and especially their summaries of the evidence agreeing with their claims here
 - there are a lot of unresolved technical questions here
 - and they don't handle the Moquegua and coastal data very accurately
 - the serious drought was too late to have anything to do with the collapse in Moquegua before 1000 cal AD.
 - Patrick (Ryan) Williams argues that some Tiwanaku colonists allied with the Wari on Cerro Baúl to get better access to irrigation water
 - because Cerro Baúl was upriver from the Tiwanaku colony, its canal diverted water from the river before it reached the Tiwanaku canal intakes
 - according to his calculations, the fields around Cerro Baúl used so much water that there was not enough left for the Tiwanaku plantation at Chen Chen
 - so some of the colonists allied with Wari, moved to the upper valley areas, and also began taking water before it could reach the Tiwanaku colony's canal intake
 - this could have stirred up a violent conflict between factions, causing the breakup of the colony
 - and maybe related in some way to Wari abandoning Cerro Baúl, too
 - I find the selective destruction of only Chen Chen style Tiwanaku sites interesting
 - to me, this suggests that some other (or additional) factional differences may have been involved
- overall pattern, my view:
 - the Tiwanaku state collapsed around 1000 cal AD
 - the people living in the colonies, and maybe some of those from the altiplano core, too, dispersed to areas including ones that Tiwanaku had never controlled or influenced much
 - I see this as a small diaspora of people fleeing the chaos implied by the sacking of Tiwanaku and colonial sites in Moquegua
- The collapse of Wari
 - not well studied yet
 - may be hard to understand until we understand Wari itself better
 - what happened?

- dating is being debated; definitely by around 1000 cal AD in most places, maybe a century or two earlier in some places
- Wari pottery ceased to be used throughout the former Wari territory
- Wari planned centers were abandoned
 - in many cases, this is not well dated
 - it may well not have happened all at once
- Wari abandoned Cerro Baúl around 1000 cal AD
 - about the same time as the Tiwanaku colonies collapsed
 - presumably there was some connection between the two events
 - some buildings on Cerro Baúl may have been burned
 - smashed fancy pottery is mixed with the roof material
 - both were possibly part of a single event
 - some pottery was on top of the burned roof material
 - maybe indicating that pots were thrown onto or into burning buildings
 - who did this?
 - attackers, maybe Tiwanaku colonists?
 - Wari people when they left?
 - as a closing ritual?
 - or to deny others the use of the site and ceramics?
 - this is preferred interpretation at the moment
 - looters after Wari people left?
- why did it happen?
 - we really don't know yet
 - climate change is tempting, since both Tiwanaku and Wari broke up around the same time
 - but the climate record just does not provide an obvious regional disaster at the right time
 - maybe something having to do with both states or their relationship?
 - Williams' story about water competition in Moquegua may be right, but it would not explain the roughly simultaneous collapse in the rest of the Wari and Tiwanaku spheres
- overall pattern of Wari's collapse
 - unlike Tiwanaku, there does not seem to have been a post-collapse diaspora (although work still needs to be done on this)
 - distinct Wari influence (and people?) just disappeared, rather than spreading further like Tiwanaku's did
 - but some later pottery styles maintained some Wari features in locally modified ways
 - so in some places, maybe people connected to Wari just stayed put as the state collapsed, and assimilated into local populations
- The collapse of the two Middle Horizon states left the Andes without large, regional polities
 - apparently, many small, competing villages and chiefdoms
 - with the main exception of the north coast, where the traditions of complex Moche society still echoed on, even though the Moche as such were gone
 - we will look at this "Late Intermediate Period" next time