

The Andes: Maritime foundations and the Late Archaic Norte Chico

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- People entered the New World as the last glacial period of the Pleistocene was ending
 - maybe 20,000 to 15,000 years ago
 - by way of the Bering Strait between Siberia and Alaska
 - probably walking or boating along the shore
 - by about 14,700 years ago (12,800 cal BC), they had reached southern Chile
 - since then, there may have been some additional immigration and some contact around Alaska, but North and South America were basically isolated from all of the Old World
- The rise of complex societies 10,000 years later in the New World was 100% independent from the Old World
 - Contact across the Atlantic?
 - the only generally accepted evidence of transatlantic contact before Columbus is a small Viking settlement on the East coast of Canada
 - far too late to have had any effect on the rise of New World civilizations
 - Contact across the Pacific?
 - Despite many attempts to show transpacific contacts outside of the Arctic
 - especially between Japan and the New World, and Polynesia and the New World
 - none has ever stood up to scrutiny
 - So why does it matter that the New World is so separate from the Old?
 - Because recognizable civilizations emerged in the New World, too
 - so similar that the Spanish conquistadores had no trouble recognizing kings, generals, cities, etc. and how to play the politics and factions against each other
 - This shows that humans did similar things in creating “civilization” entirely independently
 - There may be some regularities to this process
 - Maybe something universal about humans
 - or something universal about living in large groups
- Complex societies appeared a little later in the New World than in the Old World
 - 3000 BC: The first monumental architecture in the New World was built in Peru
 - but how complex was the society that created it?
 - that is currently being debated, as we will see
 - no real cities until much, much later
 - ambiguous evidence of social status differences, not obviously very great
 - the societies that built early monuments were restricted to some small areas of the Andes
 - 2000 BC: only in the Initial Period, some 1000 years later, did monumental architecture and possibly more complex societies began to spread over more of the Pacific coast
 - even then, still no cities, and arguable complexity
 - 200 BC: undeniably urban, complex societies definitely appeared in the Andes and Central America in the last few centuries BC
 - this may have to be pushed back to earlier periods as we learn more about them
- Compare the timing of this monumental architecture and social complexity to:

- End of the Uruk period around 3100 BC
 - already had writing and a long history of monumental architecture
- Egyptian unification around 3050 (just barely earlier)
 - already had high-status leaders, military conquests, craft specialization, cities, for centuries
- Second half of Early Indus period, say 3000 BC (about the same time)
 - with walled cities, long-distance trade, craft specialists, etc.
- China: depends on what you compare to, but-
 - big Hongshan burial mound complex around 3500 BC
 - that is, 500 years earlier
 - rammed-earth walls, large towns, "palaces" by early Longshan Horizon around 2500 BC
 - 500 years after the first New World monumental architecture
 - but 800 years before any New World towns even remotely comparable in scale
- So, New World civilizations got rolling a little later. Why?
 - people entered the New World later, maybe 15,000 to 20,000 years ago
 - so it took longer before there were enough people around?
 - local climate and geography were just slightly less favorable?
 - coincidence? (someplace had to be first)
- on the other hand, New World civilizations were not *that* much later (say, 700 to 3500 years)
 - out of the 10,000 years since the end of the Ice Age
 - or about 100,000 years of modern *Homo sapiens*
 - we could see this as being remarkably close to simultaneous
- Notes on the map of the Andes
 - Since we are so far behind, you only need to know the general location of the Norte Chico region, that the Supe valley is in that region, that Aspero is at its mouth and Caral is inland
 - These are shown in the slides for today, and in the readings
- Setting
 - A band of high, rough Andes mountains runs right along the west coast of South America
 - the rest of the continent to the east of the Andes is low, gentle terrain sloping very gradually through the Amazonian forest to the Atlantic
 - narrow coastal strip
 - the coast is extremely dry desert
 - often cloudy, even foggy, but extremely little rain
 - The coastal desert is cut by many short, steep, narrow river valleys
 - “little Niles”
 - most areas require canals to farm
 - the narrow, relatively steep valleys can be irrigated with short canals within the means of family or village groups
 - most valleys flare out near the coast, making a wider area of farmland at their mouth
 - the largest, richest valleys are to the north, while to the south the valleys get narrower and narrower, with less and less farmland
 - most of the valleys are separated from each other by desert, more than a day’s walk

- each had its own varying conditions and history
 - but for our purposes here, we will often lump many of them together
- western slopes of the Andes
 - dry, very steep, barren to scrubby
 - cut by the upper parts of the coastal valleys
 - agriculture was possible along the valleys using simple canal systems
- the high, rough, wide crest of the Andes
 - a broad band of mountains, valleys, and high plateaus, with good farmland in places
- eastern side slopes steeply and very roughly down towards the edge of the jungle
 - these eastern slopes are where the famous Inka site of Machu Picchu is
- The Andes are extremely ecologically and culturally varied
 - we will look today at just one region, the Norte Chico: a strip of coast and several river valleys a bit north of Lima, Peru
 - civilization also emerged in the coast further north, the southern highlands, and the south coast
 - but later than the cases we will look at, and we don't have time for them
- Maritime foundations of civilization hypothesis (MFAC)
 - In addition to the narrow strips of green river valleys, the coast offers some of the richest sea resources in the world
 - fish (from the shore and from boats)
 - shellfish (collected from coastal rocks and beaches)
 - these produce protein, as opposed to carbohydrates from crops
 - in the absence of many wild or domesticated animals, marine protein could be essential
 - These were exploited very early (long before agriculture), and were extremely productive
 - Mike Moseley has suggested that it was the marine resources, not agriculture, that provided the economic basis for early civilization on the coast
 - we now know that the earliest complex societies actually used a mix of sea and land resources
 - fish and shellfish
 - some industrial crops (cotton for nets, gourds for floats)
 - some food crops (beans, tubers like sweet potatoes and manioc, edible roots like achira, squash, guava, etc.)
 - probably through massive trade of staple foods between coastal fishers and inland farmers
 - this heavy reliance on protein from the sea and large-scale trade in basic foods is different from any of our other examples.
- How important is this difference?
 - differences in requirements for infrastructure
 - other cases: canals may require lots of labor and hierarchy to build
 - Andean coast: boats, nets, etc. may require wealth to build and a small group to operate, but much less than a canal system
 - differences in importance of coordination and organization
 - other cases: farmers need coordinating systems to allocate water, control pests, etc.
 - Andean coast: fishers and shellfish gatherers don't need to coordinate their actions much

- differences in possibility for control, tribute, taxation
 - other cases: canals and fields are easily controlled
 - Andean coast: shorelines and seas are not
- differences in importance and scale of trade
 - other cases: farmers have a single resource base in one region
 - Andean coast: a mixed marine and farming diet requires two different kinds of work in different places
 - possibly large-scale trade between coastal marine specialists and inland farming specialists from a very early time
 - exchange of large quantities of food between specialized groups living in different places may have been important to the development of complex social organization
 - so maybe the factors that led to complex society on the Andean coast were different than in other regions
- Early occupation of the Andes
 - Early hunters and gatherers came across the Bering Strait late in the Pleistocene
 - and spread south through North America and into the Andes by at least 12,800 BC
- Archaic period
 - Foragers began adding a little agriculture to their subsistence practices extremely gradually, with different preferred crops and different timing in different ecological zones
 - beans and hot chili peppers were collected intensively, possibly began to be domesticated, around 9000 BC, maybe even a little earlier (Guitarrero Cave)
 - quinoa (a grain), squash, peanuts in the north by around 7000 BC
 - maybe maize (corn) by 7000 BC in Ecuador, but not much
 - camelids (llamas, alpacas) domesticated maybe by 6500 BC
 - potatoes, coca maybe by 5000 BC
 - a little maize in various places in Peru by 4500 BC
 - cotton maybe around 3500 BC, mainly on the coast
 - note that cotton and gourds were “industrial” crops
 - for fishing equipment (nets, lines, bags)
 - net and line fishing requires lots of cotton, since wool does not stand up to sea water
 - some settlements got to be relatively large and permanent, but with only minor agriculture
 - some were basically foragers or fishers, who farmed small plots or encouraged wild plants in order to supplement their diets
 - many probably made regular seasonal rounds, rather than being fully sedentary
- Late Archaic period (also called “Cotton Preceramic”) roughly 3000-2000 BC
 - no ceramics, no metals, no carved stonework known
 - Same time as:
 - Jemdet Nasr, Early Dynastic, Agade in Mesopotamia
 - Early Dynastic, Old Kingdom, 1st Intermediate in Egypt
 - Long before the Olmecs or Zapotecs started building ceremonial architecture in Mesoamerica (Olmecs: 1400 BC, Zapotecs: 1000 BC at earliest, 500 BC for Monte Albán)
 - Huaca Prieta

- Often said to represent a “typical” late preceramic village on the north coast
 - actually, a relatively large one, occupied for a relatively long period of time
 - occupied for many centuries; we focus on the Late Archaic levels here
 - Built up a mound
 - not mud brick, as in Mesopotamia, but shell, ash, plant material from decomposing abandoned houses, etc.
 - Name means “Dark mound”, describing the soil, rich in charcoal from cooking fires
 - subsistence:
 - mostly fish (net-fishing from simple boats) and shellfish
 - but also collected beans, squash, achira (an edible root), chili peppers, and wild fruits
 - i.e. fishers and foragers, but did not farm much or at all
 - also gathered "industrial" plants
 - fibers, especially cotton, for nets and fishing line
 - gourds for net floats and containers
 - plants for fiber mats, etc.
 - simple technology and crafts
 - hand-knotted textiles, extremely labor intensive
 - example: pyroengraved gourd container
 - like Native American shell mounds on the California coast and San Francisco bay
- The Norte Chico region
 - where a few Late Archaic groups built big, monumental constructions
 - such monuments are often thought to be possible only in complex societies
 - that are able to marshal and organize a lot of labor
 - and complex society is thought to only be possible with an agricultural base
 - but Late Archaic Peruvian societies don't appear to have been either socially complex or exclusively agricultural
 - may be one of those valuable archaeological cases that documents a kind of society that we simply have no historical or modern examples of
 - Aspero is one of the better-studied late Archaic sites with monumental architecture
 - located right on the coast, at the mouth of the Supe river valley
 - a large area of blackened soil, full of charcoal and shells, like Huaca Prieta but more spread out, less piled up
 - plus 11 small flat-topped mounds and 6 larger ones up to 4 m high
 - mostly made of rock and soil piled against hills; some with unworked stone facing
 - only one is apparently mostly artificial
 - Huaca de los Idolos
 - “Huaca” means a sacred place or thing, usually an artificial platform mound
 - earliest radiocarbon date about 3050 BC
 - construction probably started a few centuries earlier (3200 BC?)
 - this was some 300 to 500 years *before* the first Egyptian pyramid (Djoser's, 2686 BC)
 - on a platform 10 m high (32 feet), 30 X 40 m base (about 100 X 130 feet)
 - stairway up the front to a central entrance
 - top covered by rooms with walls of angular rock in mud mortar

- interiors plastered and painted red and yellow
- increasingly restricted access as you move from outside, to stairs, to large court, to inner rooms
 - suggests rituals for different-sized groups
 - presumably, not everyone would get into the innermost, most elaborate spaces
- central room divided by a wall with “clapboard” pattern molded on the outer surface, with T-shaped doorway
- next to it, entered by a separate system of hallways, was a room with a central niche opposite the entryway, with a bench or altar built onto the wall below it
- the “Idolos” are at least 13 intentionally broken figurines found in one of the niches (carefully filled with sand for a later reconstruction)
 - 11 are female, 4 possibly pregnant
 - some have flat-topped hats; others have bead necklaces; wear thigh-length skirts
 - other artifacts include yarn “god’s eyes”, and a colorful “feather arrangement”
- Huaca de los Sacrificios
 - first date ~3,000 cal BC, but this is not from the earliest levels
 - construction possibly started around ~ 3,200 cal BC
 - similar to Huaca de los Idolos: main courtyard with smaller rooms around it
 - a fire pit in the middle of the courtyard, only about 50 cm across, was replastered several times, suggesting repeated fairly small fires: burnt offerings?
 - named for two burials in the floor of one of the smaller rooms
 - An adult with only a gourd and probably some textiles
 - A small infant with a cap covered by 500 beads of shell, seeds, and clay; a gourd bowl, basket, reed mat, several large cotton textiles, and a small carved grinding stone with signs of red pigment on the grinding surface
 - not necessarily sacrifices, but hints of some individuals or families of greater importance - or ritual burials
- surrounding the mounds are 15 ha of dark midden, marking the area where a good-sized village was occupied
 - area comparable to Çatal Hüyük
 - maybe enough people lived there to have built the huacas over a long period of time
- Caral
 - 23 km (14 miles) inland from the mouth of the same river (Supe) where Aspero is
 - one of 17 large mound sites in the Supe valley that probably date to about this time
 - the others have not been as well studied yet
 - 2,700-2,000 cal BC
 - started a few centuries after Aspero... or so it looks for now
 - grossly similar to Aspero, but
 - much bigger mounds, much more labor-intensive
 - much bigger total area (65 ha total, vs. 12 ha for Aspero)
 - distinct residential areas with well-preserved architecture
 - inland location suited to farming, vs. Aspero's coastal location for marine resources
 - 65 hectares: about 3/4 the size of the entire SSU campus

- 6 large platform mounds with rooms on top
 - much larger than any of the Aspero mounds
 - largest is about 140 x 150 meters at the base (450 x 500 feet), and about 20 meters tall (60 feet)
 - fully artificial, built of bagged stone fill, called *shicra*
 - surfaces were faced with angular stone, then covered in smooth, colored plaster
 - stepped sides, stairways up the front
 - rebuilt multiple times, each time covering and enlarging the previous mound
 - several large elongated natural stones set upright may have been the focus of ritual
 - one located in a central sunken space atop the main mound
 - another at ground level, aligned with the stairway of another mound
- plus some sunken circular courts
- "fire altar" at one side of the plaza in front of the "amphitheater" mound
- adjacent complexes of well-built rooms
 - some probably for ritual activities
 - some have ceremonial (not cooking) hearths
 - maybe also for collecting offerings, instructing visitors, etc.
 - but many probably were dwellings
 - Shady suggests for high-status people associated with ritual
 - three different "qualities" of these rooms
 - several areas of mud-daubed cane houses, considered to be low-status dwellings
 - several areas of adobe-walled rooms, considered to be middle-status dwellings
 - one area of stone and adobe walled rooms on low mounds, considered to be high-status dwellings
- the excavators guess that the population was in the thousands, and call this urban - a city
 - they may be overstating the case a bit
 - Haas and Creamer suggest just a few hundred
- inland location pretty much requires that the people practiced irrigation agriculture
 - evidence of beans, squash, guava, and cotton (no maize yet)
 - but lots of fish bone and shell were also found
 - two possible explanations:
 - Caral people regularly traveled 14 miles to the coast, or had family members who spent time at the coast
 - large-scale exchange of food with coastal people, perhaps those living at Aspero and/or similar sites
- overall impression:
 - monumental architecture implies mobilization of lots of labor, which usually implies leadership and status differences
 - but were the mounds built all at once, or did they grow through many repeated, more modest rebuildings that required less impressive labor control?
 - excavators argue that the largest mound was, in fact, built in just one or two episodes
 - ceremonial architecture (and paraphernalia found at Aspero) suggests ritual specialists

- differences in residential architecture imply differences in status
- but probably not really "urban" in density or scale
- if there was large-scale exchange of staple foods with coastal people, that would suggest a fairly complex economy
 - that could have created opportunities for some people to become better off than others
 - or that could have created opportunities for control, taxes/tribute/tithes, etc.
- The debate about Caral and the origins of complex society
 - most of the authors you read for this class take the monumental architecture to imply complex society
 - Two main positions:
 - Shady, Pringle, Haas, Creamer: complex society emerged inland, as at Caral,
 - due to processes involving irrigation agriculture, just as in the rest of the world
 - Moseley, Sandweiss: complex society emerged on the coast, as at Aspero,
 - due to a different set of processes based on fishing and shellfish collecting
 - with minor (but essential) contributions from agriculture
 - A convincing middle ground position:
 - Burger: emphasizes the complementary roles of seafood and agriculture, but thinks that rich sea resources were essential
 - in addition to crops to eat, fishermen would have needed cotton for nets and lines, and gourds for net floats
 - as populations grew, only farming could provide enough cotton and gourds
 - Sandweiss and Moseley accept this
 - the point is that seafood was *essential* to the development of complexity
 - not that it was the *only* food
 - it was the *conjunction* of the two that made large, permanent settlements and monumental architecture possible
 - The debate hinges on several questions
 - did monumental architecture first arise on the coast, or inland?
 - if Caral was first, then agriculture, not seafood, might have been the key factor
 - work is ongoing to get better starting dates for the mounds at Aspero
 - Was Aspero's architecture big enough to imply complex society?
 - if not, maybe complex society first appeared at Caral, supported by agriculture
 - was Caral really a mostly agricultural society, or did it also really depend on seafood?
 - its inland location and the plant remains in the garbage indicate that it was a farming community, dependent on irrigation
 - but they also consumed a lot of seafood obtained either directly or, more likely, by trade with coastal maritime specialists
 - were these societies really "civilizations" at all?
 - Burger argues that large monuments may not necessarily imply complex, stratified social organization at all
 - was Caral really urban, complex, or hierarchical?
 - Haas and Creamer 2006

- good general discussion of complexity, civilization, and states
 - look at it to help synthesize some of the themes of the course
- they propose that Caral and other inland sites provided cotton
 - that the coastal fishers needed
 - and could not raise for themselves due to lack of suitable land
- so they would go to the inland sites seasonally
 - trade lots of marine food for the cotton
 - feast in large groups with the operators of the ceremonial sites
 - and work on remodeling and expanding the ceremonial mounds
- Haas and Creamer see the origins of complexity in some pioneers who
 - moved up the valley as climate change reduced the availability of wild plants on the coastal hills
 - started raising larger quantities of crops
 - (which had already been domesticated elsewhere but were only of minor economic importance)
 - and used the crops to attract and direct the labor of coastal people
 - thus becoming a better-off elite
- this is just a guess, still to be tested
 - it is not very different from Moseley's model, except that it specifies a few more details about how the exchange worked which are still hypothetical
- Generalities about the coastal Late Archaic
 - the Supe valley may have been exceptional
 - probably started as a marine adaptation with the smaller center at Aspero
 - but added inland irrigation farming sites like Caral earlier than elsewhere
 - from that point on, subsistence was based on large-scale exchange between coastal fishers and up-valley irrigation farmers
 - supporting the huge monument construction at Caral
 - settlement
 - small, uniform hamlets, few larger settlements or centers
 - nothing approaching a city (unless maybe at Caral)
 - inland towns (still within walking distance of the coast) probably produced more plant food, but have just as much marine debris
 - suggests either exchange or dispersed kin groups who shared their products
- Who built and used the monuments?
 - it probably varied.
 - some ceremonial sites have settlement around them, others do not
 - some estimated between 1000 and 3000 people - maybe enough to build the monuments
 - at sites with smaller monuments and larger populations, the monumental architecture was probably built by and for the people who lived there
 - at sites with larger mounds and/or smaller resident populations, they probably got help from residents of neighboring sites

- mounds at Caral, maybe Aspero, and others seem too big to have served only the people who lived there
- this collaboration could have fostered leadership, inequality, mobilization of resources, etc., encouraging social complexity
- maybe in exceptional cases, labor was provided by the people who lived there, plus lots of visitors not only from the same valley, but also from other valleys
 - this multi-valley function might fit Caral and the 16 other Preceramic monumental sites in the Supe valley
 - the total labor to build and operate all these sites seems far too much for just the population of the Supe valley
 - so maybe they served lots of pilgrims from a large region
 - who brought their labor and offerings to one or another of the Supe sites
 - maybe depending on the cult or deity associated with each complex
 - this could have contributed to forming substantial, integrating institutions and regional organization
- did irrigation projects contribute to social complexity?
 - no big ones, but definite small-scale irrigation
 - But these were NOT huge capital investments
 - And early Spanish records show that much later, extensive canal systems were managed by local groups without an overarching authority
- did warfare contribute to social complexity?
 - apparently not much
 - sites were not in defensible locations, no site walls
 - but, at site of Asia:
 - Asia is a central coast site (far south from the Supe valley), nothing to do with China!
 - 8 trophy heads (severed human heads, often with a carrying cord, kept for show or ritual purposes - not “trophies” in the common sense!)
 - wooden clubs with shark teeth
 - maybe this site or valley were exceptions to the general Archaic pattern
- were Late Archaic societies like that of the Supe valley socially stratified?
 - few goods that could not be produced by any household
 - little that could serve as distinctive wealth
 - little to no specialized production
 - monumental architecture of coastal centers suggests some stratification
 - all have a focal, central area with restricted access
 - suggesting that a minority in the society had access to some rituals, while a majority watched just the public aspects performed outside the summit walls and on the steps
 - rituals on such impressive monuments probably required ritual specialists, who may have had elite status
- residential architecture
 - poorly preserved, poorly studied at most sites
 - Caral has areas with different types of architecture, some residential, maybe indicating residents with different social standing
- no markedly elite burials, although some were definitely richer than others

- at various sites, minor differences in grave goods were mostly by sex
 - males tended to be buried with more stuff
- at site of Asia, 28 burials
 - most had 2 to 4 textiles, a few had up to 8
 - one had 12, plus various gourds, bone tools, wooden tubes, a comb, a sling, etc.
- Huaca de los Sacrificios at Aspero
 - plain burial of adult male
 - vs. very rich burial of infant
 - was the infant someone of high status, or a dedicatory offering?
- monumental architecture
 - what were the Preceramic monuments and associated facilities for?
 - they have no storage features or craft workshops
 - so they have no obvious economic function (vs. Mesopotamia, Indus)
 - not residential (vs. China or possible priest/administrator residences in Mesopotamia)
 - not mainly mortuary (vs. Egypt, Chinese burial mounds)
 - apparently mainly used for ritual and little else
- how could such monuments be possible without:
 - much agriculture?
 - notable social stratification that would suggest leaders?
 - or maybe there was some stratification at Caral?
 - concentration and redistribution of surplus production to finance the work?
 - cities, warfare, craft specialization...??
 - recordkeeping or writing?
- how was the labor to build them mobilized without much social hierarchy to arrange it?
 - a possible alternative to permanent status hierarchy: “cargo” system
 - “cargo” = “responsibility” or “task” assigned to someone
 - once the task is done, the person gives up the role and someone else is picked to do it the next time
 - capable people rotate through offices of leadership
 - suggested because it is still in common use in the Andes and Central America
 - today, typical tasks are organizing a festival or being mayor for a term
 - this is a way to coordinate group activities (like building monuments) without establishing a permanent status hierarchy
 - although people who have successfully completed numerous cargos become generally more respected and important
 - a successful adult should hold a reasonable number of cargoes during his/her life
 - can we project this 4000+ years into the past? Not for sure, but we can suggest it
- In short: was the society of the Supe valley in the late Archaic period a civilization?
 - and if so, was its origin really different from other cases?