− The rise of complex societies in the New World was 100% independent from the Old World
− 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
− Despite many attempts to show transpacific contacts (such as between Japan and the New
  World) outside of the Arctic, none has ever stood up to scrutiny
− Some legitimate studies compared Japanese Jomon pottery to early ceramics from Ecuador
− but only some features matched, many were very different
− and the dates for some "matches" proved to be over a thousand years apart, so it had to be
  coincidence
− Even so, it is not impossible that at some point there was some small-scale contact across the
  Atlantic or Pacific that we have not detected
− maybe a Roman ship got blown to Brazil, or some Japanese fishermen drifted to Mexico
− but so far there is absolutely no convincing trace of such an event
− if it ever happened, it evidently had no significant effect on the local cultures
− that would not be surprising: imagine that a bunch of ragged Egyptian or Japanese sailors
  who couldn't speak the local language landed in an inhabited region, probably in a sorry
  state from an unexpectedly long journey, needing food, water, and supplies
− they probably would not have brought along potters, metallurgists, or other people with
  useful skills; probably none would have been literate
− they probably would not have more than a few random items on board to trade
− they certainly would not have the authority to get people to build monuments, the know-
  how to preach their religion, etc.
− so even if such a contact occurred, odds are that it would have had little impact
− So why does it matter that the New World is so separate from the Old?
− Because recognizable civilizations emerged in the New World, too
− 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
− The first monumental architecture in the New World was built in Peru around 3000 BC, as
  we will see
− but how complex the society surrounding it was is debated
− no real cities
− differences in status may be implied by different qualities of housing, but not by burials
  (yet!) or production of many elite goods
− and this was restricted to just some small areas of the Andes
monumental architecture and possibly more complex societies began to spread over a bit more of the Pacific coast of Peru only at least 1000 years later, after 2000 BC, in the Initial Period.

- even then, still no cities, and arguable complexity
- 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, but there is no consensus on that yet

- Compare this timing to:
  - Late Uruk period 3400-3100 BC (400 years earlier)
    - with writing and a long history of monumental architecture already
  - Egyptian unification around 3050 (just barely earlier)
    - but again, with a long history of high-status leaders, military conquests, craft specialization, a few cities, etc.
  - 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 (500 years earlier)
    - rammed-earth walls, large towns, "palaces" by early Lungshan 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)
    - Shang Dynasty huge cities, royalty, complex economy and society by 1700 BC, roughly contemporary with the earliest complex societies of the New World, which were much smaller in scale and probably simpler in organization (or maybe not…?)

- So, New World civilizations got rolling a little later. Why?
  - people entered the New World later (crossed the Bering strait in the late Pleistocene, maybe 15,000 to 17,000 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, the New World civilizations were not that much later (say, 700 to 3500 years)
    - compared to 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
  - I have not posted a separate map, since for this class you only really 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, and the general location of the Casma valley
  - 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 actual rain

some areas have "fog" vegetation (lomas vegetation) on coastal hills

often seasonal, unable to support large populations

The coastal desert is cut by many short, steep, narrow river valleys

"little Niles"

most areas require canals to farm, but the narrow, relatively steep valleys can be irrigated with short canals within the means of family or village groups

some 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, wide crest of the Andes

a broad band of mountains, valleys, and high plateaus

the high valleys, especially the “intermontaine” valleys that run parallel to the spine of the Andes, contain good farmland

even the floors of these valleys are high (2,800-3,500 meters; 9,000 - 12,000 feet)

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 at two regions on the coast: the Norte Chico and the central coast of Peru

civilization also emerged in the southern highlands, the south coast, and the north 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

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 used a mix of sea and land resources, but this is still different from any of our other examples.

How important is this difference?

- differences in requirements for infrastructure
  - canals require lots of labor, coordination
  - 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
  - farmers need elaborate coordinating systems to allocate water, control pests, etc.
  - fishers and shellfish gatherers don't need to coordinate their actions much

- differences in possibility for control, tribute, taxation
  - canals and fields are easily controlled; shorelines and seas are not

- differences in importance and scale of trade
  - farmers can be relatively self-sufficient
  - a mixed marine and farming diet requires two different kinds of work in different places
  - there may have been large-scale trade between coastal marine specialists and inland farming specialists from a very early time
  - this 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 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 12,000 BC

Archaic period

- Agriculture was developed and adopted 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
- some settlements got to be relatively large and permanent, but with only minor agriculture
- some may have farmed small plots or encouraged wild plants in order to supplement hunted, gathered, and fished foods
- 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
Emergence of civilizations F 2007 / Owen: Andes: Background and Norte Chico   p. 5

- 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, perhaps exceeding 1000 years
  - Built up a mound
    - not mud brick, as in Mesopotamia, but shell, ash, plant material from decomposing abandoned houses, etc.
    - Name means “Black 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: gourds, plants for fiber mats, fibers for nets, etc.
    - simple technology and crafts
      - hand-knotted textiles, extremely labor intensive
      - example: pyroengraved gourd container
    - comparable to Native Americans along the California coast and San Francisco bay
- The Norte Chico region
  - where a few Late Preceramic 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
    - 11 small flat-topped mounds and 6 larger ones up to 4 m high
      - mostly made of rock and soil piled over or against hills; some with unworked stone facing
      - only 1 is apparently mostly artificial
    - Huaca de los Sacrificios
      - “Huaca” means a sacred place or thing, usually an artificial platform mound
      - construction possibly started around ~ 3,200 cal BC
      - first date ~3,000 cal BC, but this is not from the earliest levels
      - this was some 300 to 500 years before the first Egyptian pyramid (Djoser's, 2686 BC)
      - large 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
− Huaca de los Idolos
  − earliest radiocarbon date about 3050 BC, probably started a few centuries earlier (3200 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
  − 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 up to the level of the base of the niche
  − 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
  − 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 offerings include yarn “god’s eyes”, and a colorful “feather arrangement”
  − 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
  − grossly similar to Aspero, but
    − much bigger mounds, much more labor-intensive
    − much bigger total area (65 ha total, vs. 12 ha for Aspero)
    − residential areas with well-preserved architecture
    − inland location for farming, vs. Aspero's coastal location for marine resources
  − 2,700-2,000 cal BC
    − started a few centuries after Aspero… or so it looks for now
  − 65 hectares: about 3/4 the size of the entire SSU campus
  − 6 large platform mounds with rooms on top
    − much larger than 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*
- stepped sides, stairways up the front
- surfaces had been covered in smooth, colored plaster
- several natural stones set upright on these mounds, 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 large 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 profit and become better off
− or that could have created opportunities for control, taxes/tribute/tithes, etc.
− The debate about Caral and the origins of complex society
− it dates within the Late Archaic period: about 2,700-2,000 cal BC
− and it has large monumental architecture
− yet its inland location and the plant remains in the garbage there indicate that it was a
  farming community, dependent on irrigation, not just the naturally-watered floodplain
− with a lot of seafood obtained either directly or, more likely, by trade with coastal
  maritime specialists
− Moseley's MFAC hypothesis emphasizes that seafood supported Late Preceramic
  complex societies, with minor (albeit essential) contributions from agriculture
− Burger's version is a bit more fully detailed and balanced, emphasizing the
  complementary roles of both, but still acknowledges that Late Preceramic complex
  society probably would not have been possible with the rich sea resources
  − Burger also argues that large monuments may not necessarily imply complex,
    stratified social organization
− Pringle says that since Caral is earlier than any comparable "urban" center on the coast,
  seafood cannot have been the crucial factor.
− instead, farming was the basis for large sites and monuments, just as in the rest of the
  world
− but: was Caral really "urban" or "complex"?
− was it really "first"?
− was it really independent of marine resources?
− Shady, Haas, and Creamer say that
  − this is one of the first places where people shifted from marine foraging to irrigation
    agriculture
  − but did they really "shift", if they ate so much seafood?
  − this is a very large site with large monuments and presumably complex social
    organization, unprecedented in scale at this date, with 16 other large, related sites in
    the same valley
  − so it may be where the pattern of large ceremonial centers first arose
− Sandweiss and Moseley reply:
  − Aspero, near the mouth of the Supe valley, is several centuries earlier and has
    significant monumental architecture
  − earliest date about 3,000 cal BC, and it is not on the earliest stage of construction,
    so building probably started earlier: 3,100 or 3,200 cal BC
  − so Caral is not the first such site
    − (although it is much larger)
  − Aspero is on the coast, and people at Aspero got virtually all their protein from the sea
  − so marine resources were essential
  − and probably supported the beginning of a pattern that later was elaborated at Caral
− recent versions of MFAC emphasize that
  − seafood was essential for protein
plants provided carbohydrates
it was the conjunction of the two that made large, permanent settlements and monumental architecture possible
My interpretation of their point here:
the point is that seafood was essential to the development of complexity
not that it was the only food

Haas and Creamer reply:
Caral and the other inland Supe sites are much bigger than Aspero
[I'm not sure what that proves here, though]
Aspero might not be earlier than some inland sites, since many are still not dated
[true, but it is the oldest we know of, until we discover otherwise]
The settlement and building at Aspero depended on domesticated cotton, gourds, etc. for fishing gear, so agriculture was necessary.
[this is in agreement with the modern version of MFAC.]
The marine food at Caral suggests that Caral produced industrial plants for coastal fishers, who in exchange produced seafood for inland farmers, making the coastal developments dependent upon substantial irrigation agriculture
that is, Aspero did not produce its own crops by small-scale farming on nearby naturally-watered floodplain
[this may have been true when Caral was flourishing
but that does not tell us what supported the people at Aspero several centuries earlier
they could well have raised their own minor crops at that time without irrigation]

Haas and Creamer see Caral as proving that committed, irrigation agriculture was necessary for urban, complex societies to arise, just as in the rest of the world
they seem to take this as disproving MFAC
Moseley and Sandweiss see Caral as confirming that seafood was essential to the process
eye take this as confirming MFAC
their point is that Pringle, Shady Solis, Haas, and Creamer are attacking an obsolete, simplistic version of MFAC that Moseley and Sandweiss no longer support

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
as in their earlier article, 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 quantities of crops
  − (which had already been domesticated elsewhere but were only of minor economic importance)
  − and used them 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 of the coastal Late Archaic
  − subsistence
    − mostly fishing and shellfish
    − sea birds, sea mammals
    − some wild plants
    − some cultivated plants, but not a lot
      − mostly cotton, gourds, reeds
    − for fishing equipment (nets, lines, boats, bags)
      − net fishing requires lots of cotton (wool does not stand up well to sea water)
    − housing, bags, clothing, etc.
    − sweet potatoes, manioc, achira
  − 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
    − some ceremonial sites have settlement around them, others do not
      − some estimated between 1000 and 3000 people - maybe enough to build the monuments
      − some or all probably had to bring together people from multiple settlements for labor
      − possibly encouraging social complexity
  − Who built and used the monuments?
    − it probably varied.
    − at the sites with smaller monuments and reasonable populations, probably the people who lived at the sites
    − in other cases, probably the residents, plus others from neighboring sites
– Aspero, Caral, and other sites seem too substantial to have served only the people who lived there
– maybe in exceptional cases, the people who lived there, plus large numbers of visitors not only from the same valley, but also from other valleys
– possibly for 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
– irrigation works
  – no big ones, but definite small-scale irrigation
  – But these were NOT cases of huge capital investments
  – And early Spanish records show that much later, extensive canal systems were managed by local groups without an overarching authority
– warfare
  – apparently not much
  – sites not in defensible locations, no site walls
  – but, at site of Asia:
    – Asia is a central coast site, 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
– stratification
  – 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 had to watch just the public aspects performed outside the summit walls and on the steps
    – we can imagine that 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
    – extensive areas of cane-walled houses
    – areas of rooms associated with each major mound, with stone and mortar walls, both floors and walls plastered
      – some apparently used for cooking and living in
− these were presumably dwellings of higher-status people
− 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 for?
  − they have no storage features or craft workshops
  − so they have no obvious economic function (like Mesopotamia, Indus)
  − not residential (like Mesopotamia, China)
  − not mainly mortuary (like Egypt)
  − mainly used for ritual (like Maya)
− how could such monuments be possible without:
  − much agriculture?
  − notable social stratification that would suggest leaders
  − or maybe there were some at Caral?
  − concentration and redistribution of surplus production to finance the work?
  − cities, warfare, craft specialization...??
  − recordkeeping or writing?
  − closest thing to recordkeeping is the possibility that bagged fill (bag included) may be a way of keeping track of work provided to the project
− 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
    − rotating capable people 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 cargos during his/her life
− can we project this 4000+ years into the past? Not for sure, but we can suggest it
− was the society of the Supe valley in the late Archaic period a civilization?