

**Chapter 9**

Egalitarian is most ideal situation, everyone has influence on decisions- only really work on a familial level

in bigger societies, leaders are chosen to marshal and organize labour- ppl agree he has power-

Social Complexity – organization of society basically a hierarchy

How can social complexity be seen in archeology?

- Seeing massive structures that would have required many people ex. Pyramids, indicate that society would likely have had a leader that designated/organized labour
- Burial also indicates presence of social structure some archer guy buried with polished stone shin guards and other stuff
- Megalithic – big stone structures – example in Europe stone hedge

\*\*Stonehenge is the best known of Europe's megalithic monuments. Built in stages beginning more than 4,200 years ago, Stonehenge required the organized and coordinated labor of thousands. The ability of a relatively small group of leaders to conscript, organize, lead, and carry out the tasks necessary to construct Stonehenge implies the development of a complex social, economic, and political society.

Stone hedge – initially just a circular plot of land, later big (2m) bluestone brought in from about 225 km then stones from 30 km away called sarsens - 2 types- trilithons? About 10m

Around the trilithons are smaller stones

Cap stones sit horizontally on vertical stones – have divots on them to lock the two stones in place

What was important in the building of stone hedge was not the structure itself but the process of building it

Many megalithic structures around Europe

Ex. Carnac has more than 3000 upright stones arranged into rows stone hedge has about 100

Initially thought – complexity had to come after food domestication – cause the vastness of food development are what require food domestication HOWEVER NOT TRUE many places found where factors ex environment creating a food surplus and a guy controls that source increasing his importance, where social complexity came before agriculture

Göbekli Tepe in Turkey

- Hunter, gatherers,
- Large blocks of stone pillar erected on hill tops in circles \*not habitation sites
- Many stones have carving on them
- Most likely some ceremonial aspect
- Stones are local (30 km)
- Social complexity needed to make monuments before the rise of agriculture

The Watson Brake Mound group and the Poverty Point site, both in Louisiana

- geometric earthworks at the site. Construction of the earthworks at the site began more than 3,500 years ago
- 6 ridges at poverty point , ppl lived on ridges, made using a basket carrying dirt
- Mound A – ppl say 90 days to make it indicates a very good organization of labour
- Not agriculture society

In resource rich environments, ppl have the opportunity to move into socially complex structures

In some places agriculture lead to social complexity :

Near East

- Jericho in Israel , 9000 B.P

Built massive stone wall

- Catalhöyük in Turkey, 9000 B p

Had 2000 interconnected homes but no streets or roads, to get around move around rooftops and enter through holes in the roof, held at peak 8000 ppl

Not a city tho, no economic differentiation, no public architecture, no separate burial ground for elites, lasted 1000 yrs

- Mesopotamia
  - Hassunan: 8,000–7,200 B.P.

Pretty small , hints of familial egalitarian structure but hints of social structure, northern Mesopotamia

- Samarran: after 7,500 B.P.

Fish important, agriculture difficult cause less rainfall create irrigation channels, canals indicate social complexity person needs to lead construction , southern Mesopotamia, walls, evidence of social stratification, more buried and elaborate graves, community granaries, pooling resources means control exists

- Halafian: 7,500–6,700 B.P

Agriculturalists, buildings similar to samarran, more ceremonial, important ppl buried in them

Mesomericia

- Regal – Ritual centers of Olmec in Mexico ex. San Lorenzo, La Venta, Tres Zapotes

Resource rich, around 5000 yrs ago, resources are not evenly spread located within specific areas, families close to important resources can increase their value/prestige and over time become the elites, social stratification occurs, over time villages increase in importance and the elite class forms, centers known as regal-ritual centers

Regal- ritual centers- where the elite live maybe not more than 1000 ppl except san Lorenzo (largest) different from cities cause not a lot of ppl living their , cities focused on political and religious functions

Found large stone faces in Olmec, likely rulers/leaders of the time, hired craftsmen to "immortalize" them, have found 17 of them found, 10 of them found in San Lorenzo

Olmec also made aqueducts to make drinking water, leaders control

led up to 2000 km and villagers gave allegiance to the ritual centers, and villagers get some food,

Leaders also got access to other resources from different ritual centers, ultimately increasing their power and authority

Masks/artworks also found in Olmec clearly done by craft specialists means there is enough resources for them to go out and not grow/find their own food

South America

- Norte Chico in Peru

Very dry place, annual rainfall less than 5cm, small rivers, 4000-5000 yrs evidence of monumental architecture

Ex. Caral (in Norte Chico) more than 18m high, flat topped pyramids, 5 smaller pyramids indicate a central plaza, have elaborate room complexes,

Irrigation channels also present in Peru sites, need for these is a possible cause for the increase in social complexity

Start using gold metals in the coast about 5000 yrs ago

\*\*starts with hunter gatherers taking advantage of resources and then agriculture comes along

Areas start to intermingle, Chavin - religion unifying area, linked with art, new techniques, textiles

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Assignment

- Directly link to class
  - Article should be longer than 3-4 paragraphs less than 3-5 pages
  - Not peer reviewed scientific journal
  - No Videos
  - Printed Copy and bring to class
  - Put name/ID on assignment
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### Chapter 10 - An Explosion of Complexity: Mesopotamia, Africa, and Europe

- Complexity exists on a spectrum, not you are or aren't complex - a continuum
- Switch from chiefdoms to states, a.k.a. authority of leader to convince ppl --to--power of leader that can demand obedience from leader
- Complexity didn't occur everywhere at once
- Characteristics of Civilization
  - Food surplus, - not everyone is making food (leaders) so others must make enough for themselves and the non workers
  - Large, dense populations, - increase in food pop= increase in pop= increase in challenges (ex food distribution, property ownership, disputes, waste management, ) challenges reinforce importance of government, record keeping becomes important
  - A system of record keeping, - track food, people, resources - enhances power of leader
  - Social stratification, - born in class remain in that class
  - Formal government, - work for state/wield power of state, collect taxes, more organized and dominant compared to past
  - Labor specialization, - increase in specialization, require time to develop skill ( ex. Scribes, Artisans, ) important to leader cause it makes him appear distinct and special because he can have customs made things that commoners can't have shows neighbours the same (justifies leadership=enhance their leadership)
  - Monumental work - enhanced/justified leader

\*\*similar processes occurred around the globe

MIDDLE EAST

Southern Mesopotamia

- (flood plains- flooding and then dry every year ) ex. Tell al 'Ubaid, Tell Oueili, Eridu, 'Usaila, Ur
- Survival due to irrigation systems = increase food= increase in pop- allows elites to come in and take control
- Elites were often religious elites - temples constructed become locations of power
  - Process happens in many places, largest centers Uruk (5, 500 BP) first real city, Eridu (5 200 BP) was also pretty big
  - To grow from small pop to center - food increase/ pop increase plays a role, but people moving inwards to center played a role as well cause of conflict/competition between centers means there's safety in bigger centers, can't have too many people in center because then no one will be making food, so protection must be offered to people out of main city, results

in the development of militaries

- About 20 of major cities - city states
- Tracking food/crops were done by making clay tokens- 16 diff tokens used to keep track of diff crops note: this was before city states and then after a while tokens exploded 600 tokens, way to many so about 55 00 yrs ago create clay vessels called envelopes, put token in there and seal up , put impression of token on the outside of envelope, then realized the symbols of tokens were important, so tokens become impressions on clay, then by 51 00 tokens are gone stylus is used and eventually writing appeared
- More complex food records = writing , gives leader more power

#### AFRICA

- Other Cities: Marrow way
- Great Zimbabwe (1100 - 1600 AD)
- houses of stones community Stone complex society
- One reason u don't hear about Zimbabwe, when Europeans first came and saw the great stone structure thought it had to be someone else
- Largest of about 200 settlements
- Had a massive wall
- Great enclosure - where elites lived , had precise granite bricks , tall and thick,
- About 18 000 ppl, probs the center of control of surrounding areas
- Food that ppl outside of great enclosure eat sheep and goat while elites ate cattle
- Resource that they controlled was gold, connected to wide trade network

#### Minoan Crete

- Island was uninhabited for a long time
- Lies on a crossroads of a trade network, climate is perfect for olive oil production which is highly valued
- Knossos - is the city center state called palace, destroyed by earthquake
  - Dates to 3,880 B.P.
  - Covers 20,000 square meters (5 acres)<sup>1</sup>
  - 1,000 separate rooms
  - May have inspired the Greek myth of the Labyrinth and Minotaur
  - After destruction was rebuilt better and more ornate because they had wealth

#### Egypt

- Climate allows for great preservation of stuff
- Every year Nile river would flood creating fertile land, ppl settled along Nile
- Up stream of Nile = upper Egypt
- Down stream of Nile = lower Egypt
- Upper Egypt: city states developed , social stratifications, different areas of power developing, prior dynastic (before pharaohs )
  - This
  - Nagada
  - Hierakonpolis
- \*similar stuff happening in lower Egypt
- Around time when writing developed from need to keep records and taxes later evolved into plus 700 hieroglyphs
- In Egypt hard to say how writing system came to be, just know started with some clay tags
- Hieroglyphs decoded using Rosetta stone, had 3 different languages (Greek, hieroglyphs,...) said the same thing in all 3 knew Greek so could learn hieroglyphs
- Narmur ? First leader to unite upper and lower Egypt
- Increasing number of monumental structure
- Pyramids started small, single story burial chambers initially for elites until when a pharaoh, Djoser, built a stepped pyramid, starting the pyramid age, only for burying pharaohs
- When pyramids were built they used to be smooth sided
- Khufu's pyramid - had the largest pyramid, tallest human made structure until the Eiffel tower
- Many ceremonial structures as well
- Abu Simbel Statues: sunlight aligns or something
- Nile river no longer floods cause of a dam

#### Chapter 11- An Explosion of Complexity: The Indus Valley and China (old world)

## Chapter 12 - An Explosion of Complexity: Mesoamerica (new world)

- Mayans prominent in popular media, also includes Mexico, Guatemala, Honduras, and Belize
- Ppl thought world would end in Dec 21, 2012 cause a Mayan calendar stopped at that day
- Mayans:
  - Controlled a lot of area
  - Didn't disappear, over 5000 Mayan speaking ppl around
  - Culture has shifted over time,
    - Middle Pre-classic (3000 yrs ago)
      - rise of complex society
      - Begin to see raised Plazas (before pyramids), structures, reuse old buildings, just build on top, bad and good for archeology
      - Good cause great preservation, bad cause hard to reach
      - Plaza's before Olmec
    - Late Pre-classic (2,400 yrs ago)
      - Monuments
      - Defensive structure
      - Increase in violent materials
      - Increase in agricultural techniques ex
        - sondiled? Cut and burn for a few years move and repeat while old place regenerates
        - Ridged fields, above flood zones
        - Irrigation canals
        - Hill slop terraces - increase area for growth
        - Kitchen Gardens
      - Had hieroglyphics focused on recording royal history, battles basically justifying ruling class, translation is difficult no Rosetta stone
        - Ornate and complex
      - 4 known codex's (books they wrote) cause Spanish burned them for religious reasons, a lot of info lost
      - Spanish arrivals focused on destroying Mayan writing and architectural features still over 15000 Mayan stuff around
      - End of pre class- social structure set: had a king, had stone structures, iconography of death, base 20 numbering system , hieroglyphs, ball game, chocolate drink for ceremonies
    - Early/Late Classic (250-600 yrs ago)
      - Pinnacle of Mayan society
      - Making pyramids, new on top, old on the bottom
      - Different than Egypt - one pharaoh over a lot of land
      - In Mayan each city state had it's own ruler, smaller pop in each state
      - State also known as regal city state
      - Still had main state with religious powers
      - Cause land was less fertile so more population were farmers about 90% of ppl about 15% more ppl than ppl in Indus valley
    - Terminal Classic (800 yrs ago): , in southern part of Mayan
      - Southern large cities being abandoned , No new buildings, no clue why , Mayan society starting to collapse a little before when Spanish arrived
      - Collapse of society : no certain reason, many theories
        - Not enough space for agriculture
        - Drought - but why where only the south effected then?
        - Mayans went through a cycle of growth and recession, recession lasted too long?
        - Probably a combination of all
  - Cocan? - Mayan city- in Honduras
    - Had a series of rulers

- Did a isotope on the bones found
- Found that all commoners were native to cocan but only 1/2 of the ruling elite were native to canan other 1/2 were from many different places
  - Ex. In European kingdoms all ruling classes were related cause they would send a daughter to neighbouring state to forge alliances
  - Appears that this was occurring in cocan as well , that a political structure was allowing for many independent city states to co exist peacefully
- Teotihuacan:
  - In highland Mexico, another very different civilization developed, centered at its capital, Teotihuacan. The later Aztecs called it that in their language. So impressed were the Aztecs at the site that was a ruin even in their day, the name they gave it means, in their language, "City Built By the Gods.
  - The pyramids built at Teotihuacan are the most massive and monumental of any in the New World
    - Pyramid of Sun and Moon
  - Apartments that house a lot people , have nice wall paintings, residents appear to have both high and low class
  - However highest of the high class lived separately
  - At its peak, more than 1,500 years ago, Teotihuacan's population may have topped 200,000. Its geographic reach was enormous. Teotihuacan's military power was extensive and led by a general called Fire is Born, in the fourth century A.D. Their armies subdued some of the most powerful of the Maya city states
  - Eventually city collapsed - no enviro catastrophe, no evidence that they were taken over by hostile forces
    - Hypothesis- downfall due to internal circumstances
  - Indication that trading/ambassadors were found in other place i.e peaceful interaction between groups was present
  - Interactions with Montialban?
    - A city state not as big as Teotihuacan
    - Built on a hill
    - Flattened top of hill and built on it, sign of elites taking power to undertake big projects,

\*\*Aztecs rose after teotihuacan, they were pretty impressed with the Teotihuacan, apparently they took pilgrimages to the Teco city, a lot we know about the teotihuacan comes from the Aztecs, they believed that their city has to have come from the Gods

- Aztecs:
  - Valley of Mexico
  - When expanding into other ppl territories, they would allow the villages to live normally, with their own culture/religion, language only catch was that they had to pay tribute/taxes like gold
  - Textbook says they were kind of like crime syndicate paying for protection, like pay up u live, but if u don't
    - Ex one village was trying to skip paying and the killed off the merchants that were working for the Aztecs (recording how much was made and how much was due)
    - Aztecs, mad, killed of 2000 ppl for every merchant they killed
  - Aztecs were ppl who were in power when Spanish arrived, Mayans still around but weren't the most powerful, a lot we know about Aztecs came from the Spanish cause the Spanish were impressed about the structure and hierarchies and wrote it all down
  - Spanish were in awe of tenohtitlan
  - Spanish cause the downfall of the Aztecs and other nearby places through combination of :
    - Different weapons
    - Spanish has horses, Aztecs were confused and scared of them, first time they saw them they thought the horses were attached to the people and that the Spanish were gods
    - key downfall = disease, old world diseases were unknown in new world

### - Chapter 13

South America along Andes mountains , along west coast

- Moche: 1,700 B.P
  - On Peru coast line, controlled about 600 km
  - Had a pyramid of the sun - built in 8 diff phases, 40m high, clay/ceramic/adobe bricks,
  - Pyramid of the moon- 20 m high, marks made on bricks, marks that identifying they were part of this great process
  - No writing, just an identifying mark
  - Elaborate burials for elites (warrior priests)
    - Gold, elaborate pottery, jewelry, buried with animals, other people/kids to accompany them , also found severed hands and feet that they chopped from their enemies ,
    - Specialization apparent - figurines, pots
- Nazca
  - Prominent as moche was dying out
  - Prominent for geoglyphs

- Previously thought to be alien landing strips
  - Ceremonial effigies
  - Unusual in size and precision and that it lasted so long, but the purpose it not, many other peoples of other religions/cultures also made effigies like this
- Tiwanaku
    - In Bolivia
    - Around the same time as nazca
    - One of the highest elevated ancient cities
    - Plazas, structures
    - Gateway of sun, made from a single block of stone
    - Intricate details in construction
    - Agriculture
      - Raised fields 200 m long
      - Engineered structure, started with a layer of cobbles, then gravel (stability and structure), and then topsoil, method allowed for growth
      - In-between raised fields low channels were flooded- which over time made a sludge that was then scooped up and put on raised fields as fertilizer
    - Religious elites controlled society
    - Controlled a large area, Chile, Bolivia, part of Peru, over 1 million people
- Wari
    - In Peru, came after tiwanaku
    - Terraced fields, canals, complex agriculture,
    - Religion used by elites to segregate and control society
- Chimu
    - Northern coast of Peru
    - 900 AD lasted about 300-400 yrs
    - Capital was called Chan-Chan
      - Very big about 20<sup>2</sup> km (tiwanaku was about 4<sup>2</sup>)
      - Neighbourhoods
    - Large and sophisticated irrigation system
    - Used agriculture as a cause for expansion of empire i.e. facilitated expansion
      - By irrigating fields, salts in the soil come to the surface because water has bleached it out
      - By having a complex irrigation system, salt rose and soil was no longer viable
      - They also had irrigation problems - many earthquakes which would break the irrigation system
      - Solution instead of fixing/reconstructing they would take over other places
        - More fields, more workers, and a bigger empire
- Inca
    - Pop culture focuses on gold being central in Inca culture, focuses cause Spanish was obsessed with gold and their main focus
    - Inca called themselves - Tiwantsuyu: four parts together
      - Most of what we know about Incas comes from Spanish records
    - Nothing about Inca that allowed them to rise to power except for the luck of location
    - Element that allowed for their empire to grow/thrive, there was a drought that led to the downfall of many other cities
    - Inca's were located in a valley that was less affected by the drought
    - Extensive road system
    - Large pop - 10 million ppl
    - Only 1% of elite were ethnically Inca, rest were from other places and married in
    - 80 provinces: they would take provincial rulers and force to live in the capital and send their own elite to manage each province
    - Split up large groups and send them to live far away and wouldn't allow them to merge with ppl from other places that had been conquered so they couldn't be like and enemy of enemy

- Also when new ppl were moved they got best land angering locals decreasing likelihood of them teaming up and rising up
- Had a large military, 1 soldier for every 125 ppl
- Bricks cut so they fit together, no mortar in between
- Very narrow class pyramid, suggested if was part of their downfall
- Very stratified society
  - The Inca (the name given to the supreme ruler), The sons and grandsons of the Inca, Other people of royal blood, Inca aristocrats, Inca by privilege, Peasants
  - The king was still important even after death, the next ruler was determined by military ability
- Pachacuti?
  - Ruler that allows for expansion
- 4000 kilometers (about the size of modern Egypt)
- Machu Pichu
  - Debate on what it was for
  - Textbook - retreat for royalty to relax
  - Others - ceremonial purposes, military stronghold
  - Once thought to be a lost city but that's wrong
- Sun's a big deal to the Inca
- Initial expansion was plundering and bringing stuff back but changed to leaving people in charge and claiming the land itself
- Roads allowed for quick access to all parts of the empire so they could deal with any sort of uprising
- No writing system but had knotted strings , Quipu, allowed for counting, seems to be a 3d writing system, different colour, location, and knot styles mean something else
  - Difficult to understand
  - Nothing like a Rosetta stone
  - Spanish destroyed many Qipu
- Terraced fields with engineered layers cobbles/gravel then top soil
- Meta? Economic system, state owned everything, individuals could use everything for a certain price of labour
- Taxes/labour wasn't a fixed rate that depended on what the state needed, so one year doing a big project more labour was demanded for tax
- They also collected tax as food
- Inca fell due to Spanish and many factors
  - Diseases brought by Spanish that got to the Incas even before they met the Spanish
  - Firearms and horses
  - weakened Inca's due to a civil war
- Pizarro? Spanish conquer was captured the king and heir so people couldn't move against the Spanish cause they didn't want to kill their leader
- Pizarro eventually killed the leader - no leader was present and lead to city downfall
- What does a collapse of a city mean
  - Change in the way society is structured, could be cause society was failing or just that ppl decided to change it
  - Not the disappearance of ppl
- Why do civilizations collapse?
  - Resource depletion
  - Discovery of new resources
  - Natural catastrophes
  - Insufficient response to changing conditions
  - Competition with other complex societies
  - Militarily aggressive, more mobile invaders
  - Mismanagement
  - Economic collapse as the cost of infrastructure, military, elites, etc., cannot be sustained

#### Chapter 14

- Eastern North America
  - Mound Builders
- Adena? - Ohio river valley
  - Expanded mound building
  - Expanded on art, technology, complexity
  - More complex burial mound

- Gave rise to first complex civilization : Hopewell? Which eventually replaced the adena
- Hopewell?
  - Didn't have corn
  - Burial mounds with exotic grave goods - come from far away
  - More grave good and more exotic goods a sign of status
  - Built low walls, surrounding mounds, thought to protect burial mounds
  - Social stratification
  - Specialization
  - Didn't have a military so aren't considered a state society- complex society but not state
  - Effigy Mounds
    - Earth representations of animals, made out of rocks and bushes
  - When the Europeans came over they thought the mounds couldn't have been natives, figured it was a lost tribe of Israel or lost and forgotten Europeans group
    - Strange cause the mound builder descendants were still around and were still practicing the same culture
  - Platform Mound
  - 1100 ad?
    - Increase in mound number and size
    - Introduction of crown
    - Mounds are rectangular, flat top with structure on top
    - example - Cahokia Mounds
      - Cahokia is a town or a city
      - 500 ppl to a couple thousand
      - Had a main plaza, surrounded by a log palisade
      - Permanent structure rebuilt like 3 times
      - Just one town with Mississippian society
      - Cahokia -top, farmhands - bottom
    - Top of mound - charnel houses
      - Where dead ppl kept and the building was burnt after
      - Mounds used repeatedly , built a new structure on top of old
      - Mounds could get pretty complex
    - Mound 72 at Cahokia
      - A elite, perhaps a leader
      - Buried with tool and marine shells (exotics)
      - 6 ppl buried with him - likely servants , sacrificial
      - Mound of 72 repeatedly about 272 ppl buried in mound identified maybe about 300
      - One of these pits had woman all 15-25 all dead at the same time - indicates sacrifice
- The American Southwest (missipian)
  - Squash and beans grown
  - Corn didn't come in till 1000 yrs after
  - Lot of desert, high elevation, dry
  - Hohokam
    - Semoran? desert
    - Trigger to the development of complex society: needed water to grow stuff in a dry place
    - Known for complex irrigation system
    - High density housing ex. Casa Grande
      - Big, 60 or so rooms
    - Largest village
      - Snake town
        - Planned town
        - 1000 ppl
        - Inner habitation town that surrounded a plaza that surrounded a series of mounds then a court for games
    - Some sites have a large number of unfinished things ex. pottery vs others thought to be an indication of specialisation

- Mogollon
  - squash, beans, corn,
  - High elevation - new mexico
  - Initially move a lot small settlements
  - Drought happens : become more sedentary, reaction to drought become more focused on agriculture
  - Food surplus leads to pop growth
  - Had pottery
  - Ex. Grasshopper Pueblo, Arizona
    - More dwellings after 1300
    - Kiva: roofed plaza: ceremonial
  - Ppl shift to cliff dwellings then later after another drought blend together with other groups
  
- Ancestral Pueblon?
  - Used be called Anasazi which means ancient enemies so had to change it
  - Located near 4 corners (where 4 states meet)
  - Great houses can be found in Chaco Canyon, New Mexico
    - Chaco river runs through it
    - 81 000 about 200 yrs,
    - About a dozen great houses in the canyon
  - Largest house Pueblo Bonitio
    - 800+ rooms, 5 floors high
    - Timbers used
    - Appears to be used for storage
    - Also serves as a symbol of greatness
  - Chacoan Culture
    - Unplanned villages
    - Have road network
      - ◇ Not trails , 9 m wide, actually built
      - ◇ Run very straight
      - ◇ First identified by charles lindberg
      - ◇ Roads went over hills
      - ◇ Steps carved on to cliffs
      - ◇ Had signal towers
    - Chacoan outliers smaller than small locations
    - Sophisticated water control system
    - Not really any burials found
    - In theory there should have 4000 to 5000 deaths but only 50-60 found , where the rest at?
    - Chacoan Interaction
      - ◇ Not as large as hopewell
      - ◇ At it's height important , large, and influential
  - Mesa Verde, Cliff Dwellings
    - Some are long
    - Cliff Palace
    - Indicates social stratification
  - After about 300 yrs all ancient pueblon disappeared
    - Ran a computer model correlating rain and food growth and amount of ppl that could have survived
    - Graph matched almost perfectly with archaeological estimates until the end
    - The graph indicated that the population should have continued but they didn't so the environment was the sole reason they disappeared
  
- Northwest Coast
  - Clearly complex but didn't have agriculture
  - Blows theory that agriculture rise correlates with complex societies
  - Craft specialization apparent- totem poles, art style

- Lived in long houses with totem pole outside, significant to the family
- Had complex masks
  - Ex. Transformation masks that fold, thunderbird to human
- Made canoes, wooden boxes, sophisticated tools
- Stratified society
  - Had slaves and free ppl
  - Born into ur class
  - Free ppl separated - Elite , Middle, and Low
  - Elite could increase status by giving away wealth done at potlatch
  - However the person that get the wealth is kind of bound to the person they got the wealth from
  - Rise of society without agriculture attributed to rich environment
    - Salmon comes upstream at the same time every year, millions and millions of fish
    - Food surplus = pop growth
    - Another theory - said salmon alone didn't cause complex society they had a lot more cause their was plants, whales, seals, hunting, ppl can't decide whether growth was caused by coast life (fish ) or inland
    - Another idea - they farmed seaweed
- Differential burials
- Inherited status : parents high rank, kid high rank
- Violence
  - War fare was prevalent in some places
  - Palisades and defense walls have been constructed
  - War canoes
  - Armor (ex. tlingit armour)
- Hida - one of the groups
  - Sea fare
  - Sea war fare
  - Throw stones into enemy canoes to damage/sink them



# OLD notes

April 2, 2019 7:31 PM

## CHAPTER 5

Variability between fossil records- difficult to determine if diff species or just diversity in species need more bones but there aren't any

Pre-modern human species a.k.a archaic

like homo erectus, pre-modern homo sapiens are widespread lived everywhere homo erectus did

pre-modern humans

- in Spain site more than 6000 bones were found at one site, variability present but expected variability WITHIN a species- some say bones are Neanderthals some say something else

- fairly similar to humans, pre-moderns have a slightly larger head and a slope head compared to today's humans

- Core to Flake tools are the change from Acheulean tool to Levallois tools

Acheulean- made from cobble [\[Bk1\]](#)

-flake is piece that is knocked off

- core is what the flakes come from

- Now (Levallois ) flakes are being knocked off from cores to make tools FROM flakes- allows for more specialized tools

- Achulean also used flakes but that was a byproduct the purpose was not for flakes

-pre-humans have massive brow ridges, more pronounced jaw

- Mousterian Tools are made using the Levallois technique

## NEANDERTHALS (Pre modern )

- stereotyped- big, dumb,

intelligent, adapted to environment both culturally and physically to the cold Pleistocene (ice age)

- occupy an interesting position in today's culture, a lot of literature on them/media/you shall know them book- fascination with them because they are close to us

- one of the pre-modern humans, the most well-known cause of circumstance- utilized caves, caves allow for good preservations find more material in caves

- lived in Europe, advantageous because a lot archeology began there

- lot of Neanderthals to find

- one of the first parts found - head and heavy brow ridges, heavier- initially ppl had no clue what it was - ppl arrogant back then couldn't believe it couldn't be human figured it was a human beat as a child to change skull ---later found so many they had to change the idea cause unlikely that many kids were beat up

- French scientist in 1913- tried to reconstruct what Neanderthals looked like, figured they would be ape like, stooped over, not that smart ----popular representation continues to be prominent today ----problem = probably exaggerated his picture cause bones he used to draw person was a guy who had arthritis - so he didn't use an average healthy Neanderthal

- Neanderthal probs much more human than French guy thought

- had mastery of fire, had art, ceremonial aspect to culture - buried dead, more sophisticated than ppl think

- Neanderthal initially spelt with H - from German- can be said with an H or without both are correct

- debate about whether they are directly ancestral or related by common ancestors/ cousin to us and if they are a subspecies of human or not

- some say they must be ancestors to us cause a lot of ppl have Neanderthal DNA only ppl from Africa all the way back don't

- genealogically they are our ancestors but don't think we are descended from them just DNA mixing that could just be interbreeding (evolutionary from species perspective most say no to the ancestor idea)
- Neanderthal locations - Europe, middle east, west Asia, NOT Africa, smaller occipital lobes than modern humans - which is why they had less ability to have abstract thought (assuming similar brain structure to today's humans) still had ability create art but not to the same degree as today's humans
- occipital bun at the back of skull characteristic of Neanderthal more pronounced/bigger in them, where muscles connect to allow for head control
- more robust than us in general even their kids were more robust than today's, thicker heavier bones
- don't always find complete skulls, must be filled in
- very similar but some significant differences
- slightly squatter, shorter limbs, broader/wider, reduced surface area by being shorter cause surface area of skin is where heat is lost, long thin arm loses more heat than a short thicker arm,
- bones are thicker, joints are bigger, larger knee cap (patella), stronger bones, a lot more muscle attachment areas - more muscular than us, adapted to cold and stronger than us,
- Neanderthal lithic technology- step up from other pre-humans - called Mousterian- still flake tools but more precise/ more specific tools to different tasks, taking core(cobble) use to get flakes, cobble is prepared a certain way, so flakes are a certain design for a tool - shows increase in intelligence
- Oldowan, Acheulean, Mousterian - number of hits, efficiency, increases left to right- significant differences
- Tools used to survive- primarily food - sites found carbonized seeds used to heat plant - cut marks on bones indicated meat eaters as well
- even found spear point found in animal - were hunting
- more carnivore than herbivore diet, not surprising considering how stature gives them an edge on hunting, strength and stability cause of bipedalism
- evidence of compassion, numerous bones found that would not have been able to survive on their own, but bone fusing indicated they lived longer than expected - indicated that ppl were looking after them
- found guy in Iraq slashed eye, probs blind in that eye, one amputated arm, right leg sign of trauma/disease but survived even though highly unlikely he would survive on their own - great indication of compassion or had to keep him alive for some reason - knowledge? ceremonial?
- done genetical analysis of groups found- males stayed with group while females moved from group to group --looked at genetical relatedness of children to diff males and females - males were brothers (close), females not close, children related to both so females had to have come from somewhere else
- idea males stay because they have hunting knowledge specific to the environment - idea challenged because it downplays role of woman collecting food
- had symbolic expression - artistic representation ex, cross hatching, geometrically incised bones and ivory, step up from homo erectus, found perforated bones/shells - probs used as body adornment
- lots (60 something) of Neanderthal burials found - buried flexed position - knees to chest - things found in grave - bones, stones,

## MOVING ON TO US

- anatomically modern meaning- no physical diff between them and us, no concrete idea on how they arose, consensus is we come from Africa and move north to Asia and down to Australia/Americas and lastly into western
- evidence we evolved about 20 000 yrs. ago in southern Africa

----- FEB 14th 2019

## The Evolution of Us

Anatomically modern humans – no consensus on type of humans ; however general agreement does exist,

Evidence of the anatomically correct humans found in Africa, transitional species between human and anatomically correct ones

Omo 1– Ethiopia, 200 000 yrs ago

Earliest evidence found in Israel, lithic tools in Saudi Arabia, teeth found in China (anatomically correct modern humans)

When AMH left Africa they ran into other pre-humans already living there in Europe in Asia, likely living side by side remains about 100m apart, lived together 15000 yrs

\*\*\*AMH= anatomically modern humans

Evidence of interbreeding- evidence found in mixed DNA

About 20% of Neanderthal still present today, 1/3% DNA in any one modern human (except from direct African roots)

Skeletons found that show both AMH and Neanderthal traits

General definition of species says that 2 separate species wont have viable offspring (can't have kids) so suggest Neanderthal and AMH shouldn't make viable kids however evidence found in DNA indicates kids probably could have kids

Upper paleolithic tools – AMH tools

Denisovan - subspecies of archaic humans in the genus Homo

AMH Stone tools technology – lithic blades – more core prep needed=500 000 yrs ago

AMH- first one to use pressure flaking- started in africa- taking something flexible like antler and applying pressure to flakes=more precise and more accurate

(Percussion flaking- using stones to shape stones)

Heat Treating – AMH First to heat rocks- changes consistency of rock makes it harder/stronger, harder to get flakes but makes better tools

AMH made micro blades – small flakes make many tiny flakes attach to bone or other stone = makes a new type of tool

In Europe – Levallois (Neanderthal) and Aurignacian (AMH) 2 very different separate tools

They adapted a hybrid set of tools – Châtelperronian?

What happened to the Neanderthals?

AMH out competed them or AMH killed the Neanderthals Or Neanderthals got absorbed into the larger AMH population

Not enough Neanderthal DNA in humans to make the absorption idea more valid

Out compete

AMH made clothes for each part of body – sleeves/pant legs, as opposed to just wrapping them selves in a blanket like Neanderthals

Bone marrow – high source of fat and energy

Neanderthal – just cut/scrap to get to it

AMH- boil to get more out of the same amount

Likely answer – combination of all 3- fighting , absorption, and out competed

Benefit of Denisovans – lived in Himalayas, Tibetans have Denisovan DNA that allow them to live high up where others would get sick

## SOME MAIN POINTS

- There is evidence that premodern (archaic, ex Neanderthal) *Homo sapiens* existed: 600,000 to 30,000 years ago
- There is evidence for anatomically modern *Homo sapiens* 200,000 yrs ago to present

- Mean cranial capacities for premodern *Homo sapiens* (1261cc), Neandertals (1480cc) and modern *Homo sapiens* (1450cc),.
- Levallois technology involved a shift in producing core tools to producing flakes
- Aurignacian technology produced more usable blade surface
- The sophisticated stone tool making industry at the Pinnacle Point site in South Africa is evidence of a 71,000-year-old complex sequence of microblade production and use
- There is a general consensus among paleoanthropologists that anatomically modern humans migrated out of Africa into Southwest Asia between 150,000 and 100,000 years ago and then spread into Europe, Asia, Australia, and the Americas

## CHAPTER 6

Late lithic period = most recent

Upper Paleolithic = Newer/more recent

Lower Paleolithic= Older than middle and upper

The upper Paleolithic a.k.a new stone age – a lot of growth and change in archeological record, strides in culture

Upper paleolithic-

Reliance in new and improved stone tool technologies (made more sophisticated blades)

Note- blades changing constantly, being made changed, made again and repeat, - pretty rapid change

Magdalenian- Antler, bone

Solutrean a.k.a Leaf Shape- pointy on top, then wider with a stem thing at the bottom

Bifacial – sharp on both sides

Geographic changes – locally specific / region specific tools

New hunting and weapon tech

Development of bow and arrow – indirect evidence it exists as far as 64 000

Atlatls – spear thrower – 30 000

Note- most time spear thrower comes before bow/arrow

Advantage of atlatls/bow and arrow over spear = distance from prey, atlatl can deliver spear/stick with more force and precision than a bow and arrow, can be effective in war

Atlatl – stick with handle on one end and hook on other, put blade/stick/darts, on end of the hook, extends arm, more centripetal force swing arm blade goes flying hold on to stick

Broadening of the subsistence quest (diets varied, still focus on big rhinos, mammoths, giant ox, hunting large mammals-megafauna) – region specific , start eating birds, fish, and small mammals as well, less than others but still – more variety in diet

Branching out in raw materials – start using bone, antler, with more sophistication and intentional design

Ex. Tiny bone needles to sew smaller seams = wind, water, proof – increases survival likelihood

Ceramics came around/developed = game changer – make cooking pots, food storage keep away from rodents, different styles of cooking

New uses for plant materials (some plant used to line the cave floor, plant had insecticide property), nets out of insides of plant stalks (fibers) allows for change in food sources, tech, and plant usage

Raw materials come from a greater distance (100's of Km- may mean that more than moving to get things running out it suggests trade might even be occurring between diff groups – said that trade is more socially important than the physical objects traded ex preventing war, keeping good relations, keeping peace, making friends who can help in times of need, more mate options)

Larger sites of aggregation (population) – sites that have greater pop and appears that smaller bands/groups are coming together for certain things

Suggested that this indicates that tribes have specific annual routes, berries grow here this time, some large gathering same time every year – mate selection, exchange information

BOOK – indicates significant change in from previous humans

PROF- more significant in later times but previous humans also probs had seasonal rounds probs not large gatherings, ppl weren't wandering aimlessly in past

Abundance of non-utilitarian object (beads for decoration, teeth with holes= jewelry, personal adornment – suggests sense of identity)

More elaborate burials – hundreds of beads buried with ppl – 1000's of hours to create adornments for dead ppl

Symbolic Expression through the production of art (no question art was being made unlike uncertainty of Neanderthal)

FOUND = Ochre – mineral mixed with water- used as paint- many colors – have paint probs making art

Most known for- cave paintings – clear evidence at least 40 000, hard to date paintings, can't scrape paint away cause then u destroy the pic, can date minerals that form on top

Sulawesi Cave - Some of the oldest painted art in the world was recently discovered in caves on the island of Sulawesi in Indonesia. animals and hand stencils from more than 35,000 to about 40,000 years ago.

Australia cave – scratched into cave

MOST CAVES IN EUROPE – OVER 350 with art, growing as more discovered

INTERESTING – animals are depicted very well, humans more stick figure like, hand prints are also found

Chauvet cave France

ART definition – images created through memory, filtered thought artists imagination

Figures also made during this time – many called Venus figurines – females with greatly exaggerated sexual parts – purpose unclear, ppl thought they were fertility symbols but pointed out huge variety – skinny to heavy, young to old, calls into question fertility symbols

Sheds light on modern humans – what we see as fertility, men came up with fertility ideas,

Theory – women made them? Self portraits?

Animal carvings – bears, mammoths, lions, human/animal hybrids

Ex human body, lion head – suggest belief in spirit world

Music – modern human (anatomically human trait), shown to have physiological effect on humans, instruments that date back to 40 000 yrs ago, found in Germany, bird bone flutes, bird bones are hollow, also found ivory flutes- more steps needed to make this,

Purpose of all this art ?

Art for arts sake – counter argument – why so deep in hard to reach places

Meant to be prompt discussion or debate

Relates to altered states of consciousness (trance like state), research says ppl in trances see parallel lines, dots, wavy lines, .....suggests shamanistic art work or trance like state

\*\*\*Europe appears to be the focus cause most researcher lived so more ppl looking there

Animal paintings correlate with most economical important animal of region, most likely a combination of everything

Grandmother effect- explain why humans live as long as we do, past child making yrs, if grandparents (grandmothers) are around children, # of children goes up and increase in survival rate seems to appear in this time around 30 000 yrs ago

SOME MAIN POINTS

- Unequivocal evidence for art as symbolic expression dates from as early as 77,000 BP, at Blombos Cave
- one of the important differences between the middle and upper paleolithic was a profusion( greater collection) of stone tool traditions, indicating a change from temporal and geographic homogeneity to greater diversity and variability.
- Atlatl - a spear-throwing device developed in Europe more than 30,000 years ago
- Australia features the earliest evidence of etching into a rock face
- Petroglyph- A design that is not painted upon but is etched into a rock
- Paretal art – done on cave walls or large blocks of stone
- most of the Venus figurines found in Europe
- Portable art (sometimes called mobiliary art) refers to the small examples of upper paleolithic that could be carried from place to place,
- 

## **Chapter 7 – Expanding Geographic Horizons: New Worlds**

Movement of ppl in to pacific islands, Australia, and the New World

AUSTRALIA

Ice age-lower water levels, during Pleistocene more land was open

Sunda land – connection of Southeast asia and Indonesia islands

Sahul and Sunda always separated because deep strait

Sahul- new guinea and Australia

Australia- isolated for many many yrs due to strait

How they get to Australia? Had to have some time of maritime tech -boats- all routes require passing 70-80km water

Debate about when and where – 2 options from the north and south- could've been both

Earliest place is in new guinea found remains, found axe heads think used to cut trees to open land for sunlight to grow food

Plains weren't always plains – think that land was repeatedly burned

No such thing as pristine environment- humans = change

Humans got into New guinea and Australia roughly the same time – there by 40 000 yrs ago

When they got to Australia they lived on the coasted- marine oriented ppl, could create some sort of boats, therefore were comfortable living on coasts, much later people move in land (20 000 yrs after coming) coast is tropical jungle inland is dry and hot

People moved to Tasmania in Pleistocene as well when land was connected about 35 000yrs

Australia aboriginal ppl depicted as primitive but in reality, were very sophisticated in culture, tools, methods,

Oldest radiocarbon dates for modern human occupation of Greater Australia:

Talepu, Sulawesi, 100,000 B.P.

Huon Peninsula, New Guinea: 49,000 B.P.

Niah Cave, Borneo: 46,000 B.P.

Lene Hara Cave, Timor: 35,000 B.P.

Bobongara Hill, New Guinea: 40,000 B.P.

Kosipe, New Guinea: 26,000 B.

Oldest radiocarbon dates for human occupation of Australia proper:

Lake Mungo, Willandra Lakes, Australia: 46,000 B.P.

Upper Swan Bridge, Australia: 39,500 B.P.

Devil's Lair, Australia: 38,000 B.P.

Mammoth Cave: 37,000 B.P.

Keilor, Australia: 37,000 B.P.

Oldest radiocarbon dates for human occupation of Tasmania

Wareen Cave: 35,000 B.P.

ORS7: 30,000 B.P.

Acheron: 30,000 B.P.

Bone Cave: 30,000 B.P.

Bluff: 30,000 B.P.

Nunamira: 30,000 B.P.

Beginner's Luck: 20,000 B.P.

Kutikina: 20,000 B.P.

South Pacific

Pacific Ocean – largest water body, covers over 1/3 of Earth surface, area of all island in Pacific make roughly 1% of ocean

You heard that ppl accidentally ended up on new lands and just live their, wrong, intentional moving need 9-10 men, 9-10 women, proper equipment, also migration of ppl happened in waves not at the same time

Melanesia – first wave settled here about 35 000 yrs

Micronesia – 35 500 yrs ppl came here after

Polynesia – shortly after micro ppl came here

POLYNESIA

Common culture exists at this point , domesticated plants ex yams

Ppl had intimate knowledge of stars, winds, cloud formations, sophisticated understanding of environment

Had pottery (laptia pottery?) found throughout Polynesia not in Micronesia or Australia

To get these days researchers have used carbon dating rat bones – rats not native to Polynesia,

Used clouds formations, stars, moon, wind,...etc to navigate ocean

Why move?

Natural curiosity

Warfare, ppl driven out

Population pressure

Accidental migration

All probably played a role

Started putting down roots on each island resulted in distinct cultures

New Zealand – Moa hunting (weird bird)

Hawaii - Agriculture

Tonga- Agriculture as well

Easter Island – after 1800 AD – pretty isolated took longer to get their – different culture- carved giant head stone statues, questions why made make statues?

Why did they disappear? – rats eat all food, warfare, western diseases

new idea-- disease and slavery from Europeans played a major role

Polynesian have similarities but also differences

Coming to America

Beringia between Alaska and Russia existed between 35,000-11,000 humans about 28 000yrs ago stayed there about 10 000yrs before splitting into different groups and moving

Ice Sheets – receded resulted in Bering land bridge but not 100% accurate was actually large wide plain where ppl moved in and lived there

Ice Free Corridor – space between 2 great ice sheets Cordilleran and Laurentide ice sheet, expanded and retreated independently

Oldest sites in Siberia

Ranges from 40 000 yrs to 10 000yrs ago, dates of those sites match up

Oldest Site in New World (north America)

Cactus Hill/Meadcroft sites dates are earlier that ice free corridor that suggest ice free corridor wasn't the first route

Summary

Evidence in Siberia of ppl

Using DNA we can link Siberian ppl to north America

Y chromosome has 2 mutations that show up in native American male that is only ever found elsewhere in Siberian males

Computer modeling with DNA to create timeline

Costal Route is most likely for the first route but was definitely a route

Ancient dates pose problem that ice free corridor was first route

Ancient remains, ex shovel shaped teeth, shared between Siberian and native American

Similar lithic technology between Siberia and native Americans, pre-Clovis

Dorset ppl – lived in arctic for many 1000yrs ago, disappeared with the introduction of tuile ppl who pretty much replace them

Clovis points- has channel that aids in blood flow from animal, clovis ppl were mostly megafaunal but also ate small animals and animals

Some evidence suggest clovis ppl hunted megafaunal to extinction

Suveleran hypothesis that ppl came from europe to americas -problems tho the dates have 4000yrs gap, they would have to come by water and no evidence supporting water travel, DNA evidence links to asia not europe

#### MAIN POINTS

- During the Pleistocene era, the islands of Java, Sumatra, Bali, and Borneo formed SUNDA. The landmass connecting Australia, New Guinea, and Tasmania was called SAHUL.
- Clovis points not in Alaska
- the Pleistocene ice mass in North America centered in the Rocky Mountains is called Cordilleran
- The undersea chasm between New Guinea/Australia and Java/Borneo is called the Wallace Trench
- New Zealand one of the last to be occupied
- The Bering Strait was above water, on and off, between 35,000 and 11,000 B.P..
- Clovis - the name of the stone blade exhibiting a fluted point on both faces and associated with extinct elephants?
- Toward the end of the Pleistocene, between 28,000 and 18,000 years ago, worldwide sea level was much lower than present day, resulting in the exposure of a landmass east of Siberia called Beringia This period is called the Late Glacial Maximum.
- The separation between native Siberians and the earliest Native Americans occurred sometime between 20,000 and 23,000 years ago..

### Chapter 8 – After the Ice – The Food Producing Revolution

Move from upper Paleolithic to Mesolithic

Europe – in this time enviro moves from ice age (Pleistocene) to Holocene ice sheets receding

Pleistocene megafauna (mammoths ..) die out, sea level rise sea bridge Beringia disappears, deer ,wolf, pig replace other stuff - more diverse more plants and animals

Nuts, apples, marine animals – increase in variety what humans are using

Ppl are more different from region to region, nature of trade is has changed – trading occurs over smaller distances while the number of traded items increases

Asia

Pretty similar to Europe, increase in flora and fauna , increase in culture diversity, ppl becoming more stationary in resource rich environment spend more time in one place

Africa

No glacial here, so no extreme environment shift, no deglaciation

Increase in cultural diversity ex. Northern African tribe using cattle, seafood, nuts

No huge shift in culture but a continuum, continuation of cultural development

Increase in realistic animal cave drawings – ritualistic purposes

Australia

Significant environment change greater than Africa less than in Europe and Americas

Initial increase in temp and rainfall but that drops soon

Progression in cultural diversity not a huge shift

Dingos – kangaroos, kolas,... came from southeast Asia about 3000 yrs ago , sort of domesticated

North America

Here we don't say upper paleolithic to Mesolithic say paleo Indic to archaic

Ice sheets pulling back

Cultural diversification – region specific often linked to environment ppl present in

Huge increase in cultural specification

Food – increase in whatever is close to them, specialize in marine food in some costal archaics

Some places diversified others specialized

Increase in variety of food generally

South America

Increase in specialization

Increase in culture

Increase in sedentism (where rich resources are present)

**DURING THIS TIME MORE HUNTERS/GATHERERS NOT AT ALL OF FOOD PRODUCTION**

As you get really into the Holocene – domestication of food/plants/animals occurs all across globe can same general species , happened 1000 of yrs ago aside from these: pretty recent

Can be general all over the globe like dogs or specific to region

Strawberries: 1500s Pecans:1840s

Domestication took a long time – ppl realized that some animals were useful, collected young, killed off troublesome ones, over years animals changed

Ppl realized they would change the earth to increase the likely food of growing certain plants, eventually began collecting seeds to intentionally growing them

Becomes specific seed types- big vs scrawny plants

Archeological record- looked for changes in types of plants or animals (sudden appearance) indicates domestication

Changes in physical appearance of things ex larger seeds ppl grow larger seeds more of those founds

Smaller animals increase easier to control , bones of animals are found at arky sites hard to determine whether domesticated or not from bones

Some things to look at:

Domesticated animals have slighter bones, animals are penned up don't stress bones as much compared to wild counterpart

Look at many bones, age distributions, a higher proportion of younger male bones likely that animals domesticated cause men=trouble and killed off only kept a few compared to women

DOGS- exception- weren't domesticated for food – about 18 000 yrs ago domesticate, came from wolves, domesticated for guard, hunting, companionship, likely collected wolf pups and kept pups that were less harmless ex. Shorter canines and shorter snouts Some say benefit for dogs as well by being domesticated

#### ADVANTAGES TO FOOD PRODUCTION

Control enviro – predictable/steady source of food

Selection for desirable characteristics

Steady and predictable source of food

Increased sedentism

Increased output – select plants with more seeds= more plants eventually

Geographic expansion

What are the disadvantages of food production?

Increased workload

Creating an attractive resource for your enemies

Danger of overemphasis of a smaller number of food sources over time too focused on smaller number of foods get too dependent on that source if disease wipes out that source(s) ppl doomed theory on why civilizations falls – too dependent on a few sources

Food production is based on the “domestication” of wild plant and animal species. Domestication: The production of brand new species of plants and animals through selective breeding or “artificial selection” Some domesticated species become so highly specialized to the specifications of human beings that they can no longer survive and propagate without human assistance ex corn

Humans look for stronger non brittle attachment of seeds to plant cause u wack the plants if seeds are weak the break when u were collecting it, strong one lasts longer can harvest and replant extra

Evidence of domestication

Age at death of males is lower – killed younger compared to females lived longer make more offspring

#### NEOLITHIC

Near East - fertile crescent east side of Mediterranean, a lot was domesticated there

Neolithic sites: Near East

Dog, Wheat, Barley, Chickpeas, Lentils, Sheep, Goats, Pigs, Camel

Increased chance of sedentism when less animals are being domesticated for longer

- Younger Dryas Period – constructed where plants growing ppl started growing it themselves barley first then wheat was domesticated types of wheat einkron and emmer then lentils around same time
- a little later goat and sheep, cattle took longer

Meso America – south of America ex mexico, hondurars

- Earliest in western hemisphere 3 big Squash (first ), maize (corn), beans

Africa

- Occurs everywhere
- Sorghum Millet, Oil palm, Cattle, Yams, Donkey, Cat

- Barley brought in from elsewhere so were some species of cattle
- Domesticated cattle in southern Africa are native to Africa – began about 10 000 yrs ago
- Donkey -

#### East Asia

- Rice; one of the 100s of things domesticated in Asia, one of the more important ones though, 2 main types japonica short grain and Indica? Long grain rice
- 3d grain domesticated in Africa
- Long and short grain are more closely related to the original non-domesticated one than each other indicates they were domesticated separately
- Neolithic sites: East Asia, Rice, Millet, Cattle, Pigs, Chickens Dog  
Pakistan about 2000 yrs ago maybe chicken domesticated

#### Japan

- Pears

#### Central Asia

- Kazakhstan – domesticated horse about 5,500 yrs ago

#### Europe

- Most domesticates were brought in from the south
- Ppl moved into Europe and bringing their food with them
- Dog, Cattle, Goats, Barley, Rye, Wheat
- Lactose the sugar in milk is not digestible by humans, dairy products big in Europe cause a mutation called lactase persistence digest lactose, mutation spreads
- Yogurt and cheeses being made, production reduces lactose in dairy product, increasing the value of the products, mutation further increases value
- 7500 yrs ago cheese making evidence

#### South America

- Maize, Potatoes, Manioc, Arrowroot, Yams, Quinoa, Cotton, Llama, Alpaca, Turkey, Dog, Duck

- Changes in elevation result in different domestication species in diff areas

MEXICO and Meso-America – Squash domesticated first

Amazon river – largest water volume

Nile – longest river

135 domesticated species in the Amazon Jungle when the Europeans arrived

Highland Peru – chillies and beans and Quinoa

Many versions on manioc, one is poisonous but very nutritious

- Cotton comes from coast of Peru

#### North America

- Dog, Squash, Sunflower, Sumpweed, Little Barley, Goosefoot, Smartweed, Knotweed, Turkey, Maize
- Squash, Maize Beans came in through trade from Mexico
- Another type of squash was already domesticated in north America
- 10000 yrs ago most food domesticated, 24 regions around the world where domestication happened
- Why? Environment changes from ice age to Holocene – megafauna and flora dying
- Need more reasons :
- Younger driest – period of time in Holocene - abundance of resources beans to shrink in Holocene likely resulted in domestication
- Niche Construction theory – All animals (including humans) change in environment to suit themselves
- Human effect environment and environment effects humans cycle results in domestication
- Domestication increases in sedentism, pop increases , developing specialized trade ,
- Increase in efficiency needed, social structure created to organize , new tech develop, hierarchy develop all this equals cultural complexity

#### SOME MAIN POINTS

- The Younger Dryas was: a period of glacial expansion between 12,900 and 11,600 years ago
- the triad of plants that provided the subsistence base for indigenous New World civilizations- maize, beans, and squash
- China – millet cabbage rice
- Virtually all of the crops important in the European Neolithic were imported from other regions
- South America – potatoes
- Genetic studies of the two primary varieties of rice, japonica (short-grained), and indica (long-grained), each is more closely related to local wild ancestors than one another, suggesting that these modern varieties of rice were domesticated separately in east Asia and south Asia..

[\[Bk1\]](#) Oldowan (Homo Habilis) Acheulean (Homo Erectus) Mousterian (Neanderthals a.k.a pre modern) Aurignacian (anatomically modern)