

## The emergence of civilization in Mesopotamia: Early cultures

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- Jericho and Çatal Hüyük were early, complex neolithic settlements, and probably not the only ones
  - But though they lasted for a very long time with only minor changes, they did not grow into anything bigger or more complex
    - Jericho was occupied for about 700 years after building the wall and tower, then was abandoned around 7300 BC at the end of the PPNA
      - Later reoccupations, starting with the PPNB, were culturally different
    - Çatal Hüyük was occupied for about 1000 years, then abandoned around 6400 BC
  - why didn't they continue to change in the direction of "civilization"?
    - maybe their environments did not encourage continued growth and elaboration
      - not enough farmland to continue expanding population?
      - not enough neighbors to continue expanding trade?
    - another suggestion is that although they elaborated and expanded *existing* social arrangements, they did not develop *new* social, organizational, or other mechanisms that would lead to further growth in size and complexity
      - that is, there was some necessary change that just did not occur, so these societies just kept playing out the possibilities of simpler, more limited systems
  - changes in Neolithic society did not amount to "progress"; instead, there was a scattering of different developments, some of which were very successful for many centuries, but which did not keep getting more complex
    - this was not failure; in fact, in a way it was success - but it was not change in the direction of what we now see as "civilization"
- Now let's fast-forward a little bit and look at what happened with some other societies something like those at Jericho and Çatal Hüyük, but later in time, and located in Mesopotamia
  - The chronological chart may help put these sites and cultures in perspective
- The setting
  - The "Fertile crescent"
    - Crescent-shaped area from head of Persian gulf, up Mesopotamia and the flanks of the Zagros mountains, across through Anatolia and below the Taurus mountains, down through the Levant
    - as we have seen, this is where some of the earliest agricultural societies emerged
  - Mesopotamia is literally the area between ("meso") the Tigris and Euphrates rivers
    - Often broadened to include the foothills ("hilly flanks") of the Zagros mountains to the east, and the general area around the mouth of the rivers
    - note that Mesopotamia, where civilization first emerged, is mostly *not* within the "Fertile crescent", but instead is part of the desert area that the "Fertile crescent" arcs around
- Environment of Mesopotamia
  - Climate
    - long, hot, dry summers

- Babylon (near where the rivers pinch together) in August can be 50°C in the shade (122°F); 75°C in the sun (167°F!!!)
- constant hot, dry wind, often full of sand and dust
- “unbearably hot, with no rain, and clear skies” (Charles Redman 1978:31)
- cold, wet winters
  - coldest in the north, warmer to south
  - January low from 0°C (32°F) (south; Basra) to -11°C (12°F) (north, Mosul)
  - virtually all the rain falls in winter, especially January and February.
  - Less than 150 mm (6 inches) annual rainfall (vs. 28 inches in Sonoma, just over one fifth of Sonoma’s mean annual rainfall)
  - “clear balmy days, cool drizzly nights, brief violent rainstorms, and occasional dust storms” (Redman 1978:31)
- Water
  - river flow varies widely by season
    - lowest flow in September and October
    - highest flow and most floods in April and May
      - this is just when crops mature, and must be protected from flooding
  - rivers shift course, especially in the central and southern areas
    - big, shallow lakes sometimes form, then disappear
- A quick “tour” from the Persian gulf northwards
  - From the Persian gulf up to the “neck” of the plain where the rivers come closest together
    - This part of Mesopotamia is called the “delta” or “the alluvium”
      - where Sumerian civilization emerged
      - note: Sumer is a *region*, not a particular city or site
  - overall, it is
    - flat, poorly drained, with a high water table
    - rivers split into streams that criss-cross the flood plain
    - natural levee formation by rivers
      - so irrigation and canal construction are easy
    - natural flooding
    - rivers sometimes change course
      - so maps tend to disagree on the courses of these rivers, and some show huge, shallow lakes, depending on when they were made
      - so little rainfall that irrigation is necessary for reliable agriculture
      - salinization is a problem due to poor drainage
  - southern part of the “alluvium” was marshland
    - drained by Saddam Hussein, largely to control the formerly mobile “Marsh Arabs”
    - now being restored!
- further north are the Assyrian highlands (or “piedmont” = foothills)
  - historically called Akkad, in contrast to Sumer
  - land slopes slightly more steeply upwards to the north
  - slightly higher land with steeper rivers flowing in deeper, more stable courses
    - irrigation and canals are possible, but require more effort than in Sumer

- enough rainfall to support grassland and marginal, but not dependable, agriculture without irrigation works
- so this area focussed more on pastoralism than agriculture during the periods we will look at
- better drainage, so salinization was less of a problem
- The coastline probably changed with the rising sea levels at the end of the Pleistocene plus the deposition of silt by the rivers, up to around 4000 BC
  - but details are debated
  - coast may have been up to 180 kilometers further out before 5000 BC
  - others suggest the opposite trend, that the delta has grown through deposition of silt
  - so the earliest sites may be under water off the modern coastline, or may be buried under delta silt deposits.
- Resources: plenty of water and mud
  - Water, soil, and sun: great for irrigated farming
  - rivers important for transportation and communication
    - also for fish
  - entire region is alluvial deposits; no bedrock
    - no locally available stone for building
      - so buildings mostly of sun-dried mud bricks, or reeds
    - no stone for tools, beads, etc.
    - no ores for metals
  - almost no timber
  - yet it was in this inauspicious environment that civilization first emerged
- We will start with a look at several archaeological "cultures" that surrounded this region, so let's straighten out this concept first
  - The concept of archaeological cultures
    - people within some geographic area that shared cultural traits like pottery style, house construction, subsistence practices, etc.
  - cultures are *spatial* units
    - the markers of the culture (pottery style, etc.) are found in some region, and not elsewhere
  - cultures are *chronological* units
    - the markers of the culture appeared at some time, and later disappeared or changed
    - these chronological boundaries are often relatively arbitrary divisions in continuous trends of change
  - cultures are assumed to be *social* units of similar people
    - we assume that they reflected ethnic, linguistic, and/or social similarities among people
  - all the people of a given "culture" would not necessarily be united in a single political group
    - people of one culture might live in different settlements and go to war with each other
  - cultures are typically named after the pottery style made in that region, at that time
  - the pottery style is typically named after the site where it was first identified
    - so we can have the *site* of Tell Hassuna, where the Hassuna *style* of pottery was identified, which characterizes the Hassuna *culture*, which was the lifestyle of the Hassuna *people*, who lived during the Hassuna *period*

- Of course, Hassuna people (people who made Hassuna style pottery) did not live only at the site of Hassuna; they also lived at other sites and left Hassuna style pottery there, too
- and people who lived later at the site of Tell Hassuna, long after people had stopped making Hassuna style pots, made other styles of pottery and left pieces of those pots at the site of Hassuna
- Sorry! But you need to understand what the names mean in a given context
- Terms: Tell and Tepe, both mean simply “mound”, or “mound-shaped archaeological site”
  - Tell is an Arabic language word, Tepe is Farsi (Persian; spoken in Iran)
- Early settlement
  - We will start by looking briefly at several neolithic cultures that were the roots, background, neighbors, and context of the earliest societies that were to develop Sumerian civilization
    - refer to the table “Basic chronology...” and the chart “Early Civilizations in Perspective”, both posted as readings
    - Today we will look at three cultures: Hassuna, Halaf, and Samarra
      - The chronological chart shows that Hassuna started first, but overlapped with the other two in time
      - so these cultures were contemporaneous for some 500 years
      - but they existed in different geographic areas, partially overlapping
        - around the periphery of the Mesopotamia proper
    - next time we will look at the ‘Ubaid culture, which began while people of the three other cultures were living around the margins of Mesopotamia
      - the 'Ubaid people were located further south yet, in the Mesopotamian alluvium proper
  - Hassuna style and culture (6000 BC - 5250 BC)
    - By 6500 BC, simple neolithic farming villages were becoming widespread throughout the Fertile Crescent
    - by around 6000 BC, people had settled the foothills (piedmont) of northernmost Mesopotamia
      - the original walled PPNA settlement at Jericho had already been forgotten for 1300 years, and Çatal Hüyük had been abandoned for 400 years
      - here there was enough rainfall to allow for "dry" agriculture in some places
      - these became the first farmers in northernmost Mesopotamia
    - subsistence:
      - earliest occupations may have been intensive foragers, gradually shifting to more and more farming
      - may have only been semi-permanent, leaving in bad years
      - cultivated wheat (emmer and einkorn) and barley, but no evidence of irrigation
      - kept sheep, goats, pigs
      - but hunting was still very important, especially onager (wild ass), some gazelle
  - They made Hassuna style pottery
    - fairly fancy decoration: cream slip, reddish paint in linear designs, also applied (modeled) eyes and ears, animal heads, etc.
  - Hassuna people lived in small villages or hamlets
    - ranging from under 1 ha to around 3 ha (hectares)

- that is about 2 to 8 acres
- Just for reference, here are some comparisons to help you visualize site areas
  - 1 ha = 100 X 100 m (10,000 m<sup>2</sup>), or about 2.5 acres
  - a football field with endzones is about 0.75 ha
  - the main quad, from Salazar hall to the cafeteria and from Stevenson to the Athletics building, is about 2.0 ha
- Hassuna sites ranged from the same ballpark of size as PPNA Jericho had been 1000 years before (some 0.8 - 1.6 ha) up to about twice as big
  - but still much smaller than Çatal Hüyük (13 ha)
  - probably few, if any, Hassuna villages exceeded 500 people
  - so in terms of settlement size, we are looking at some fairly ordinary early farmers here
- rectangular multi-roomed free-standing houses of packed mud (“tauf”)
  - walled yards with outdoor ovens
  - small rooms with plastered floors and wall niches for storage
  - wall paintings
  - indoor ovens with chimneys
- at the site of Tell Hassuna, fairly late in the duration of Hassuna culture: in addition to houses, also a larger central building (~5500 BC)
  - with rows of small, square rooms
    - unplastered walls
    - plain dirt floors
    - no hearths or food garbage
  - obviously for some special purpose
    - but not involving much obvious respect or display, unlike the special clay-floored Natufian structure at Jericho or the "shrines" at Çatal Hüyük
    - probably storage
    - presumably built and used by a group or the whole community (certainly not by just any one family)
- one room had 2,400 baked clay sling balls and 100 large baked clay balls: a hunting arsenal?
  - maybe the site was a specialized hunting center, exchanging animal products for cultivated foods??
- Point: this was something new; a group effort to build, presumably stocked or used by the group
  - purpose looks economic, probably storage of something bulky like food or hides for consumption or exchange
  - implies some kind of group coordination, organization, leadership
  - since the building seems to be a centralized, community storage place, it suggests that some of the economy may have been redistributive
    - and therefore there was some kind of community institution for collecting, storing and redistributing goods
    - a chief?
    - a governing body?
    - a temple institution or a priest?

- they also started to make stamp seals out of stone
  - seals can have different uses
    - the clay ones at Çatal Hüyük were larger, and were probably for stamping pigment onto textiles, or for body painting
  - small stone seals at later sites in Mesopotamia were used to press an image on clay, as you do with sealing wax
    - a glob of clay pressed over a knot or the edge of a lid and then marked with a seal can be used to close tied-up bundles, covers on jars, or even doorways, so that they can't be tampered with
    - which is useful if you are storing valuable goods that someone or some institution owns or controls access to
  - so if these seals were used in the way that later ones were, they may suggest private property, exchange, or communal storage
    - that is, an increasingly complex economy
- note how different this communal construction and use of seals for storage is from either PPNA Jericho or Çatal Hüyük
  - Hassuna society and its contemporaries in Mesopotamia were developing different features, especially some related to institutional rather than individual organization of economic activities, that ultimately would lead to different kinds of societies
- Halaf (5500 BC - 4700 BC)
  - After people had been making Hassuna style pottery for about 500 years, a new style called Halaf developed in roughly the same area, but spreading to a larger area
  - For several centuries, both the Hassuna and Halaf styles were used, maybe by different ethnic groups
  - But the Hassuna style faded from use as the Halaf style continued on
  - these Halaf pots were clearly made by specialists
    - formed on a "tournette" ("slow wheel")
    - very elaborately painted
  - The lives of people who used Halaf style pottery were basically similar to that of those who used Hassuna pottery, concerning subsistence, town size, etc.
    - settlements of 1.2-1.6 ha
  - All within area of possible dry farming (i.e. no irrigation needed)
    - wheat (emmer and einkorn) and barley
    - sheep, goats, cattle
  - Together with Samarran pottery to the south, the Halafian style was the first really widespread cultural "horizon"
    - Not just isolated fancy pieces, but 80-90% of the pottery assemblage at any site is virtually identical to that from any other site
      - house styles, other artifacts also very uniform
    - Ceramic paste studies (neutron activation) show pots from a single clay source are found as much as 600 miles (about 1000 kilometers) apart
      - that is, some pots moved at least 300 miles...
      - indicates long-distance trade in ceramics
      - not just the spread of a style that influenced local potters

- although presumably most of the pottery was made locally, by local potters who learned to work in the regional style
- Looks like a complex pattern of exchange
  - some argue for a limited number of specialized centers that produced much of the pottery
    - which was then traded to other settlements both nearby and far away
  - people in larger towns conducted long-distance exchange between large settlements
    - mostly (or only?) for fancier, high-status goods
    - probably elites or trade specialists trading with each other
  - while simpler, "cheaper" versions were produced in the large towns and exchanged over shorter distances with smaller towns nearby
  - this flow of goods suggests that larger settlements may have controlled production of some craft goods
    - one possibility: elites in larger towns may have supported specialist potters ("attached specialists") who produced the fancy items that the elites used in their long-distance exchanges with other elites
  - implies some sort of increased interaction between people in different towns, of which trading pots was probably only a part
    - probably mostly between elites in the larger towns
- Samarra (5500 BC- 4800 BC)
  - Farming gradually spread south towards the "neck" of Mesopotamia
    - this may have been some combination of people actually moving into the area...
    - and a possible low density population of foragers who were already there and began to adopt agriculture
  - this area has less rainfall, so irrigation is necessary to consistently produce much food
  - The Samarra style and culture was contemporary with the later part of Hassuna style
    - but further out onto the alluvium
    - it is both a cultural and a chronological category
    - maybe a different social or ethnic group?
  - Samarra style was also contemporary with Halaf style, found to the north
    - in some places, both styles are found...
    - may have been different ethnic groups, or just different fashions
    - together, these are the first widespread, relatively uniform pottery styles
      - this might indicate more long-distance travel, contact, and exchange
  - Samarra style pottery
    - made with "tournette" (also called a "slow wheel")
    - possibly by specialists?
  - subsistence
    - cultivated wheat (emmer and bread wheat) and barley
    - kept sheep, goats, pigs, cattle
    - some fishing and shellfish gathering from Tigris river
    - hunting and wild plant foods important, but agriculture had a bigger role
    - farming was based at least partially on irrigation

- how do we know that? Evidence of irrigation:
  - the region in general is too dry for reliable farming without it
  - they cultivated at least one crop that would not have produced at all in this region without irrigation: flax (linseed)
    - for fiber used in linen cloth
  - sites are found in the areas where natural flooding could be most easily channeled and drained
  - sites are lined up along contour lines, implying canals
- irrigation suggests intensification
  - more investment in the land
  - more permanence
  - maybe land ownership
  - greater vulnerability to attack and need for defense
  - maybe greater need for coordinated work, conflict resolution, etc.
- but this can all still happen in pretty small-scale societies, without strong leadership or very complex social organization
- largest sites around 6 ha (site of Samarra)
  - about three times the size of the main quad
  - estimated about 1000 people
- mud-brick rectangular houses
  - multiple rooms
  - external buttresses, apparently originally to support corners and roof beams (later become decorative)
  - houses set around open courtyards
  - granaries, ovens, kilns
- the Samarra economy apparently had some complex features
  - stamp seals, like Halaf
  - possible maker's marks on pottery suggest craft specialization, exchange
    - makers' marks: limited range of marks that are not part of the decoration
    - may indicate who made the vessels, who commissioned them, etc.
    - only needed when there is risk of mixing them up -- shared kilns, large-scale transportation, markets...
  - limited amounts of copper suggest long-distance exchange
- Tell es-Sawwan (a Samarra style site)
  - population probably several hundred (comparable to Jericho)
  - in the earliest level (about 5500 BC)
    - houses were relatively uniform in size and elaboration
      - suggesting little variation in social status
    - several large buildings (up to 17 rooms) are interpreted as temples (maybe)
      - suggesting some kind of organization or leadership
      - some sort of group activity and coordination, for ritual, or ?
      - most elaborate shared projects yet, except for Jericho's wall and tower
  - the site was surrounded by a ditch

- many baked clay balls -- sling missiles?
  - suggests fear of raids?
- at least 128 burials under several of the large buildings
  - including 55 infants, 16 adolescents, and 13 adults
    - this high proportion of sub-adults in burials is typical for pre-industrial populations, which normally have high infant mortality
  - most buried with at least one object
    - alabaster female figurines
    - alabaster bowls
    - jewelry including copper and turquoise beads
    - ceramic pots
  - only minor variation in goods
    - slightly more with adolescents and adults than with infants
    - this agrees with the uniformity of houses (other than "temples") to suggest relatively minor differences in wealth between individuals and families
  - but one adult male with several items, buried under the floor of a room with no other burials
    - maybe a slightly wealthier, more important person
  - but all together, the burials are richer than burials from other contemporary sites
    - suggests that some settlements or groups within settlements already had access to more wealth than others
- by about 5400 BC (about 100 years after first settlement there)
  - a wall had been built just inside the ditch
  - with an “L”-shaped entrance path to make intruders vulnerable to fire from on top of the walls
    - suggests fear of attack
  - also, a number of specialized "T-shaped" structures that were apparently for grain storage
    - possibly at the community level, rather than by individual families
- Another example of a fairly large, walled Samarra site: Choga Mami
  - up to 6 ha (15 acres)
  - up to 1000 people
  - like the later levels at Tell es-Sawwan, Choga Mami was walled and had an L-shaped (that is, defensible) entrance
    - plus a tower guarding one entrance to the site
- Defense was clearly a serious concern for Samarran people, at least at some sites and times
  - and Samarra people at some sites were sufficiently organized to build sizable defenses
  - presumably indicating some sort of leadership, at least on a temporary basis
- These neolithic societies, especially the Samarrans, were the source of the first people who settled in the Mesopotamian alluvium
  - they comprise the roots of the first civilization in the world

- Next we will go out onto the alluvium proper, where we will see the beginnings of that first civilization: Sumer.
- Let's recap some of the features of the societies around and ancestral to Sumerian society (that is, Hassuna, Halaf, and Samarra)
  - these societies developed some features that were different from the small-scale Neolithic farmers in the Levant, central Asia, etc.
  - Fancy, decorated pottery (all three, but especially Halaf and Samarra)
    - made by specialists (most clear for Halaf and Samarra)
      - i.e. increasingly complex division of labor
      - the specialists may have been attached to elites who supported them
      - they imply increasingly complex social and economic organization
    - exchanged over long distances (especially clear for Halaf; likely also for Samarra)
      - interactions among elites
  - irrigated agriculture (Samarra)
    - investment in land, ownership, intensification, dispute resolution...
  - centralized storage (Hassuna, probably Samarra)
    - redistribution? Institutions to collect, keep track of, and distribute surplus?
  - stamp seals (Hassuna and Samarra)
    - possibly used for keeping track of goods: more complex economy, information flow
  - possible makers' marks (Samarra)
    - possibly keeping track of goods
  - burials with some wealth suggest rise of wealthy families (Samarra: Tell es-Sawwan)
  - large central buildings (Samarra: Tell es-Sawwan) may be residences of wealthy people, or shared ritual buildings?
    - they imply more complex social stratification and/or religious institutions
  - ditches, walls, L-shaped entrances, sling stones (especially Samarran sites): increasing fear of attack
    - and organized investment of labor for shared defense
- some or all of these features must have been involved with the emergence of more complex society in Sumer
  - so how and why did each come about?
  - and how and why did each contribute to the emergence of civilization?