Late Uruk (3400-3100 BC; 300 years long)
- We know far more about the Late Uruk period than the preceding Middle and Early Uruk and the 'Ubaid
  - due mostly to extensive excavations at the site of Warka (Uruk) that have uncovered impressive monumental architecture of the Late Uruk period and not dug any further
  - since that would mean destroying some of the Late Uruk buildings to see what is underneath
  - this means that we have a better idea of the communal institutions (usually called temples) and city life of Warka than we do of towns in earlier periods
- by this time the temples had piled up high enough to form tall platforms: early ziggurats
- stone sculpture
  - sculpture was probably not new to this period, but some nice examples help us imagine some features of Uruk society
    - the elaboration of high-status life
    - the elaboration of religious ritual
    - the training, specialization, and support of craftspeople that must have been necessary to produce these kinds of objects
  - apparently most, if not all, of this production was connected to the temple and/or high-status people related to the temple
    - that is, specialists worked in temple shops or were otherwise supported by the temple
    - most of these things were not, apparently, results of independent entrepreneurship
- Warka vase, 1 m tall, with low reliefs around it showing
  - plants and animals
  - nude men with shaved heads carrying offerings in baskets, jars, etc.
  - and a complex scene apparently of food offerings being presented to a goddess
- Marble head (8 inches high)
  - originally with inlaid eyes and eyebrows, copper hair
  - probably from a composite wood and stone statue
    - back is flat, with mounting holes
    - very naturalistic
- Statuette, Khafje, 4 inches high
- Offering stand, Uruk. Stone ram with silver rod support for offering stand or incense burner
- Cup holder, Tell Agrab
  - the figure holding the lions is a recurring theme in Sumerian art; may refer to a character named Enkidu who appears in the Gilgamesh stories
  - See the brief Gilgamesh story in the Reader
- Stela, Uruk (granite)
  - note the environment that this scene implies!
– “Monster”, Uruk period
– also small-scale stonework apparently for personal use, like amulets
– Late Uruk period relief with a reed house (or barn)
  – virtually identical to recent Marsh Arab houses!
– social status differences
  – implied by the monumental architecture (temples), fancy goods that only a few would have access to, many specializations
  – but we cannot confirm it with burials, because very few have been found, and no particularly elaborate ones
  – Uruk burials are so scarce that some have suggested the Uruk people may have had some non-burial way of disposing of the dead
  – like floating them down the river?
– invention of writing (more on this later)
  – clearly was related to increasingly intense economic activities
    – production, collection, storage, redistribution, exchange
  – like the workshops and other economic features, writing was associated with the temple
  – the city of Uruk was joined by four other competing city-states that were getting large
  – Ur, Nippur, Kish, and Eridu (continuing its importance from the ‘Ubaid period)
  – although none was as big as Uruk
– Example Uruk period city: Uruk itself
  – the modern placename of the site of Uruk is Warka
  – also mentioned as Erech in the Bible (Genesis 10:10)
  – a surprising amount of the Old Testament is derived from much, much earlier Mesopotamian traditions and/or written sources, including many details of the flood
  – Erech is one of the cities in the first kingdom mentioned in Genesis, ruled by Nimrod, a descendent of Noah, who “began to be a mighty one in the earth…and the beginning of his kingdom was Babel, and Erech, and Accad…”
  – located by the Euphrates river
  – initially settled in ‘Ubaid period
  – and continued to be occupied long after the end of Uruk period
  – Uruk was probably the biggest, most impressive city in Mesopotamia (i.e. on Earth) for 400 years or more (3200-2800+ BC)
    – New York should be so lucky
  – up to 80 ha (200 acres) during the Uruk period
    – about 90% of the entire SSU campus, from the residence halls to the stadium (~1130m x 780 m; = 87 ha)
  – population at the end of the Uruk period (about 3100 BC) estimated from 10,000 to 50,000 or more, and it grew even larger in the following centuries
  – surrounded by city walls
  – mostly the temple precincts have been excavated
  – one of the important temples was the “Anu ziggurat”
    – as at Eridu, they built over and over again on the same site
    – after 6 rebuildings over a span of 500 years, the accumulated stack of buildings and rubble stood 16 meters (over 50 feet) above the ground surface
on this platform was built the “white temple” (just one temple in the sequence of rebuildings)
- white color
- on a high platform with steps and ramps
- offering of a leopard and a lion in lowest course of bricks
- similar plan to late ‘Ubaid temples
  - central cella
  - freestanding rectangular pedestal with a semi-circular step with evidence of burning
  - high platform at one end of cella with steps leading up to it: base of a statue?
  - many interior niches
  - many exterior buttresses
- called “Anu” temple because it is close to later temples that can be historically linked to Anu, the Sumerian sky god
- estimated 7,500 person-years to build Anu ziggurat (i.e. monumental architecture)
- the Anu ziggurat was just one of several temple complexes at Uruk
- Eanna ceremonial precinct at Uruk
  - the ceremonial precinct alone covered 9 ha, over twice the entire site of Jericho; 2/3 the size of all of Çatal Hüyük
  - near historical temple to the goddess Inanna, Uruk’s principal patron deity
- Limestone temple
  - built on foundation of shaped limestone blocks from Arabian plateau 60 km away
  - 30 X 76 m (about the same width as Darwin Hall, but only 3/4 as long)
  - Carefully laid out, symmetrical plan, elaborate niches and buttresses
- Pillar temple
  - contemporary with Limestone temple
  - several buildings
  - freestanding large round pillars, 2.6 m diameter (over 8 feet)
  - made of mud bricks stacked radially, thickly plastered with clay
  - into the wet clay were pushed clay cones with painted ends in red, white, and black, forming geometric designs
  - also done on flat walls: "clay wall cone mosaics"
  - Later rebuildings were twice as wide as the Limestone Temple; as wide as Stevenson Hall and over 3/4 as long (60 X 80 m)
- Stone mosaic temple
  - possibly first built a bit earlier than the others
  - walls decorated with cone mosaics, but in this case, the cones are different colored stone
- Temple compounds had not only the classic temple structure on a tall mound, but also major economic functions
  - large complexes of storage rooms, apparently for agricultural produce
  - apparently used to support hundreds of laborers and craft specialists associated with the temple
- the first examples of writing (pre-cuneiform) are from the Eanna temple precinct
they clearly have to do with accounting of goods in storage, payments, lists of workers, and so on

implications of temples, ziggurats, etc.

these are really big, elaborate, expensive buildings

even by today’s standards

required a huge labor force to build

required skill in planning the building and organizing logistics

all suggest:

an institutionalized, stable hierarchy

that is, not just one successful, charismatic leader, but a society organized around powerful institutions (like the temple) with leaders

that kept working in about the same way for generation after generation

analogous to the Vatican

mobilization of large economic resources

organization of many laborers and craftspeople

legitimation of institutions through association with impressive monuments and ceremonies

presence of architects, specialized planner-organizers, ritual experts: a “knowledge” class

that is, people with “esoteric” knowledge

possibly with formal training or apprenticeship

probably with control of access to knowledge and skills

the buildings and the institutions would have lent a permanence and legitimacy to this class

the storage, production, recordkeeping, and other administrative features suggest that the temple had a major role in

the flow of agricultural produce

the direction of at least some of the labor of much of the population

the training and support of specialized craftspeople

the training and support of specialized administrators, eventually including scribes

all together, the temple seems to have been the institution around and through which a complex social hierarchy and real political and economic power finally developed

even so, settlement patterns seem to suggest that each big city only controlled the production of the small hamlets in its immediate vicinity

that is, at this point there was no larger-scale integration between cities

Uruk society was organized into city-states (more or less)

walled

often competing or even fighting, sometimes allied or coexisting

success sowed the seeds of destruction:

beginning of salinization

salinization is the accumulation of salts in the soil due to evaporation of water from the surface of poorly drained, soggy soil

as the soil gets saltier, it becomes less fertile for farming
late Uruk records show that wheat and barley were grown in equal amounts; 1000 years later, Early Dynastic records show 6 times as much barley as wheat
  - Barley is more salt-tolerant than wheat
  - this is an indication that poor drainage from intensive farming was already beginning the process of salinizing the landscape
  - which would eventually convert much of Sumer into desert and scrubland fit only for grazing animals

- Jemdet Nasr (3100 - 2900 BC; 200 years long?)
  - poorly defined, short
  - some sources just lump Jemdet Nasr in as the end of the Late Uruk period
  - sometimes called "protoliterate" period, since cuneiform was just developing and literacy was still limited mostly to accounting
  - writing improved and became more common
  - mass-produced pottery became still more common, made with the fast wheel, continuing a trend that started in the Uruk period
  - stone artwork continued
  - temple rebuilding continued
  - Jemdet Nasr burials: finally some clearer evidence of variation, suggesting some stratification
    - of 340 graves, 61 (about 20%) had one or two metal cups; 2 had numerous goods (the top less than 1%)
  - basically, this was a transitional period that is poorly known
  - it is identified by a style of ceramics a certain sites, but it is not clear that there was a separate period in which this style was used over a large area
  - or whether maybe it was a style that coexisted with other styles at some places and not others
  - in any case, we don’t know much about it that is very distinct from the preceding and following periods
  - for our purposes you can generally jump directly from the Uruk period to the beginning of the Early Dynastic period, which follows Jemdet Nasr

- Origins of writing
  - Why is writing important?
    - storage of information, more detailed, exact, and voluminous than memory allows
    - transmission or access by different people at different times
      - that is, information can be transmitted and acted on without needing face-to-face contact
      - people involved don’t need to be in the same place
      - or even dealing with the information at the same time
      - this opens up possibilities for much greater flexibility and efficiency
    - facilitates comparison, summary, analysis, impersonal consideration
    - written information is not affected by personality and presentation as much as spoken information is
    - and it can be re-read, the reader can jump back and forth, make comparisons, etc.
Emergence of civilizations F 2006 / Owen: Mesopotamia: Uruk, Jemdet Nasr, writing p. 6

- so presumably more complex information and decisions can be managed
- allows a different kind of handling of complex ideas and data, the visual aspect of seeing it all on the page
- some people believe that information that is seen is processed differently from information that is heard
- implies formal training and specialists
- many definitions of civilization include writing as an important characteristic of civilization

- Denise Schmandt-Besserat: The token theory of the origin of writing
- This explanation has its critics, but it is probably at least partially right
- Clay tokens found at many neolithic sites around SW Asia
  - cones, disks, spheres, partial spheres, etc.
  - variable size, average around 2 cm (1 inch) high
- example: Jarmo, 8,500 BC: a modest early agricultural village
  - 1,153 clay spheres, 206 disks, 106 cones found in excavations (1465 tokens total)
  - generally found in clusters of 15 or more
  - generally found in storage areas in houses
  - i.e. counters representing stored goods, herds, etc.?
- also found at other sites, starting around the time of initial use of agriculture
  - found at sites that generally don’t have much evidence of pastoralism
  - nor of trade
  - so if these tokens were the beginning of record keeping, it started with cultivating and storing cereals -- not keeping track of herds or trade
- similar tokens continued in use for thousands of years, up to a bit after 2000 BC -- that is, some 6,500 years!
- very stable for close to 5000 years until Uruk times, with only minor additions to 20-28 shapes and variants
- In the Uruk period, many new complex shapes were added, also more incisions, appliques, etc.
  - May indicate increasing number of types of goods to record, due to imports, craft specialization, etc.
  - many of the new, more complex variants resemble later precuneiform symbols for manufactured goods
  - like bread, oil, beer, perfume, metal, spun fibers, garments
  - so the expansion of the token system probably reflected the increasing variety of goods made by craft specialists that had to be kept track of
- The new, complex tokens were apparently limited to cities, not found in small hamlets
  - another hint that they may relate to things produced by specialized craftspeople who lived in the larger towns
- also, at some point the tokens seem to have been extended to stand for numbers
  - this is suggested because some tokens seem to correspond to known precuneiform symbols for numbers
  - small cone=1, circle=10, larger cone=60, etc.
so the token system was already more complex than just one token standing for one item

In the Uruk period, two means of keeping groups of tokens together appeared
- pierced tokens
  - apparently to keep on strings
  - the knot of the string was covered with clay, which had one or more seal impressions pressed into it
- unpierced tokens were encased in a clay “envelope” (“bullā”, plural "bullae")
  - most had two different seal impressions, suggesting transactions or contracts between two people
- both kinds of grouping were presumably to record a transaction or contract
  - such as giving a shipment of goods to someone to transport
  - the set of tokens would make it difficult to divert any items without being discovered
  - both plain and complex tokens were pierced and put in bullae; both grouping systems were used for both simple and complex tokens
  - although most bullae contained mostly plain tokens
- problem with bullae: you had to break them open to verify the contents, and once opened, they were no longer sealed and tamperproof
- so they began marking the bullae on the outside by pressing the tokens (or similar ones) into the clay
  - in some examples, the tokens inside fit the impressions outside perfectly
  - but most examples have representations of the tokens made with a finger or stylus (probably a cut reed or wooden stick)
  - with the outside marked, the tokens inside the bullae were not really necessary
- so they gradually stopped bothering with the tokens at all, using just the impressions on small clay slabs, or "tablets", to record the information
  - the symbols became more complex, and writing emerged
  - so the emergence of a complex economy drove the development of writing
- Earliest “writing” appeared around 3400 BC, beginning of Late Uruk period
  - written on clay tablets
  - signs were initially made by scratching lines into the damp clay: this was Uruk period “pre-cuneiform”
    - fewer than half were clearly pictographic: hand, head, barley, etc.
    - from the beginning, more than half were totally abstract
    - even in Uruk times, already some phonetic signs, based on monosyllabic words
    - only some can be read, by extrapolating back from later, better understood cuneiform
    - Uruk period pre-cuneiform used at least 1,500 different signs
- Over the next 500 years, the pictographic system was simplified
  - by the Early Dynastic period (2900 BC - 2373 BC), it had developed into cuneiform
  - cuneiform symbols are modifications of the symbols, made by pressing a pointed stylus, rather than dragging it; the impressions give a "cuneiform" (wedge-shaped) look
  - it was faster to write by pressing cuneiform symbols than scratching pictographic symbols
  - but the pictographic quality of the signs was lost; they became very abstract
the number of signs declined to around 700 signs
read left to right, top to bottom, in columns
a much later version of cuneiform was “cracked” by intense study of a tri-lingual inscription of the Persian king Darius I, in 516 BC
Old Persian, Elamite, Babylonian
this allowed epigraphers (writing experts) to work backwards to decipher the earlier forms of cuneiform, and some of the precuneiform symbols
the symbols were initially for numbers, nouns, and a few adjectives
they were for accounting records
later, additional syllabic signs were invented to add other elements of language
an early common application was for contracts
sometimes sealed in a clay envelope with the same text written on the outside
continuing the traditional bulla concept of verification
an example of fully developed cuneiform writing (this example is actually later, one of the “Amarna letters” found in Egypt, around 1400s BC)
“Shawardata, prince of Hebron, stands alone and needs a large force to rescue him.”
context and content of Uruk writing
tables are found in temples
and in some private houses, associated with seals and sealings
suggesting that it was mostly related to storage and trade
the most common signs are bread, beer, sheep, cattle, clothing
again, suggestive of storage and transaction records
incidentally, note the difference between cuneiform writing and the signs (sometimes including some cuneiform) on seals
seals are used over and over to make a repetitive ID mark, like a signature or a rubber stamp with your name on it
some have writing on them, some don’t
the content of the writing is secondary; the point is the identification of the user
this could be done by an abstract symbol, a coat of arms, etc., with no need for recording speech
an essential feature of writing is that it is flexible, able to record a wide variety of different statements
not just identify an individual
the vast bulk of pre-cuneiform and cuneiform writing is on tablets
which record accounts, records, letters, and practice work by scribes in training
these are different from the seals, in that they express different information in every phrase, rather than standing for the same thing over and over
So: writing developed out of recordkeeping and contracts for storage, transportation, and exchange of goods
and continued to be used mostly for that
these tablets with accounts and administrative records are mostly found in archive rooms
initially archives were only in temples
later, as palaces arose, they too had archives
– as time passed, it was gradually extended to other uses like
  – diplomacy (such as letters between kings)
  – law (such as land ownership agreements, codes of crimes and punishments)
  – recording myths, poetry, etc. (the Gilgamesh epic and others)
– it remained a highly specialized skill that was formally taught with standardized exercises
  and practice texts
  – this formal training implies a close control of esoteric knowledge (the method of reading
    and writing)