

Mesopotamia: More on Uruk, Jemdet Nasr, and the origins of writing

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- 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.

- 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” (“bulla”, 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
 - tablets 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)