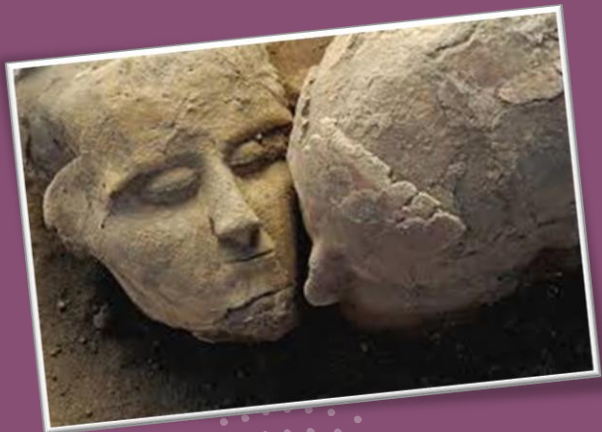


# Paleoanthropology



Lecture 1: EpiPaleolithic:  
Kebaran & Natufian 07/05

Lecture 3: Earliest cities 21/05

14 May

07 May

21 May

Lecture 2: Neolithic &  
SouthWestern Asia 14/05





# Neolithic & SouthWest Asia

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Dr Arwa Kharobi

Assistant professor

Department of Anthropology, MUNI





# The Neolithic

❖ last stage of the Stone Age

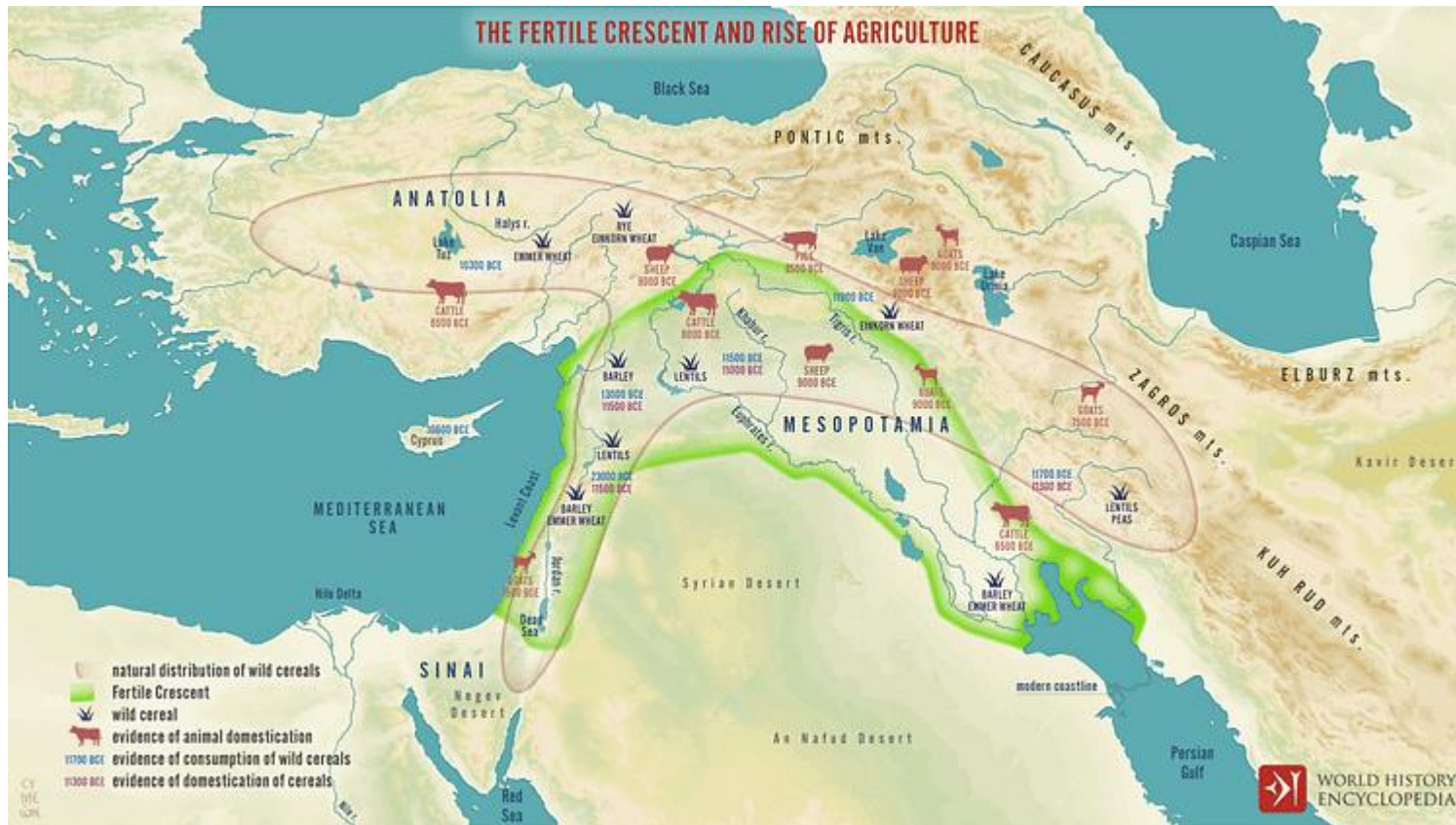
❖ refers to a period of time when humans shifted from hunting & gathering to **agriculture**:

1. producing food
2. grazing animals

❖ **mixed economy** = where wheat & barley were grown = lived sheep, goats, cattle & pigs

# “Mixed economy”

both processes were intimately connected & underway at the same time







# Domestication

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**Domestication** is the process by which farmers select for desirable traits by breeding successive generations of a plant or animal.

Over time, a domestic species becomes different from its wild relative.



# Agricultural Inventions

1. Plant  
domestication

2. Livestock

3. Housings – living

4. Special buildings  
– ceremonies

5. New tools

6. Pottery

7. Art



# 1. Plant domestication

- ❖ Neolithic farmers **selected** for crops that harvested **easily**.
- ❖ **Cereals** : **emmer wheat, einkorn wheat and barley** - among the **first** crops domesticated by Neolithic farming communities in the **Fertile Crescent**.
- ❖ then **lentils, chickpeas, peas & flax**.
- ❖ continued with a variety of nuts (most commonly pistachio)





# Wheat

## 1. Plant domestication

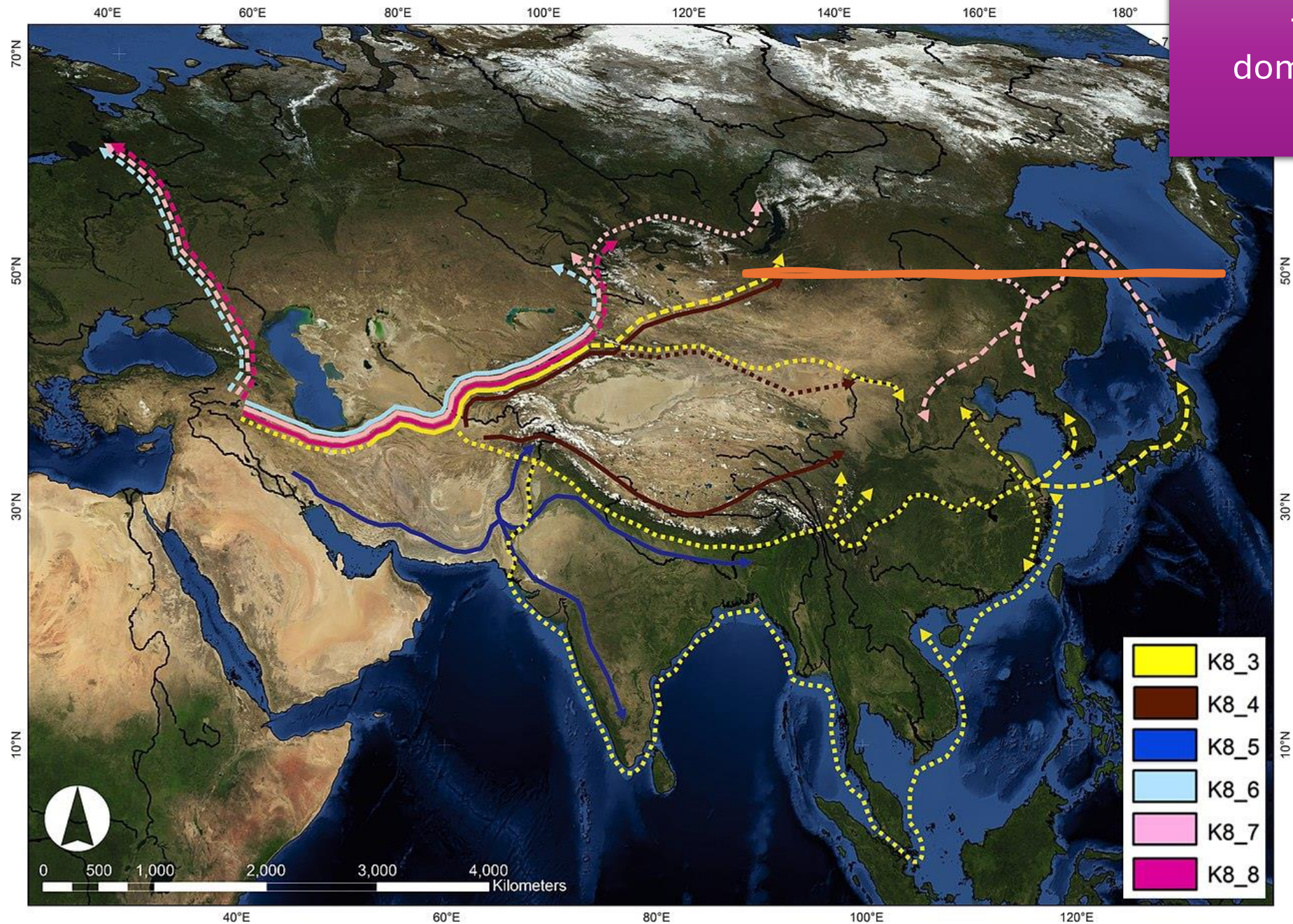
Local trajectories were coming into focus as the earliest cultivation of **wheat** appeared in the **Cayonu** (Turkey) from where it spread towards Tell **Aswad** (Syria) and further south to **Jericho** (Jordan Valley) by 10,200-9550 BC **typically located near to springs & lakes**.





# Genetic analysis on the spread of **barley** from 9,000 to 2,000 BP

## 1. Plant domestication





## 1. Plant domestication

**Emmer wheat** : principal cereal crop in Southwest Asia as permanent villages spread to other areas of the Fertile Crescent.

Its charred grains appeared at:

- Abu Hureyra
- Çatalhöyük, Anatolia
- Ali Kosh
- Jarmo







# 1. Plant domestication



## 1. Plant domestication

Around the same time:

in **Asia:** started to grow rice & millet.

- *archaeological remains of Stone Age rice paddies in Chinese swamps dating back at least 7,700 years.*

In **Mexico:** squash cultivation

- *began about 10,000 years ago,*

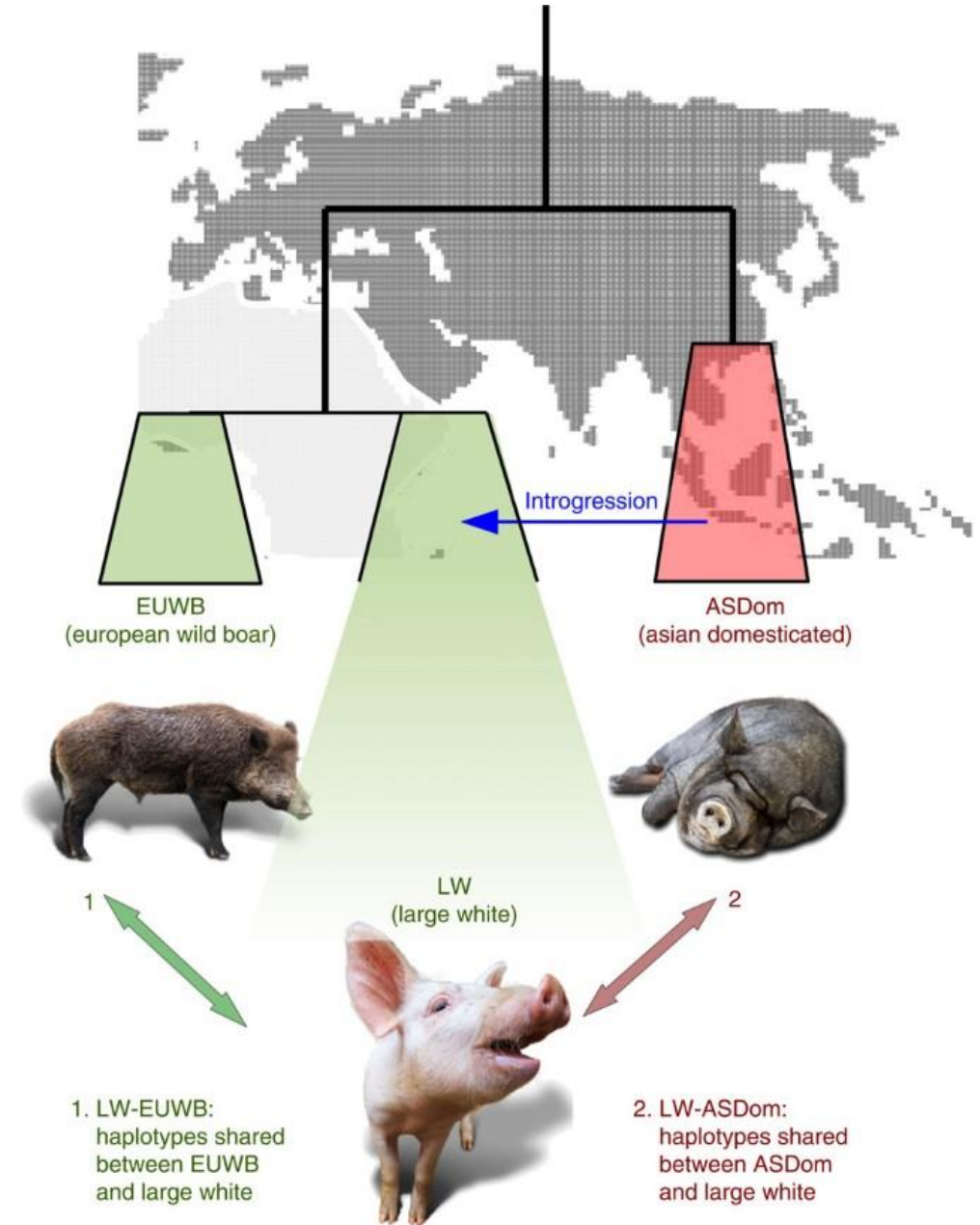
while maize-like crops

- *emerged around 9,000 years ago,*



## 2. Livestock

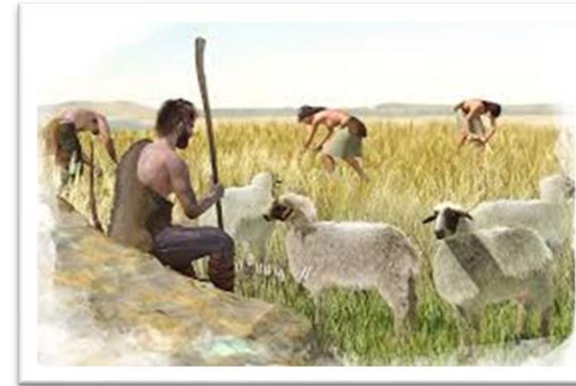
- ❖ The first livestock were domesticated from animals that Neolithic humans hunted **for meat**
- ❖ Domestic **pigs** were bred from **wild boars** / goats from the Persian ibex



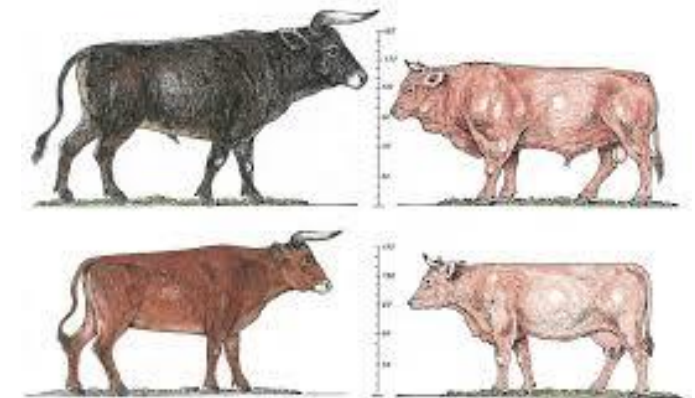


## 2. Livestock

- ❖ **Same time**, 10,000 -13,000 years ago: sheep & cattle (Mesopotamia)



- ❖ **shortly after**: water buffalo & yak (China, India & Tibet)



- ❖ **much later** (4,000 B.C.): draft animals : oxen, donkeys & camels

*'as humans developed trade routes for transporting goods'*

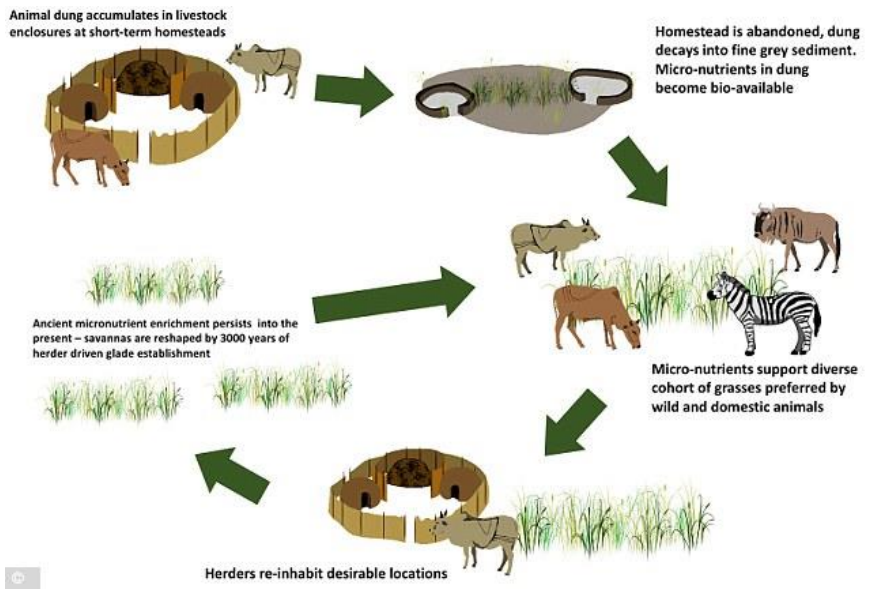


## 2. Livestock

# Advantages & disadvantages

++ They made the hard, physical labor of farming possible  
++ their milk & meat added variety to the human diet

-- They also carried infectious diseases: smallpox, influenza and the measles all spread from domesticated animals to humans.





## 2. Livestock



- ❖ Wild animals were controlled, tamed and reared for food and ensuring **availability of dairy products** (meat, wool) + their usage to carry heavy burden over long distances
- ❖ By domesticating animals Neolithic people **managed their economy without having to constantly wonder in search of food.**
- ❖ however, in the beginning (10,300 BC) hunting still continued and agricultural groups were exploiting wild animals (*faunal assemblage*)

# Diversity

## 2. Livestock

**At Abu Hureyra (Syria)**, proportion of cattle as domesticates is said to have been higher as compared to sheep and goat

clearest evidence for domesticated pig was recorded from **Jarmo** (Iraq).

By 7000 BC:

- pig bones were recovered from all over Southwest Asia
- mixed herds of domestic goat, sheep, pig, cattle become significant at Cayonu, Abu Hureyra, Ganj Dareh, Ali Kosh, and Jarmo, indicating the setting in of animal husbandry

once domestication of animals advanced, the raising of goat and sheep spread rapidly accompanied by the domestication of pig and cattle in varying proportions, an advantage of diversity, forming the basis of faunal economies in Southwest Asia.



# 3. Housings – Living

building was an **important facet** of the Neolithic Southwest Asia's lifestyle providing evidence for **diversity** in terms of:

1. layout
2. size
3. structural patterns of both domestic & community architecture

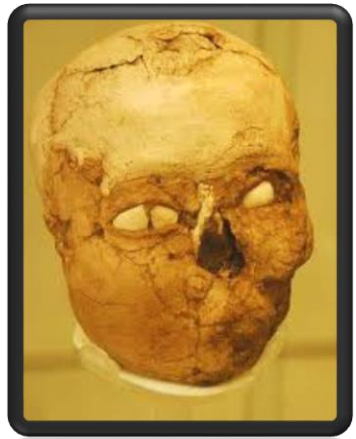
The oldest known house structures are from **Jericho**

3. Housings – living





# Jericho



- Levantine region, next to Ein-es Sultan, a perennial water spring
- **Maximum size:** 2.5 hectares
- **Population estimate:** 2000 people
- Jericho referred to as the "**oldest town**" in antiquity
- **Cultivation:** Emmer wheat & barley
- **Livestock:** Domesticated goat & sheep
- **Hunting:** Gazelle & wild boar for protein sources



The oldest known house structures are from **Jericho**

- round shaped huts from sun dried bricks
- flat at the bottom and curving at the higher edge
- bricks were plastered together with mud mortar (as a gluing agent)
- houses looked like a cluster of large beehive shaped ovens
- Some houses were built on stone foundations and measured around 5 metres across
- no street planning though





### 3. Housings – living

## a change in cultural tradition : Jericho II



- advanced structures
- houses now rectilinear shaped
- made of mud-bricks
- some houses having an elaborate courtyard plan
- plastered floors
- impressions of reed mats (preserved)
- houses had internal divisions, with storage pits
- hearths outside and within the houses





# Çatalhöyük

## 3. Housings – living

- ❖ southern Turkey
- ❖ one of the best-preserved Neolithic settlements
- ❖ **demography** = 8,000 people
- ❖ more than a dozen mud-brick dwellings
- ❖ houses clustered so closely back-to-back  
→ entrance through a hole in the roof
- ❖ walls are covered with murals of men hunting, cattle & female goddesses





3. Housings – living





# Çatalhöyük

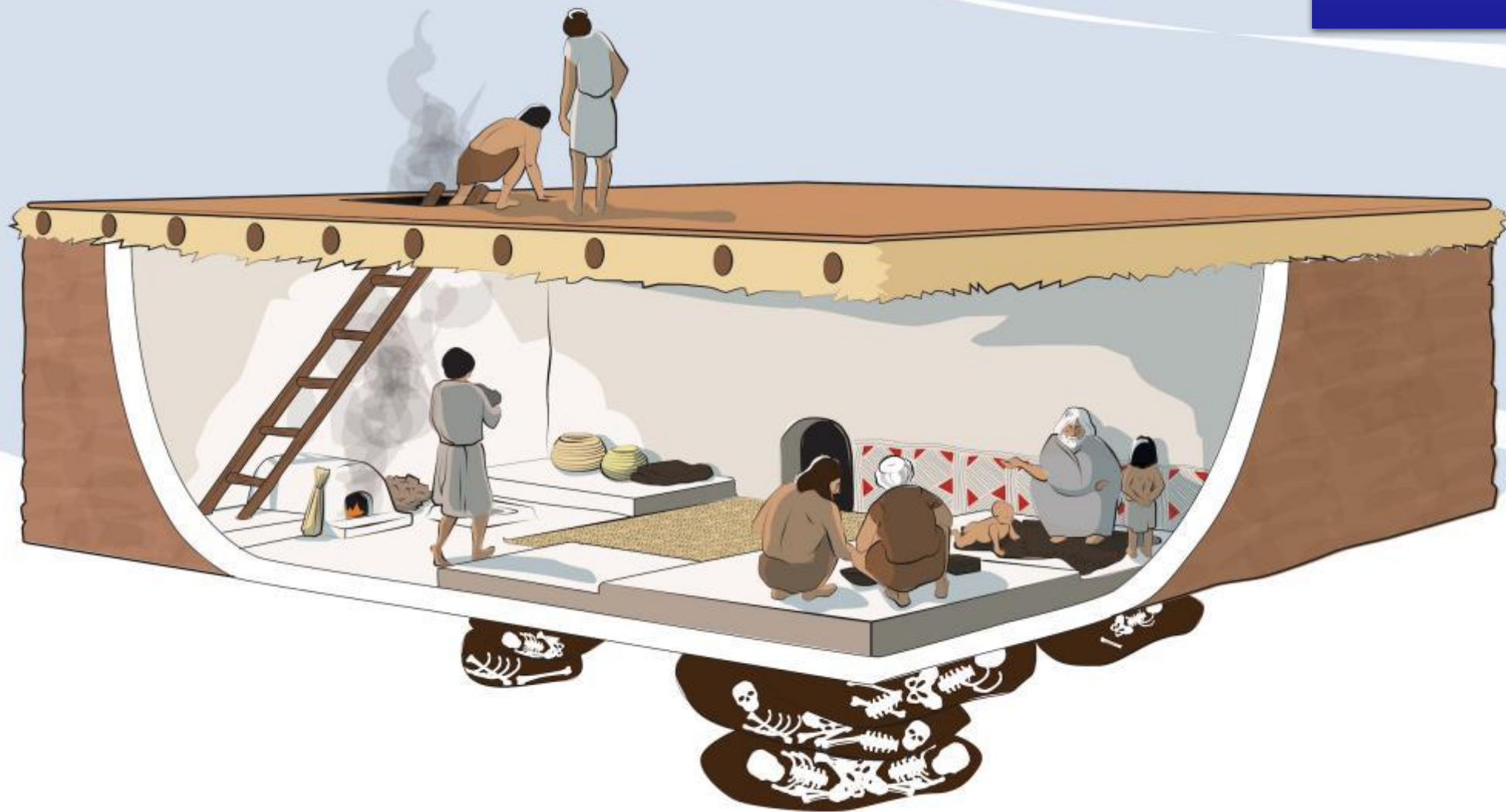


The inhabitants of Çatalhöyük:

1. had valued art & spirituality
2. buried their dead under the floors of their houses

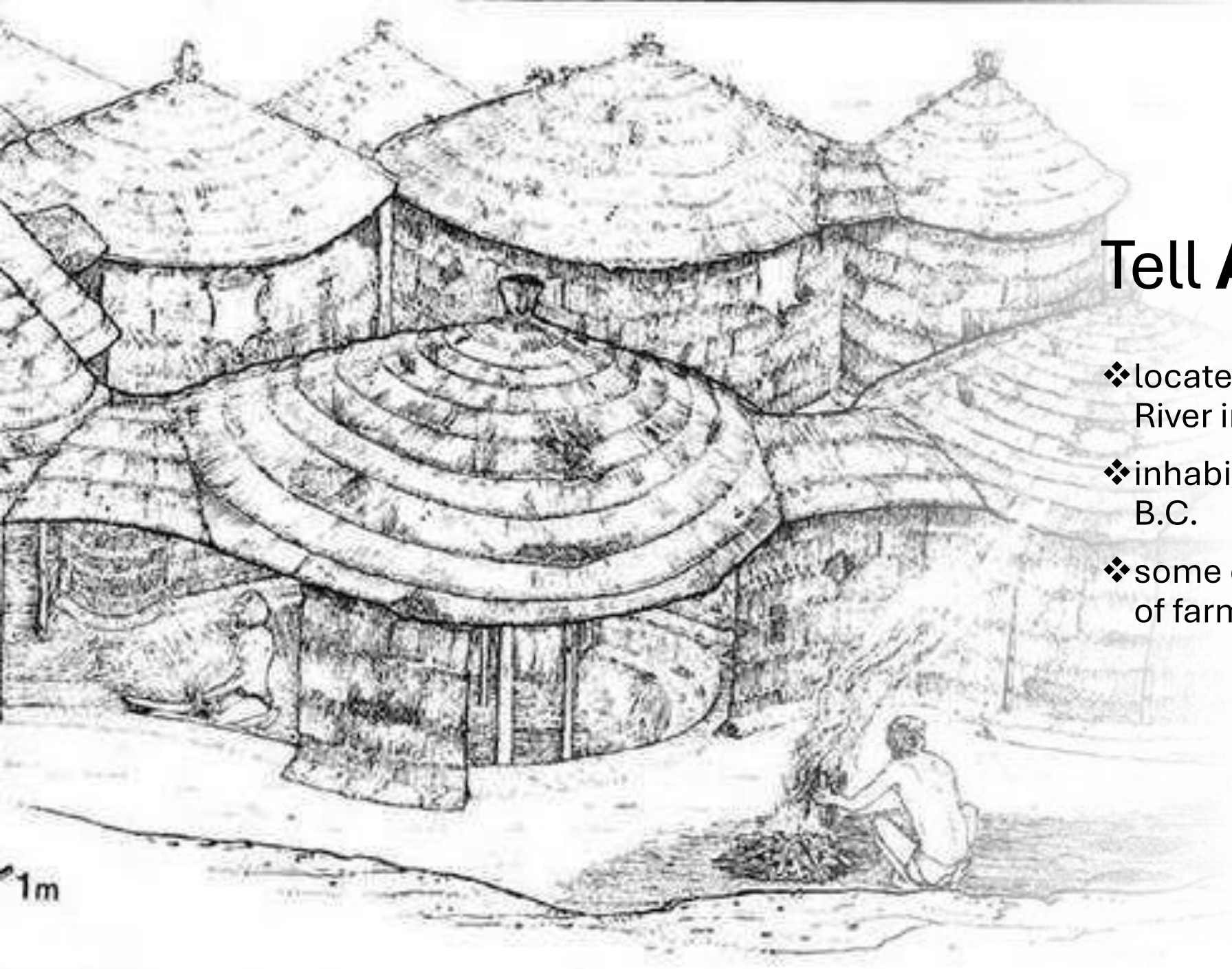


### 3. Housings – living



## Tell Abu Hureyra

- ❖ located along the Euphrates River in Syria
- ❖ inhabited from 11,500 - 7,000 B.C.
- ❖ some of the earliest evidence of farming





# Tell Abu Hureyra

- ❖ Inhabitants initially hunted gazelle
- ❖ Around 9,700 B.C. they began to harvest wild grains
- ❖ **Several large stone tools for grinding grain have been found at the site.**



## 4. Special buildings

- might have served the ceremonial purpose
- or places of worship

**Jericho:** colonnaded building (identified as a shrine)

**Çatalhöyük:** Similarly buildings with mounted bull's skulls in the walls of their houses and covered with plaster as shrine

**Jarmo:** modest building (termed as shrine)





# 5. New tools

**new agricultural methods → new tool technology:**

Heavier tools like:

1. grind stones
  2. mortars
  3. querns
- } important for agricultural activities

heavy duty round stone axes

bifacial lithic tools

brittle stone (to make tools)

arrowhead points } to cut soft animal tissues

knives



## 5. New tools

# Better making techniques

1. To make heavier tools that **could withstand the impact against** tree trunks, stalks, and hard soil
2. To produce **smoother cutting edges** in tools (like grinding & polishing)
3. To **be reshaped over and over again**





# Not only, new means for cultivation also

1. to enhance survival
2. for long term propagation

Agricultural methods emerged to:

- ✓ clear the land
- ✓ prepare the soil
- ✓ plant the seeds





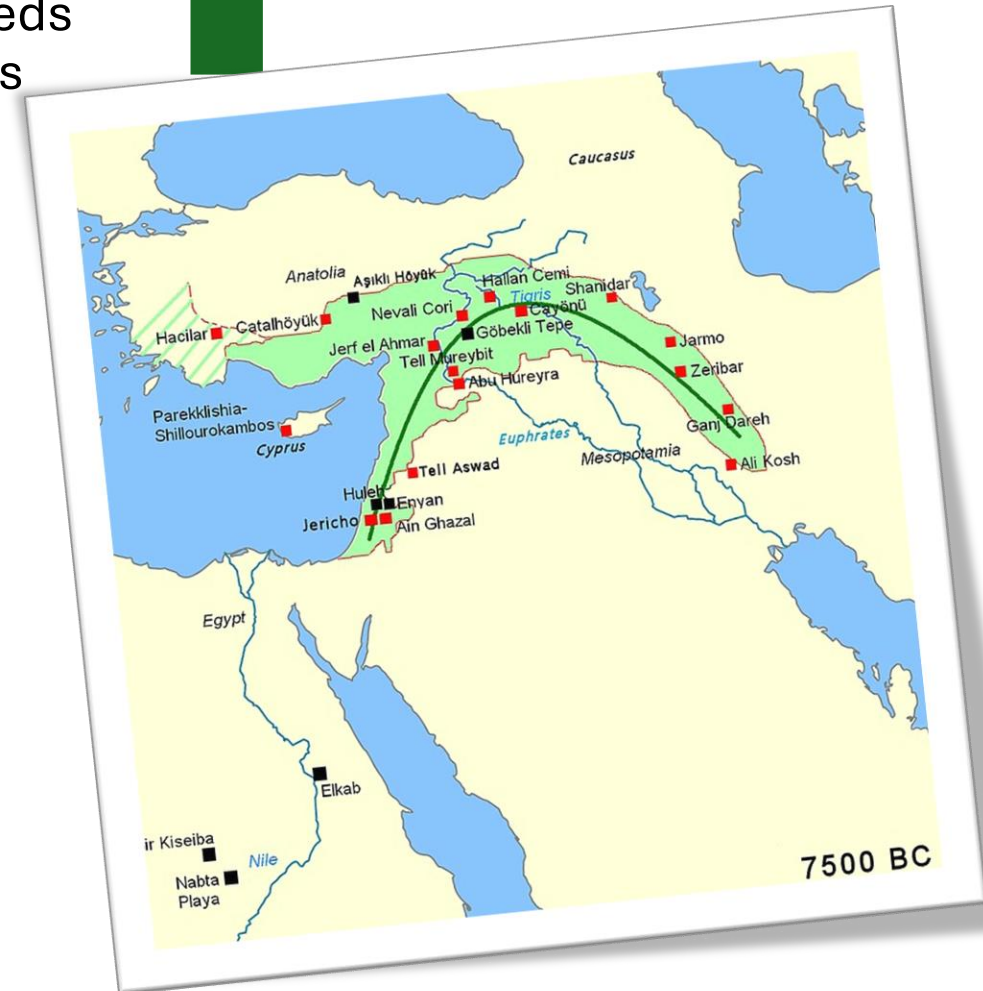
a range of crops were domesticated multiple times

once the cleared fields again choked with weeds after a gap of few years

farmers fell the other trees in new areas

leading to the expansion of

1. agricultural economy in the region
2. Neolithic site size





**A society that acted in this way began to *not only produce food but gradually increased its food supply & food output***

→ resulting in continuous supply of food



## 5. New tools



- 
1. clearing forests,
  2. tilling the soil
  3. keeping flocks & herds of animals

→ provided Neolithic people with much more dependable food resources, at times yielding them a **surplus**, a characteristic that **differentiates** Neolithic food producers in Southwest Asia from their Paleolithic predecessors

(Childe, 2016).



# Surplus → Storage → Specialisation!

- ❖ facilities for storage of grain emerged and improved
- ❖ economy demanded greater specialisation of labour
- ❖ need for specialization:
  1. farmers
  2. carpenters,
  3. potters



# Surplus → Storage → Specialisation!

## PLOS ONE

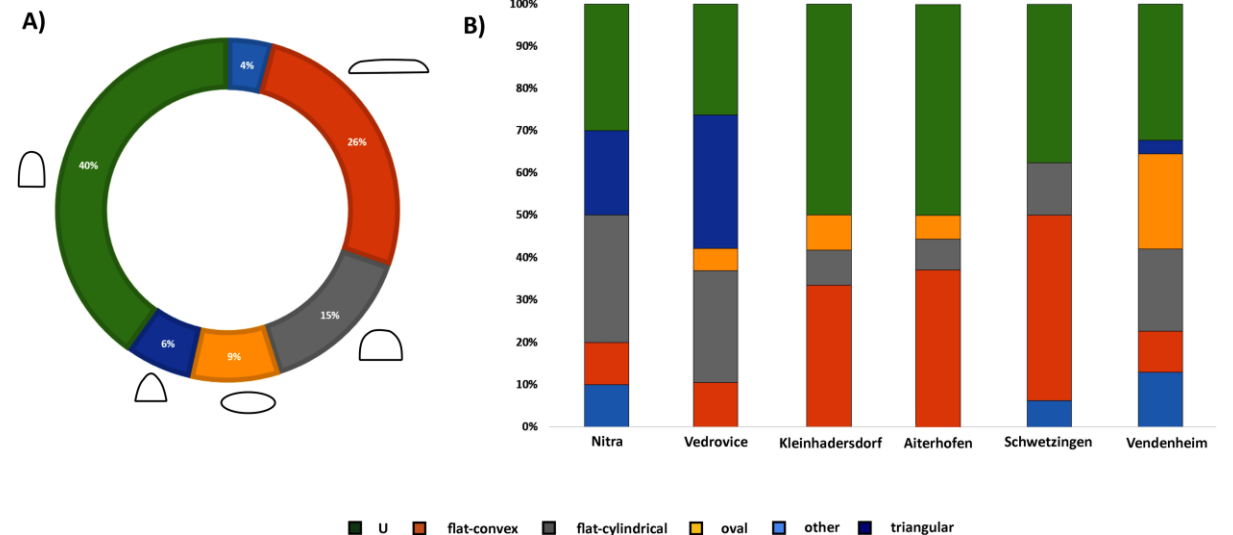
OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

### A sexual division of labour at the start of agriculture? A multi-proxy comparison through grave good stone tool technological and use-wear analysis

Alba Masclans, Caroline Hamon, Christian Jeunesse, Penny Bickle

Published: April 14, 2021 • <https://doi.org/10.1371/journal.pone.0249130>





# 6. Pottery



1. handmade
2. of simple design
3. treated with vegetable solvents

## 6. Pottery

**did not appear everywhere in the same order**

earliest farming communities like **Jericho** did not create pottery, its bowls and dishes were made in stone.

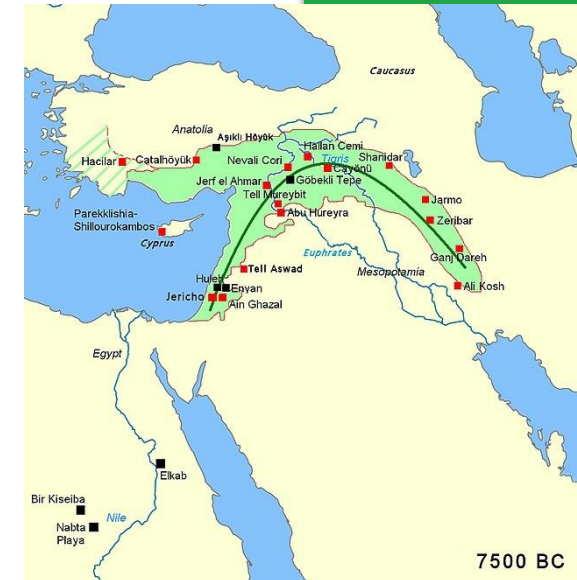
**Jarmo**: long periods of Neolithic occupation before pottery came into use and is found in the recent levels of occupancy.

**Çatalhöyük**: pottery is known for fired, unpainted, unglazed and very simple bag-shaped form.

**Ali Kosh**: painted and plain

**Ain Ghazal**: small quantities of fired sherds

**Abu Hureyra**: pottery sherds in the form of dark burnished ware,





# 7. Art

- ❖ mother goddess sculptures

- ❖ Most of the statuettes of this period were themed around female deity

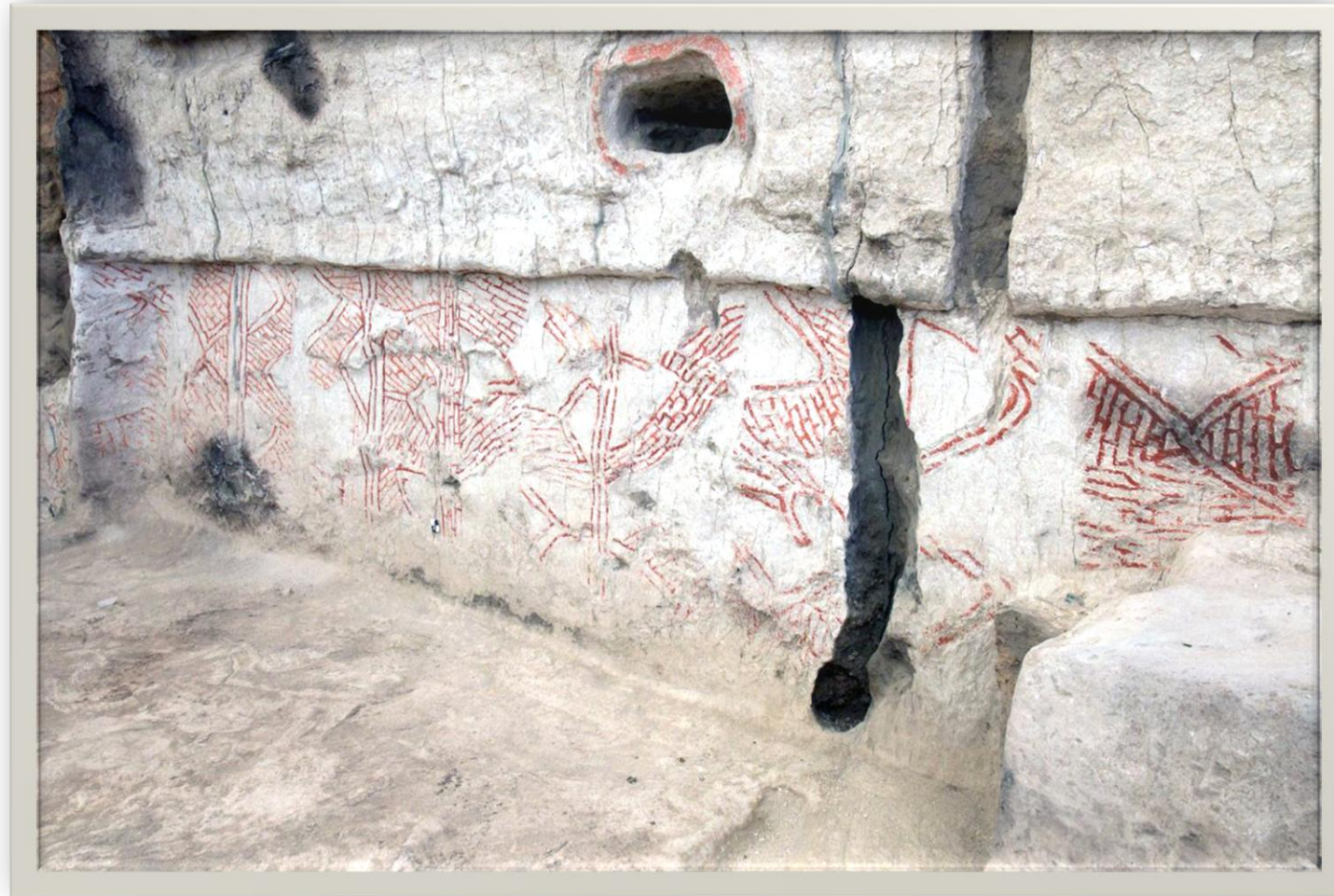
- ❖ but often animal statues broken into bits have been found scattered in some sites (Jericho).



# Painting walls

house walls & decorative element to human settlements (Çatalhöyük)  
animals, humans, hunting scenes  
and geometric designs

'deer hunt' showing animals being pursued by humans organised as a group.





# Other objects

- ornaments
- amulets
- mirrors belonging
- spindle whorls
- loom weights made of stones



7. Art

# What about funerary practices

- ✓ dead were carefully buried immediately **below the floor** of the houses at Jericho
- ✓ wished to keep the ancestral spirits with them





# Different positions/deposits

- ✓ in full length flexed position
- ✓ in crouched position
- ✓ head displaced and found lying near to the skeleton.





# grave goods

wooden stools,  
wooden bowls,  
combs,  
beads  
pins







# Distinct burial practices

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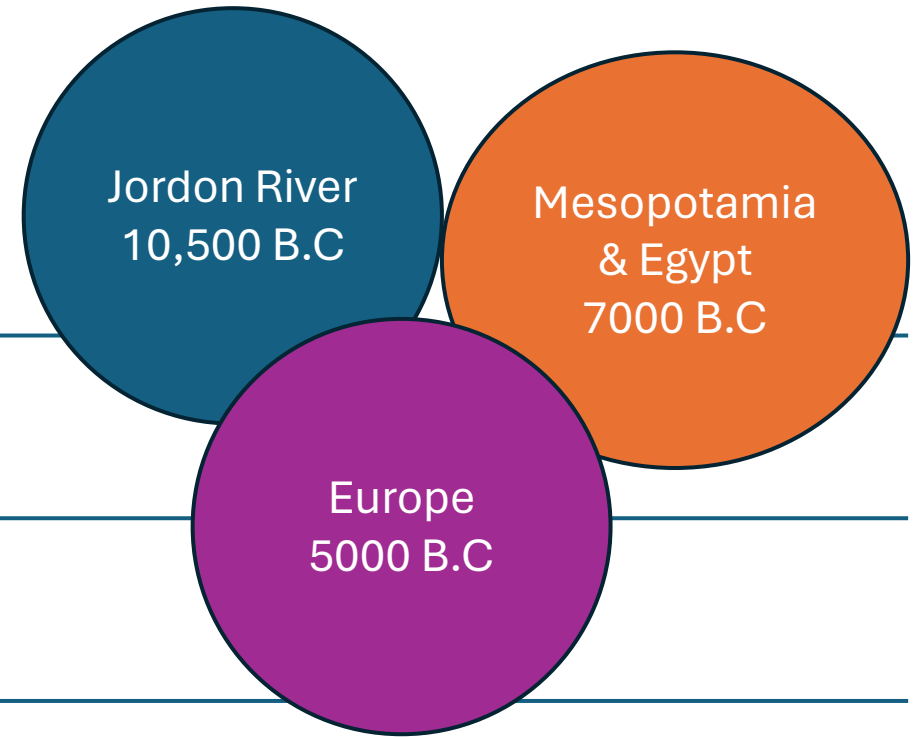
**'Ain Ghazal:** skeletons found deposited with severed heads

Frequent multiple burials with pig bones as grave offerings

**Abu Hureyra:** headless individual burials found along with group burials



# The Neolithic



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did not arise:

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1. abruptly

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2. uniformly all over the world

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3. not in the same order

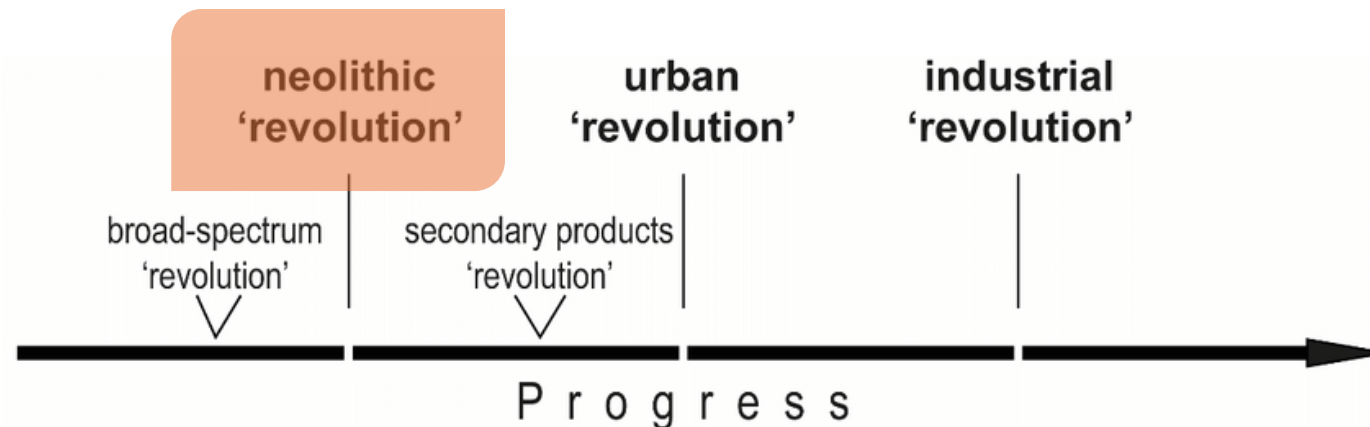
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**Neolithic involved a long period of adjustment & the process varied across geographical zones**



# “Neolithic **R**evolution”

- ❖ also called the **Agricultural Revolution**
- ❖ begun roughly around 12000 years ago in the **Fertile Crescent**
- ❖ marked the transition **from** small, nomadic bands of hunter-gatherers **to** larger, agricultural settlements and early civilization.



V. Gordon Childe

1935

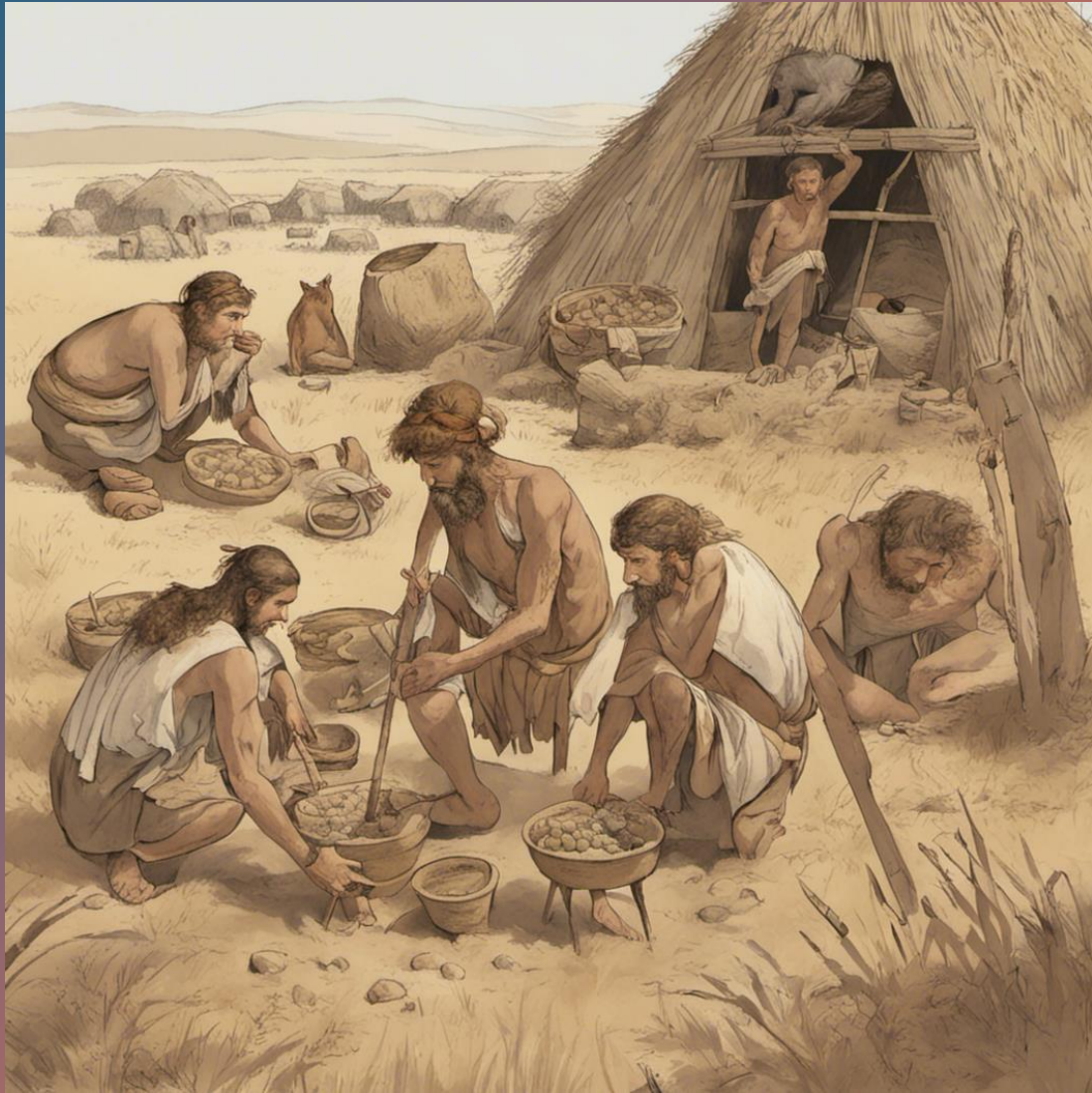
# “Neolithic Revolution”

applied to advancements as:

1. the beginning of **agriculture**,
2. **domestication** of animals,
3. population **growth**,
4. permanently **settled** life,
5. creation of better **tools** & implements,
6. origin of skilled crafts (**pottery**)
7. scientific control of **fire**
8. worship of **female figurines**







# Causes of the Neolithic Revolution

no single factor but many (varied from region to region)

- I. **Climate Changes:** warming (at the end of the last Ice Age) → longer growing seasons & dry land
- II. **Population increased** → Need for more food
- III. **Intellectual advances** in the human brain → settle down



Thank you