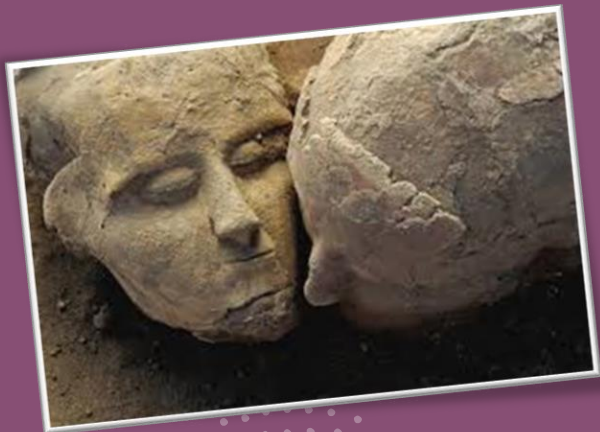


# Paleoanthropology



Lecture 1: EpiPaleolithic:  
Kebaran & Natufian 07/05

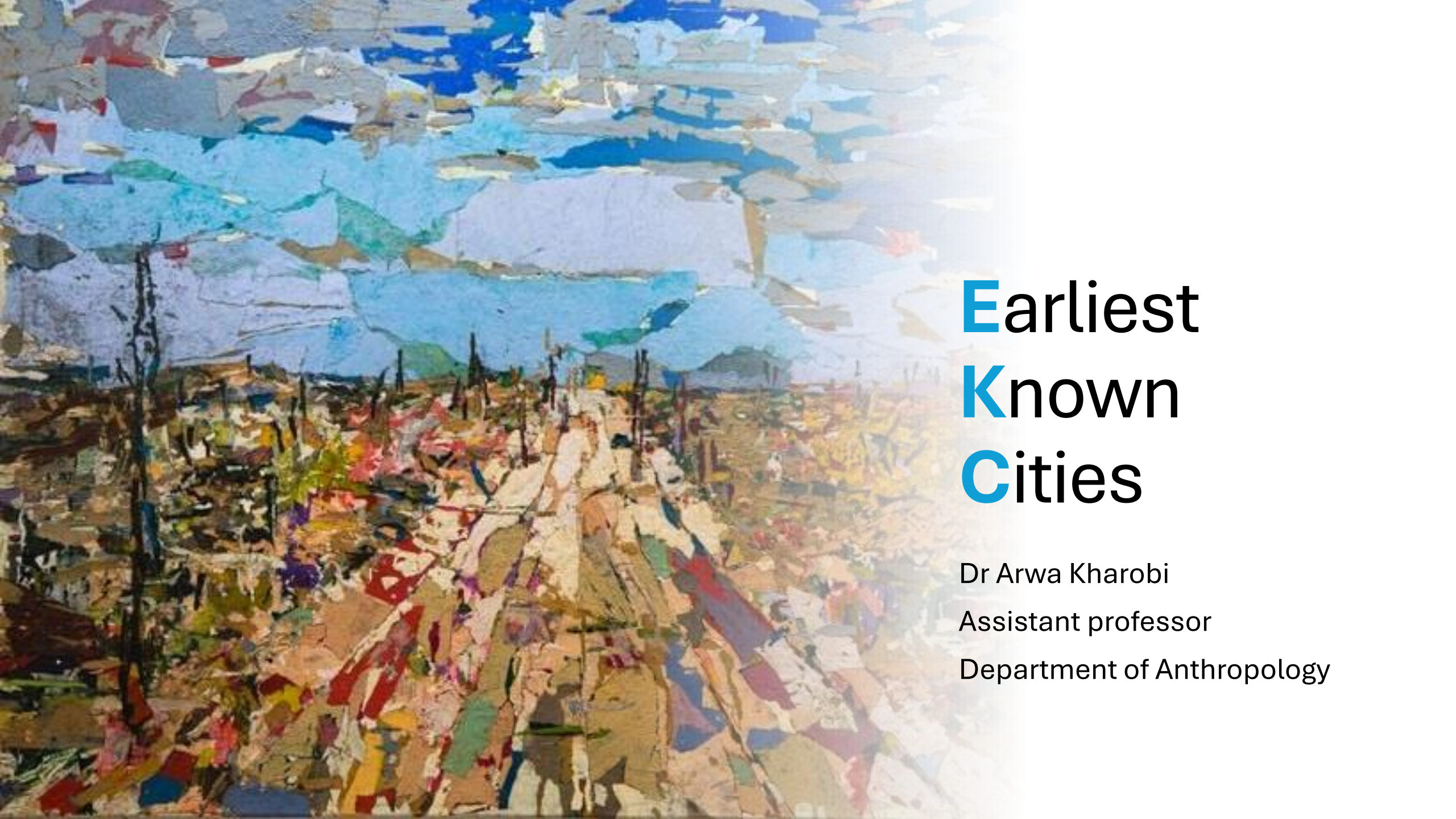
Lecture 3: Earliest cities 21/05

14 May

07 May

21 May

Lecture 2: Neolithic &  
SouthWestern Asia 14/05



# Earliest Known Cities

Dr Arwa Kharobi

Assistant professor

Department of Anthropology



**No enough evidence to assert what conditions gave rise to the first cities**

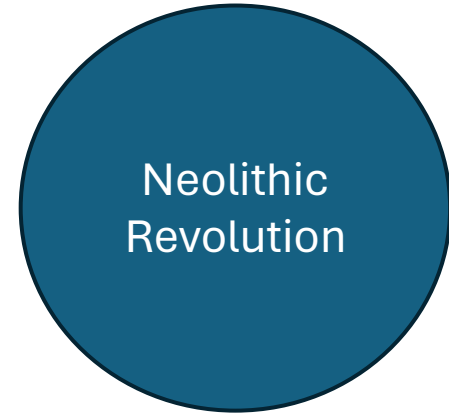
suitable pre-conditions?

basic mechanisms?

driving forces?

# Before permanent settlement in **cities** pre-date **cities**

1. **Stopping points** for nomadic groups
2. Small human settlements ; **Villages**
3. Large temporary settlements: **Religious**



farming immigrants **replaced** foragers or foragers **began** farming ??

Different opinions.....

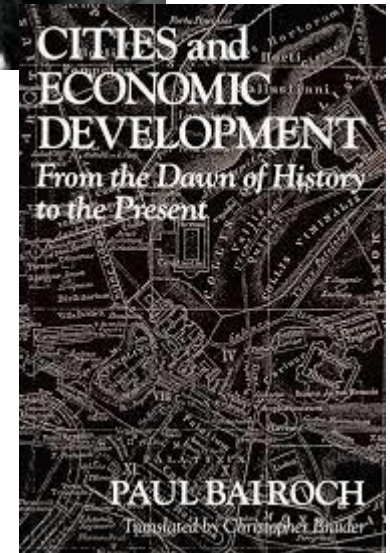
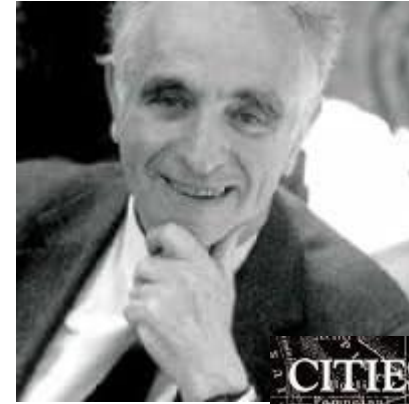


# Different opinions.....



**Paul Bairoch** “Cities and Economic Development”

The increased food production per unit of land supported higher population density and more city-like activities

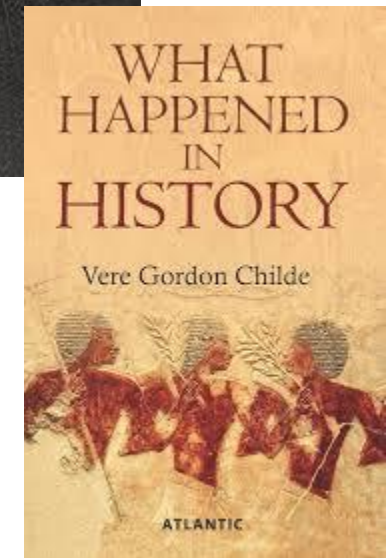


# Different opinions.....

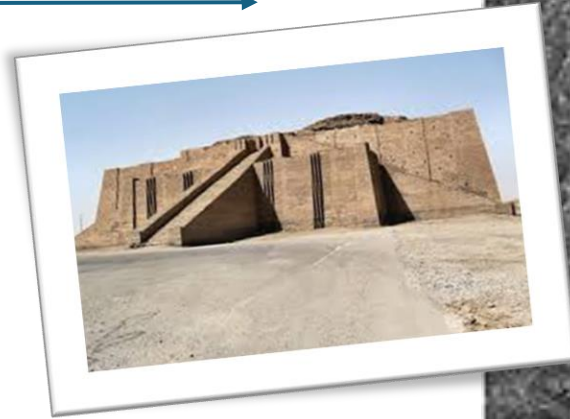


**Vere Gordon Childe**

for a settlement to qualify as a city, it must have enough surplus of raw materials to support trade and a relatively large population



# Childe's 10 criteria



1. Size & density of the population should be above normal.
2. Differentiation of the population. Not all residents grow their own food, leading to specialists.
3. Payment of taxes to a deity or king.
4. Monumental public buildings.
5. Those not producing their own food are supported by the king.
6. Systems of recording and practical science.
7. A system of writing.
8. Development of symbolic art.
9. Trade and import of raw materials.
10. Specialist craftsmen from outside the kin-group.

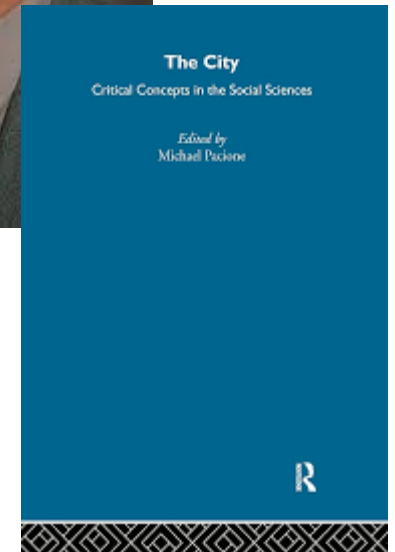




# Different opinions.....

**Michael Pacione**

due to sparse population densities that would have persisted in pre-Neolithic, hunter-gatherer societies, the amount of land that would be required to produce enough food for subsistence and trade for a large population would make it impossible to control the flow of trade.





# Different opinions.....



**Brendan O'Flaherty**

Cities could persist—as they have for thousands of years—only if their advantages offset the disadvantages

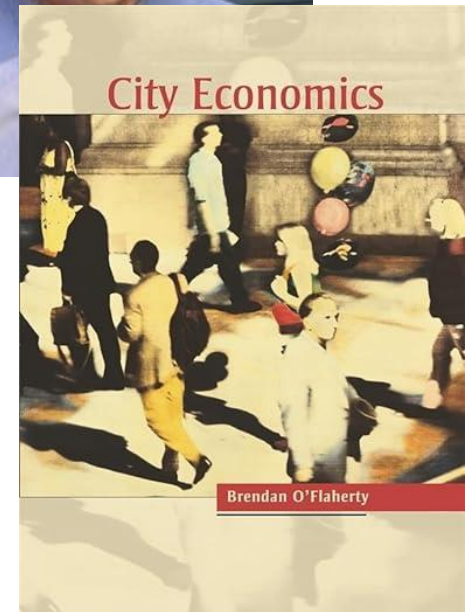
increasing  
returns to  
scale

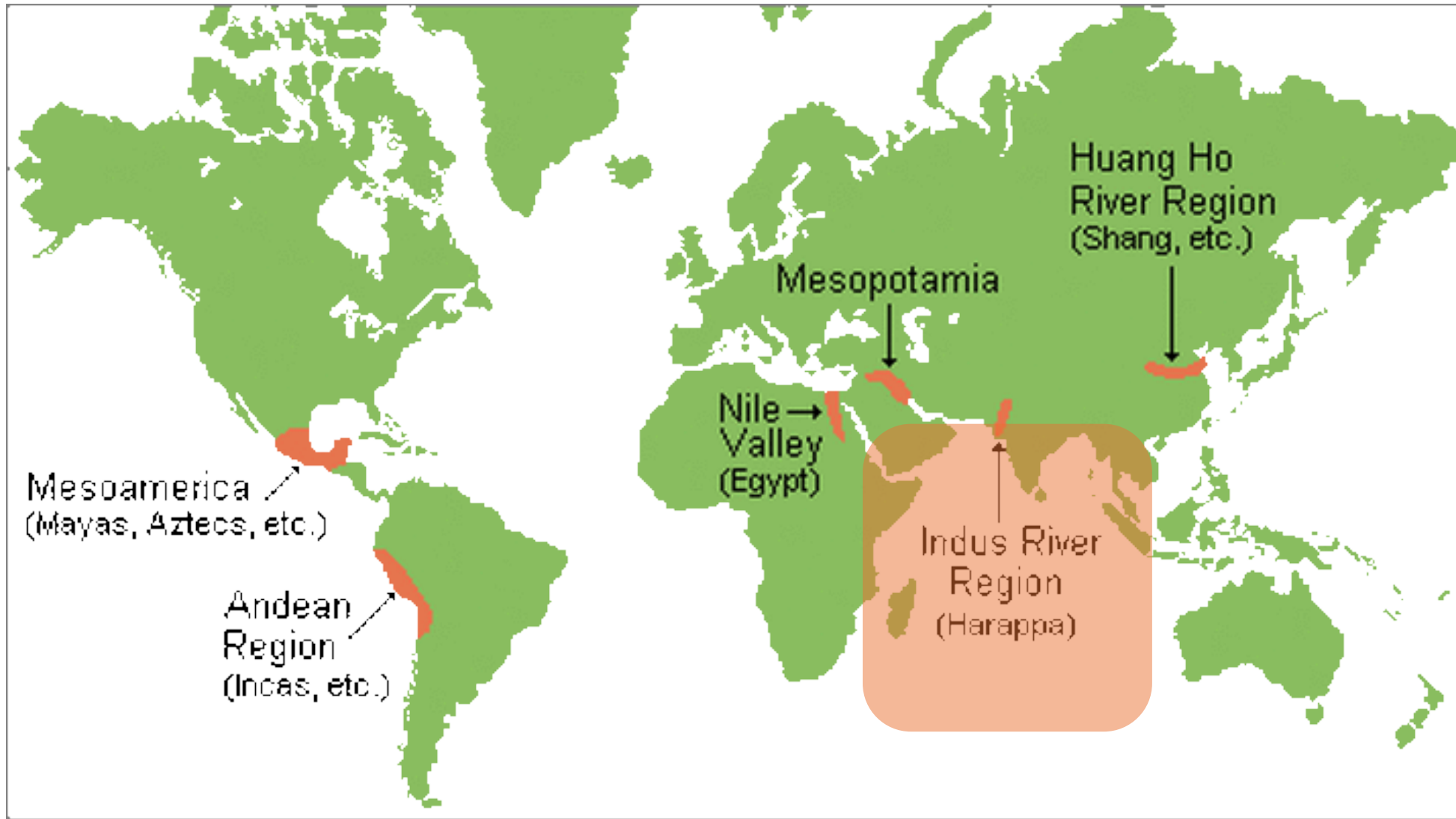
occurs when "doubling  
all inputs more than  
doubles the output



economies  
of scale

an activity has  
economies of scale if  
doubling output less  
than doubles cost"









## 1. Mehrgarh

One of the Oldest Cities  
in the Indus Valley

west of the Indus River near the  
Bolan Pass in Balochistan,  
**Pakistan**



# Discovery of Mehrgarh

- by a French archeological mission led by Catherine & Jean-François Jarrige
- 1974 to 1986: excavated extensively & continuously
- 1997 to 2000: revisited

- consists of 6 mounds spread over an area of 200 km<sup>2</sup>
- a total of 32,000 artifacts
- remains of a small farming village
- 9,000-7,500 years old





# Where Did the Mehrgarhans Come From?

various theories about the origin of the people who founded Mehrgarh

## 1. Archaeobotanical study:

- show that **wheat** in the Indus Valley likely originated from the Middle East
- based on that, it is theorized that the Indus Valley civilizations originated from people who **migrated into the Indus Valley from the west,**
- becoming an **offshoot** of the Middle Eastern Bronze Age civilization
- Mehrgarh **founded by the first wave of immigrants**



# Where Did the **Mehrgarhans** Come From?

*“early Mehrgarhan archeological evidence differs enough from late Indus Valley settlements to indicate that Mehrgarh has a unique local origin not connected to the Middle East”.*

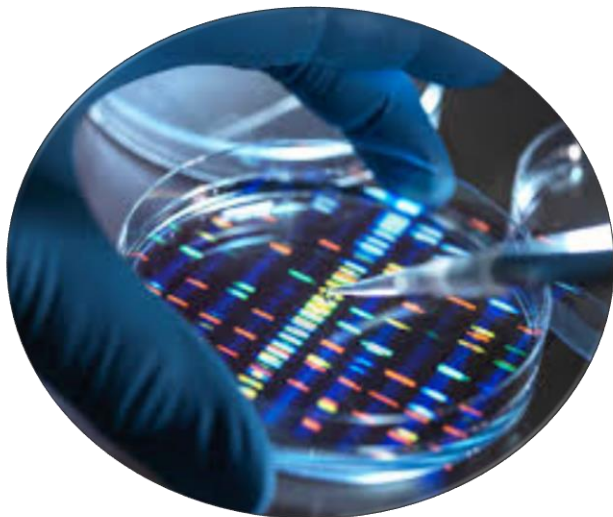
**Jean-François Jarrige**



# Where Did the Mehrgarhans Come From?

## 2. Genetic study:

- suggests that the original ethnic group that founded the site was displaced during the end of the Neolithic and the beginning of the Chalcolithic periods.
- The direct descendants of the original inhabitants can be found south and east of Mehrgarh around the western edge of the Deccan Plateau in the northwest of India.





# The Eras of Settlement

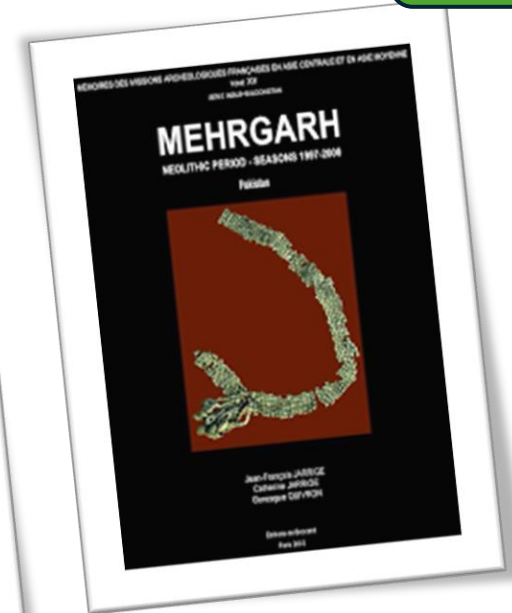
1. Mehrgarh I period 7000 - 5500 BCE
2. Mehrgarh II period 5500-4800 BCE
3. Mehrgarh III period 4800–3500 BCE





## Mehrgarh I period 7000 - 5500 BCE

- farming was first practiced
- Wheat & barley: main crops,
- dates & jujubes: also
- no use of pottery
- Instead of pots, baskets covered in bitumen to make them waterproof
- simple terracotta figurines



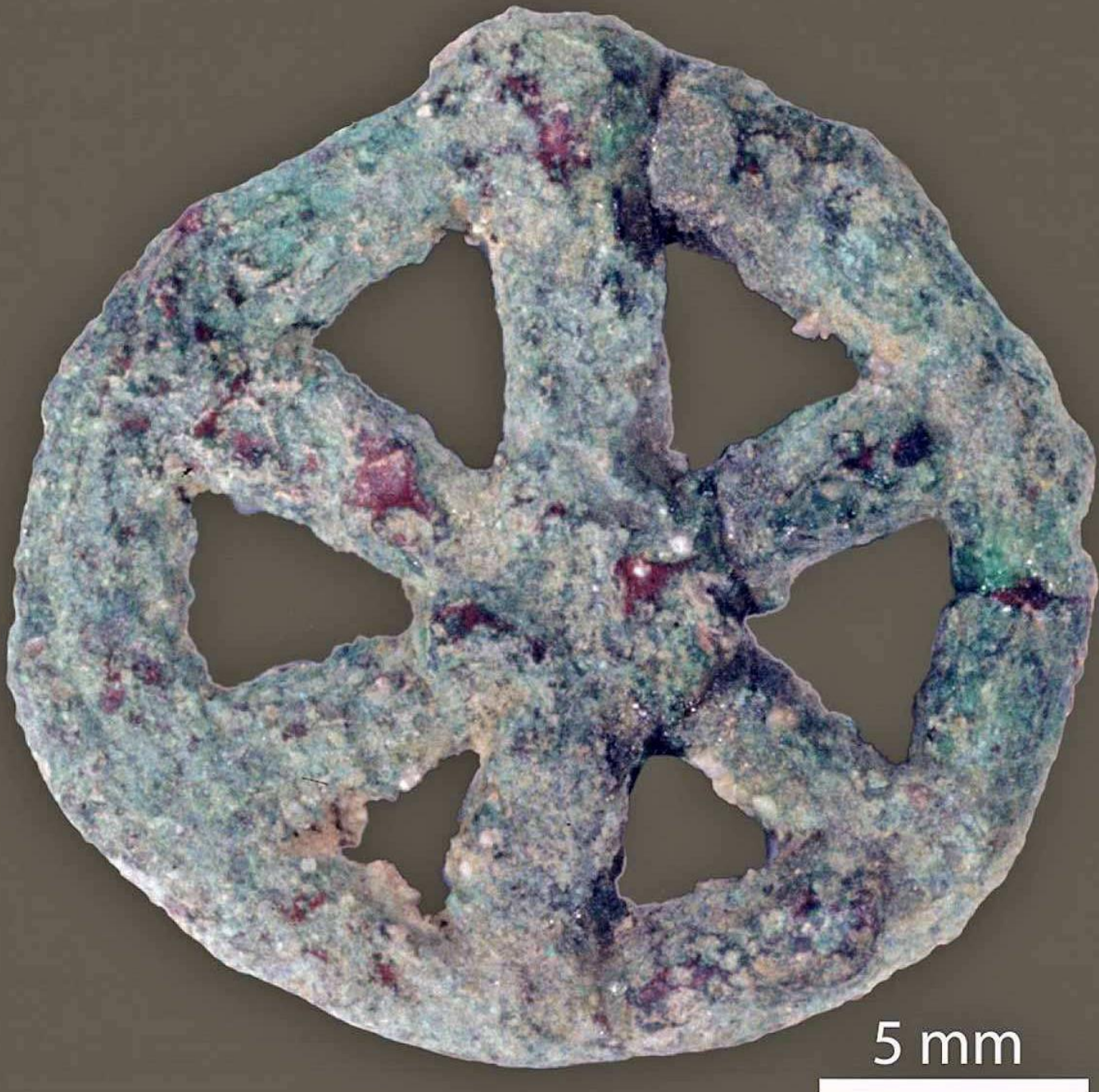
I. the Mehrgarh I period 7000 - 5500 BCE

- unbaked clay to build their structures
- bricks were mortared & cigar-shaped
- residential structures: rectangular buildings with multiple rooms



Mudbrick houses in Mehrgarh, via CNBC





**I. the Mehrgarh I period 7000 - 5500 BCE**

- first evidence of copper being smelted
- dates back to 6000 BCE
- a small spoked wheel amulet
- created using the lost-wax technique.
- this predates the first evidence of copper smelting in Europe by several hundred years.

## **Mehrgarh II period 5500-4800 BCE**

- signs of pottery work began to emerge
- first instances of metalwork with the discovery of a copper ring & a bead

## **Mehrgarh III period 4800–3500 BCE**

- more advanced & complex pottery-making techniques
- more intricate decoration on pots
- with designs being painted onto them with the addition of high-quality glazing techniques
- copper smelting became widespread with various forms of kilns
- advances in building techniques : Clay bricks made in molds, and the foundations of buildings were improved by incorporating pebble aggregate into a clay medium





# Mehrgarh

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- Mehrgarh was characterized by the production of many thousands of small clay figurines, via Barneby's



# Figurines

- figurines evolved to become more intricate
- painted
- diverse array of hairstyles
- female figurines generally have large, pronounced breasts
- many of the figurines incorporate anthropomorphic designs
- Until 4000 BCE, all the figures that were created depicted females (mother-goddess worship)





Figurines dating from Mehrgarh III, via Zache



# Funerary practices

**Burials** → patriarchal society: more luxury goods buried with men than with women

Mostly: in **small brick-lined** tombs

**individual** burials & **plural**

**flexed** position

orientation (**east-west**).

**Children** inside **urns**





# Grave goods

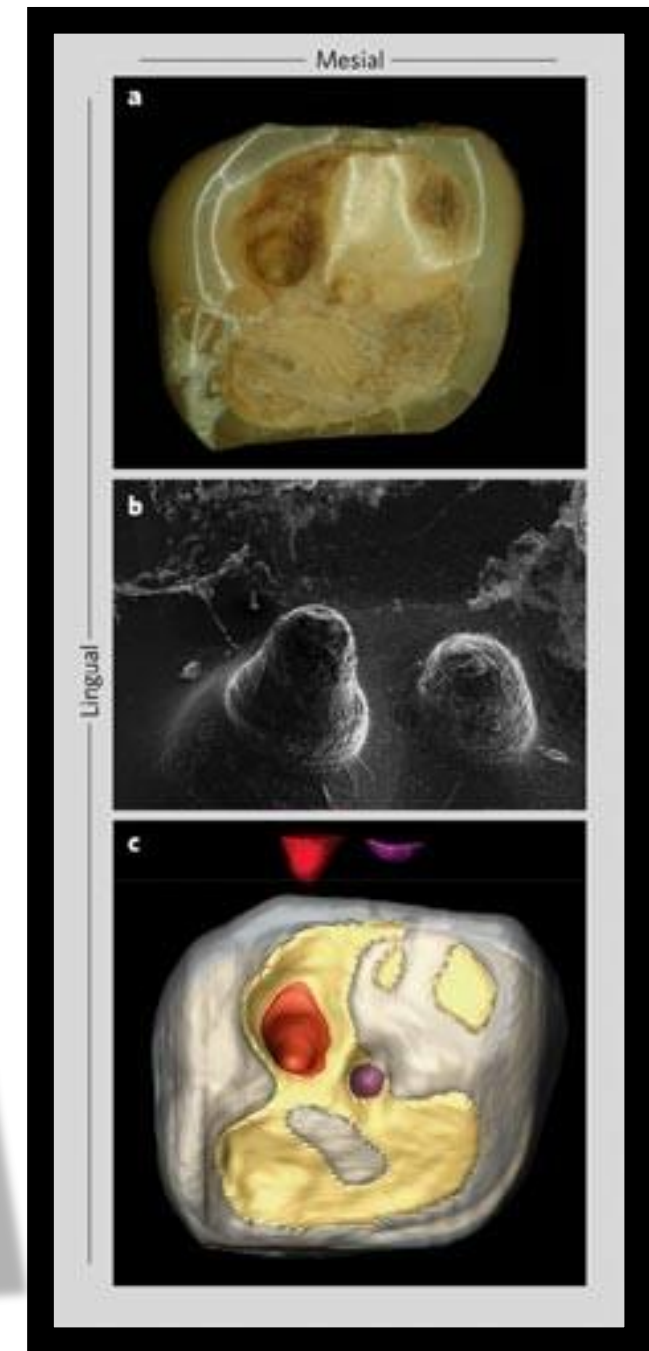
- ornaments (stone & bone tools), baskets, beads, bangles, and pendants
- **variety of substances:** sea shells, lapis lazuli, turquoise, limestone, & sandstone
- Occasionally **animal sacrifices** alongside some skeletons.





# Oral health & Dentistry

- 11 drilled molars, 4 with caries
- using flint drill heads (found at the site)
- complex procedures
- therapeutic or palliative reasons?



# Trade

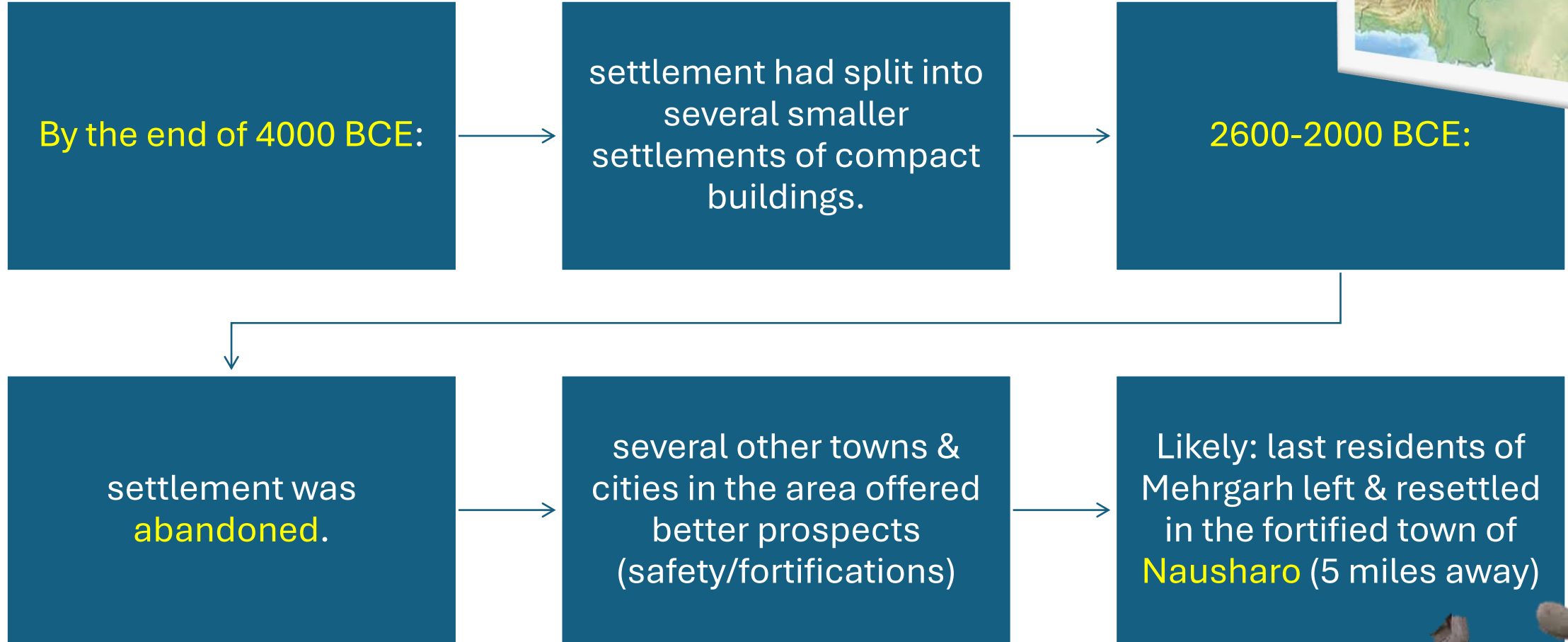
**5000 BCE:**

increased with settlements & cities from the Badakhshan region (present-day northeastern Afghanistan)

**4000 BCE:**

settlements bloomed in the surrounding areas, offering many trading opportunities

# The Decline of Mehrgarh



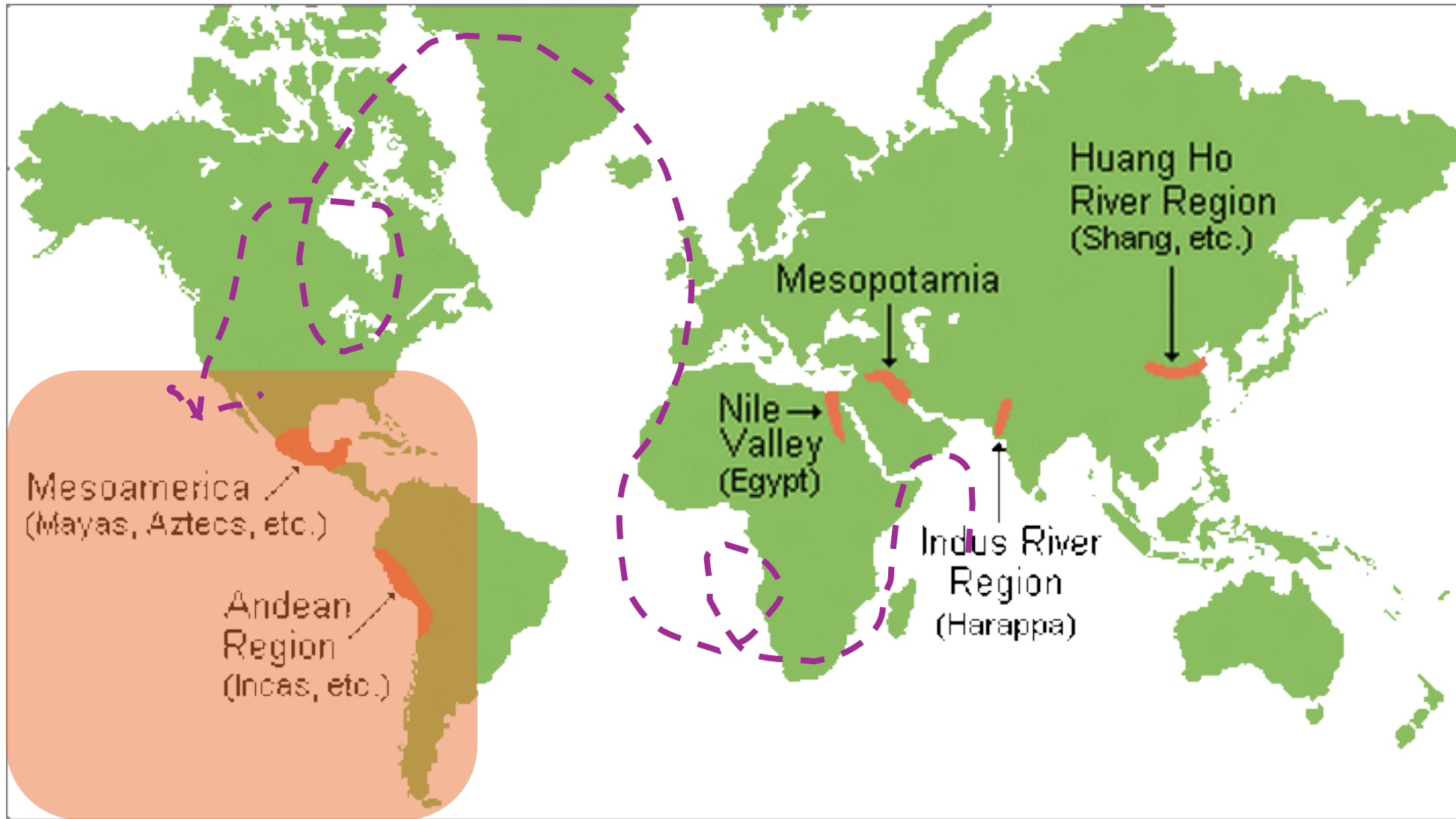




Poorly preserved structures at Mehrgarh highlight the need for better attempts at preservation

via Muhammad Akbar Notezai / Dawn

Mehrgarh is the oldest permanent settlement outside of the Middle East and provides a foundation for an investigation into the culture of the Indus Valley civilizations that followed or developed when Mehrgarh was still inhabited.



# Americas

## 1. Andes:

- first urban centers developed in the Norte Chico civilization, Chavin and Moche cultures,
- followed by major cities in the Huari, Chimu and Inca cultures.
- The Norte Chico civilization included as many as 30 major population centers in what is now the Norte Chico region of north-central coastal Peru.
- the oldest known civilization in the Americas, flourishing between 30<sup>th</sup>-18th century BCE





# Americas

## 2. Mesoamerica:

- rise of early urbanism in several cultural regions
- including the Preclassic Maya, the Zapotec of Oaxaca & Teotihuacan in central Mexico
- Later cultures (Aztec) drew on these earlier urban traditions



# Teotihuacan



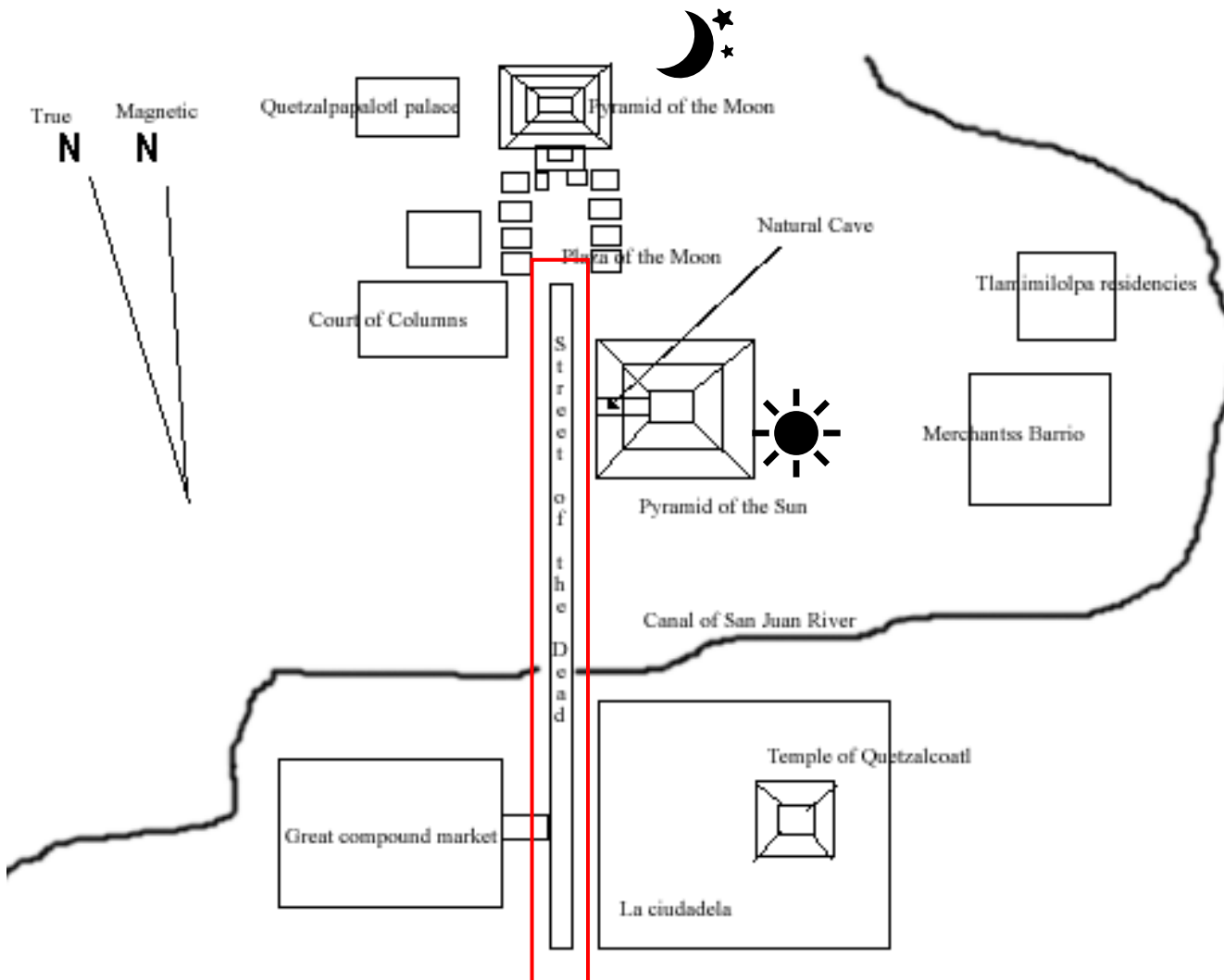
# Foundation

- flourishing from 200 BCE to 750 CE
- the largest American city of the pre-Columbian era
- the sixth largest city in the world during its epoch





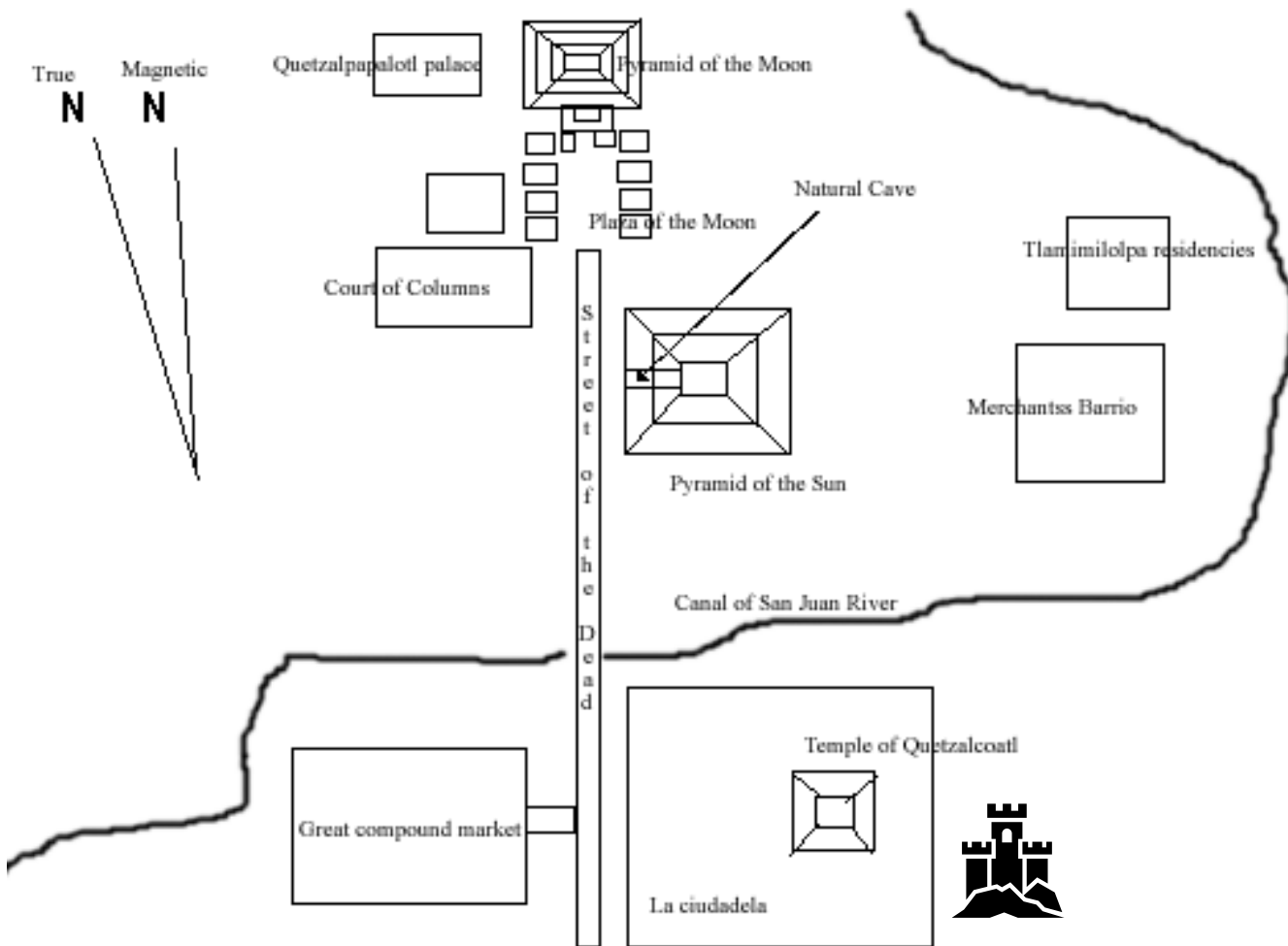
# City plan



- demography: 125,000 in 200 CE
  - → large multi-floor apartment compounds (to accommodate this large population) spread across the city.
- 1) broad central avenue, called “Avenue of the Dead”
  - 2) flanked by impressive ceremonial architecture (Pyramid of the Sun & the Pyramid of the Moon)
  - 3) many smaller talud-tablero platforms along the Avenue of the Dead (tombs)



# City plan



- Further down the Avenue of the Dead is the area known as the **Citadel**, containing the ruined Temple of the **Feathered Serpent**.
- This area was a large **plaza** surrounded by temples that formed the religious and political center of the city.
- Many of the buildings contained workshops where artisans produced pottery & other



# Religious buildings



- 23 temple complexes
- expansive & significant religious system
- + political and economic functioning

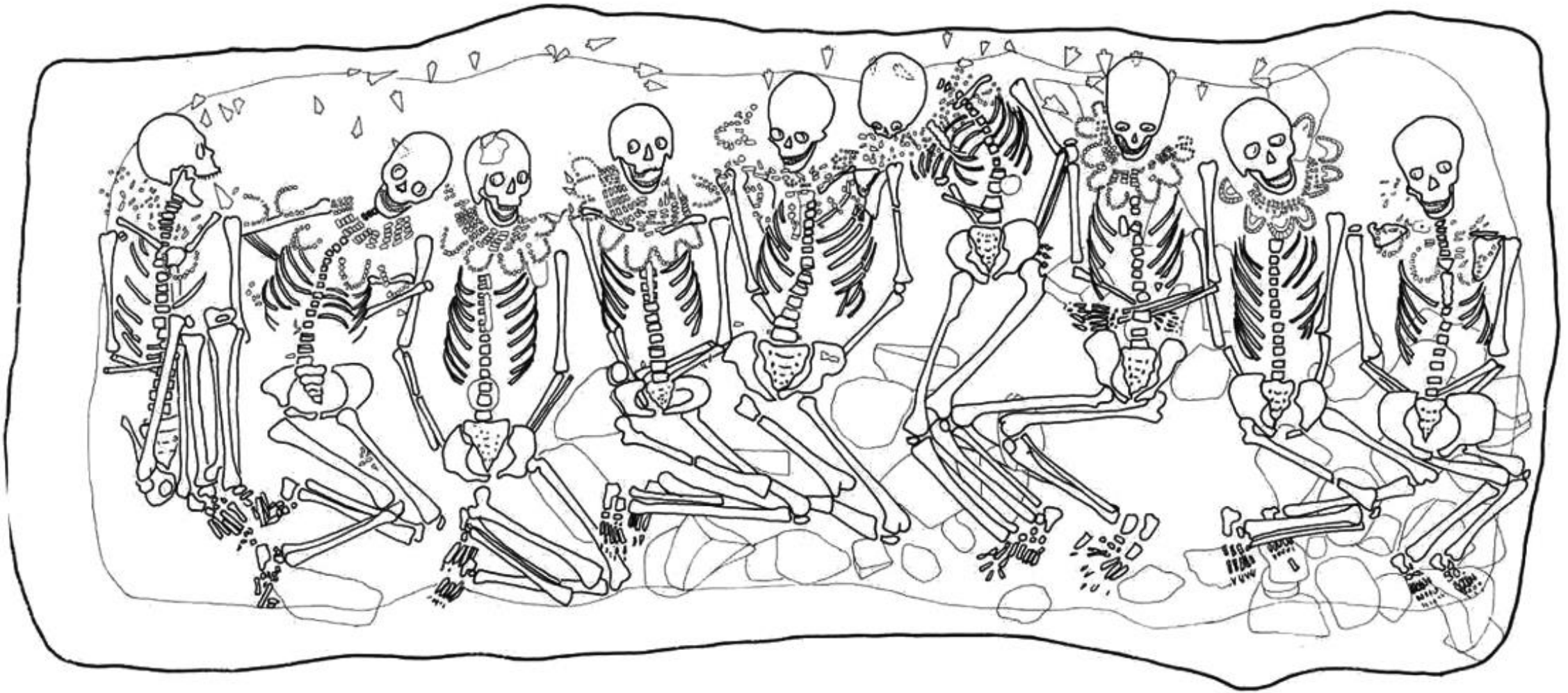
Mural of the Great Goddess of Teotihuacan. This powerful goddess was associated with darkness, mystery, death, and creation. She was often depicted with owls, jaguars, and spiders, all creatures of the earth, darkness and the underworld. This mural is from the Tetitla compound at Teotihuacan.

# Funerary practices

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# Funerary practices

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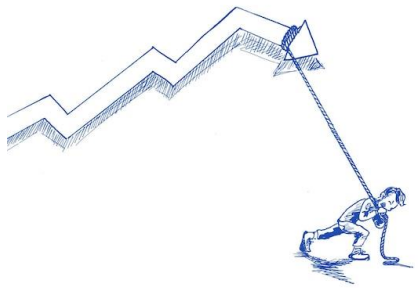




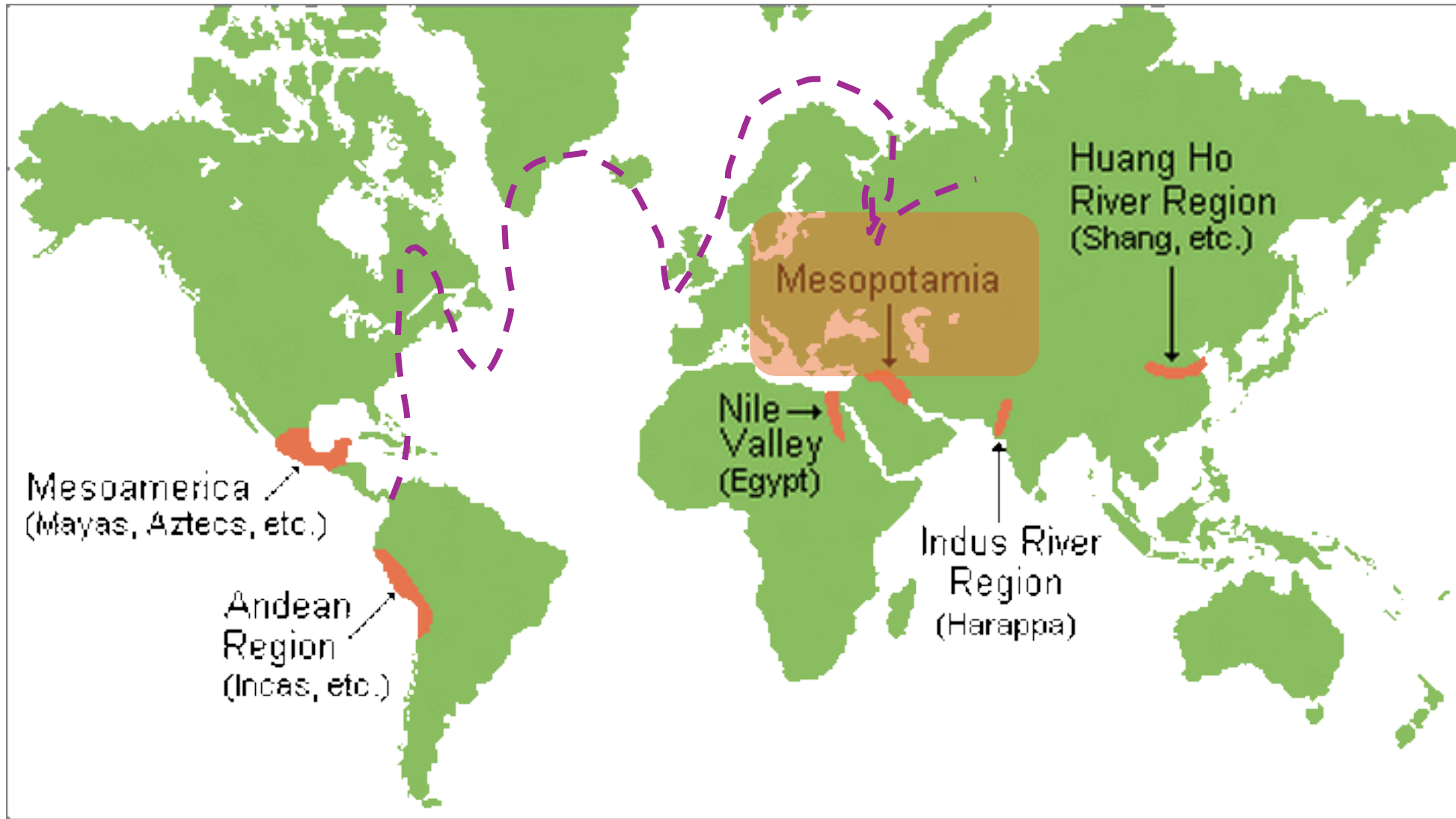
# Fall of Teotihuacan

Teotihuacan collapsed & the population abandoned this city center... ongoing debate about why?

1. Evidence of **climate changes**: severe droughts (535 CE) → a general population decline in the region
2. signs of malnutrition on juvenile skeletons → **famine?** forced populations to move or to revolt?
3. **Fire**: only elites buildings along the Avenue of the Dead → internal unrest and possibly a revolt against the elite power structure







# Eridu

- The first city founded by the Sumerians
- Tell Abu Shahrain in southeast Iraq
- Sumerian legend: city was founded by **Enki** (god of water, crafts, knowledge, and creation)

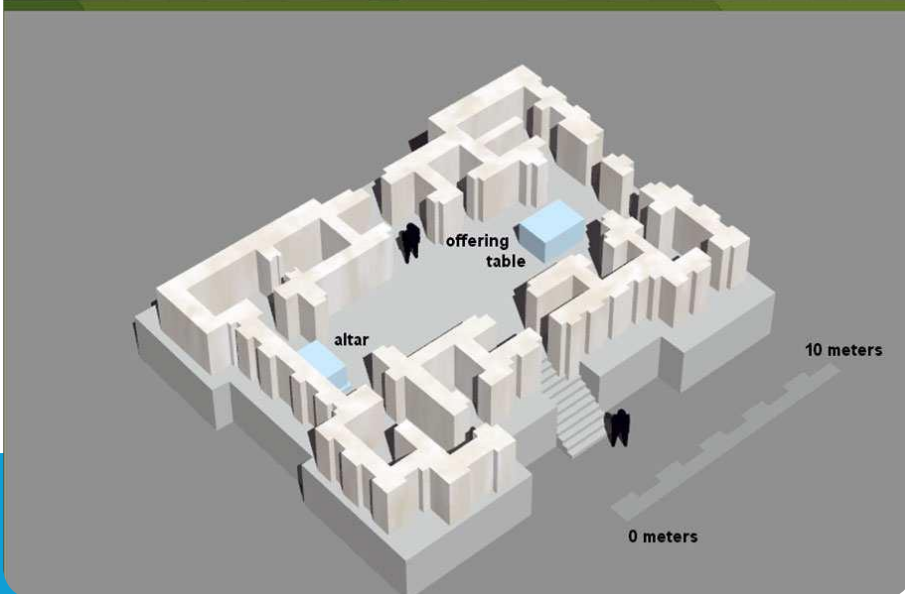
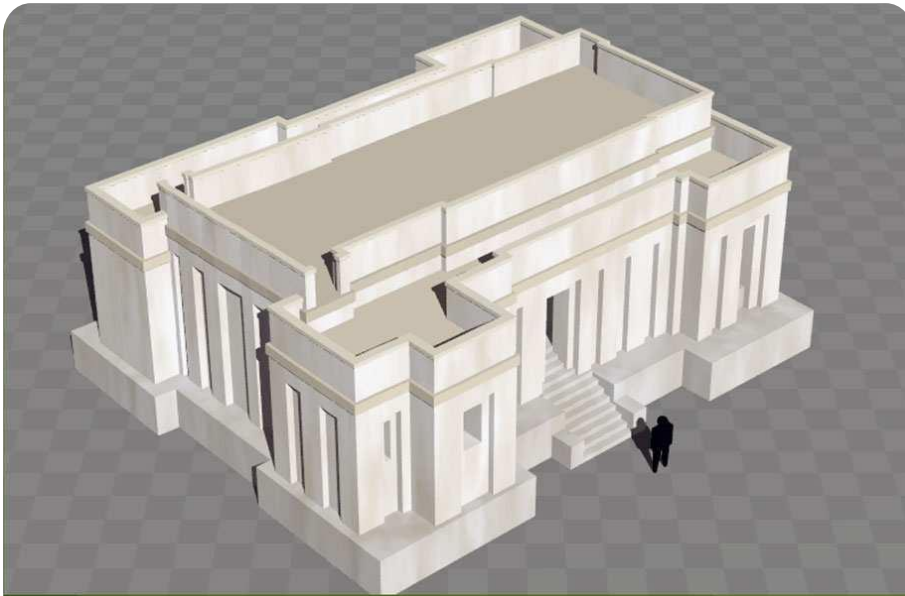


# Temple to Enki E-Abzu

At the center of the city

The city that developed was built outwards from this center point.


Successive temples culminating in a massive ziggurat



the temple design representative of ancient Mesopotamian culture



### 3. Eridu

A photograph of an ancient stone wall in Eridu, showing remnants of blue paint on the bricks. The wall is constructed from large, rectangular stone blocks, some of which are painted blue. The wall is situated in a narrow, dirt-filled alleyway between other stone structures. The ground is covered in dirt and small stones. The sky is clear and blue.

Remnants of the paint on the walls of Eridu can still be seen, from Tina Hager /arabianEye / Getty Images



# Three ecosystems

1. The **fisher-hunter** : knowledge of fishing & construction = reeds to build houses & boats.
2. the **Samarra** culture: knowledge of canal-building & mudbrick construction
3. The **nomadic** group: lived out of tents in the semi-desert region.



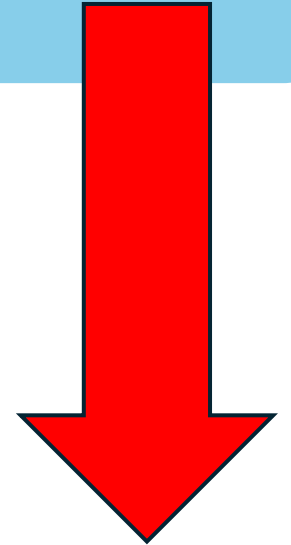
A



B

# Three ecosystems

1. The **fisher-hunter** culture: knowledge of fishing & construction = reeds to build houses & boats.
2. the **Samarra** culture: knowledge of canal-building & mudbrick construction
3. The **nomadic** group: lived out of tents in the semi-desert region.



were the **original** Sumerians who had migrated from elsewhere (Caucasus?).



# Excavation of Eridu



**beginning:** John  
George Taylor

1855

**re-visited:** R.  
Campbell  
Thompson & H.  
R. Hall

1918

**excavated:** Fuad  
Safar & Seton  
Lloyd (Iraqi  
Directorate  
General of  
Antiquities and  
Heritage).

1946–1949

From 2019  
onwards:  
**ongoing  
excavations** by a  
joint French,  
Italian, and Iraqi  
team.

2019-now



# Decline of Eridu

overworking the land for agricultural purposes

→ led to an increase in the salinity of the water table,

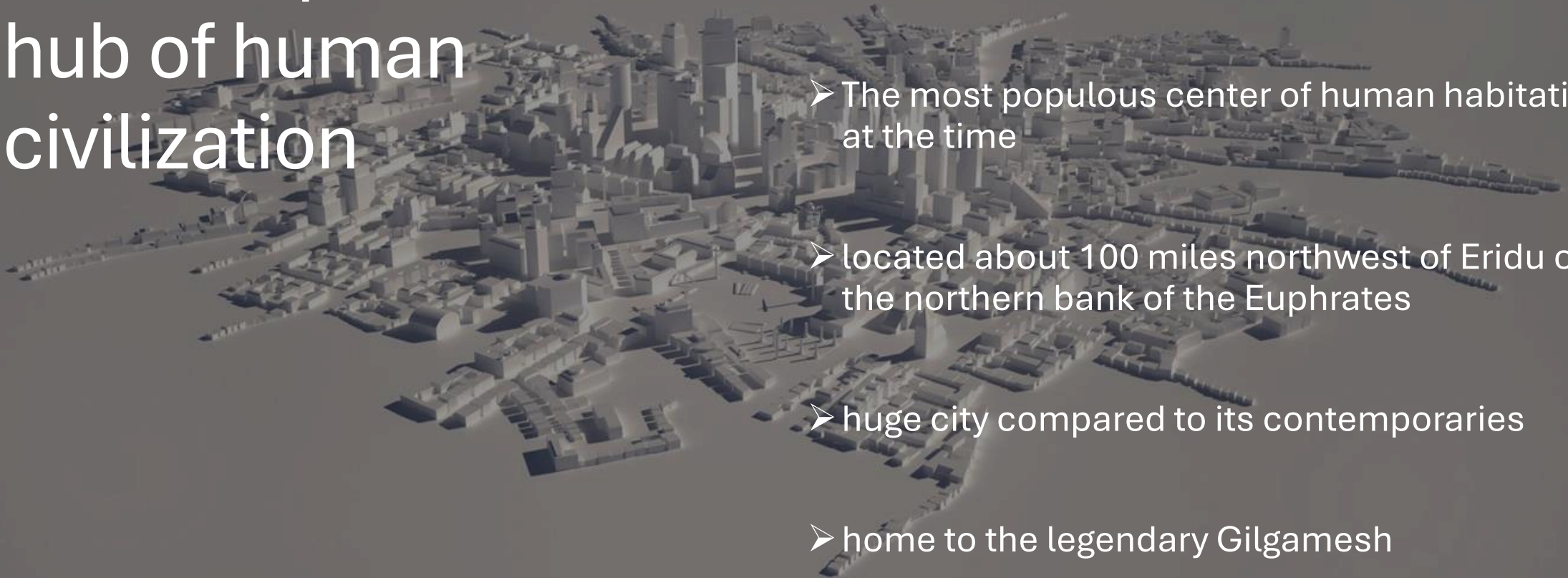
→ making the farming of crops untenable

→ This led to abandon the city in search of more arable lands



# Uruk: a spectacular hub of human civilization

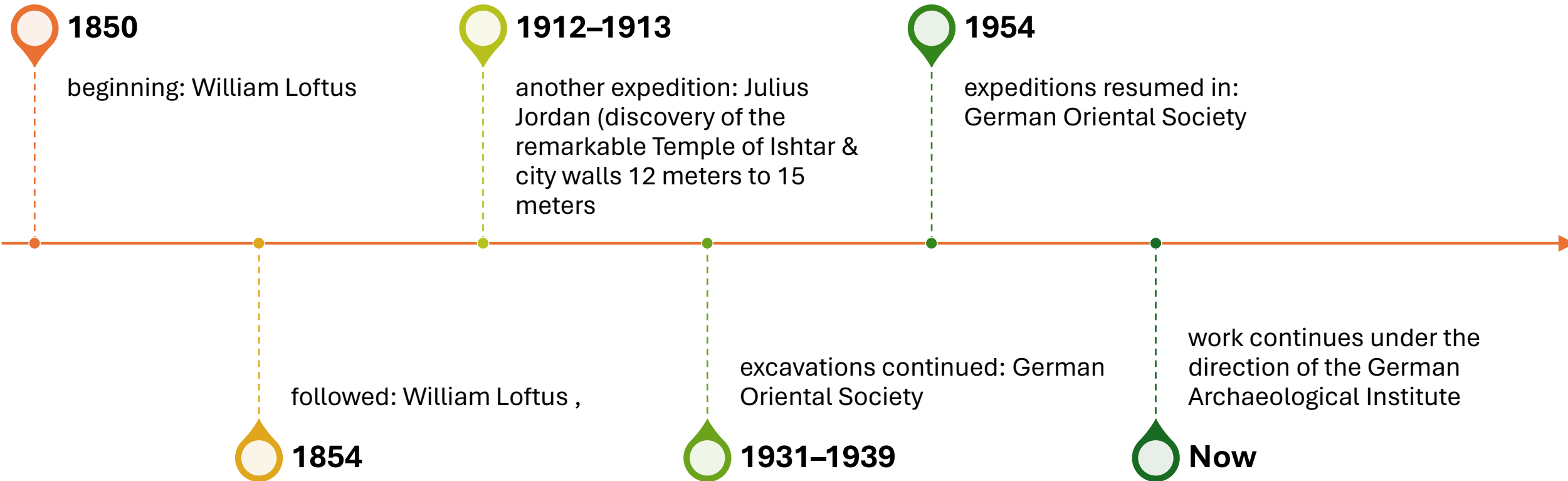
- Founded around 5000 BCE,
- contained around 30,000-40,000 residents & up to 90,000 people in its environs
- The most populous center of human habitation at the time
- located about 100 miles northwest of Eridu on the northern bank of the Euphrates
- huge city compared to its contemporaries
- home to the legendary Gilgamesh







# Excavation of Uruk





What is left of the Temple of Anu, which rested at the top of a great Ziggurat, is a pale shadow of its former self, from Nico Tondini, Source: National Geographic





# How Uruk Prospered

From 4000 BCE to 3200 BCE, the “Uruk Period” was an era of rapid expansion, not just for the city but for all of Sumeria.

During this period;

1. small villages grew into **large urban centers**
2. Social **hierarchies** evolved, along with **militaries**
3. Full-time **bureaucracies** were established → development of a **writing** system
4. **Trade** flourished



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proto-cuneiform tablet  
an administrative account of barley  
distribution,

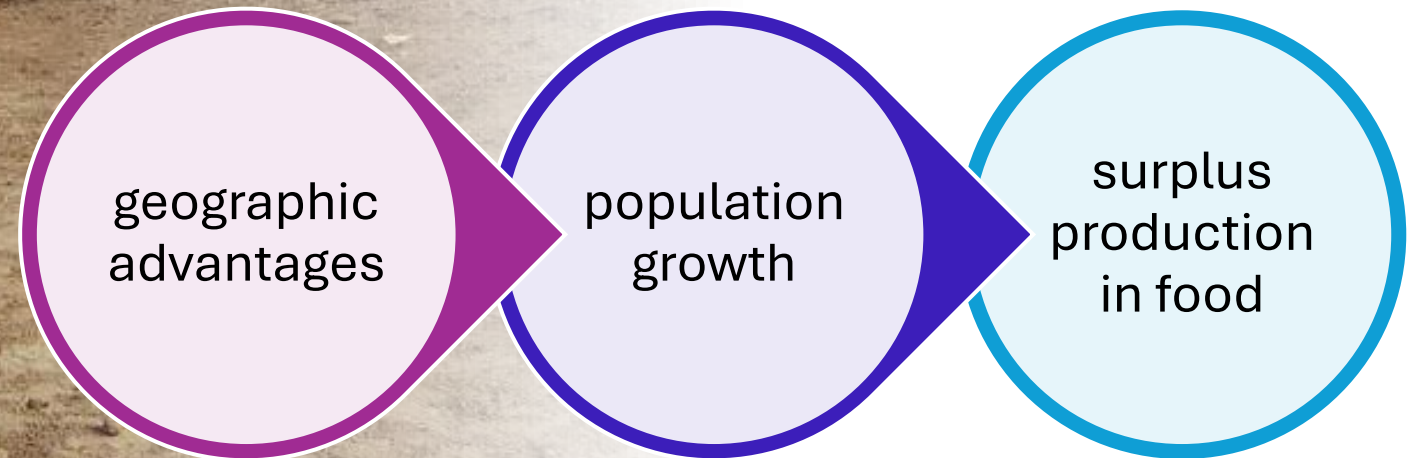
Source: The Metropolitan Museum of Art, New York







**Location:** rich area in resources and with vast arable lands that stretched along the bank of the Euphrates.





## Strong economy diversity in labor

1. Industries around pottery, metalwork, and building flourished
2. artists and architects contributed to the creation of Uruk's culture
3. Others created luxury goods, enabling a robust trade network with Sumeria's other city-states to be established.





Sumerian Man in Prayer, 2750-2400 BCE,  
Source: Rijksmuseum Van Oudheden





# Districts of Uruk 4000 BCE

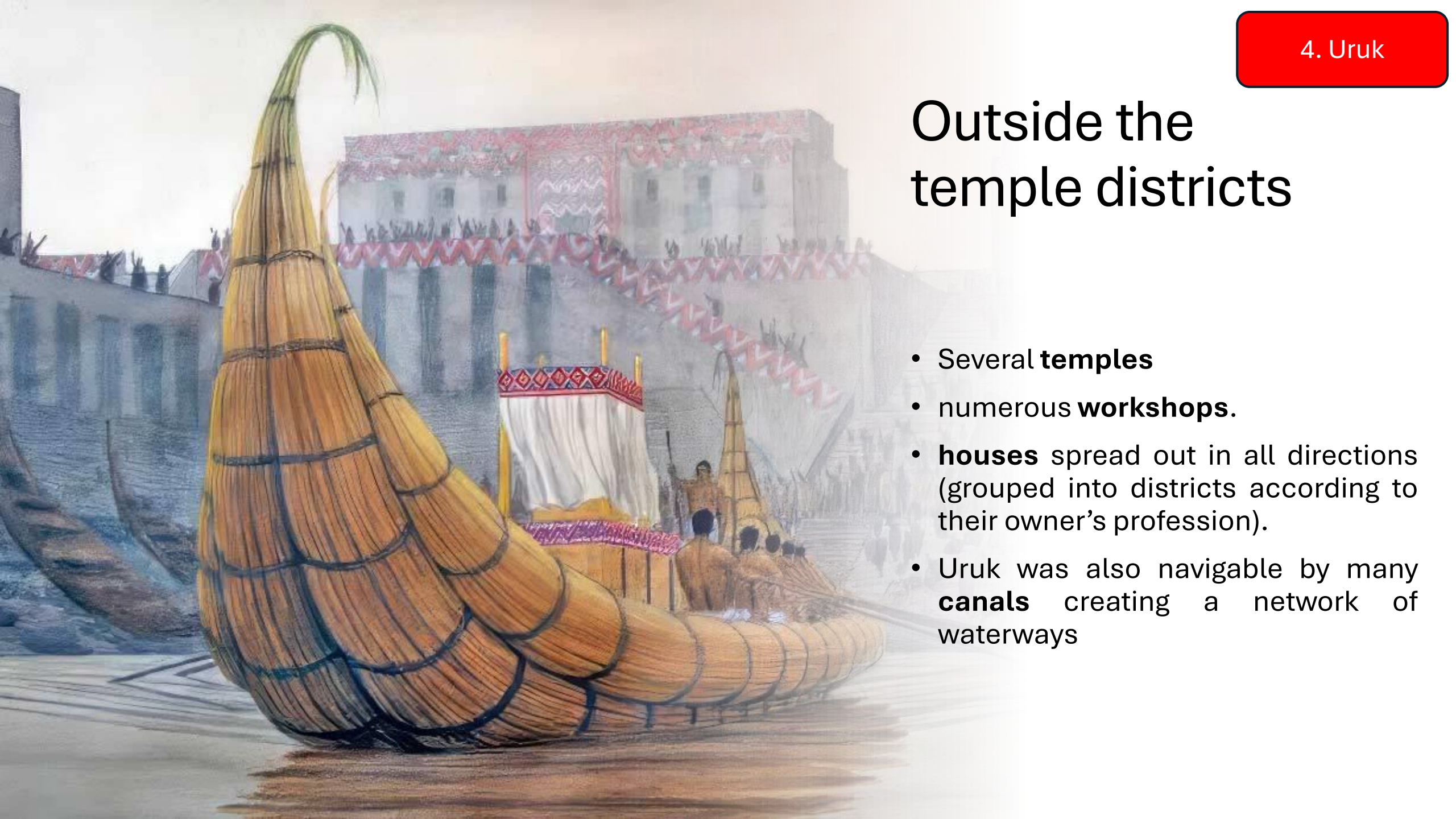
With two temple at the heart of  
the city;

1. **Eanna / Ishtar**
2. **Anu** (god of the sky)



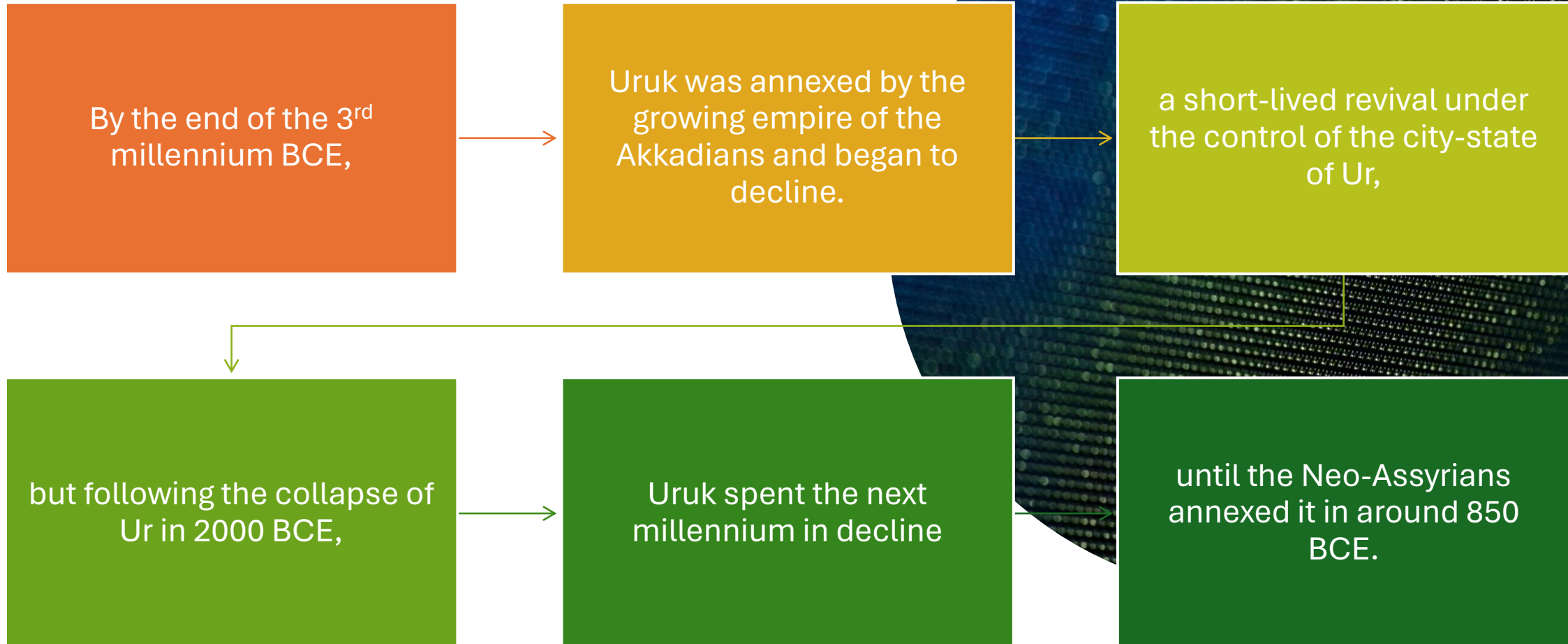
## Outside the temple districts

- Several **temples**
- numerous **workshops**.
- **houses** spread out in all directions (grouped into districts according to their owner's profession).
- Uruk was also navigable by many **canals** creating a network of waterways





# Decline of Uruk





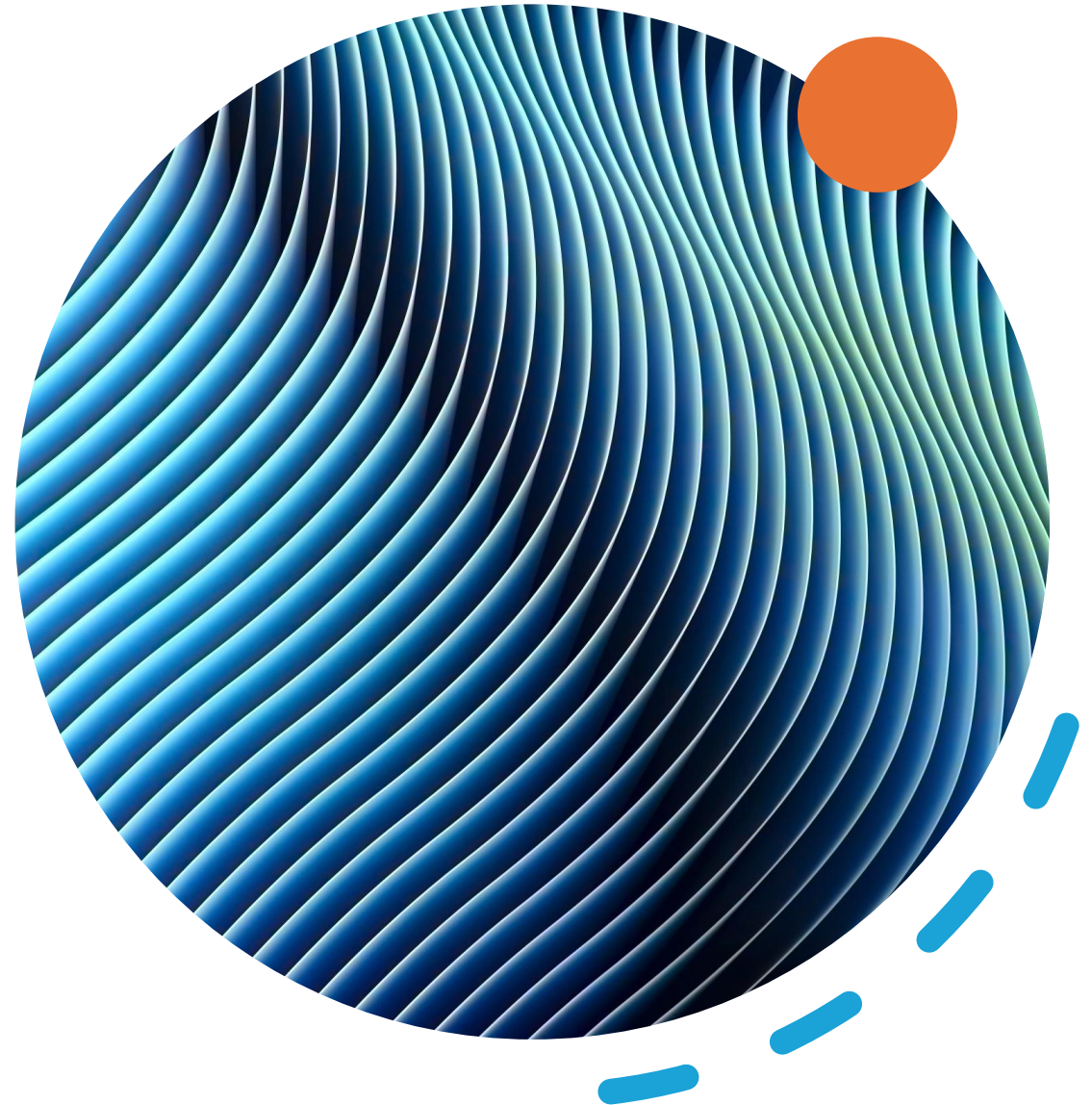
# Decline of Uruk

Under the Neo-Assyrians and the Neo-Babylonians, the city was revived.

It continued to be an important cultural center under:

1. Seleucids (late 4th century BCE)

2. Parthians (who came after)









# Villages, settlements, cities then empires

Akkadian Empire

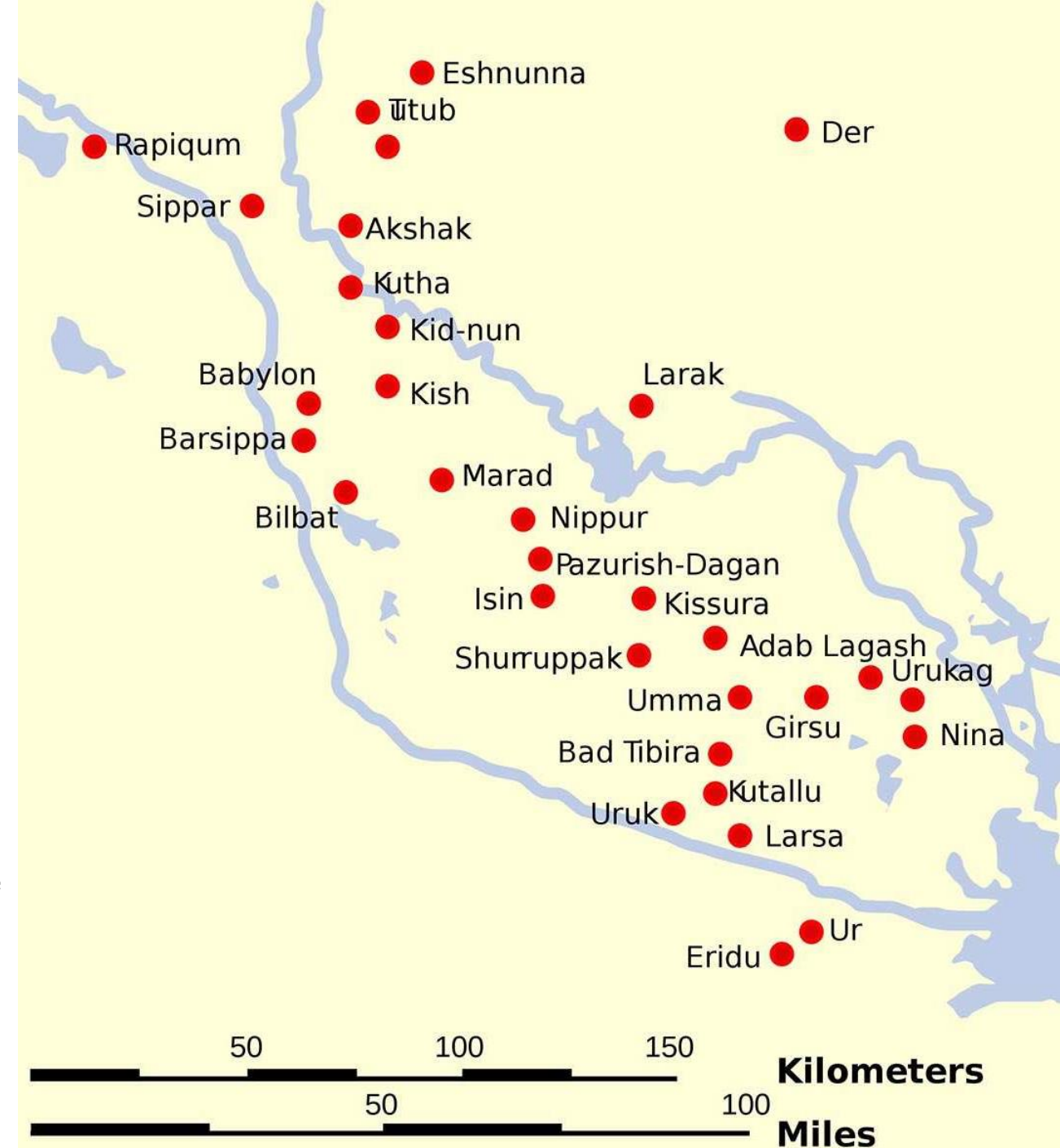
c.2334 BCE – c.2154 BCE

**Duration:** 180 years

**Capital City:** Akkad

forming a network of trade and culture  
recognized as **the world's oldest Empire.**

**Bilingual** population (Akkadian & Sumerian  
language).







# Akkadian Empire

## 8 kings

over the duration of the Akkadian Empire.

1. Sargon
2. Rimush,
3. Manishtushu,
4. Naram-Sin,
5. Shar-Kali-Sharri,
6. Interregnum,
7. Dudu,
8. Shu-turul.



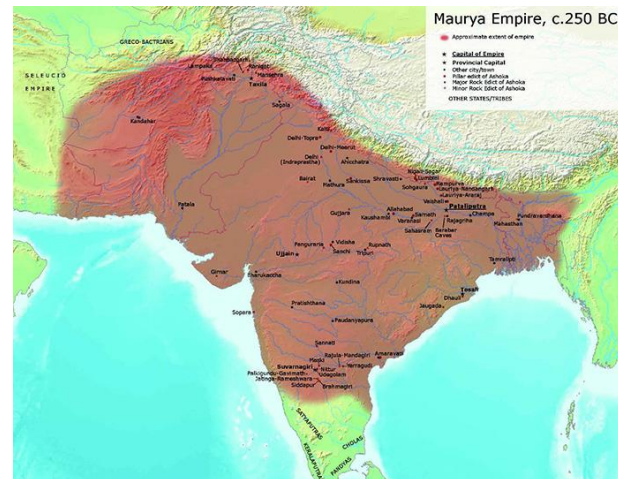
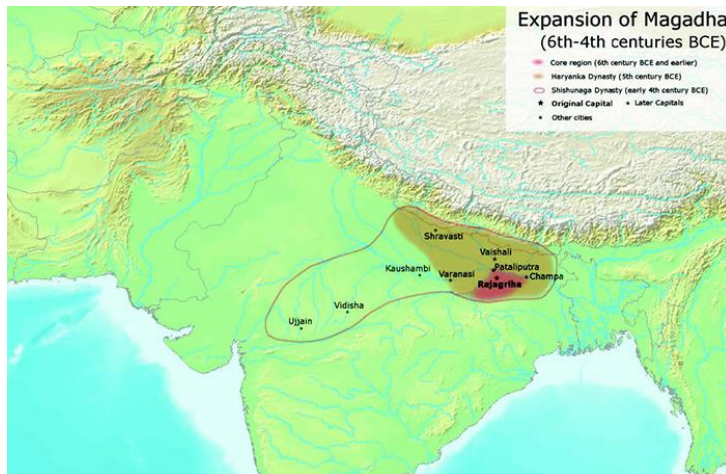
# What is an empire

- a complex political organization where a dominant central state controls weaker peripheral (outer) states
- no single recipe for making an empire, but main ingredient is control
- In general, empire creation is a result of a drive to accumulate power and control

Nanda Empire  
(345-322 BCE)

Mauya Empire  
(322-185 BCE)

Chinese empire  
(402-221 BCE)



# Center vs. periphery

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**Inequality defines** the relationship between center & periphery

---

The center (seat of power) identifies itself as superior over its periphery

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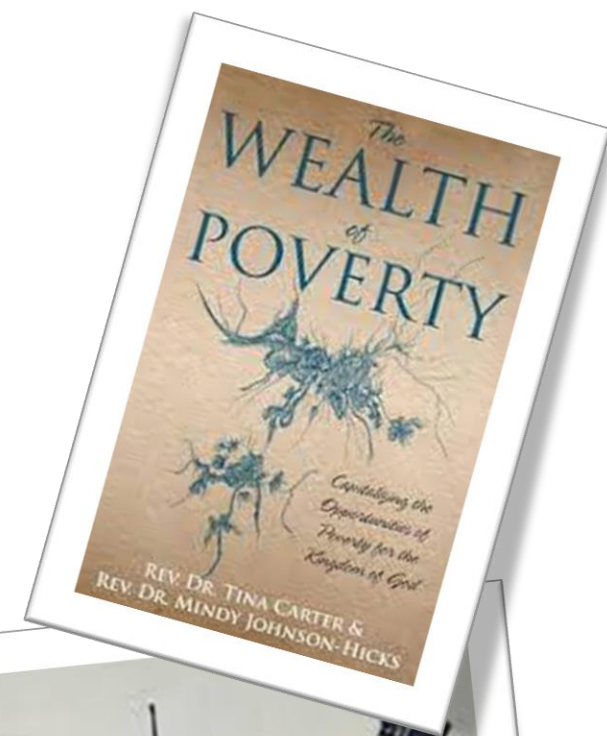
To justify the center's control of the periphery

---

This inequality is often reinforced through the legal system.

---

community of an empire is divided by status into smaller communities





# In conclusions

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the emergence of cities marked a pivotal transformation in human history, characterized by several key developments:

it reflected the desire for proximity to essential resources

---

Early cities, though modest by today's standards, were monumental in their time, serving as grand symbols of human achievement and devotion to the gods.

---

These urban centers were not merely residential spaces but cradles of innovation and cultural evolution

---

They fostered the exchange of ideas, spurred the growth of new cultural practices, and enhanced our understanding of the world, thereby significantly advancing the development of human civilization.

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