

Beginnings

Ec 365

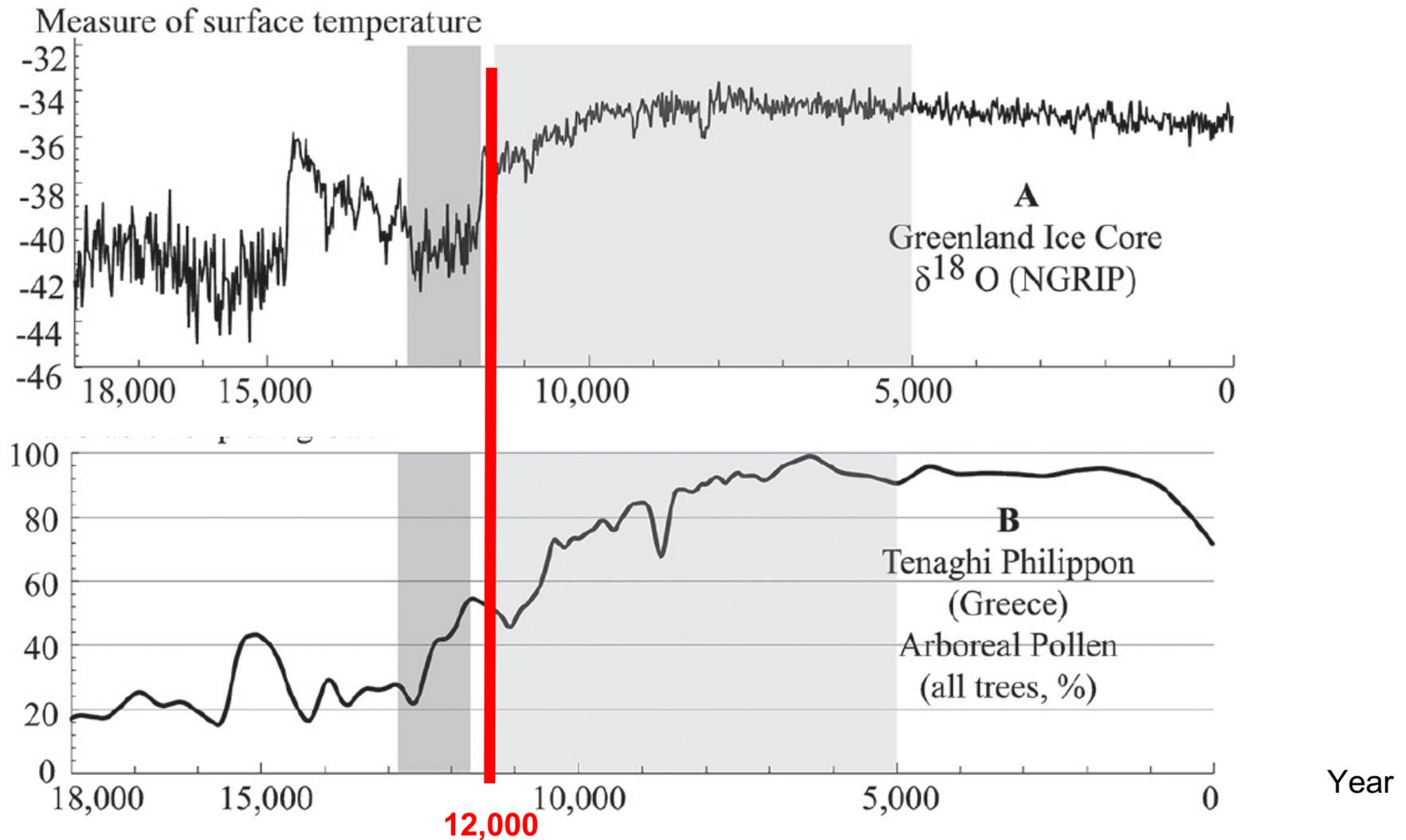
January 21, 2026

Introduction to the course

- Themes
 1. The state -4K to 1850
 - Form (form, public finances, before 1815 essentially war financing)
 - Geography (travel, trade)
 2. Divergence Europe / China, Islam (little on India)
 - Institutions and some innovations (printing press, paper money)
 - (before 1750, > before industrial revolution)
- Case studies (no grand history)
 - Chronological sequence
 - Sense of history
 - causality

From hunters to farmers

- End of the last Ice Age

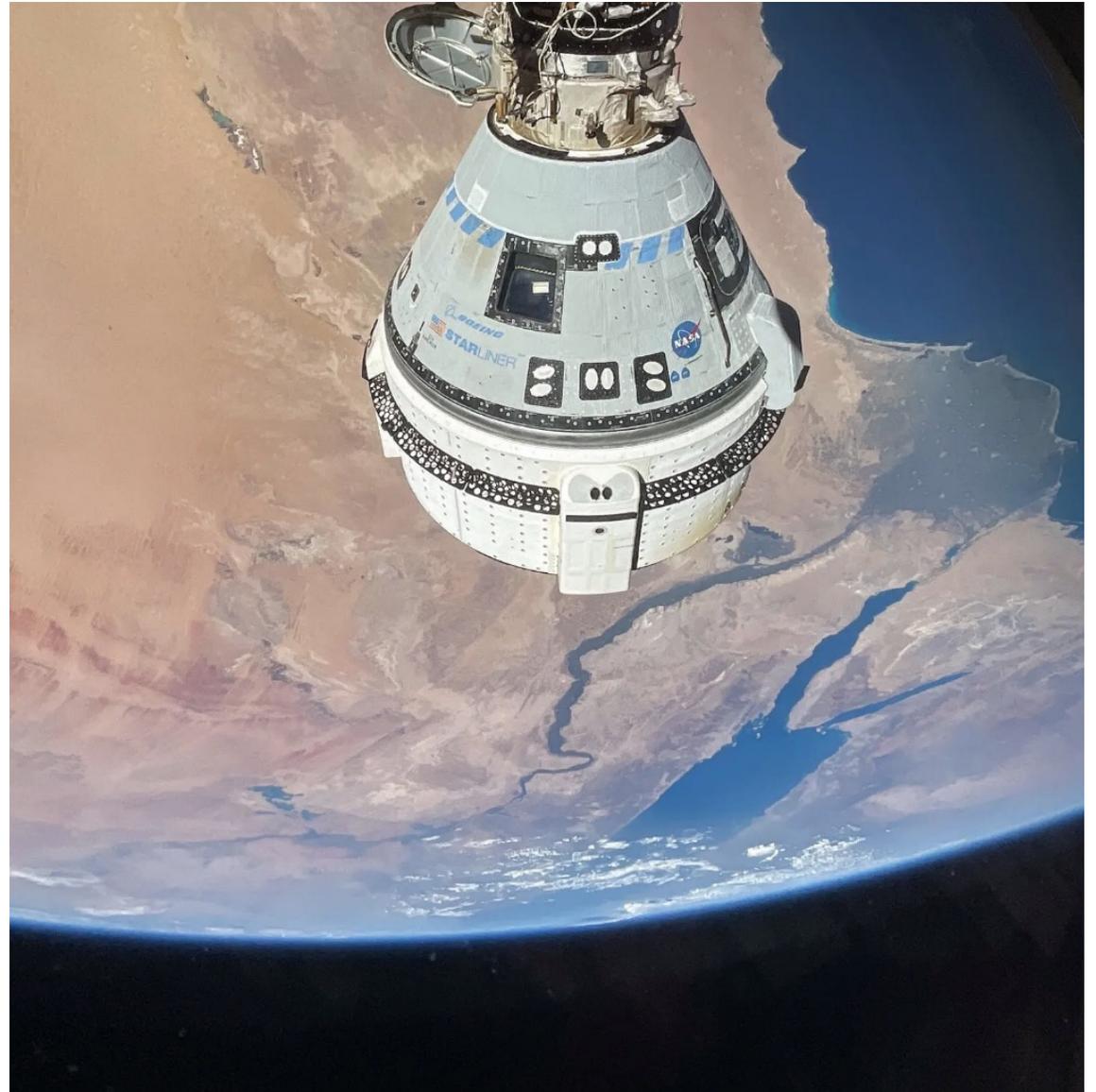


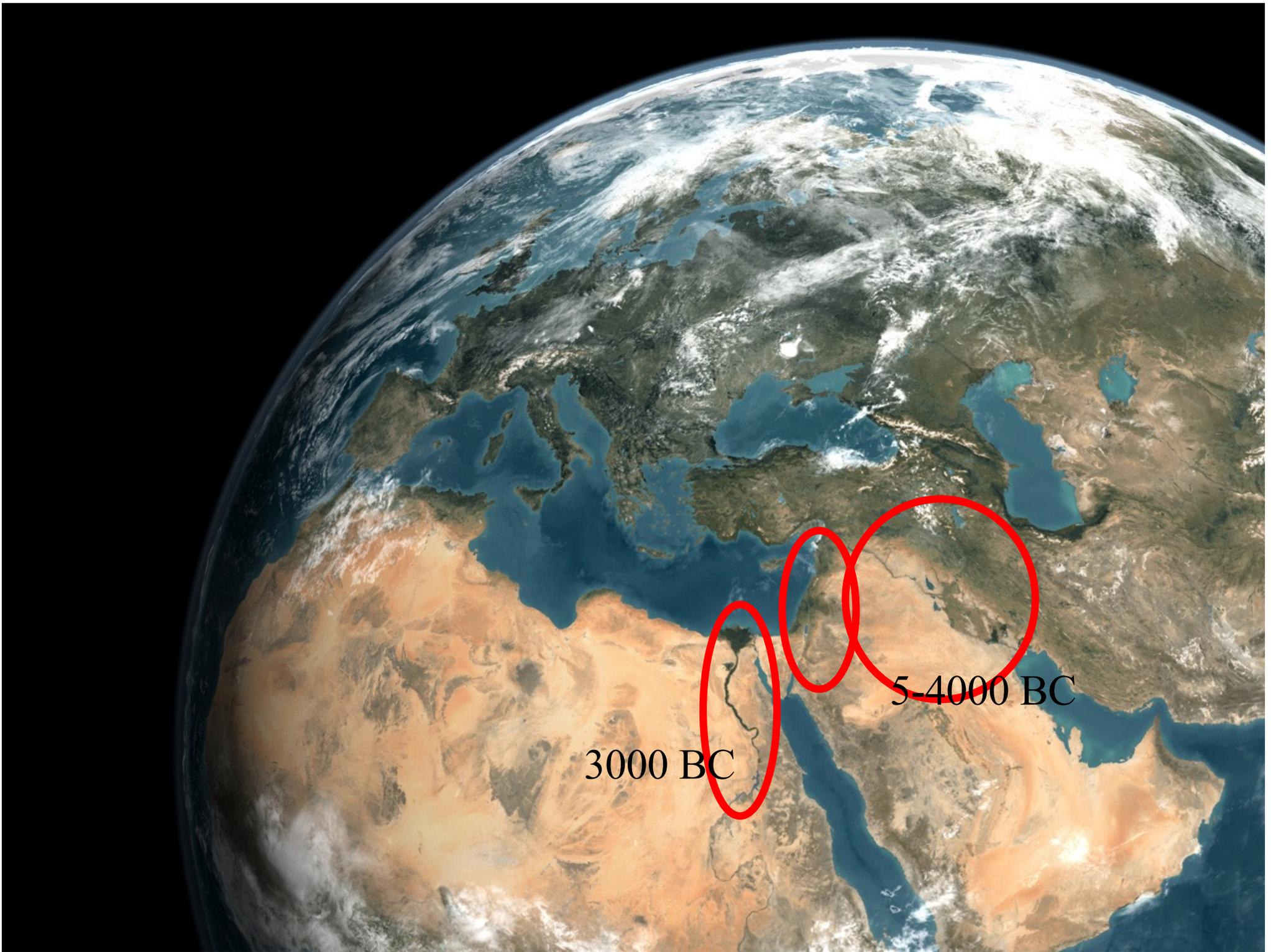
Beginning of the states : the Middle-East (The Fertile Crescent)

- Impact of geography and climate
- What generates a state?
 - Extraction
 - Cooperation
- Relation with urbanization
- Two cases (hydraulic civilizations in a basin)
 - Mesopotamia (~ Iraq today)
 - North
 - South : cities
 - Egypt
 - Central state (geography of the Nile)

A view from space

- Behind the space station :

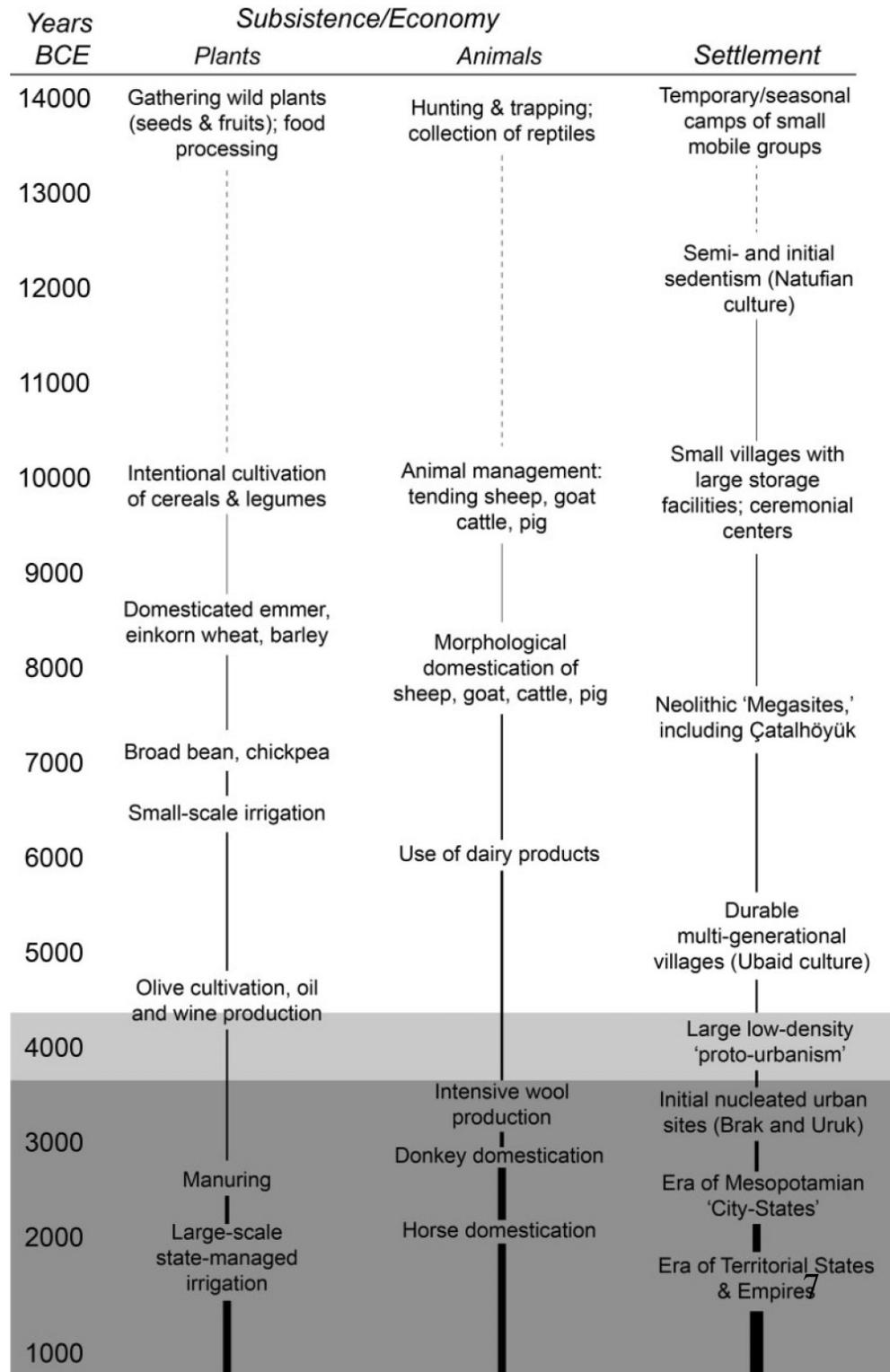




3000 BC

5-4000 BC

Time line (near East)



Geography

Now

Then



Meso-potamia

- “between-rivers
- Main: Euphrates
- Tigris, more volume, more dangerous
- Bagdad elevation 50m
700km from the sea

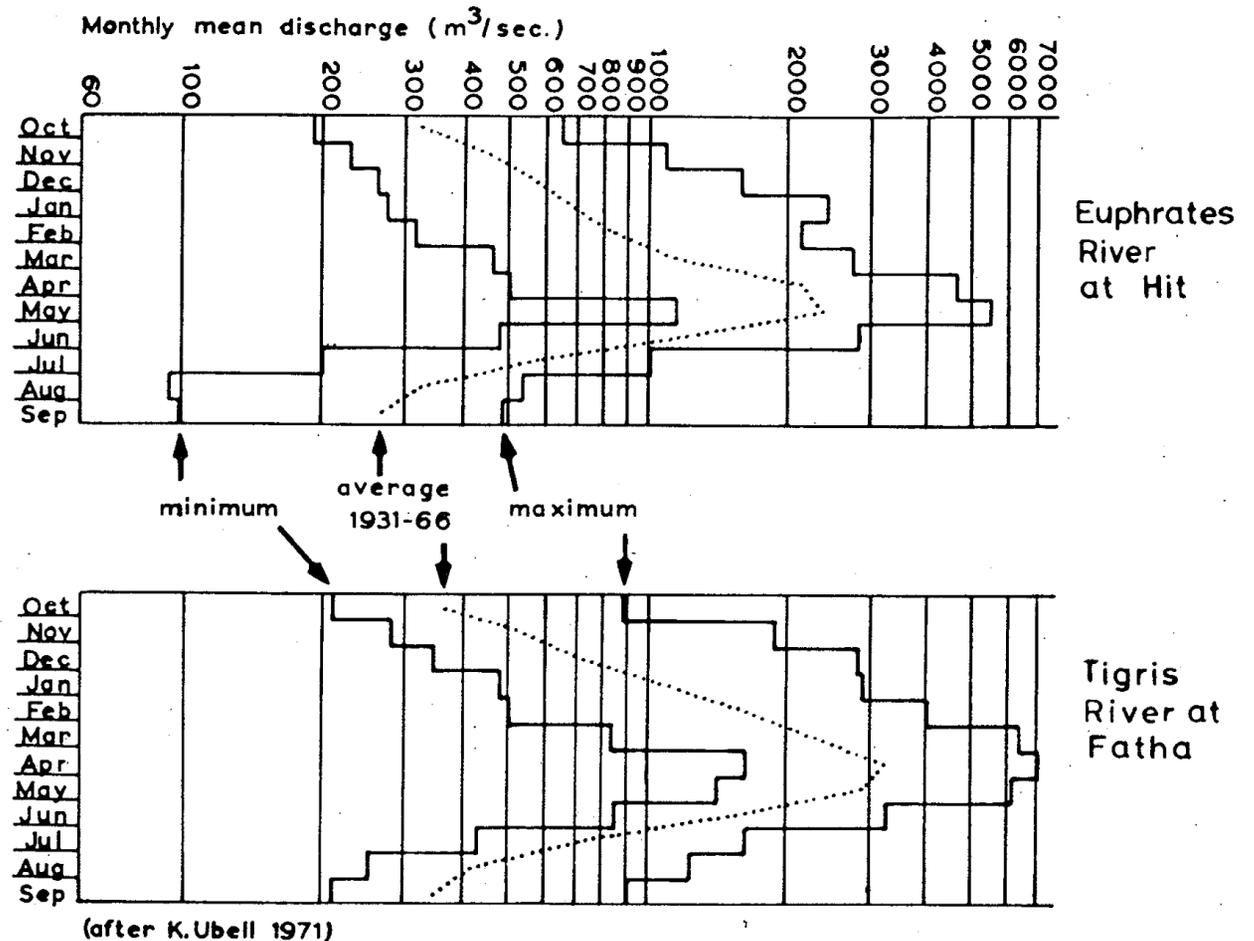


Fig. 1. Variations in Euphrates and Tigris River discharge.

North / South

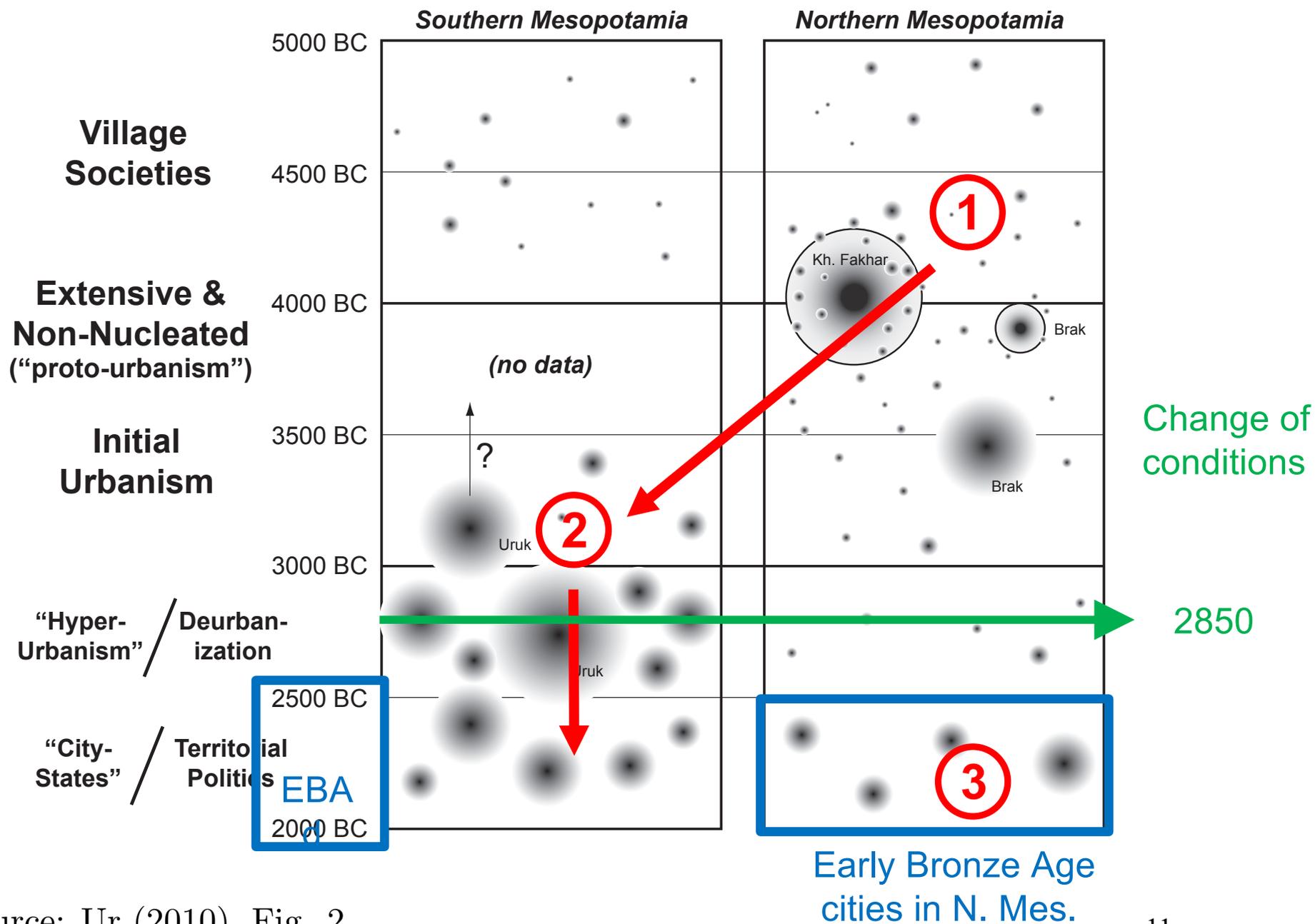
- North
 - Rain fed agriculture
- South
 - Bagdad elevation 50m from the sea
 - Necessity of irrigation (both for capture and defense)



Mardin (Turkey)



Time line of “urban” development



Source: Ur (2010), Fig. 2.

From villages to empires

1. Villages (north)
2. City-states, (north then, south)

Rivalries and wars

3. Empires

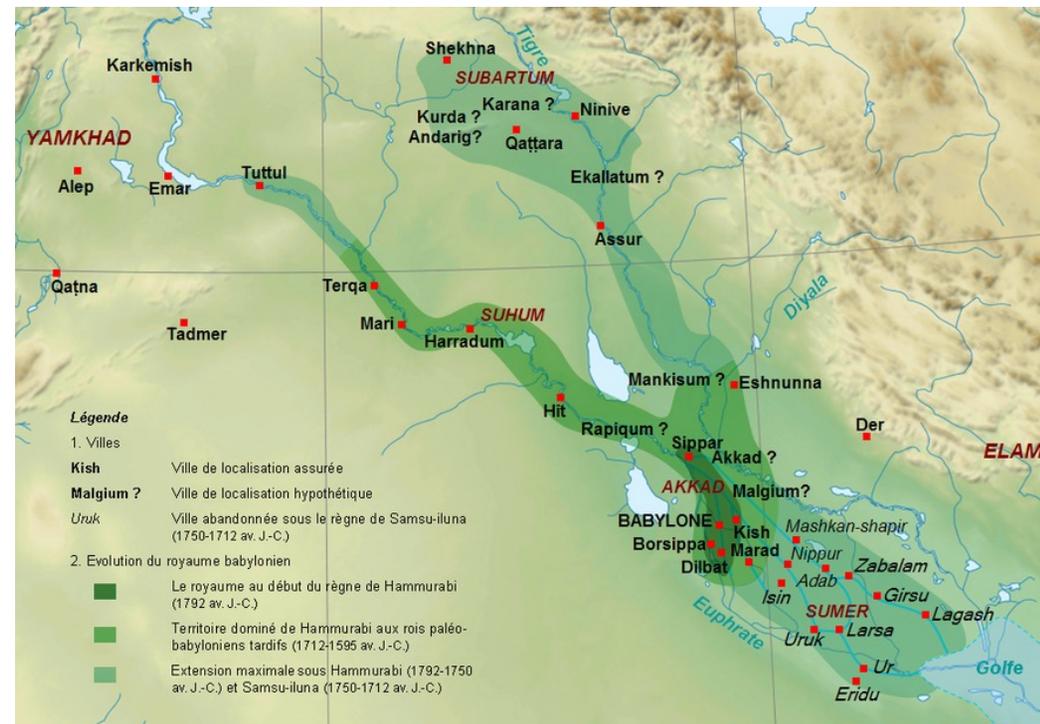
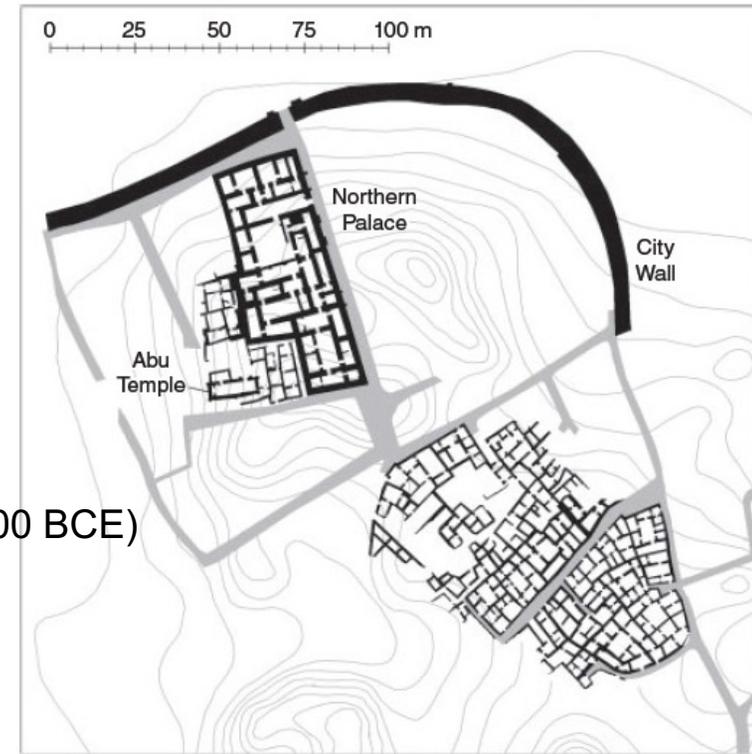
Capture the surplus of cities

Less local incentive

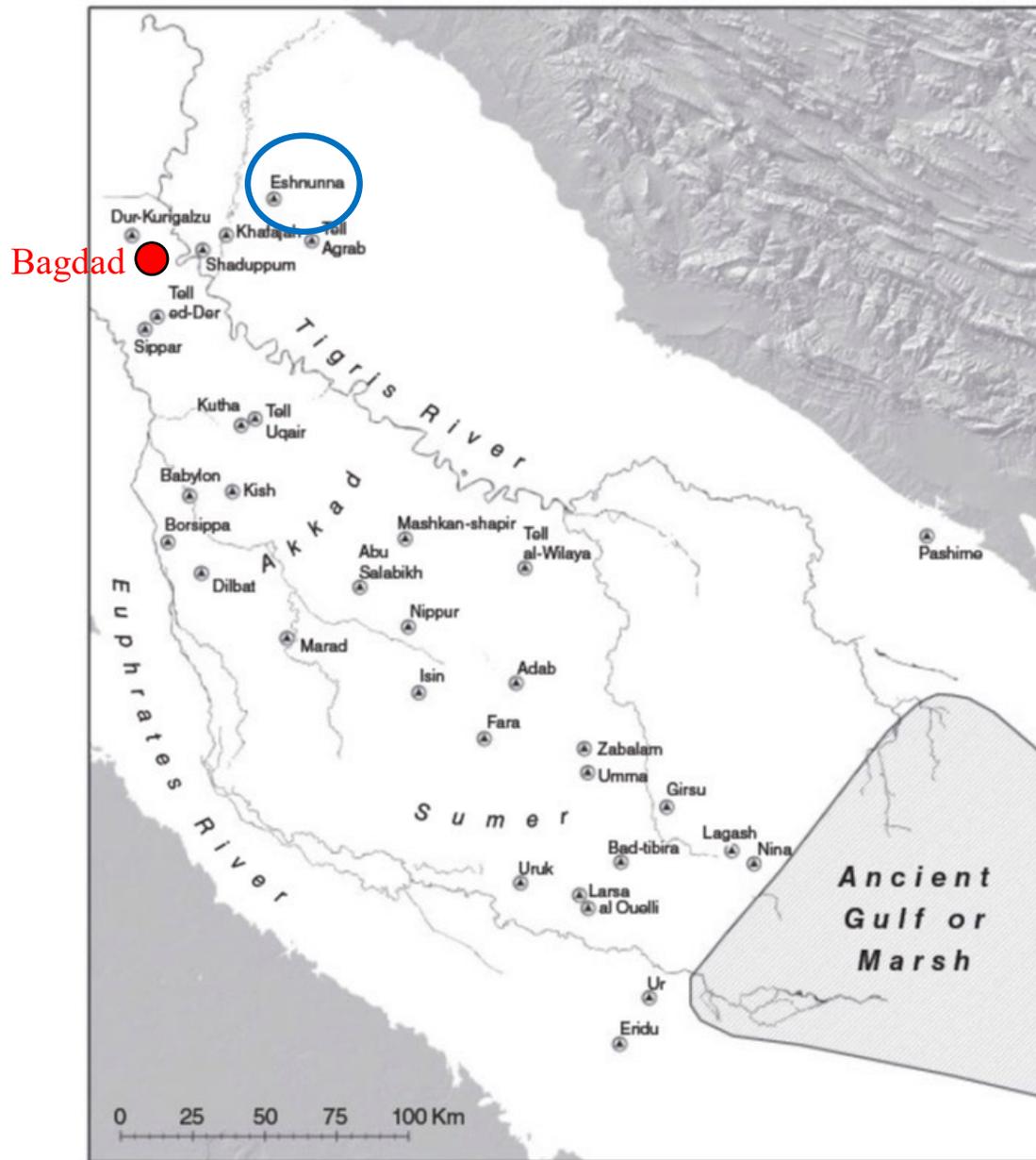
Save on inter-city warfare

Hammurabi (1750 BCE)

Ennusha (2200 BCE)



Southern Mesopotamia



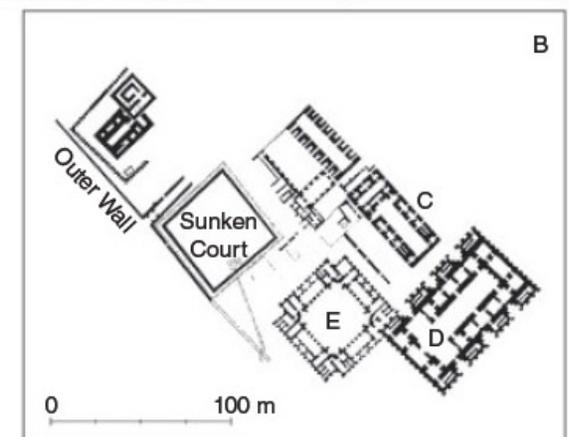
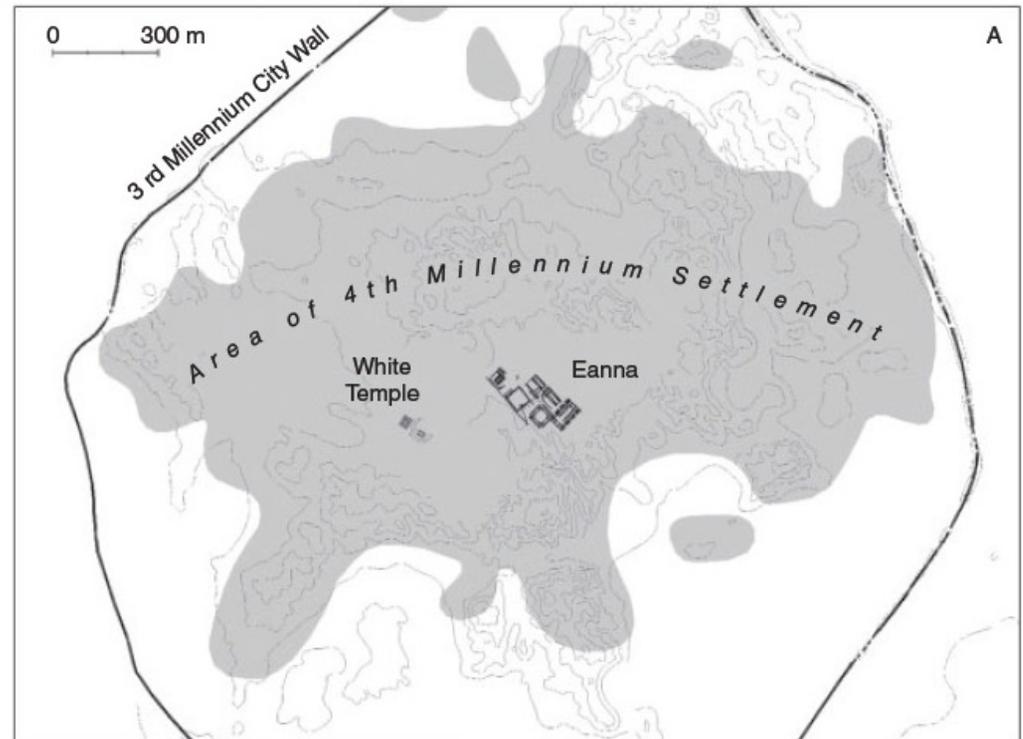
Source: Ur (2013)

Terrain above 100m is shaded

Cities

Uruk c. 3100 BC

- Definition?
- Buildings for common function
 - Burial
 - Palace
 - Temple



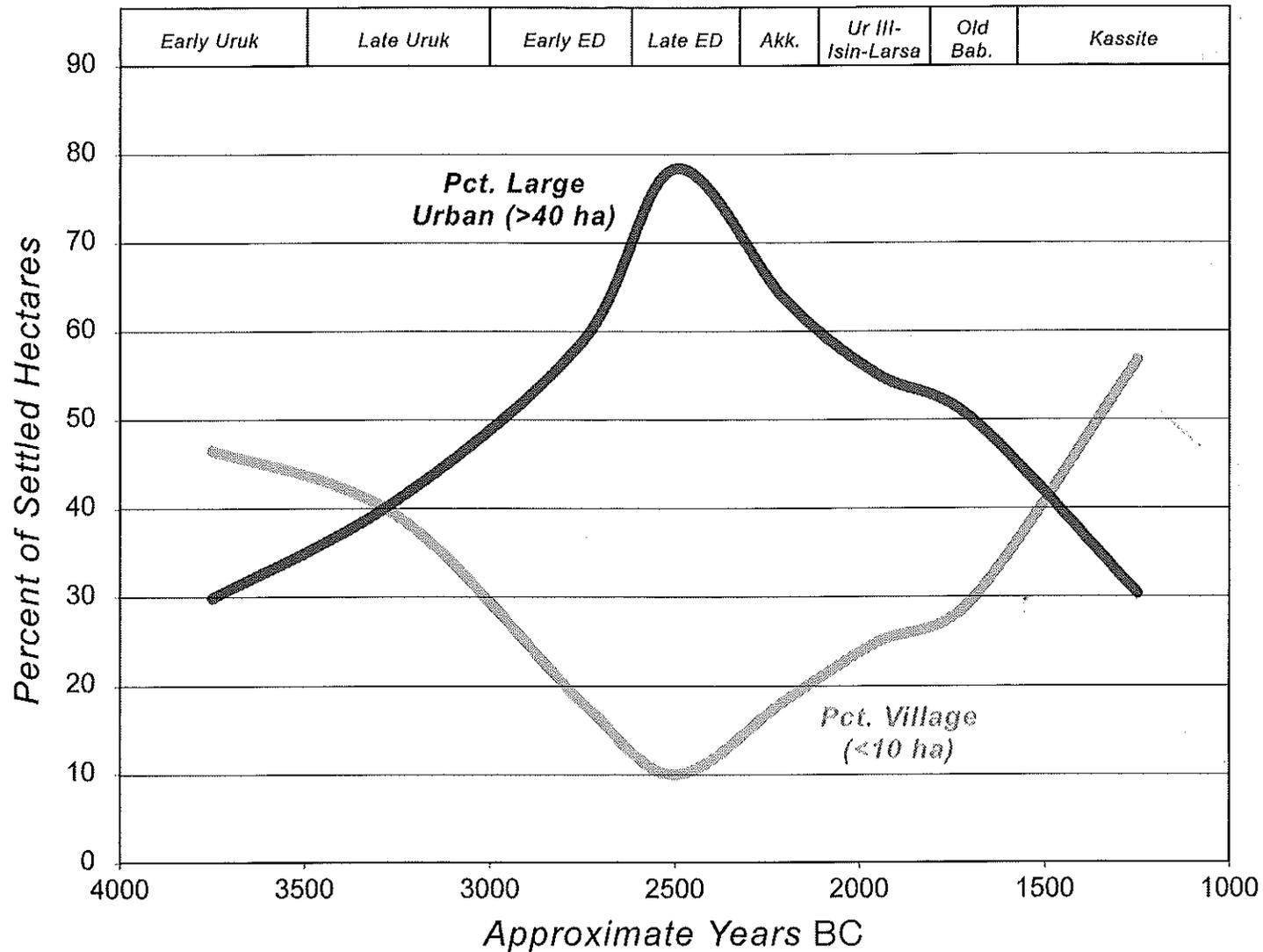
Uruk

“Unfortunately, almost all objects found in the great structures at Uruk were in a secondary context and cannot be tied directly to them. These include the world’s first written documents, clay tablets (the so-called Archaic Texts) with a pictographic script (Englund 1998). The 5,400 tablets recovered are primarily concerned with economic matters and record great quantities of sheep, agricultural products, beer, and land. They are often assumed to be the economic records of temples, but this assumption is complicated by their secondary archaeological context”

Jason Ur (2012)

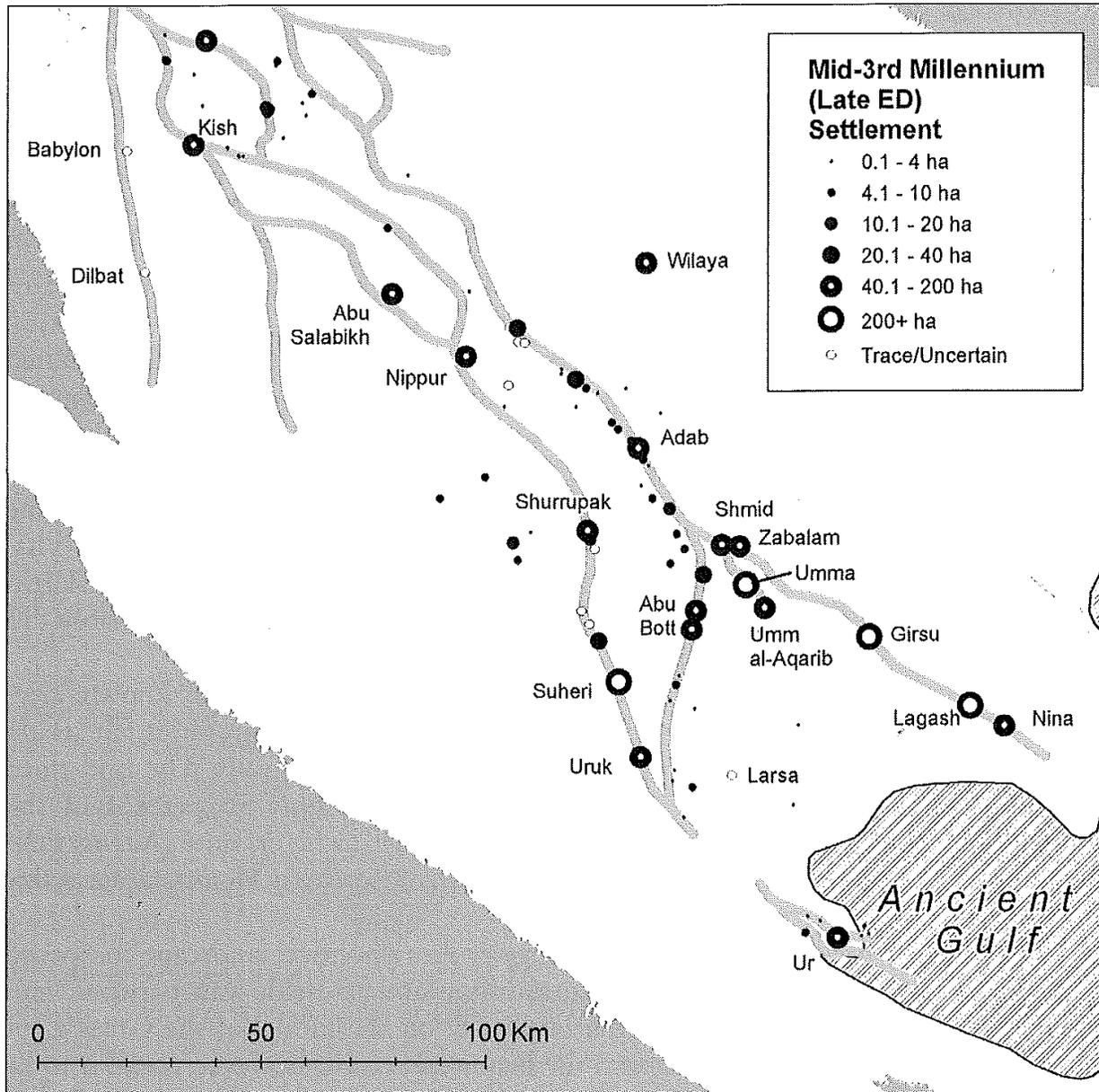
Urbanization and ruralization

Note the minimum scale for a city



Urban > 40 ha. Rural <10 ha.

Competing cities 2600-2100 BC



Invention of writing

- around 7500 BCE, tokens for accounting
- ~ 3400, bullae (clay balls) for token
- ~ 3300, pictograms on boxes
- ~ 3200, tablets with numbers and logograms

~ 3000 BCE



Money

- Coins will appear around 7th century BCE (in Anatolia, current Turkey)
- Before that, weight in gold and silver
- Even with no exchange in gold and silver, a unit weight (shekel) can be used as a unit of account.
 - One shekel 8.4 grams of silver
 - Daily wage for Babylonian workers ~ ¼ shekel
- Other unit: sar (shar) 36 square meters (~ 400 square ft)

Contracts and private property

Sale of Real Estate, Sumer, around 2000 BCE

Sini-Ishtar, the son of Ilu-eribu, and Apil-Ili, his brother, have bought one third Shar of land with a house constructed, next the house of Sini-Ishtar, and next the house of Minani; one third Shar of arable land next the house of Sini-Ishtar, which fronts on the street; the property of Minani, the son of Migrat-Sin, from Minani, the son of Migrat-Sin. They have paid four and a half shekels of silver, the price agreed. Never shall further claim be made, on account of the house of Minani. By their king they swore. (The names of fourteen witnesses and a scribe then follow.) Month Tebet, year of the great wall of Karra-Shamash.

Contract: power of attorney

First year of Evil-Merodach, 561 B.C.

ITTI-NABU-BALATU, the son of Shula, the son of Egil acts in place of Bel-kishir, his brother, (who) has not gone into business. With reference to their securities and whatever property belonged to Shula, their father, (which) they have shared with one another, in so far as it belongs to Bel-kishir, it shall go into the business, and whatever profit arises from traffic (literally, the street), however much he may gain in this way, he shall bring all unto and to Bel-kishir deliver. His hand for this he raised.

Public good provided by the state: justice

- Code of King Ur-Nammu (2250 BC)
 - Probably, encoding of previous rules
- Code of Hammurabi (1792-1750 BC)
 - 282 cases
 - Very harsh punishments
 - “an eye for an eye, a tooth for a tooth”
- Demonstration of private property rights

Louvre museum



Test on the “origin” of a state

Reference

Allen, Robert, C., Mattia C. Bertazzini, and Leander Heldring (2023). “The Economic Origins of Governments,” *American Economic Review*, 113(10): [2507-2545](#).

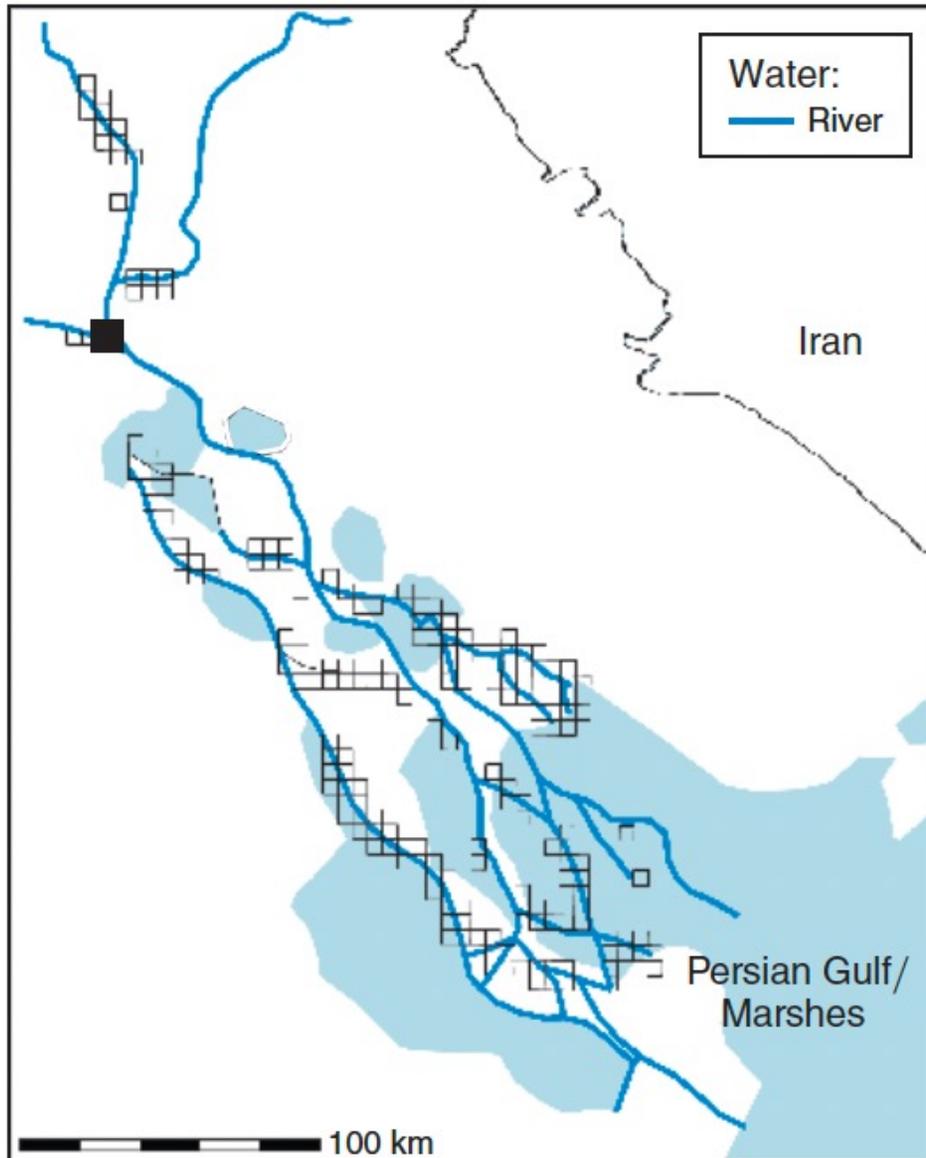
- A state is defined by organization
- Evidence:
 - Buildings
 - Size of the area
- What was the driving force behind the state
 - Extractive
 - Cooperative
- Empirical test (it was a long time ago)
 - Exogenous shock: river shift
- Reaction in creating state (city-states, not empires)

River shifts

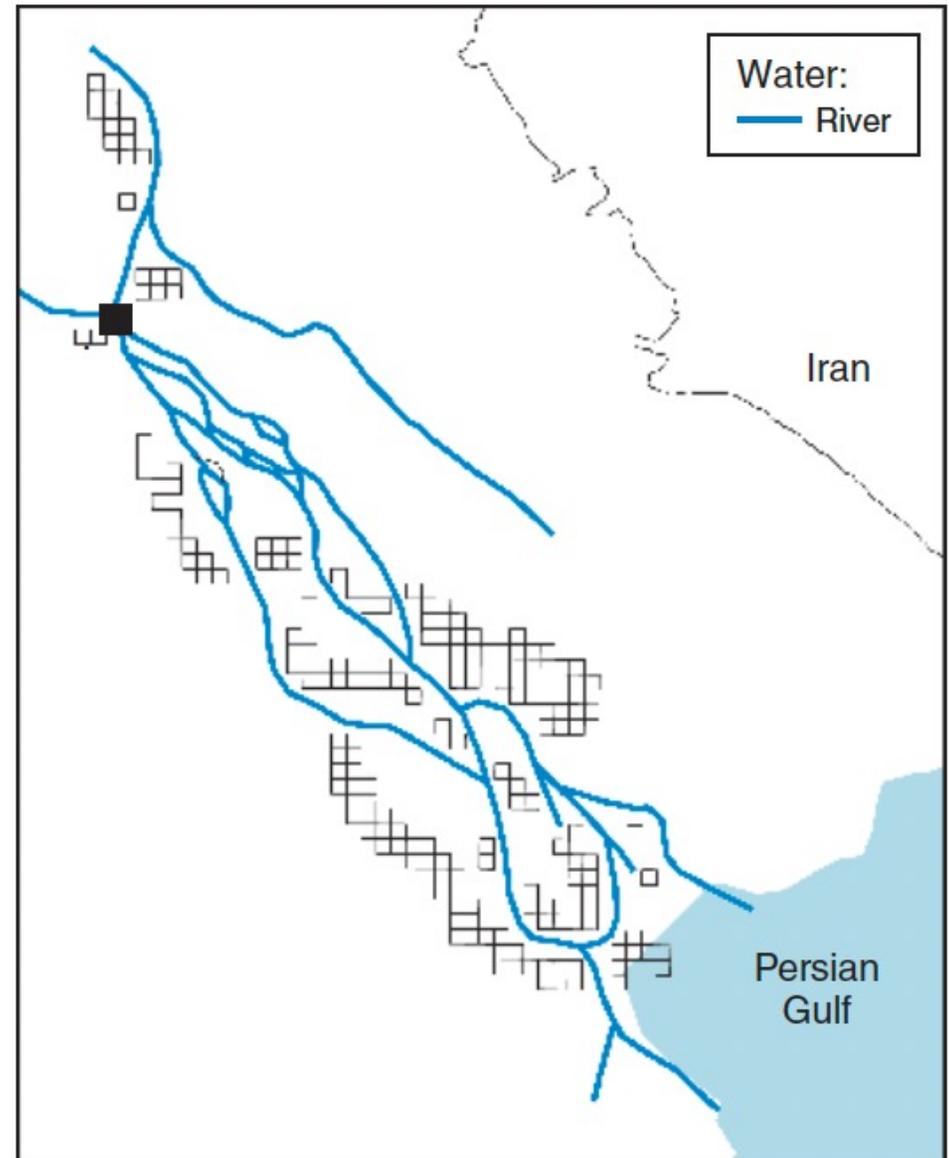
- Flat plain
- Violent floods (Tigris doubling in two days)
- Alluvions carried the floods created barriers
- Sudden shifts (weeks or days)
- One recorded shift in 2850 BCE

River shift

2900 BCE



2700 BCE



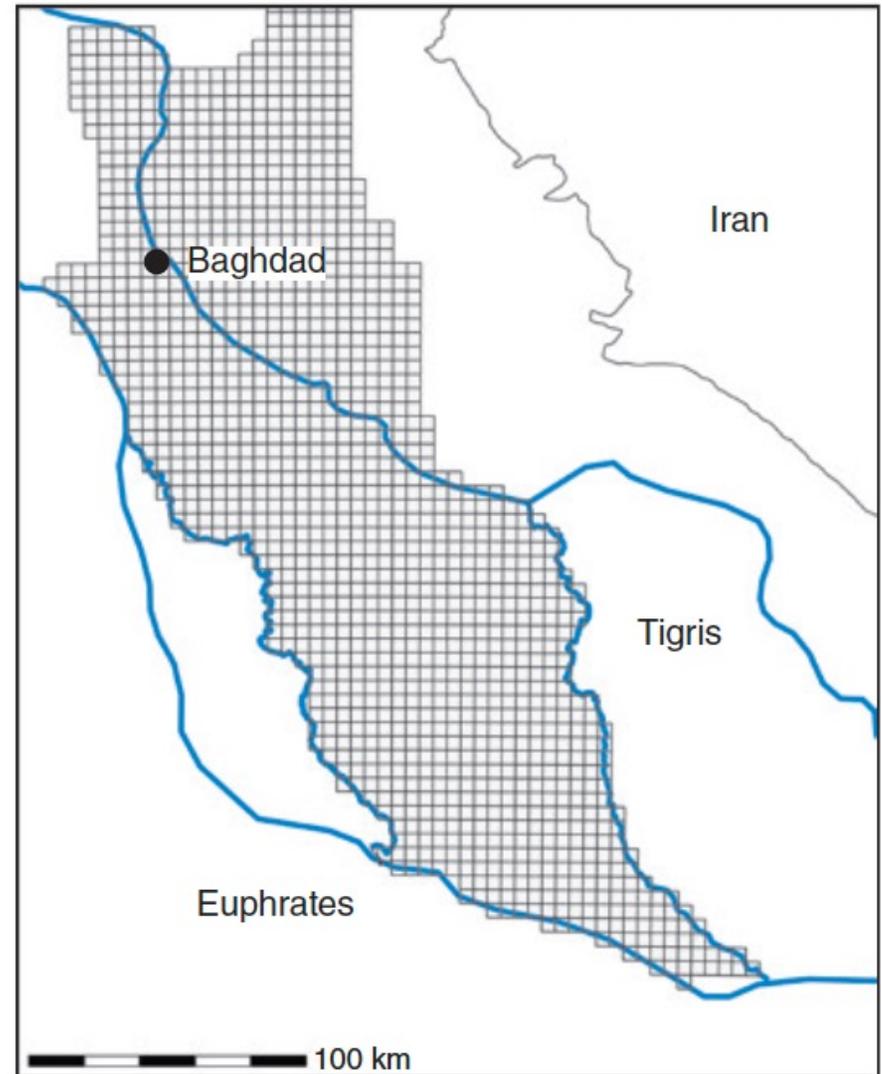
Data on cities and states

- Rich data
 - Many excavations (cradle of civilization)
 - Desertic area today
- 62 cities (Chicago survey)
- 442 buildings (62 palace,s 423 temples, 21 ziggurats)
- State (borders) defined by administrative buildings and reach of canal networks
- City walls (10 such cities)
- 6572 cuneiform tablets with text.

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Cells and data

- Cells 5km squares
- Data on whether the center is within 5km from a river
- 5 periods from 3900 to 2700 BCE -4 to 0
- Period k=0: 2900 to 2700
- For each cell, data on cities (existence, palace)



...

Statistical test

$$Y_{ct} = \sum_{k=0}^{-4} \beta_k^{treatment} \times \mathbf{1}\{period_k\} \times treated_c + \rho_c + \gamma_t + \dots$$

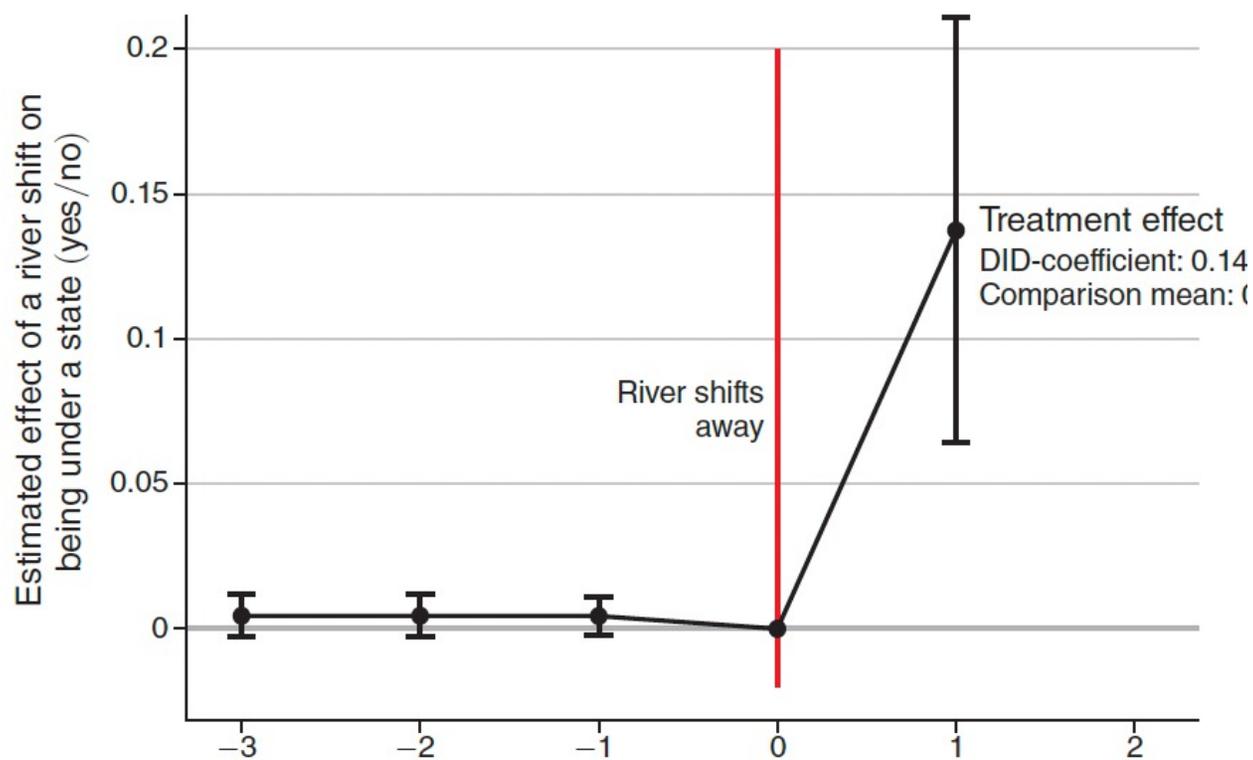
- **Treated cell:** river moves away between period -1 and period 0
- **Control cell:** no shift
- **Dependent variable Y**

TABLE 3—MAIN RESULT: A RIVER SHIFT LEADS TO THE FORMATION OF NEW STATES

Dependent variable:	Under city state (yes/no)		New state (yes/no)	Existing state (yes/no)
	(1)	(2)	(3)	(4)
<i>River shift (yes/no)</i>	0.14 (0.04) [0.03]	0.16 (0.05) [0.04]	0.11 (0.04) [0.03]	0.02 (0.02) [0.01]

Illustration of the main result

Panel A. Main result



Main inference

- Cooperation: inclusion in new states that arise as a response to the shock
- Extraction: new inclusion in existing states that expand along existing rivers.

Internal organization of the state

- Data set: 5,885 cuneiform tablets
- Administrative content, dated and located.
- Lineage: like corporation
- Head of the ruling lineage *lugal. Gal*: Chief (step below

