

## Chapter 2

### I. CITIES OF MESOPOTAMIA: MUD, GODS, AND URBANISM

#### A. The Urban Temple: Creating the *Axis Mundi*

1. During the fifth through third millennia BCE, Mesopotamia, which extends from the Persian Gulf in the southeast through modern Iraq to the foothills of Armenia in the northwest, spawned a great system of cities.
  - a. An immense effort to harness the unwieldy rivers into canals and lay out irrigation systems for the agricultural fields helped to consolidate the Mesopotamian cities.
  - b. Clay was the most available medium of expression.
  - c. The earliest urban settlements in Mesopotamia date from 5000 BCE in Sumer, the southern delta area.
  - d. Agricultural towns on the slower-moving Euphrates, such as Eridu, Uruk, Nippur, Lagash, Ur, and Kish, grew into sizeable city-states with 10,000–20,000 inhabitants.
  - e. Cities shared similar features.
    - i. A set of double walls
    - ii. At least one towering temple as the center of its surrounding agricultural estates
    - iii. Dikes, canals, irrigation systems
2. Sumerian architects designed sacred enclosures, *temenos*, and *ziggurats*, temples that rose on one or more platforms to create a stepped profile.
  - a. *Axis mundi* is a sacred marker indicating a local culture's center of the world.
  - b. *Ziggurat*: "House of the mountain, mountain of the storm, bond between heaven and earth."
3. Eridu is the oldest settlement in the region.
  - a. Eridu's temple to Enki used:
    - i. External buttresses
    - ii. Spur walls
  - b. By the end of the third millennium the worshippers at the Enki Temple had incorporated many previous versions into a colossal stepped mound that took the form of a proper ziggurat.
4. Uruk's White Temple (between 3400 and 3000 BCE) rose as the focus of the city's religion and government.
5. The city produced many other types of temples to important cults:
  - a. The priesthoods of the moon god, Nanna, and the goddess of the morning star, Inanna, sponsored a collection of extraordinary monuments.
6. The constant building and rebuilding of temples in Uruk came as a response to the fragility of existence in Sumer:
  - a. Crop failures, famines, droughts.
  - b. The extravagant temple-building mission of Gudea, a high priest with kingly status who commanded the city of Lagash east of Uruk, illustrated this desperate struggle for survival.
    - i. Left detailed records of his rebuilding of the city's temples, records environmental crisis of the Tigris no longer rising to water the fields.
    - ii. While undertaking the rebuilding of Ningirsu's temple, Gudea commissioned twenty stone statues of himself.
  - c. By the end of the second millennium BCE the population of the plains dwindled through starvation and warfare.

#### B. Kingship: The Emergence of the Palace

7. Sargon the Great seized power from the reigning king of Kish and proceeded to take control of as many as sixty-five cities.

- a. This transition led to the development of an enclave for the royal palace.
  - i. Sargon built a palace at Akkad, which probably resembled those built in rival city-states, such as Ebla, near modern Aleppo, Syria.
  - ii. This human-made acropolis, or *tell*, served as the site for both the royal palace and the primary temple to the city goddess, Ishtar.
  - iii. Sargon's armies sacked Ebla and burned down the palace around 2300 BCE. The heat of the fires converted the clay of the walls and the cuneiform tablets of its archive into the more permanent form of terra-cotta.
- b. At Mari, the great palace was also destroyed during the time of Sargon, rebuilt two centuries later, and destroyed definitively in 1759 BCE by King Hammurabi of Babylon. As in Ebla, the torching of the palace converted the mud-brick walls and the archive of cuneiform tablets into terra-cotta.
  - i. The palace served as both a royal residence and a religious center.
  - ii. Architects made the approach through the fortified entry gate at the northeast corner a twisting series of three antechambers to slow down the entrants and allow the guards to better control their access.
  - iii. The great court accommodated hundreds of functionaries and petitioners.
  - iv. The second courtyard in the western half of the Mari palace served the ruler and his retinue.
  - v. The labyrinthine plan of the palace at Mari allowed for the paths of servants and troops to be segregated from that of the king.

C. Ur: The City and the Ziggurat

8. The city of Ur emerged as the largest in Bronze-Age Mesopotamia following the demise of Sargon's Akkad.
9. The extensive archaeological excavations of Ur's temples, palaces, mausoleums, harbors, canals, streets, fortifications, shops, and common dwellings offers a unique vision of the urban fabric of this period.
10. During the period of the Third Dynasty, King Ur-Nammu (r. 2047–2030 BCE) published the first code of laws, revised three centuries later in Babylon as the celebrated Code of Hammurabi.
11. Ur-Nammu became famous for centuries to come as the patron of the Great Ziggurat of Ur.
12. Layout of Ur:
  - a. A canal surrounded and bisected it.
  - b. A dense, twisted network of narrow, unpaved streets relieved only by the port on the west edge, the harbor and a large palace in the north, and the great *temenos* for the ziggurat in the center.
  - c. Houses at Ur formed tightly packed blocks, built with shared-party walls.
  - d. Houses were single-story structures of mud brick, with several rooms wrapped around an open court.
  - e. The level of the streets continually rose.
  - f. Wealthier houses were larger, whitewashed, and built around a courtyard, anticipating the Greek *oikos*, the Roman *domus*, and the Moroccan *riad*.
  - g. The temple district was planned as a solemn void with orthogonal coordinates—the enclosing *temenos* established an obvious contrast between order and disorder.
  - h. South of the tower stood the perfectly square palace of E-Gi-Par, which served the high priestesses.
  - i. The design of the ziggurat at Ur followed a preconceived geometric idea, and it was among the first built with materials meant to last.
  - j. The Mesopotamian ziggurat crowned the city, flaunting a tangible axis mundi, the vertical link to the supernatural.

II. OLD KINGDOM EGYPT: ARCHITECTURE FOR THE AFTERLIFE

The ancient Egyptians left behind immense funerary monuments that constitute the most permanent volumes ever constructed.

#### A. The Nile and Sacred Geometry

1. The Nile's reliable annual floods encouraged the belief in an eternal order.
2. Orthogonal planning came naturally to the ancient Egyptians.
  - a. Knowledge of right angles, combined with proportional systems obtained from triangles, enabled Egyptian engineers to plan immense works of astounding geometrical accuracy.
3. Unlike the solidity of their tombs, Egyptian houses were made with perishable materials—aside from rectangular mud-walled structures covered with palm trunk roofs, the most frequent house type used vegetable matter: river reeds and papyrus stems.
4. Palace architecture in the north borrowed from Mesopotamian precedents, resulting in rectangular structures with large courts and pleated mud-brick walls with deep niches.
5. In the early third millennium BCE a centralized state emerged with a deified monarch.
  - a. The capital city of Memphis had magnificent white walls, which enclosed a grand palace for the pharaoh and the immense Temple to Ptah.
  - b. The pharaohs and their courtiers erected hundreds of colossal funerary monuments, including over ninety pyramids.
    - i. All burial grounds were confined to the west bank of the Nile, the land of the setting sun.
    - ii. At first they designed the royal tomb as a loaf-shaped rectangular tumulus, known in Arabic as a *mastaba*.
      1. The perimeter walls of the mastabas included altars for visitors that were framed with twin stelae.
      2. A special sealed chamber, known as the serdab, contained a statue of the pharaoh.
    - iii. Saqqâra came to prominence as a royal burial site around 2900 BCE.

#### B. Saqqâra: The First Pyramid

6. King Djoser (r. 2691–2625 BCE), the probable founder of the third dynasty, transformed the Old Kingdom royal tomb type into Egypt's first pyramid.
  - a. Imhotep, the architect, designed the precinct of Djoser's tomb complex as a perfect rectangle. Features include:
    - i. Square bastions
    - ii. Fifteen gate towers: only one opened
    - iii. Processional Hall
    - iv. A succession of side chapels, suitable for placing sculptures
    - v. Clerestory gaps
    - vi. The Grand Court
    - vii. A series of dummy granaries
    - viii. A vaulted mastaba on the south covering an intricate tomb shaft.
  - b. The spaces surrounding the pyramid served as the site of the Heb-Sed festival.
    - i. Celebrated every thirty years during the reign of an incumbent pharaoh to test the monarch's capacity to rule
    - ii. Five days of the festival involved the symbolic sacrifice, re-birth of the pharaoh, a double crowning, and a foot race to demonstrate his physical fitness.
    - iii. A secret passage in the first bay of the Processional Hall led circuitously along the ramparts to a narrow courtyard parallel to the Grand Court, known as the "Heb-Sed Court."
  - c. A stepped pyramid dominated Djoser's funeral complex, rising above the flat desert landscape like a vision of another world.
    - i. Although it resembled the stepped ziggurat towers of Mesopotamia, Djoser's tower more abstract.

- d. The mortuary temple at Djoser's pyramid, where sacrifices were regularly conducted, stood adjacent to the north.

#### C. Giza: The Culminating Pyramids

- 7. Djoser's immediate successors continued to build stepped pyramids.
  - a. Sneferu (r. 2613–2589 BCE) attempted to smooth the stepped structure to obtain a solid prism.
    - i. He made three attempts: at Meidum, the Bent Pyramid at Dashur; the Red Pyramid, a kilometer to the north of Dashur; and a final effort that was the first perfectly prismatic pyramid.
    - ii. Sneferu also created the first example of a valley temple.
  - b. Sneferu's descendants continued to improve the pyramid type at Giza, on the southwest edge of modern Cairo.
    - i. His successor, Khufu, commissioned the first and largest; Khufu's pyramid astounds not only for its bulk but also for its precision.
  - c. Khufu's successors (Khafre and Menkaure) sponsored the other two large pyramids at Giza.
- 8. For the ancient Egyptians the pyramids at Giza shone as monuments of hope: They represented a necessary link to the realm of the gods.

#### D. The Lowered Expectations of Egypt's Middle Kingdom: The Limits of Eternity

- 9. Though there are few signs of protest or rebellion from the Old Kingdom period, the overall well-being of the country and stability of the regime steadily declined during the next three centuries.
  - a. In the 22nd century BCE, the same period of Ur's decline, Egypt suffered comparable environmental disasters: the Nile refused to flood and famine, disorder, and political shifts ensued.
  - b. After the monuments of the Fourth Dynasty, succeeding dynasties felt obliged to downplay the role of the royal tomb and give more attention to temples.
  - c. Various powers outside the monarchy, including the provincial governors (or nomarchs), the priesthood of Heliopolis, and the landed aristocrats, began to assert their independence.
- 10. The period known as the Middle Kingdom (ca. 2150–1750 BCE) took shape after more than a century of civil strife and anarchy.
  - a. The founder of the eleventh dynasty, Mentuhotep I (r. 2161–2040 BCE), reunited the two lands of Egypt.
    - i. Mentuhotep sponsored a new type of platform funeral memorial, combining a solar sanctuary terrace temple to the sun god with a rock-cut tomb.
    - ii. The principal shrine to Amon-Ra, the Theban sun god, stood at Karnak, directly aligned to Mentuhotep's funerary complex across the river beneath the spectacular cliffs of Deir el-Bahri.
      - 1. The design of Deir el-Bahri achieved the antithesis of the pyramids of Giza.
      - 2. The new attitude toward funerary architecture echoed the political transition to a more diffused system of authority.

### III. THE INDUS VALLEY: CITIES WITHOUT MONUMENTS

The Harappans appear to have been the first urban society to intentionally avoid building monuments.

#### A. The Indus–Saraswati River System: A Hydraulic Civilization

- 1. The Harappans are mostly understood through traces of their architecture—the evidence suggests an urban culture that encouraged a fairly equitable distribution of

wealth. Unlike the Mesopotamians and Egyptians, the Harappans left a complete absence of religious and dynastic monuments.

2. Mehrgarh, the earliest known settlement in the region, dates from the seventh millennium.
  3. A system of linked agricultural towns between modern Lahore and Karachi took shape during the fourth millennium.
  4. The two best-excavated sites, Harappa in the north and Mohenjo-daro 600 km (373 miles) to its south, compared in size to the Mesopotamian city-states.
  5. As an urban system, the Harappan culture covered more territory—most of modern Pakistan and the Indian state of Punjab—and was probably more populous than either Mesopotamia or Egypt.
  6. Infrastructure is more interesting than their architecture.
    - a. Instead of great stepped temples or massive pyramids, one finds:
      - i. Unusually thick city walls
      - ii. Well-planned reservoirs
      - iii. Sophisticated systems of brick-lined drains that kept the sewage away from the drinking water
    - b. They left no traces of grand palaces, temples, or mausoleums.
  7. The cities of the Indus valley followed a high degree of orthogonal order, indicating a sophisticated social organization and advanced engineering knowledge based on geometry and probably astronomy.
  8. The absence of large structures for high priests, monarchs, or powerful rulers implies a relatively horizontal society run by assemblies.
- B. Water and Harappan Urbanism
1. Each town had impressive walls, but these were to defend more against natural calamities than human invasions.
  2. The walls, canals, and reservoirs became components of a system of water management to control the periodic monsoon floods.
  3. The cities of the Indus valley, such as Mohenjo-daro, usually included an elevated citadel area in the west and one or two lower districts, implying some sort of social hierarchy.
  4. One of the greatest mysteries of Harappan cities remains their lack of religious buildings.
    - a. However, the most detailed building in Mohenjo-daro, the Great Bath, may have had religious functions as a structure for ritual bathing, a custom that has remained central to Indian religions.
    - b. Small rooms and a portico made of brick piers surrounded the pool's courtyard.
    - c. Carefully constructed of sawn bricks set in bitumen mortar and sealed with gypsum based plaster.
  5. The northern city of Harappa, which is partly occupied by a modern town, also had a citadel in the west, a grid of city streets, and the best-preserved drains of the region.
  6. The Harappans did not need to translate their surplus into great architectural statements. Instead, they seem to have invested in the greater civic concern for defense against the elements, grain storage, and public assemblies.