CHAPTER

4

A POLYCENTRIC WORLD

CITIES AND STATES IN EAST ASIA, THE AMERICAS, AND WEST AFRICA 1700 B.C.E.–1000 C.E.

KEY TOPICS

- China: The Xia, Shang, and Zhou Dynasties
- The Western Hemisphere: Mesoamerica and South America
- West Africa: The Niger River Valley

This chapter completes the survey of the seven areas of primary urbanization. It covers the four areas that developed primary urbanization somewhat more recently: the Yellow River valley of China; two regions of the western hemisphere—Mesoamerica and the South American Pacific coastal plain with the adjacent Andes Mountains that tower above it; and the Niger River valley of West Africa. The first cities in these regions date from as early as 1700 B.C.E. in China to as late as 400 C.E. in the Niger valley. They include cities that were not in major river valleys as well as some that were. They all show at least some evidence of state formation, long-distance trade, and religious practices. But they include settlements that did not have written languages and records, and therefore require us to base our understanding entirely on the archaeological record. In at least one of them—west Africa—the settlement pattern is so different from urbanization elsewhere that we are asked to stretch our definition of urbanization and challenge our value system in assessing the significance of it.

CHINA: THE XIA, SHANG, AND ZHOU DYNASTIES

The Earliest Villages

As early as the eighth millennium B.C.E., Neolithic pottery decorations marked the transition from hunting and gathering into the culture of farming and village life. This Yangshao culture, first excavated in 1921, was named for the location where it was discovered in China's western Henan province. Among other fascinating finds, in late 1999 archaeologists uncovered a set of tiny flutes carved some 9000 years ago from the wing bones of a large bird. Three thousand years older than the next known playable instruments, from Sumer, one of them is still playable.

The Yangshao lasted to *c.* 2700 B.C.E. Farmers of this era grew millet, wheat, and rice, and domesticated pigs, dogs, goats, and perhaps horses. They lived mostly in river valleys, and the villages were often surrounded with earthen walls for defense. Ban Po is the best excavated village of the Yangshao culture (see Turning Point, p. 36). From archaeological evidence, it appears that individual nuclear families occupied dwellings, but there was also a larger building found that may have housed clan meetings.

Slightly later and slightly to the northeast, a more sophisticated Neolithic culture, the Longshan, grew up. The people of the Longshan made their pottery on wheels, whereas the Yangshao had coiled or molded their pots by hand. The Longshan people domesticated sheep and cattle, which were not seen in Yangshao sites. Longshan graves were dug under their own homes, while the Yangshao had buried their dead in

Opposite **Warrior ear ornament (above), cleaned and reconstructed (tomb 1), and spider bead (below), cleaned and reconstructed (tomb 3), Moche Royal Tombs, Sipan, Peru, 1st–6th centuries C.E.** The spider that captures its prey in webs and later extracts its vital fluids, and the warrior—along with other human, animal, and ornamental grave goods—suggest a culture dominated by powerful warrior priests.

AT A GLANCE: CHINA

DATE	POLITICAL	RELIGION AND CULTURE	SOCIAL DEVELOPMENT
8000 B.C.E.		■ Neolithic decorated pottery	■ Simple Neolithic society established
5000 B.C.E.	■ Yangshao culture in China (5000–2700)	■ Marks on Yangshao pottery possibly writing	■ Penal code; defensive structures round villages
3500 B.C.E.	■ Longshan late Neolithic culture	■ Delicate Longshan ceramics	■ Farming, with domesticated animals
2000 B.C.E.	■ Xia dynasty (2205–1766) ■ Shang dynasty (1766–1122) ■ City of Zhengzhou (*c.* 1700) ■ Under Shang, bronze vases found in ceremonial burials	■ The "sage kings" in China known from legend; first known use of writing in this area	■ Agricultural progress ■ Cities (by 1700) under control of Shang kings
1100 B.C.E.	■ Zhou dynasty (1100–256)	■ Poetry extant from Zhou period	■ Under Zhou, iron, money, and written laws in use
500 B.C.E.	■ Warring States period (480–222) ■ Qin Dynasty (221–206)	■ Confucius (d. 479) ■ Great Wall of China begun (214) to keep out Xiongnu	■ Crossbow invented (*c.* 350)
100 B.C.E.		■ Sima Qian (d. 85)	

Burial pit, unearthed at Liulihe, Hebei province, Western Zhou period. Evidence for the centrality of ritual in ancient Chinese culture can be found in this tomb, which contains the remains of horses and chariots. These important instruments of rule would have been regarded as valuable offerings to the gods and were thus buried along with their owner.

graveyards far from their villages. Sometimes Longshan funeral urns were cemented into foundation walls, suggesting ancestor worship.

Several hundred miles to the east, somewhat further down the Yellow River in Shandong, and one or two centuries later, yet another branch of Longshan culture developed, with yet another distinct type of pottery, often distinctively reddish-brown and gray in color, quite different from the black pottery of the Longshan of Henan. Although the high points of Yangshao and the western and eastern Longshan cultures appeared at successively later times, they overlapped each other to a considerable extent.

The Henan Longshan culture seems to have been a harsh one. Excavations reveal the burials of victims of killing, some decapitated and showing signs of struggle, suggesting warfare between villages. The defensive walls of pounded earth that encircle some of the villages support this hypothesis, as does the presence of bronze knives.

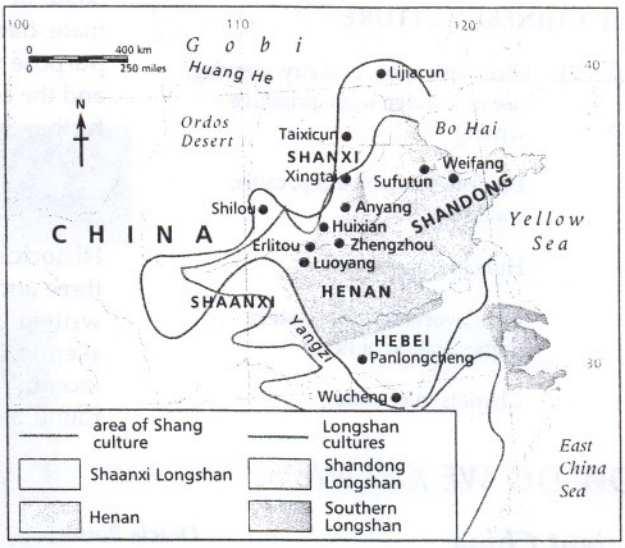
The Beginnings of State Formation

Out of these struggles among villages, larger political units gradually emerged. Ancient Chinese historical texts tell of three early dynasties—the Xia, the Shang, and the Zhou—that ruled over large regions of China. In its time, each ruled over the most powerful single kingdom among the embattled states of northern China. All were based primarily around the Huang He (Yellow River) valley in north China. State formation may have begun under the Xia, *c.* 2205–1766 B.C.E., although records are too sparse to recreate its cities and institutions. The archaeological record on urbanization under the Shang, *c.* 1766–1122 B.C.E., is far more revealing and reliable. The Zhou, *c.* 1100–256 B.C.E., consolidated both city and state, and left extensive archaeological remains and written records.

None of the three dynasties succeeded in annexing all its enemies and building a single unified empire. That process would come later.

The traditional chronological dating suggests that the states succeeded one another, but recent evidence indicates that there may, in fact, have been considerable overlap. For centuries, they may have coexisted in neighboring regions, with first one, then another, having comparatively greater power and prestige.

By the time of the Shang, if not already in the Xia dynasty, people had founded cities in north China as centers of administration and ritual. State formation was well under way, and cities served as capitals and administrative centers. An urban network ruled the entire dynastic state. Capitals were frequently shifted, suggesting that new rulers wanted to make their mark through new construction, or that confrontations with neighboring, enemy states required strategic redeployments for improving offensive or defensive positions. Kings frequently entrusted the regional cities and their administrations to their blood relatives. It appears that rulers performed productive economic functions for their subjects, especially in water control. The ability to organize huge work gangs to construct irrigation channels and dikes for flood control confirmed their power and status. As a result, the lineages on top lived lives of considerable wealth while those on the lower levels had little, as sharp class differences emerged in the early dynastic states. The cemeteries of different classes were geographically segregated into different neighborhoods within the city and its suburbs, and were of different quality.

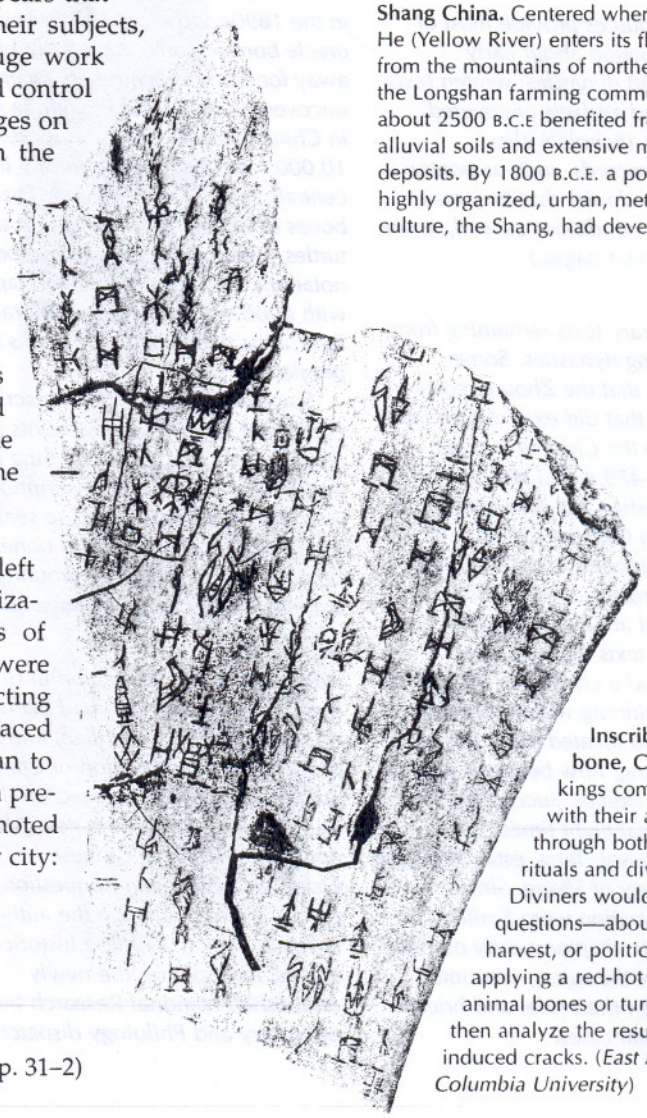


Shang China. Centered where the Huang He (Yellow River) enters its floodplain from the mountains of northeast China, the Longshan farming communities of about 2500 B.C.E benefited from rich alluvial soils and extensive metal ore deposits. By 1800 B.C.E. a powerful, highly organized, urban, metal-working culture, the Shang, had developed.

Like primary cities in other parts of the world, the Chinese cities were also religious centers, with the kings presiding over rituals as well as administration and warfare. Indeed, the warfare was necessary to supply the human and animal sacrifices that were central to the rituals.

Early Evidence of Writing. One of these early rituals has left us evidence of a crucial development in Chinese civilization—the invention of writing. Oracle bones—bones of birds, animals, and especially the shells of turtles—were inscribed with markings and writings for use in predicting the future. After they were marked, these bones were placed in a fire and tapped lightly with a rod until they began to crack. The cracks were then interpreted by specialists in predicting the future. A poem from the later Zhou dynasty noted the use of oracle bones in deciding the location of a new city:

> The plain of Chou was very fertile,
> Its celery and sowthistle sweet as rice-cakes.
> "Here we will make a start; here take counsel,
> Here notch our [turtle]."
> It says, "Stop," it says, "Halt.
> Build houses here." (Chang, *Shang Civilization*, pp. 31–2)



Inscribed oracle bone, China. Shang kings communicated with their ancestors through both sacrificial rituals and divination. Diviners would pose questions—about health, harvest, or politics—by applying a red-hot poker to animal bones or turtle shells and then analyze the resulting heat-induced cracks. (*East Asian Library, Columbia University*)

EARLY CHINESE CULTURE

5000 (B.C.E.)	Rice cultivation, basketry, weaving, use of wooden tools, primitive writing
3000	Domestication of sheep, cattle, water buffalo
2000	Human grave sacrifices
1900	Metal working, class system, domestication of horse
1200	Chariots in warfare

Some of the oracle bone inscriptions confirm the names and approximate dates of Xia and Shang rulers. Other bones suggest that their purpose was to communicate with the gods. The location of the bones and the content of their inscriptions encouraged archaeologists to search further in the north central Chinese plains, near the point where the Yellow River flows out of the mountains for evidence of China's early dynastic period.

Historical Evidence of the Xia Dynasty. Chinese legend long spoke of three ancient dynasties—the Xia, the Shang, and the Zhou. While many written records exist on the Zhou dynasty, historians were often skeptical of the existence of the earlier dynasties until relatively recently. At Erlitou, east of Luoyang, in western Henan, archaeologists found a culture in precisely the areas described by ancient texts as the

HOW DO WE KNOW?

Ancient China

Three kinds of sources provide most of our direct information about early Chinese cities and dynasties: written texts, oracle bones, and artifacts uncovered archaeologically. (Scholars also sometimes take records, such as poetry, from later eras and infer that they may represent earlier conditions as well, as we shall see in the next pages.)

Texts

We have no literary texts remaining from the Xia and Shang dynasties. Some scholars believe that the Zhou dynasty destroyed those that did exist. Much later texts ascribed to the Chinese teacher Confucius (551–479 B.C.E.) refer to the Xia and Shang dynasties, but give little detail. Later, Sima Qian (Ssu-ma Ch'ien; c. 145–85 B.C.E.), court historian of the Han dynasty, wrote the first of China's official historical annals. Sima, who had access to many texts that have not survived, devoted a chapter to the Shang royal house beginning with its legendary founder Xie, who located his capital to a town called Shang, now believed to have been in eastern Henan. Successive rulers moved this capital eight times. Xie's fourteenth successor, Tang, established the hereditary dynasty of Shang. Sima's sources of information were limited, however, and his chapter mostly outlined the genealogy of the rulers, recounted moralistic tales of their rule, and briefly noted their capital cities.

Oracle Bones

A new source of information came to light in the 1890s and early 1900s. Numerous oracle bones—some apparently hidden away for many years, others recently uncovered—appeared in antique markets in China. Over the decades more than 10,000 were discovered, mostly in the central plains of north China. These bones of birds and animals, and shells of turtles, were inscribed with symbolic notations, placed in a fire, and tapped with a rod until they began to crack. Specialists then "read" the marks to predict the future.

Some of the oracle-bone inscriptions confirmed Sima Qian's accounts of early Shang rulers. The location of the bones and the content of their inscriptions encouraged archaeologists to search further for additional oracle bones and other artifacts in the area around the ancient Shang capital of Anyang.

Archaeology

Archaeology was in fashion in China in the 1920s. Peking Man had been discovered at Zhoukoudian, and in the process a new generation of Chinese archaeologists had received on-the-job training. Meanwhile, the new "doubting antiquity" school of Chinese historiography began to question the dating and to challenge the authenticity of many ancient Chinese historical events. In response, the newly established National Research Institute of History and Philology dispatched the young archaeologist Dong Zobin to explore the Anyang region. Dong recommended excavating for oracle bones. These excavations, mostly under the direction of Li Ji, uncovered not only bones but also sites from the Shang dynasty. These led to the discovery of artifacts from earlier eras as well. Scholars understood these to be evidence of the existence of the Xia dynasty. Ancient texts, bronzes, oracle bones, and excavations reinforced one another in recounting parts of ancient China's urbanization and state formation. Civil war in China, beginning in 1927, and war with Japan, beginning in 1937 (see Chapter 20), interrupted excavations until 1950, but since then continuous archaeological research has yielded new understandings.

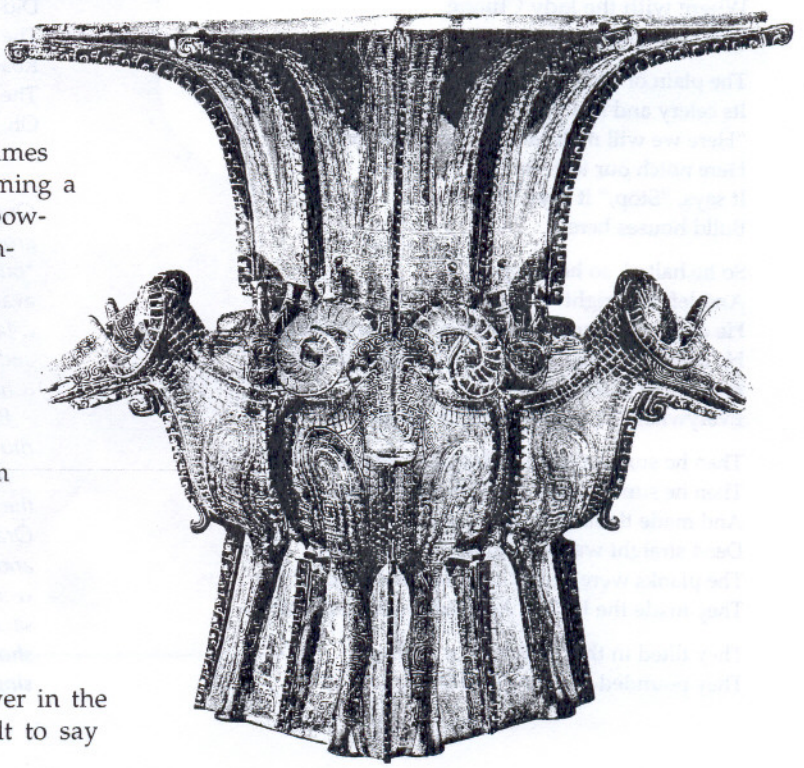
- *What historical evidence enabled the Xia dynasty to emerge from the realm of legend to its current status as the accepted first dynasty of ancient China?*
- *Politics and fashion as well as scholarly motives influence the kind of research that archaeologists can and do undertake. Please discuss this assertion in terms of the excavation of the sites of early Chinese cities and dynasties.*
- *What kinds of skills do you think a "reader" of oracle bones must have had to be successful? What would have been considered success in this profession?*

site of the legendary Xia dynasty. The pottery at Erlitou seemed intermediate in style and quality between the earlier Longshan and the later Shang. Although the link is not certain, many archaeologists took Erlitou to be representative of the Xia dynasty.

The Xia, like the later Shang and Zhou, seems to have been ruled by specific internal clans, each with its own king. As in many cultures, kingship and kinship were linked. As head of both his biological clan and his geographical realm, the king performed rituals, divinations, and sacrifices; waged war; constructed irrigation and flood control works; and administered his government. The king mediated between the world of the spirits and the world of humans. He was thought to be descended from the god of the spirits who controlled human health, wealth, agriculture, and warfare. The king's assertion of his right to perform sacrifice in any particular place was, in effect, his assertion of his right to rule over that place. Rights over ritual implied rights over land and people.

Another critical task of the ruler was taming the waters of the mighty, and hazardous, Yellow River. China's first settlements had avoided the immediate flood plain of the Yellow River, one of the most treacherous in the world. Its bed filled with the silt from the mountains, the Yellow River has jumped its course twenty-six times in recorded history, wreaking untold devastation. As early as the Longshan culture, people built great levees and canals for flood control, drainage, and irrigation. Chinese legend credits the first success in taming the Yellow River to one of the cultural heroes of ancient history, Yu the Great of the twenty-third century B.C.E., legendary founder of the Xia dynasty. The legend reflects the reality of a royal house's gaining power in part through its ability to organize great gangs of laborers to construct a system of water control.

The Xia dynasty went further with human organization. It assembled armies, built cities, carved jade, cast and worked bronze into both weapons and ritual vessels, created the pictograms that would evolve into Chinese script, and may have designed China's first calendar.



Shang dynasty bronze wine vessel, fourteenth to eleventh century B.C.E. The thousands of Shang bronze vessels that survive today continue to astonish us with their technical mastery and elegance. They testify to the elite's willingness to devote huge quantities of a precious resource to ritual purposes. During times of war, such bronzes were often melted down to produce weapons but once peace resumed, they were recast into ritual objects. (*Historical Museum, Beijing*)

Similarities Among the Three Dynasties. All three of these earliest dynasties, the Xia, Shang, and Zhou, built walled towns. Indeed, in written Chinese the same character, *cheng*, represents both city and city wall. At times these towns were loosely connected to one another, forming a network of rule and trade. At other times, when a single powerful king headed the dynasty, a single capital city predominated. Archaeologists see many similarities among the towns and the political structures of all three dynasties.

In the absence of earlier written records, scholars sometimes use literary evidence from later dynasties as evidence for patterns in the earlier dynasties. For example, in arguing for the supremacy of royal rule during the Shang Dynasty, they find supporting proof from "Pei shan," a poem of the Zhou dynasty:

> Everywhere under Heaven
> Is no land that is not the king's
> To the borders of all those lands
> None but is the king's slave. (trans. Arthur Waley)

There is some evidence that women could wield power in the earliest of Chinese dynasties, but it is otherwise difficult to say

much about gender relations in ancient China. By the time of the Shang dynasty, however, all evidence points to China as a very patriarchal society wherein women had many fewer options than men.

City and State under the Shang and Zhou

By the time of the Shang dynasty, the ruler directly controlled a growing network of towns. The king ruled from his capital city. He apportioned regional cities to his designated representatives, who were usually blood relatives. These relatives received

SOURCE

The Cosmo-Magical City

In his classic and convincing Pivot of the Four Quarters, *Paul Wheatley argues that ancient Chinese cities, like most ancient cities, began as ritual centers. He calls these cities "cosmo-magical." Archaeological and textual records support this interpretation for China. Consider, for example, this Zhou poem illustrating the siting of a royal capital. The process begins with reading the oracle shell of a tortoise to determine its location and ends with sacrifices to mark the completion of construction:*

Of old Tan-fu the duke
At coming of day galloped his horses,
Going west along the river bank
Till he came to the foot of Mount Ch'i.
Where with the lady Chiang
He came to look for a home.

The plain of Chou was very fertile,
Its celery and sowthistle sweet as rice-cakes.
"Here we will make a start; here take counsel,
Here notch our tortoise."
It says, "Stop," it says, "Halt.
Build houses here."

So he halted, so he stopped,
And left and right
He drew the boundaries of big plots and little,
He opened up the ground, he counted the acres
From west to east;
Everywhere he took his task in hand.

Then he summoned his Master of Works,
Then he summoned his Master of Lands
And made them build houses
Dead straight was the plumb-line,
The planks were lashed to hold the earth;
They made the Hall of Ancestors, very venerable.

They tilted in the earth with a rattling,
They pounded it with a dull thud,
They beat the walls with a loud clang,
They pared and chiselled them with a faint *p'ing, p'ing;*
The hundred cubits all rose;
The drummers could not hold out.

They raised the outer gate;
The outer gate soared high.
They raised the inner gate;
The inner gate was very strong.
They raised the great earth-mound,
Whence excursions of war might start.

The rituals seem to have conferred worldly benefits. Potential enemies fled. The poem continues:

And in the time that followed they did not abate their sacrifices
Did not let fall their high renown;
The oak forests were laid low,
Roads were opened up.
The K'un tribes scampered away;
Oh, how they panted!

Oracle records recognize more than twenty titles of officials grouped into three categories: ministers, generals, and archivists, "but the most important categories of officials insofar as our available data are concerned are the diviners ... and the inquirers. . .. Jao Tsung-yi enumerated the activities of as many as 117 diviners and inquirers in the oracle records. Ch'en Meng-chia counted 120." (Chang, p. 192)

Besides the diviners, a cadre of priests performed religious rituals, including human sacrifices.

Military force was needed to sustain these rituals, by providing the prisoners-of-war to be sacrificed when rituals demanded. Oracle records speak of Shang military campaigns of 3000, 5000, and even 13,000 troops. As many as 30,000 prisoners-of-war were claimed in one large battle, and 300 prisoners were sacrificed in a ritual of ancestor worship. Archaeological finds show that 600 humans were sacrificed at the completion of a single house; 164 for a single tomb.

title to land, shares in the harvests, and rights to build and control the regional capital cities. In exchange, they represented and served the king and his interests in the provinces.

Territorially, the Shang dynasty was always based in northern and central Henan and southwestern Shandong. At its most powerful it extended as far south as Wucheng, south of the Yangzi River; east to the Pacific, incorporating the Shandong Peninsula; north into Hebei and southern Manchuria; and west through Shanxi into the mountains of Shaanxi. At its greatest extent it may have controlled 40,000 square miles. On the fringes, Shang territories were interspersed with those of other rulers, and warfare between them was apparently frequent.

Early Royal Capitals. The capital shifted often, but always remained within the core area of Shang urbanization. One of the earliest capitals was located at Luoyang; later, and for many decades, it was at Zhengzhou; and, finally, *c.* 1384 B.C.E., at Anyang. Luoyang has been difficult to excavate because it lies directly under a modern city. Zhengzhou, however, has been excavated extensively. Founded *c.* 1700 B.C.E., its core covered about 1¼ square miles, enclosed by a wall 4½ miles long and, in places, still surviving to a height of 30 feet.

Inside the walled area lived the royal family, the nobility, and their retainers. Outside this palace/ritual center was a network of residential areas; workshops making bone, pottery, and bronze artifacts; and cemeteries. The class divisions written into this spatial pattern were reinforced by the geography of the suburbs: to the north were the dwellings and graves of the wealthy and powerful, marked by ritual bronze vessels and sacrificial victims; to the south were the dwellings of the commoners and their burial places in trash pits. Occupations tended to be inherited within specific family units (compare the caste system of India discussed in Chapters 8 and 9). Many *zu*, or lineage groups, corresponded to occupational groups.

Anyang: The Last Shang Capital. The final, most powerful, and most elaborate capital of the Shang dynasty was at Anyang. Shang texts report that the nineteenth king, Pan Gieng, moved his capital to Yin and that the dynasty remained there until its fall 273 years later. Archaeologists identify that site as Anyang. This capital was the center of a network of sites stretching about 200 miles from northwest to southeast. The core area around Anyang is difficult to excavate fruitfully. The city burned to the ground,

Headless skeletons of human sacrificial victims, tomb 1001, Anyang, China. The royal tombs discovered at Anyang testify to the wealth and power of the Shang rulers. Numerous servants and prisoners-of-war gave their lives willingly or unwillingly to accompany their masters to the grave. The heads of the decapitated figures shown here were located elsewhere in the tomb.

and farmers have been plowing the area, and robbers pillaging it, for 3000 years. Remains of royal graves and of buildings that appear to be royal palaces hint at the greatness of the ancient city, but they do not yield many secrets. Nonetheless scholars have found yields of bronze treasures in royal graves.

The Shang excelled in crafting bronze. They produced bronze axes, knives, spears, and arrowheads as well as bronze utensils, ritual vessels, and sculptures. They also used horse-drawn chariots, which may have been derived from Indo-Europeans who migrated into China. The ability to use bronze in their weapons gave Chinese kings and warriors a decided advantage over their enemies, but it appears that most bronze was crafted for ritual uses.

The Zhou Dynasty. The Shang dynasty fell to the Zhou around 1122 B.C.E., but it did not disappear, just as the Xia had not disappeared when it had fallen to the Shang. Instead, in defeat, these kingdoms continued to exist, albeit with diminished territories and powers. Until the Qin dynasty unified China in 221 B.C.E., the defeat of a dynasty did not mean that it completely disappeared. Rather, it became one of the many smaller kingdoms competing for power in continuous warfare in north China.

The Zhou survived for more than 600 years, making it one of the longest lasting Chinese dynasties. The Zhou made several important conceptual contributions to Chinese thinking about culture, politics, and military strategy. Moreover, with the advent of substantial written sources, we know much more about the Zhou than the earlier Chinese dynasties.

One of the most important written sources for Zhou political thought is the *Book of Documents*, which describes the Zhou conquest of the Shang. As is often the case, such a book is written from the perspective of the winners. In this case, the Zhou portray their victory as one of heroic soldiers over decadent soldiers led by a clueless king. Nonetheless, they wanted to portray their strong connections and good relations with previous kings so that they will appear legitimate.

They also develop a heretofore unique explanation of why they should be considered the legitimate rulers of the region: the idea of the "Mandate of Heaven." The *Book of History* assumed a close relationship between Heaven and the king, but the king only had the mandate to rule if he acted in the interests of the people. If a king was weak, the theory argued that others had the right to remove him, with the "Mandate of Heaven." This doctrine would shape Chinese thinking on leadership for centuries.

While they were in power, the Zhou made several important contributions to Chinese culture. One of the most important was the *Book of Songs*, which includes a collection of China's earliest poetry, some of which appears to have been from earlier societies and transmitted orally until it was recorded. The poetry focuses on the exploits of kings and aristocrats, but also provides powerful insights into family life and gender relations in early China.

One poem, for example, describes the anxiety of a woman who became too old to marry. It makes clear that men would pursue women in courtship and not the other way around and that the woman would leave her family to join her husband's. Others speak of a deep distrust of women in politics and argue that men alone should be in the public sphere and that women belonged at home. Challenging the notion of the Mandate of Heaven, at least one poem argues that women in politics, not Heaven, sowed disorder in dynasties. Still others deal with the give and take of seduction and love outside of marriage.

The Zhou also transformed warfare, turning away from the chariots that seemed so useful earlier. They both developed the cavalry in which soldiers fought successfully with bows and arrows on horseback, and introduced infantry troops of draft foot soldiers who could effectively fight the cavalry with crossbows.

The Zhou expanded significantly, creating a much larger state than that ruled by the Shang. Recognizing the difficulty of ruling such a large state, the Zhou created a decentralized administration that left much power in local hands. In the end, this contributed to much instability with the Zhou remaining in power at least nominally at the top, while Zhou rulers faced competition from subordinates throughout China. Because of the chaos, by 480 B.C.E. a period subsequent scholars have named "the Warring States period" emerged, which lasted until the Qin dynasty unified the country in 221 B.C.E. (We will continue with this discussion as China enters an imperial age, Chapter 5.)

THE WESTERN HEMISPHERE: MESOAMERICA AND SOUTH AMERICA

The first cities of the Americas share several characteristics with those of east Asia. They began as religious shrine centers, linked by shamans, individuals who had special powers to communicate with the spiritual world on behalf of the community. They developed into city-states with important functions in politics and trade as well as in religion, and some even incorporated whole empires under their sway. Specific individual cities, most notably Teotihuacán, had enormous cultural influence over other settlements that were spread across great distances.

AT A GLANCE: THE EARLY AMERICAS

DATE	POLITICAL	RELIGION AND CULTURE	SOCIAL DEVELOPMENT
6000 B.C.E.		■ Stone tools in Mexico (6700)	
5000 B.C.E.			■ Plants (including maize) cultivated in Mesoamerica
3000 B.C.E.			■ Villages established in Mesoamerica; gourds and beans grown
2500 B.C.E.	■ Maya culture originated (2000)	■ Pottery from Mesoamerica	
1500 B.C.E.	■ Olmecs, Gulf of Mexico (*c.* 1500 B.C.E.–400 B.C.E.) ■ Zapotecs, S. Mexico (1400 B.C.E–900 C.E.)	■ Olmec center of San Lorenzo; pottery, mirrors, ceramics	
1000 B.C.E.	■ Chavin, N. Peru (*c.* 900–200 B.C.E) ■ Tiwanaku, Bolivia (*c.* 800 B.C.E–1200 B.C.E.)		
200 B.C.E.	■ Moche, N. coast of Peru (200 B.C.E.–600 C.E.)	■ First Teotihuacán buildings, Valley of Mexico	
100 B.C.E.	■ Nazca, Peru (1–600 C.E.)		
500 C.E.	■ Maya culture (S. Mexico, Guatemala, Belize) at peak (325–900) ■ Huari, Peru (*c.* 650–800)	■ Teotihuacán population 100,000 ■ First fully developed towns in the Mississippi valley (*c.* 700) ■ Teotihuacán culture at peak (500–650)	
1000 C.E	■ Toltecs (*c.* 900–1170) ■ Chimu, N.W. Peruvian coast (*c.* 1000–1470)		
1200 C.E	■ Aztecs (*c.* 1100–1521) ■ Inca, Andean S. America (*c.* 1200–1535)	■ Aztec pictographs and hieroglyphs ■ Aztec gold, jade, and turquoise jewels, textiles, and sculptures	■ Aztec tribute empire over surrounding lands from capital of Cuzco

There were also great differences between the hemispheres. Geographically, the cities of the western hemisphere were built at water's edge, usually near lakes or small rivers, but not on major river systems. Technologically, the people of the Americas did not use metals in their tools. In fact, they hardly used metal at all except for ornaments, jewelry, and artwork. They used neither wheels nor draft animals in transportation, perhaps because the Americas had no large, domesticable animals to use for pulling carts until horses and cattle were introduced by the Spaniards. Llamas served as pack animals for small loads in the Andes in South America, but otherwise goods were carried by hand, dragged, or shipped by canoe. Construction and transportation were thus far more labor intensive than in most of Afro-Eurasia. Finally, except for the Maya, the native Americans did not create writing systems. Some, like the Zapotecs and Toltecs, used limited hieroglyphic symbols and calendar formats, but these did not develop into full, written languages. In Afro-Eurasia, only in the Niger River area did settlements grow into cities without developing writing systems.

In many respects, the cities of the western hemisphere still had one foot in the stone age. Urban society evolved much later in the Americas. Stone tools ground by hand first appeared in central Mexico about 6700 B.C.E.; the domestication of plants began about 5000 B.C.E.; villages were established about 3000 B.C.E.; pottery appeared about 2300 B.C.E.; and population suddenly increased in about 500 B.C.E. These processes were much slower than in the river-valley civilizations of Eurasia, perhaps because humans arrived in the New World relatively recently.

Origins: Migration and Agriculture

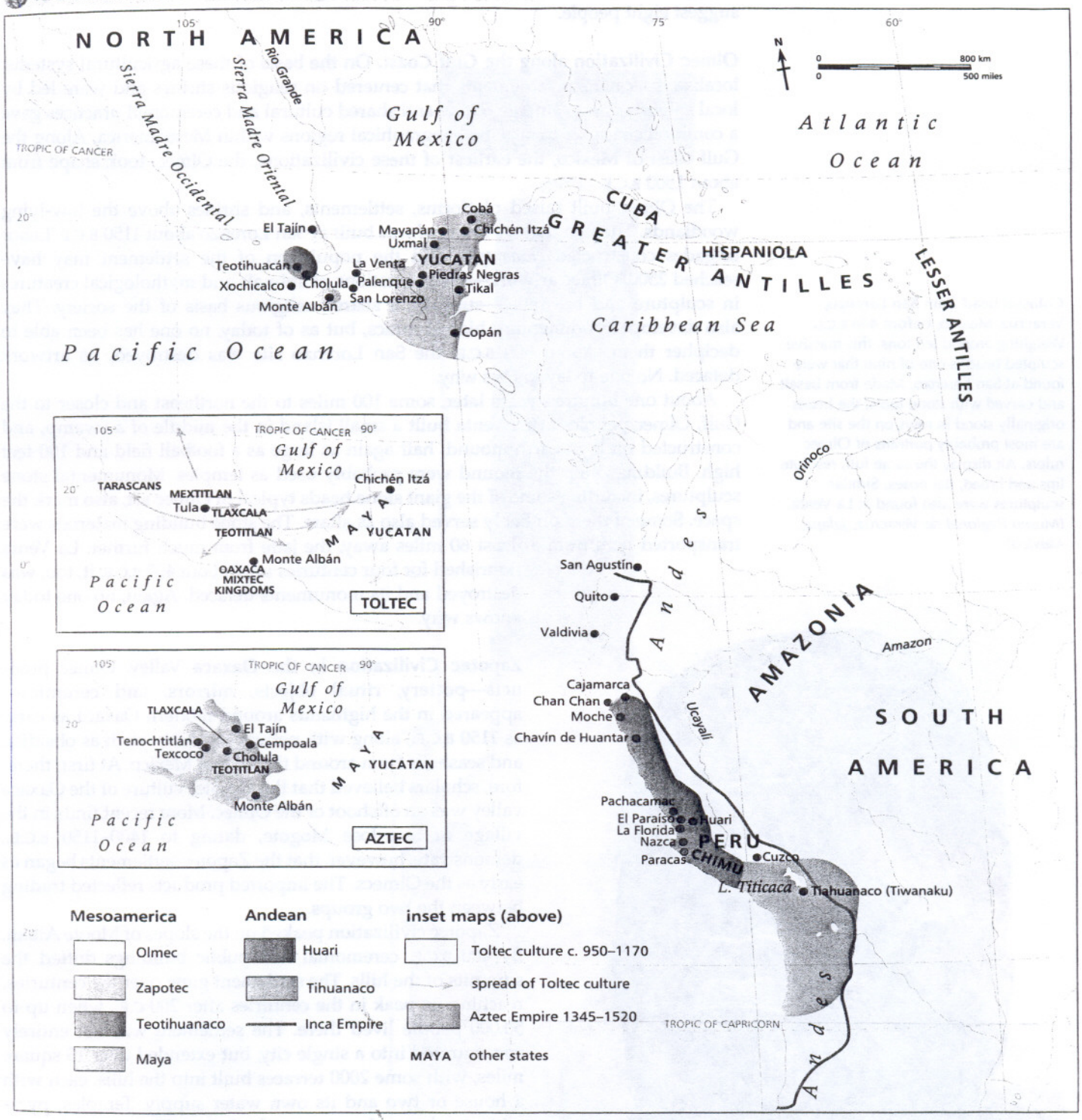
Humans arrived in the western hemisphere from across the Beringia land bridge (connecting Alaska and Siberia) about 15,000 years ago and then spread throughout both North and South America. By 5000 B.C.E., they were cultivating maize, at least in small quantities, as well as gathering wild crops and hunting animals. By around 3000 B.C.E. they also grew beans and gourds.

Archaeologists and botanists have documented the beginnings of domestication of maize in the valley of Tehuacan, 200 miles southeast of Mexico City. Beginning with wild corn cobs about 5000 B.C.E., farmers slowly bred larger and more nutritious varieties, producing an early form of modern corn about 2000 years ago. Later excavations in Peru showed that the cultivation of maize began there by 4000 B.C.E., perhaps introduced from Mesoamerica. In both regions, at about the same time, the other two staples of the American diet, beans and squashes, also appear. Further, in the Andes Mountains, potatoes and rootcrops were also grown. The valley of Mexico and the high Andes of Peru thus became incubators of much of the civilization of the Americas from an early date. Agricultural innovation, urbanization, and the foundation of empires originated in these regions and spread outward.

Mesoamerican Urbanization: The First Stages

By 2000 B.C.E., the agricultural foundations for an urban civilization were in place in Mesoamerica. Farmers throughout present-day Mexico and central America were cultivating maize, gourds, beans, and other food crops. In addition to farming dry fields, their methods included "slash-and-burn agriculture," which kept them moving from place to place in search of new land; "pot irrigation," dipping pots into wells and simply pouring the water onto the fields; canal irrigation; and, in low-lying swamplands, the creation of *chinampas*, raised fields or so-called "hanging gardens." *Chinampas* were created by piling up the mud and the natural vegetation of the swamps into grids of raised land crisscrossed by natural irrigation channels. When the

For an interactive version of this map, go to: http://www.prenhall.com/spodek/map4.2



Classic cultures of the Americas. Sophisticated urban cultures developed in two tropical regions of the Americas: humid southern Mexico and the more temperate valleys of the central Andes. Both regions witnessed a succession of distinctive cultural and political centers. The Maya civilization of the Yucatán emerged, by 250 C.E., as the outstanding power in Mesoamerica, while the Huari empire of the Andes prefigured that of the Inca. In South America, urban civilizations appeared both near sea level along the Pacific coast and in the Andes Mountains, at altitudes from 6,500 to 12,000 feet.

Spanish arrived in 1519, they estimated that the *chinampas* could feed an impressive four persons per acre; more recent archaeological estimates of their productivity suggest eight people.

Olmec Civilization along the Gulf Coast. On the basis of these agricultural systems, localized permanent settlements that centered on religious shrines and were led by local chiefs began to emerge. Trade and shared cultural and ceremonial practices gave a common character to specific geographical regions within Mesoamerica. Along the Gulf coast of Mexico, the earliest of these civilizations, the Olmec, took shape from about 1500 B.C.E.

The Olmec built raised platforms, settlements, and shrines above the low-lying woodlands. The first that we know of was built at San Lorenzo about 1150 B.C.E. Labor brigades constructed *chinampas*, and the population of the settlement may have reached 2500. Olmec artwork—representations of animals and mythological creatures in sculpture and bas relief—suggests a shared religious basis of the society. They also developed rudimentary hieroglyphics, but as of today, no one has been able to decipher them. About 900 B.C.E. the San Lorenzo site was destroyed, its artwork defaced. No one today knows why.

About one hundred years later, some 100 miles to the northeast and closer to the Gulf, Olmec peoples at La Venta built a small island in the middle of a swamp, and constructed on it an earth mound, half again as large as a football field and 100 feet high. Buildings atop the mound were probably used as temples. Monumental stone sculptures, including some of the giant stone heads typical of Olmec art, also mark the space. Some of them probably served also as altars. The stone building materials were transported here from at least 60 miles away, the jade from much further. La Venta flourished for four centuries until about 400 B.C.E. it, too, was destroyed and its monuments defaced. Again, no one today knows why.

Colossal head from San Lorenzo, Veracruz, Mexico, before 400 B.C.E. Weighing around ten tons, this massive sculpted head is one of nine that were found at San Lorenzo. Made from basalt and carved with stone tools, the heads originally stood in rows on the site and are most probably portraits of Olmec rulers. All display the same full, resolute lips and broad, flat noses. Similar sculptures were also found at La Venta. (*Museo Regional de Veracruz, Jalapa, Mexico*)

Zapotec Civilization in the Oaxaca Valley. Olmec products—pottery, ritual objects, mirrors, and ceramics—appeared in the highlands around modern Oaxaca as early as 1150 B.C.E., along with natural products, such as obsidian and seashells from around the Gulf of Mexico. At first, therefore, scholars believed that the Zapotec culture of the Oaxaca valley was an offshoot of the Olmec. More recent finds in the village of San Jose Mogote, dating to 1400–1150 B.C.E., demonstrate, however, that the Zapotec settlements began as early as the Olmecs. The imported products reflected trading between the two groups.

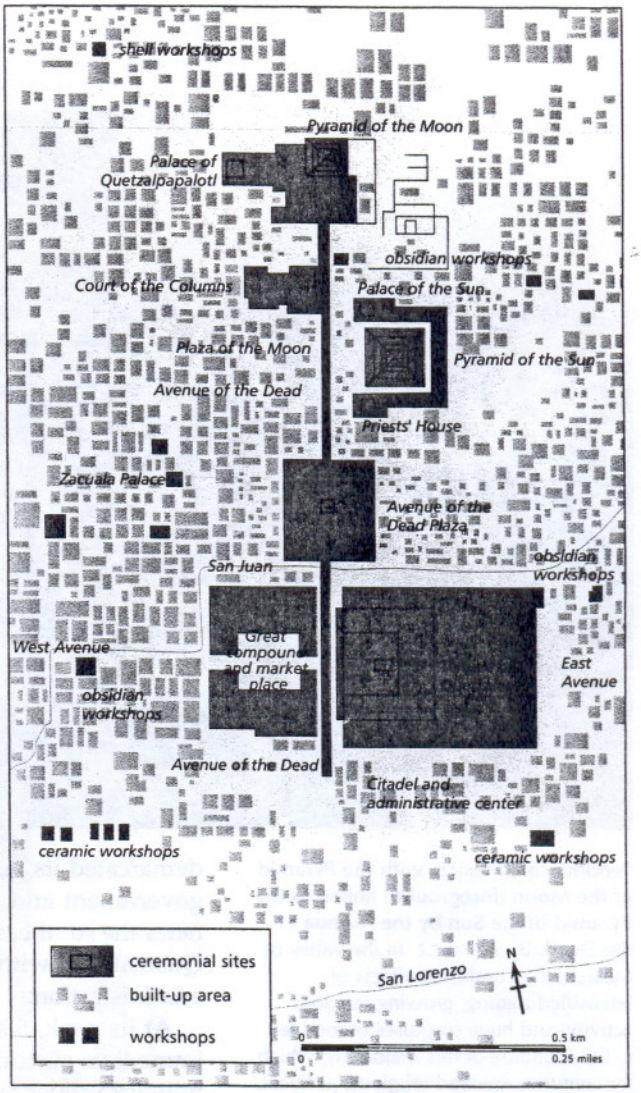
Zapotec civilization peaked on the slopes of Monte Albán. By 400 B.C.E. ceremonial and public buildings dotted the summits of the hills. The settlement grew over the centuries, reaching its peak in the centuries after 200 C.E., when up to 50,000 people lived there. The settlement was not entirely concentrated into a single city, but extended over 15 square miles, with some 2000 terraces built into the hills, each with a house or two and its own water supply. Temples, pyramids, tombs, and an array of religious images suggest the importance of symbolism among the Zapotecs, too. Monte Albán peaked in population and creativity about 700 C.E. and then declined.

The Urban Explosion: Teotihuacán

Meanwhile, in the valley of Mexico, another civilization was coalescing, dominating the lands near it, and finally creating a substantial empire. At its core, about 40 miles to the northeast of present day Mexico City, stood Teotihuacán, one of the great cities of the ancient world. Teotihuacán represented a totally new kind of settlement in the Americas. It marked the beginning of a true urban revolution. At its peak, about 550 C.E., Teotihuacán accommodated about 100,000 inhabitants on some 8 square miles. Teotihuacán civilization had no system of writing so, again, our knowledge is limited to the excavation and interpretation of physical artifacts.

The first buildings of Teotihuacán appeared about 200 B.C.E. One hundred years later, there were still only about 600 inhabitants. By 150 C.E., however, the population had grown to 20,000 and the area to 5 square miles. Then the population multiplied as the city exploded with religious, trade, artisanal, and administrative functions and personnel.

The city sat astride the major communication line between the valley of Mexico and the passes eastward to the Gulf of Mexico. Life in the city was a gift of the low-lying lake system of the valley of Mexico, especially of nearby Lake Texcoco. The lakes provided irrigation waters for the fields of the Teotihuacán valley and salt, fish, and waterfowl. Basalt, limestone, and chert stone for building and clay for pottery were readily available in the valley, but other raw materials were imported, notably obsidian for tools and weapons from Pachuca and Otumba in the surrounding mountains. Marine shells and copal (a tree resin used as incense) were imported from the Gulf region, and feathers of the quetzal bird came from the Maya regions of the southeast. Trading outposts of Teotihuacán appeared 700 miles south in Maya areas, and Teotihuacán ceramics have been found as far south as Tikal (see the discussion of Maya civilization on pp. 103–106). More than 400 workshops in the city produced pottery, obsidian manufactures, ornaments fashioned from seashells, and art and jewelry from jade and onyx.



Teotihuacán. Between 400 and 750 C.E., high in the valley of Mexico, Teotihuacán was the dominant power in Mesoamerica. Covering over 7.5 square miles, with a population of 100,000, the city was laid out on a regular grid plan connecting the elements of a massive ceremonial complex. The residents thrived on agriculture, craftwork, and trade in ceramics and locally quarried obsidian.

A huge pyramid, the Pyramid of the Sun, at its base as broad as the great pyramid of Khufu in Egypt, though only half as high, dominated the Teotihuacán cityscape. The pyramid sits above a natural cave that early inhabitants enlarged into a clover-leaf-shaped chamber. The combination of natural cave and pyramid suggests that local people may have believed that this cave was the "navel of the universe." As Mircea Eliade, the historian of religions, has demonstrated, the belief that all human life, or at least the lives of the local people, had emerged upward onto earth from a "navel," a single specific geographical point, was widely held in many civilizations of the ancient world. (The Garden of Eden story is a later variant of this belief.) Two additional massive shrines—the adjacent, smaller Pyramid of the Moon, and a central temple dedicated to the god Quetzalcoatl—enhance the religious dimensions of the city. Throughout its lifetime, and indeed even afterward until the Spanish conquest, Teotihuacán attracted multitudes of pilgrims from as far away as Guatemala.

The city was laid out on a monumental, geometric grid that centered on the 150-foot-wide Avenue of the Dead, the north–south axis of the city. More than seventy-five temples line this road, including the Pyramid of the Sun. The Pyramid of the Moon

Teotihuacán, Mexico, with the Pyramid of the Moon (foreground) linked to the Pyramid of the Sun by the Avenue of the Dead. By 200 B.C.E. in the valley of Mexico, the combined effects of intensified trading, growing religious activity, and huge surpluses of food led to the founding of this major city, which for centuries enjoyed religious, political, and economic dominance in the region. Teotihuacán reached an enormous size (8 square miles) and population (100,000) before eventually being deliberately, and mysteriously, burned down in 650 C.E.

demarcated its northern terminal. The regularity of the city plan suggests a powerful government and, indeed, a large administrative headquarters, the Ciudadela, dominates the southeastern terminus of the Avenue. The placement of the central Temple of Quetzalcoatl within the Ciudadela implies a close relationship between religion and administration.

At its peak, 500–650 C.E., Teotihuacán exercised a powerful imperial force over its immediate surrounding area and exerted spiritual, religious, cultural, economic, and military influence for hundreds of miles, especially to the south, into Maya areas. In 650, however, the city was deliberately burned down. Teotihuacán began to decline in significance. By 750 its power was broken, and its population scattered to smaller towns and rural areas. Several reasons have been suggested: the region may have become increasingly arid, incapable of supporting so large a population; increasing density of population, augmented by government programs for moving rural populations into the city, might have led to conflict and revolt from within; neighboring city-states, pressured by the increasing militarization in Teotihuacán, may have attacked the city. These are, however, only educated guesses. In the absence of written records, no one knows for sure.

Cities interact with one another in networks of exchange, so advances or declines in one usually echo in the others. Teotihuacán and Monte Albán both declined simultaneously about 750 C.E., but smaller, nonurban centers kept the political, cultural, and religious legacies of Teotihuacán alive in the region. (Compare this with the experience of western Europe after the decline of Rome, discussed in Chapter 6.) Three subsequent civilizations—the Toltec, the Aztec, and the Maya—absorbed and perpetuated its influence.

Successor States in the Valley of Mexico

When the Toltecs arrived in the valley of Mexico from the north and came to dominate the region from a new capital at Tula, about 900 C.E., they apparently ruled on Teotihuacán foundations and built their chief ceremonial center in honor of Quetzalcoatl. Their rule, however, was shortlived. About 1170 C.E. still newer immigrants destroyed the Toltec temples and government.

After Tula fell, the Aztecs entered the valley. They established settlements on the southeastern shores of Lake Texcoco and built Tenochtitlán as their capital only 40 miles from the earlier site of Teotihuacán. As the Aztecs built their large, militaristic empire, the population of Tenochtitlán grew to 200,000. Militarism and the demand of their gods for human sacrifice led the Aztecs into a constant quest for captives to sacrifice and, therefore, into constant warfare with their neighbors. When the Spanish conquistadores arrived in 1519, the neighboring peoples helped them overthrow the Aztecs and their empire. The Spanish then razed Tenochtitlán to the ground and established their own capital, Mexico City, atop its ruins (see Chapter 12).

The Rise and Fall of the Maya

Teotihuacán's third legacy was to the Maya. The Maya lived where their descendants still dwell today—in the Yucatán peninsula of Mexico, in Guatemala, and in Belize. The Maya built on Olmec and Teotihuacáno foundations as well as on their own practices. Arriving in the Yucatán and central America, they began to construct ceremonial centers by 2000 B.C.E. Between 300 B.C.E. and 300 C.E., they expanded their centers to plazas surrounded by stone pyramids and crowned with temples and palaces. The classic phase, 300–600 C.E., followed with full-fledged cities and monumental architecture, temples, extensive sacrifices, and elaborate burials, and the Olmec and Teotihuacán cultural influences are evident. Maya culture flourished in the southern lowlands, and major construction took place at Palenque, Piedras Negras, Copán, Coba, and elsewhere.

The Great City of Tikal. Tikal, in today's Guatemala, is one of the largest, most elaborate, and most completely excavated of these cities. In its center, Tikal holds five temple pyramids, up to 200 feet high and built from 300 to 800 C.E. (One appeared so massive, powerful, and exotic that film-maker George Lucas used it as a setting for *Star Wars*.) As the first modern archaeologists hacked away the tropical rainforest and uncovered this temple core, they concluded that Tikal was a spiritual and religious center. Later they uncovered housing and water cisterns that accommodated up to 50,000 people outside the

A blood-letting rite, limestone lintel from Yaxchilán, Mexico (Maya), c. 725 C.E. The king, Lord Shield Jaguar, in his role of shaman, brandishes a flaming torch to illuminate the drama about to unfold. His principal wife, Lady Xoc, kneeling, pulls through her tongue thorn-lined rope that falls into a woven basket holding blood-soaked strips of paper cloth. These will be burned and thereby transmitted to the gods. Few works of art made by the Maya capture so completely the link between their political and religious ideas in an appropriately sacramental style. (Having deciphered the hieroglyphics of the Mayan calendar, scholars know that this event took place on October 28, 709 C.E.) (*British Museum, London*)

temple precincts. This find led them to change their assessment of Tikal. Instead of viewing it as a purely religious shrine, they began to see it as a large city of considerable regional political and economic significance as well. At the height of its powers, Tikal's authority covered almost 1000 square miles containing 360,000 people.

Most Maya states held only 30,000–50,000 subjects. The number of states ruled by kings grew from perhaps a dozen in the first century B.C.E. to as many as sixty at the height of the lowland civilization in the eighth century C.E.

Temple I at Tikal, Guatemala (Mayan), before 800 C.E. At its height the city-state of Tikal covered almost 1000 square miles and was home to 360,000 inhabitants. Its symbols of authority were centralized in its monumental shrines. This unusually steep stepped pyramid—230 feet high—would have been the backdrop for self-inflicted blood-letting and the sacrifice of prisoners-of-war as offerings to the gods.

SOURCE

The Popol Vuh

The Popol Vuh *is the most complete existing collection of creation myths to survive the Spanish conquistadores. Originally written in Maya hieroglyphs, it was transcribed into Latin in the sixteenth century and then translated into Spanish by a Dominican priest in the eighteenth century. The selection cited here is reminiscent of the biblical story of the tree in the garden of Eden whose fruits were forbidden. But the tale in* Popol Vuh *has even more significant differences. The tree, a calabash, is forbidden because the skull of a god, named One Hunahpu, was placed on a fork in it. As a young woman reached out to take the fruit of the tree, the skull spat out saliva on her, making her pregnant and thus preserving the god's lineage among humans.*

And this is when a maiden heard of it, the daughter of a lord. Blood Gatherer is the name of her father, and Blood Woman is the name of the maiden.

And when he heard the account of the fruit of the tree, her father retold it. And she was amazed at the account:

"I'm not acquainted with that tree they talk about. 'Its fruit is truly sweet!' they say." "I hear," she said.

Next she went all alone and arrived where the tree stood. It stood at the Place of Ball Game Sacrifice:

"What? Well! What's the fruit of this tree? Shouldn't this tree bear something sweet? They shouldn't die, they shouldn't be wasted. Should I pick one?" said the maiden.

And then the bone spoke; it was here in the fork of the tree:

"Why do you want a mere bone, a round thing in the branches of a tree?" said the head of One Hunahpu when it spoke to the maiden. "You don't want it," she was told.

"I do want it," said the maiden.

"Very well. Stretch out your right hand here, so I can see it," said the bone.

"Yes," said the maiden. She stretched out her right hand, up there in front of the bone.

And then the bone spat out its saliva, which landed squarely in the hand of the maiden.

And then she looked in her hand, she inspected it right away, but the bone's saliva wasn't in her hand.

"It is just a sign I have given you, my saliva, my spittle. This, my head, has nothing on it—just the bone, nothing of meat. It's just the same with the head of a great lord: it's just the flesh that makes his face look good. And when he dies, people get frightened by his bones. After that, his son is like his saliva, his spittle, in his being, whether it be the son of a lord or the son of a craftsman, an orator. The father does not disappear, but goes on being fulfilled. Neither dimmed nor destroyed is the face of a lord, a warrior, craftsman, orator. Rather, he will leave his daughters and sons. So it is that I have done likewise through you. Now go up there on the face of the earth; you will not die. Keep the word. So be it," said the head of One and Seven Hunahpu—they were of one mind when they did it.

This was the word Hurricane, Newborn Thunderbolt, Raw Thunderbolt had given them. In the same way, by the time the maiden returned to her home, she had been given many instructions. Right away something was generated in her belly, from the saliva alone, and this was the generation of Hunahpu and Xbalanque.

And when the maiden got home and six months had passed, she was found out by her father. Blood Gatherer is the name of her father. (Tedlock, p. 106)

The Maya also created an elaborate calendar that recorded three related chronologies: dates and events in cosmic time periods of thousands of years; historic events in the lives of specific rulers and their states; and the yearly cycle of agricultural activity. Maya rituals were permeated by the sense of living at once in the world of here-and-now and in a spiritual realm connected with other worlds and gods. Their kings were shamans, bridges between the two worlds.

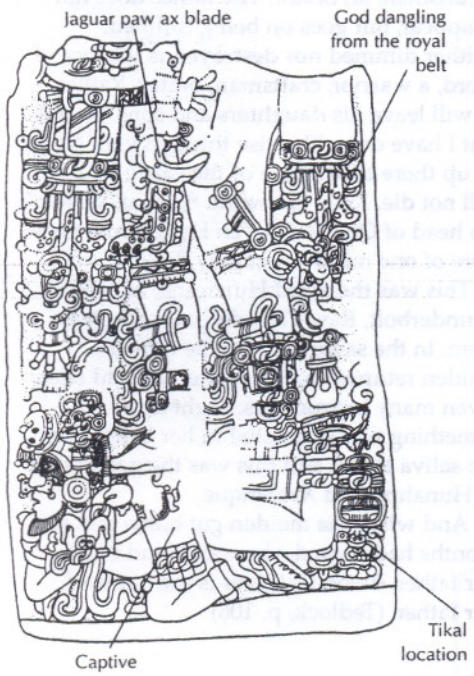
Maya Civilization in Decline. By 900 C.E., the great classical period of the Maya in the southern lowlands ended. No one knows why. The most frequent hypotheses include: excessive population pressure on natural resources, especially agriculture; climatic changes beyond the ability of the Maya to adjust; excessive warfare that wore out the people and destroyed their states. No one knows for sure.

No one knows, either, why at the time of the Maya decline in the lowlands, new Maya cities and states grew up in the northern highlands of the Yucatán peninsula, notably at Uxmal and Chichén Itzá. These cities, in turn, declined by 1200, and the last Maya capital, Mayapán, was constructed between 1263 and 1283. It adapted many of the cultural monuments of Chichén Itzá, but grew only to some 10,000 to 20,000

HOW DO WE KNOW?

Great-Jaguar-Paw: Mayan King of Tikal

By deciphering, translating, and interpreting the stelae at Tikal, Linda Schele and David Freidel recreate an heroic moment of military victory in the life of the king Great-Jaguar-Paw and in the history of his kingdom. Their interpretation is based primarily on the stela illustrated here and on comparison with later stelae representing the same event:



Despite the fact that he was such an important king, we know relatively little about Great-Jaguar-Paw's life outside of the spectacular campaign he waged against Uaxactun. His reign must have been long, but the dates we have on him come only from his last three years. On one of these historical dates, October 21, A.D. 376, we see Great-Jaguar-Paw ending the seventeenth katun [a ritual cycle of twenty years] ... This fragmentary monument shows him only from the waist down, but he is dressed in the same regalia as his royal ancestors, with the god Chac-Xib-Chac dangling from his belt. His ankle cuffs display the sign of day on one leg and night on the other ... He holds an executioner's ax, its flint blade knapped into the image of a jaguar paw. In this guise of warrior and giver of sacrifices, he stands atop a captive he has taken in battle. The unfortunate victim, a bearded noble still wearing part of the regalia that marks his noble station, struggles under the victor's feet, his wrists bound together in front of his chest. He will die to sanctify the katun ending at Tikal.

Warfare was not new to the Maya. Raiding for captives from one kingdom to another had been going on for centuries, for allusions to decapitation are present in even the earliest architectural decorations celebrating kingship. The hunt for sacrificial gifts to give to the gods and the testing of personal prowess in battle was part of the accepted social order and captive sacrifice was something expected of nobles and kings in the performance of their ritual duties. Just as the gods were sustained by the bloodletting ceremonies of the kings, so they were nourished as well by the blood of noble captives. Sacrificial victims like these had been buried as offerings in building terminations and dedications from late Preclassic times on, and possibly even earlier ...

The war waged by Great-Jaguar-Paw of Tikal against Uaxactun, however, was not the traditional hand-to-hand combat of proud nobles striving for personal glory and for captives to give to the gods. This was war on an entirely different scale, played by rules never before heard of and for stakes far higher than the reputations or lives of individuals. In this new warfare of death and conquest, the winner would gain the kingdom of the loser. Tikal won the prize on January 16, A.D. 378 ...

The subjugation of Uaxactun by Great-Jaguar-Paw and Smoking Fog [his commander-in-chief], which precipitated this new kind of war and rituals, survives in the inscriptional record almost entirely in the retrospective histories carved by later rulers at Tikal. The fact that these rulers kept commemorating this event shows both its historical importance and its propaganda value for the descendants of these conquerors.

(Schele and Freidel, pp. 144–8)

- *What are all the symbols through which this stela represents the power and strength of Great-Jaguar-Paw?*
- *What does the war between Tikal and Uaxactun tell us about the increasing power of the state?*
- *What do you think Schele and Freidel mean by "the propaganda value" of commemorating the victory of Tikal over Uaxactun?*

inhabitants. Mayapán seemed militaristic, beleaguered, and possessed of tough sensibilities as evidenced by wholesale human sacrifices. The city was later destroyed in civil wars in the mid-1400s.

By the time the Spanish conquistadores reached Mesoamerica in 1517, only a few small Maya towns remained. The period of Maya power and splendor had ended. The Toltecs, too, had fallen by then. The Aztecs had become the reigning power, and the Spaniards destroyed them.

Urbanization in South America

South America had few established trade links with Mesoamerica, but the two regions share many similarities. Both regions constructed religious shrine centers that seem to have dominated their general cultural foundations by about 1500 B.C.E. Both developed small city-states that defined local cultural variations from 300 to

HOW DO WE KNOW?

The Mysteries of Maya Writing

For centuries the connection between today's Maya—living an often impoverished existence—and the glories of their civilization in the third through the tenth centuries C.E. had been lost. Then, in 1839–41, a New York lawyer, John Lloyd Stephens, and a Scottish artist, Frederick Catherwood, discovered the remnants of the cities of Copán and Palenque in the rainforests of Mesoamerica, and the temples of Uxmal and Chichén Itzà in the Yucatán peninsula. Stephens and Catherwood wrote and painted what they saw and made rubbings of the designs they found on Maya stelae, stone marker tablets. Their research, published in 1841, opened the way for the modern academic study of the Maya at almost exactly the same time as H.C. Rawlinson and others were discovering the great archaeological sites of Mesopotamia and deciphering its language.

Stelae and other inscriptions demonstrated that the Maya had created a written language, but no one could read it. Even the Maya themselves, prevented by the Spanish from keeping their language alive (see Chapter 13), had forgotten the script. Scholars could read parts of the elaborate and sophisticated Maya calendar system, but they could not discern whether the events recorded were historical, mythical, or some combination of the two.

In the 1950s and 1960s, at Harvard University, Tatiana Proskouriakoff began to demonstrate that the Maya stelae recorded the reigns and victories of real kings who had ruled real states. Then the Russian scholar Yuri Knorozov demonstrated, against fierce opposition, that the Maya script included representations of phonetic sounds as well as of full words. By the 1970s a new generation of linguistic scholars began to decode the syntactical structure of the writing. They learned to distinguish the signs for nouns and those for verbs, and their place in the structure of the narrative. They were well on their way to discovering Maya history, and they were surprised by what they found.

The archaeologists Linda Schele and David Freidel finally mastered the hieroglyphs and scripts of the people of the city of Palenque. In contrast to previous beliefs that the Maya were peaceful and somewhat otherworldly in their concerns, as their massive temples seemed to indicate, Schele and Freidel found records of constant warfare among the local shaman kings and their profoundly religious local city-states. The Maya kingdoms fought in order to gain captives who would serve as slaves and human sacrifices to their demanding gods. The temples, it turned out, were the altars on which the sacrifices were performed. Schele and Freidel also discovered the exact lineage of the Palenque kings, and the picture of a tree used to symbolize the king, for the Maya represented their royal families as forests of trees and forests of kings.

- *Why was it easier to decipher the cuneiform of Sumer and the hieroglyphs of Egypt than the symbols of Maya writing?*
- *Why had the Maya forgotten their own written language? Does the reason surprise you? Why or why not?*
- *On p. 106 you can see an example of Maya writing. As you look at it, what seem to you to be the difficulties in deciphering the Maya written language?*

200 B.C.E. Both created proto-empires throughout significant regions about 500–600 C.E.; and generated large, urban empires—the Aztecs in the valley of Mexico, the Inca in the Andes—and developed trading relationships between their coastal regions and their mountainous inland cores. But the contrast between coast and inland mountains is far more striking in South America. The Pacific coast of Ecuador, Peru, and Chile is a desert in most places. The prevailing winds come not from the Pacific, but from the Amazon basin to the east. The Andes Mountains thus have little rainfall from the Pacific Ocean to trap on their western slopes, but they do intercept the precipitation from the Atlantic, making the eastern slopes fertile while leaving the west coast dry. The most spectacular urban civilizations of South America took root in the 10,000-foot-high plains and passes of the Andes rather than in the arid Pacific coast below. The contrast with the river-basin civilizations of Afro-Eurasia could not be more vivid.

Coastal Settlements and Networks

The Pacific coast is not, however, uninhabitable. It yields abundant quantities of fish, seaweed, and salt. Even today these ocean products are traded to the mountain cities in exchange for their food crops. In some areas the cultivation of cotton is also

and a powerful state that stretched some 1000 miles along the Peruvian coast. Their monumental capital, Chan Chan, built near the earlier Moche, was surrounded by a 35 foot high mud wall, and it covered nearly 4 square miles, with palaces, temples, administrative offices, and housing for the common people. Chan Chan contained ten royal compounds. Apparently each king in turn built his own center, ruled from it during his life, and was buried in it after his death.

In each area they dominated, the Chimu built subsidiary administrative centers that formed a network reaching as far south as modern Lima. The Chimu empire reigned until it was conquered by the Inca in 1470. Ironically, thanks to the Inca transportation and communication network, Chimu artwork influenced western South America even more after the Inca conquest than it had before.

Urbanization in the Andes Mountains

Despite these coastal settlements and networks, most scholars believe that the core areas of South American urbanization were in the Andes, the 20,000-foot-high mountain chain that parallels the Pacific coast for the entire length of South America. From earliest times to today, there has been considerable "vertical trade," linking coastal lowlands with high mountain areas in an exchange of the different products of their different ecologies. With the trade came networks of cultural, religious, and political communication, and some archaeologists have argued that the civilization of the Andes Mountains was developed from a prior foundation along the sea coast far below.

The Chavin. The first known civilization of the Andes, the Chavin, flourished for about a millennium, 1200–200 B.C.E. The civilization is named for its best known and largest ceremonial center at Chavin de Huantar, which flourished in central Peru from about 900 to about 200 B.C.E. Chavin temples include a pantheon of gods preserved in paintings and carvings, including jaguar-like humans with serpents for hair, eagles, caymans, and many mixed figures, part-human, part-animal, reminiscent of similar figures in China. Like El Paraiso and the coastal shrines, Chavin seems to have been built by the joint efforts of many nearby kin and village groups. At its height, it held only 2000 inhabitants, but its culture and its gods inspired common religious forms in the vicinity, and carried them throughout the high Andes.

The Tiwanaku, Huari, and Nazca. Some 600 miles to the south, south of Lake Titicaca, on today's border between Peru and Bolivia, at an elevation of 12,000 feet, lay the largest open, flat plain available for agriculture in the Andes. By 200 C.E., Tiwanaku (Tihuanaco) at the southern end of the lake, near the modern city of La Paz, became the capital of the region. Its rulers irrigated their high plains, *altiplano*, region to support perhaps 20,000 people and to create a ritual center of monumental structures and religious and spiritual practices that suffused the Andes and the coast. When Tiwanaku collapsed, for reasons now lost to history, successor states in the region, notably at Huari and Nazca, kept alive many of their administrative and religious practices.

CIVILIZATIONS OF SOUTH AMERICA

Chavin *c.* 1200–200 B.C.E. N. Peru. Farming society, comprising different regional groups, whose main town may have been a pilgrimage site.

Moche 200 B.C.E.–600 C.E. N. coast of Peru. Modeled ceramics of animals in a realistic style. Religious and political life focused on the Huaca de la Luna (artificial platform) and Huaca del Sol (stepped pyramid).

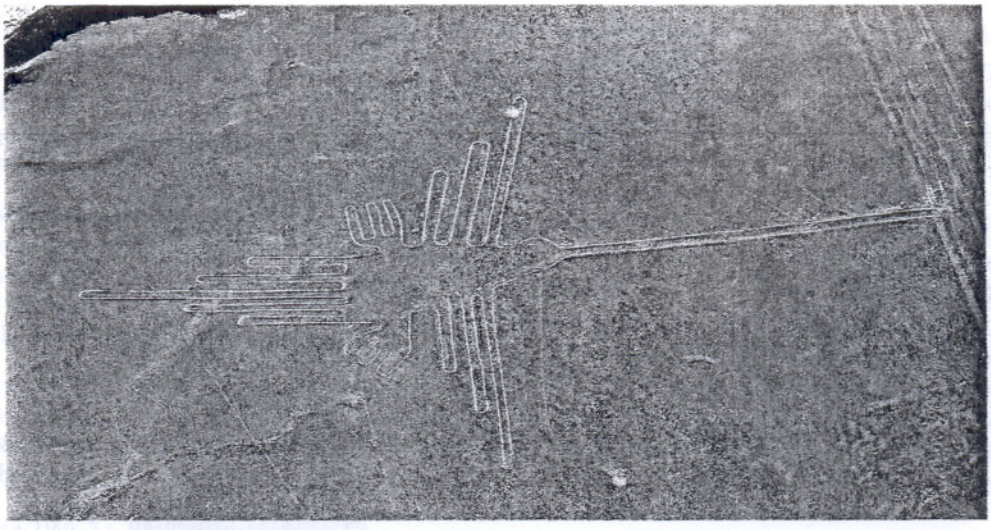
Nazca ?1–600 C.E. Peru. Known principally for its series of enormous figures drawn with lines of pebbles. Best seen from the air, the largest (a hummingbird) is 900 feet long.

Tiwanaku *c.* 200 C.E.–1200 C.E. Bolivia. Named for the ancient city, near Lake Titicaca, that was occupied by a series of five different cultures, then abandoned.

Huari *c.* 650–800 C.E. Peru. Empire whose style of architecture and artifacts, similar to Tiwanaku's, was dispersed throughout the region.

Chimu *c.* 600–1470 C.E. Northwest Peruvian coast. Large urban civilization (capital: Chan Chan) responsible for fine gold work, record-keeping, and aqueducts. Conquered by the Aztecs.

Inca *c.* 1476–1534 C.E. Andean South America. Last and largest pre-Columbian civilization (capital: Cuzco) that was destroyed by Spanish conquistadores in the 1530s.



Nazca lines, San Jose pampa, Peru desert, c. 500 C.E. Another of the successor states of Tiwanaku, the Nazca, created great patterns of lines drawn with pebbles on the desert surface. The designs, like this 900-foot-long hummingbird figure, are visible only from the air, and their function and meaning are as elusive as the culture that fashioned them.

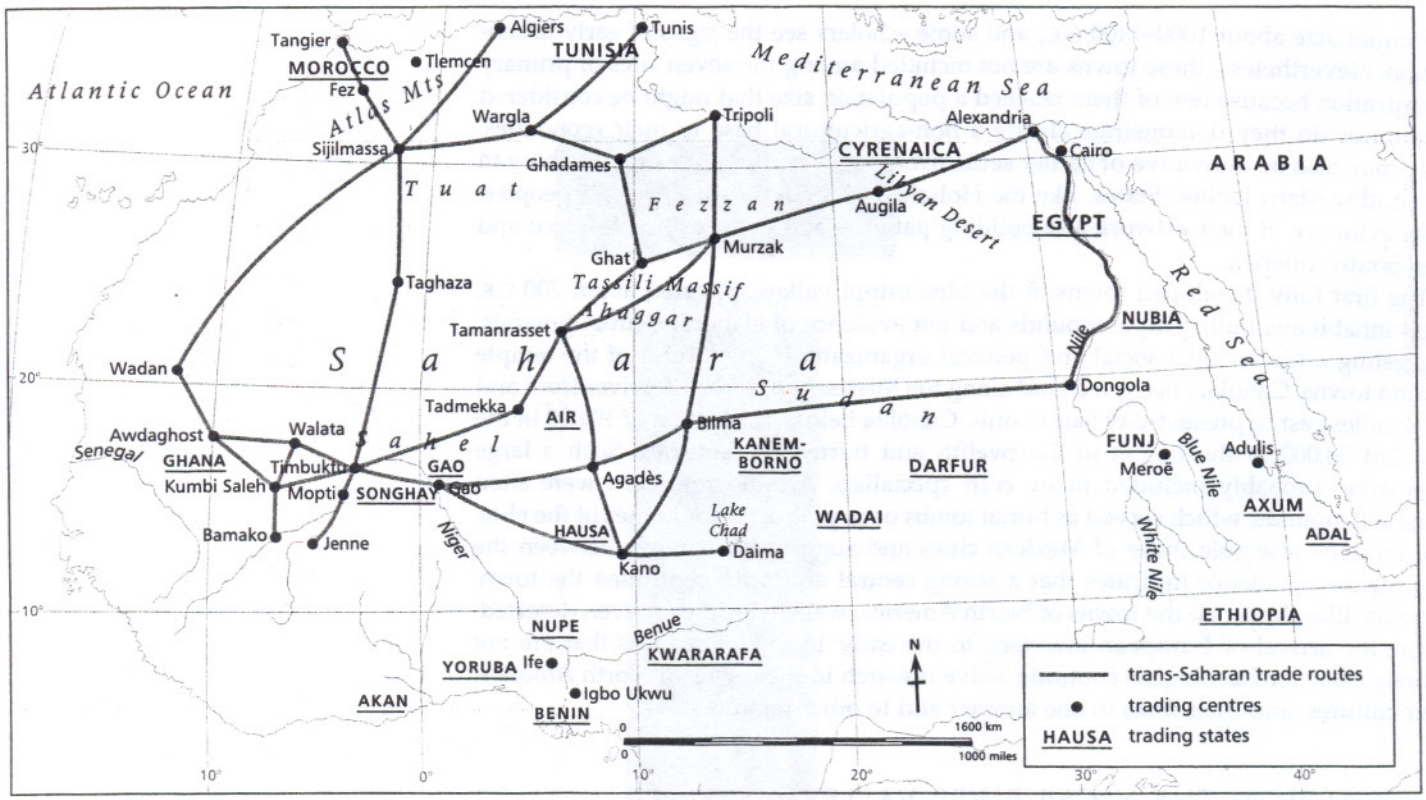
The Inca. These five states—Chimu, Chavin, Tiwanaku, Huari, and Nazca—established foundations on which the Inca built their powerful but shortlived empire, which stretched for 2000 miles from north to south and as far as 200 miles inland, between 1476 and 1534. The Inca adapted many of the gods and religious symbols, artwork, ceramics, and textiles of these earlier states. They built a new capital, Cuzco, at 10,000 feet, and connected it to all the mountain and coastal regions of their empire by an astonishing 25,000-mile system of roads, with tunnels, causeways, suspension bridges, travel lodges, and storage places. The roads were sometimes broad and paved, but often narrow and unpaved, especially because the Inca had no wheeled vehicles. Enforced, *mit'a* labor was exacted from local populations for the construction.

In 1438, Cusi Yupanqui was crowned "Inca," or king-emperor, after he won a victory over a neighboring tribe, and forged his quarreling peoples into a conquering nation. Thereafter, the whole nation was called Inca. Cusi Yupanqui established an hereditary monarchy, and his descendants built a great empire from his early conquests. They employed the *mit'a* system, demanding unpaid labor for public construction for part of each year from all adults in the empire. The Inca did not develop writing, but they did create an abacus-like system of numerical recording through the use of knots tied on strings. These *quipu* held the administrative records of the empire.

In each conquered region, the Inca established administrative centers, from which tax collectors gathered two-thirds of the crops and the manufactured products, like beer and textiles, half of it for the state, half for the gods and their priests. They established state workshops to produce official and consumer goods, and they seem to have encouraged significant standardization of production, for Inca arts and crafts show little variation over time and place. Inca religion apparently encouraged different gods and worship for different people. The sun god was the chief deity, and the emperor was considered his descendant; the nobility worshiped the military god Viracocha; while the common people continued to worship their own indigenous spirits, along with the newer sun god. The organization and the study of empire, however, take us to Part 3.

Agricultural Towns in North America

Agricultural settlements took root in many locations in continental North America in the first few hundred years C.E. Several grew into small towns, reaching their



Trade across the Sahara. Ivory, gold, hardwoods, and slaves were the magnets which drew trading caravans south across the arid Saharan wastes, often following routes established before the desert had formed. These routes linked the classical cultures of the Mediterranean and southwest Asia with an array of rich trading states strung along the Sahel/Sudan axis.

to the arrival of Muslim traders from north Africa who crossed the Sahara southward after the seventh century C.E. Archaeologists believed that Africans, like Europeans, had learned of city building from outsiders. But this viewpoint has now been challenged.

West Africa before Urbanization

The most important developments of pre-urban west Africa were iron smelting, apparently initiated by contact with north Africa; the development of new artistic traditions, especially by the Nok peoples; and the spread of agricultural civilization by the Bantu people. Iron smelting entered the archaeological record in west Africa suddenly about 500 B.C.E. In most places the technology jumped from stone to iron directly, with only a few examples of copper-work in between. Most archaeologists interpret this technological jump to indicate that iron working was introduced from outside, probably from the Phoenician colonies along the north African coast, and they find evidence for this idea in the rock art of the Sahara desert. Along the routes crossing the desert, rock engravings and paintings dating from between 1200 B.C.E. and 400 B.C.E. depict two-wheeled chariots that suggest trans-Saharan traffic.

In northern Nigeria, the Nok peoples were producing terra cotta sculptures, especially of human heads, from about 500 B.C.E. Living in settlements along the Niger, near its confluence with the Benue in modern Nigeria, the Nok also built iron-smelting furnaces, dating to 500–450 B.C.E.

Meanwhile, also in the lower Niger, some Bantu peoples were giving up nomadic pastoralism for settled agriculture, although many remained nomadic for a long time. They began great, but gradual, migrations southward and eastward over thousands of miles, introducing their languages, their knowledge of iron production, and their

experience with settled agriculture. In one thousand years, 500 B.C.E. to 500 C.E., the Bantu carried their languages, their new, settled way of life, and their metallurgical skills almost to the southern tip of Africa.

Jenne-jeno: A New Urban Pattern?

Neither the Nok nor the Bantu built cities. Other people of the Niger River, however, apparently did. In excavations that began in 1977 and continue today archaeologists Susan and Roderick McIntosh uncovered Jenne-jeno, "Ancient Jenne," the first known indigenous city in sub-Saharan Africa. The Jenne-jeno settlement began about 250 B.C.E. as a small group of round mud huts. Its herding and fishing inhabitants were already using iron implements, and the village grew to urban size by 400 C.E., reaching its peak of settlement by about 900 C.E.

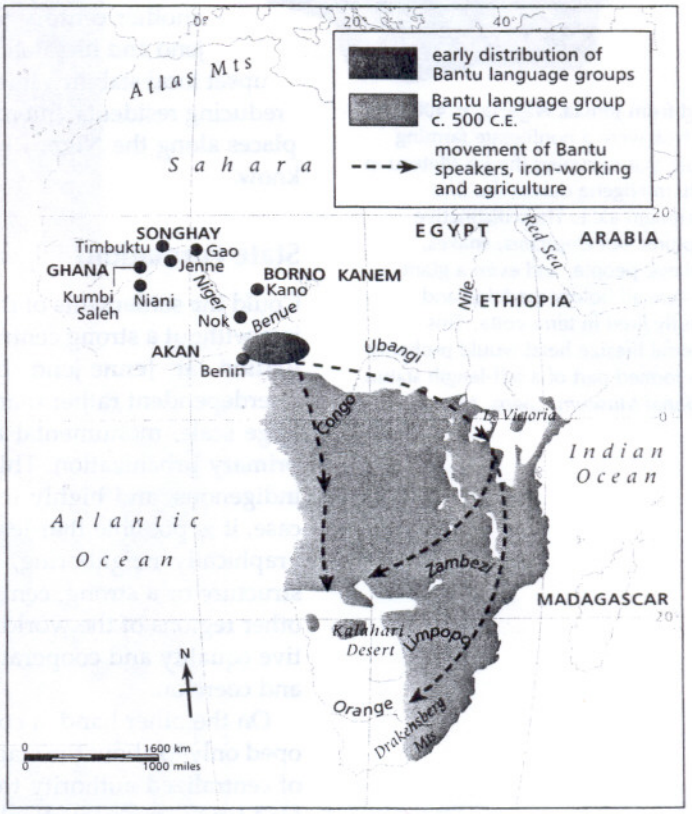
The physical form of the city was different from that of the other six centers we have studied. A central inhabited area of some 80 acres was surrounded by a city wall 10 feet wide and 13 feet high with a perimeter of 1¼ miles. Near this central area were some forty smaller, but still substantial additional settlements. They extended to a radius of 2½ miles. By the year 1000, the settled area may have included 50,000 persons.

Excavations through numerous levels revealed that the people of Jenne-jeno ate fish from the river, rice from their fields, and beef from their herds. They probably drank the cows' milk as well. At least some wore jewelry and ornaments of imported copper and semi-precious stones. Dozens of burial urns, each up to 3 feet high, yielded human skeletons arranged in fetal position. The urns date from 300 to 1400 C.E., and their burial inside and adjacent to the houses suggests a reverence for ancestors. Statuettes in a kneeling position set into walls and under floors further suggest the probability of ancestor worship.

This part of the religious and cultural heritage of Jenne-jeno seems to have endured. Although not built primarily as a shrine center, Jenne-jeno included religious functions as an important part of its activities, as its modern counterpart does today. There are also similarities between the arrangement of the huts of Jenne-jeno 1000 years ago and the grouping of family huts there today. In ancient times as in modern, it appears that the husband–father lived in one large central hut while one of his wives occupied each of the surrounding huts.

Jenne-jeno must have engaged in trade, because even in 250 B.C.E. its inhabitants were using iron and stone that had to be brought from at least 30 miles away. Sandstone for their grinding stones had to have been imported from at least 60 miles away, while copper and salt came from hundreds of miles away. The McIntoshes have also discovered one gold

Two men with an ibex, Tanzoumaitak, Tassili Mountains, Sahara, 7000–6000 B.C.E. Rock painting. Rock art of the Sahara at first represented wild animals such as buffalo, rhinoceros, hippopotamuses, giraffes, and elephants. By 6000 B.C.E. it was representing domesticated animals such as ibex or goats, dogs, horses, and camels, suggesting a transition from hunting to pastoralism and settled agriculture.



The spread of Bantu. About 1500 B.C.E. an extraordinary cultural migration began to transform sub-Saharan Africa. From their homeland near the Niger delta, groups of Bantu-speaking farmers began to move east and south, spreading cattle domestication, crop cultivation, and iron-working. By about 500 C.E. southern Africa had been reached, the original hunter-gatherers having been marginalized to remote regions such as the Kalahari Desert.

Head from Jemaa, Nigeria, *c.* 400 B.C.E. The Nok were a nonliterate farming people that occupied the Jos Plateau in northern Nigeria during the first millennium B.C.E. Their distinctive sculptures—of elephants, snakes, monkeys, people, and even a giant tick—are all boldly modeled and skillfully fired in terra cotta. This powerful lifesize head would probably have formed part of a full-length statue. (*National Museum, Lagos, Nigeria*)

earring, dating to about 750 C.E., in the region. The nearest site of gold mining was 500 miles away. Perhaps the people of Jenne-jeno traded the fish of the Niger and the rice of their fields for these imports. Some Jenne-jenoites may have become professional merchants.

Innovation in architectural concepts may also have come to Jenne from external contacts. By about 900 C.E. some rectangular houses began to appear among the circular ones, perhaps introduced through contact with northern peoples. Outside contacts increased with the introduction of camel transportation across the Sahara about 300 C.E. and with the Muslim Arab conquest of north Africa about 700 C.E. Especially after 1200 C.E., Muslim traders crossing the Sahara linked the savanna and forest lands of the south to the cities of the Mediterranean coast. Most scholars have argued that these external contacts and trade possibilities encouraged the growing importance of new cities like Timbuktu, Jenne, Niani, Gao, Kano, and, further south, Benin. The McIntoshes suggest an opposite perspective: these cities predate the northern connections, and, indeed, their prosperity and control of the trade routes and the gold further to the south encouraged the northerners to dispatch their camel caravans across the Sahara. This debate remains unresolved.

By 1100, the settlements peripheral to Jenne-jeno began to lose population. Some of their inhabitants apparently moved to the central settlement. In another century the rural population also began to decline. By 1400, Jenne-jeno and its satellites were no more. Why? Perhaps warfare and slave-trading upset local stability. It is also possible that land rights and family structures shifted, reducing residents' interest in the region. Finally, it is possible that migration to other places along the Niger River simply allowed Jenne to slowly decline. We just do not know.

State Formation?

Could the settlements of the Middle Niger at Jenne-jeno be an example of early urbanism without a strong centralized government? Without a state? It is possible. The population at Jenne-jeno lived in neighboring clusters that were functionally interdependent rather than in a single urban center with a prominent core marked by large scale, monumental architecture as was found in most of the other centers of primary urbanization. This kind of development might be viewed as "a precocious, indigenous, and highly individual form of urbanism" (R. McIntosh, p. 203). In this case, it is possible that Jenne-jeno rose on the basis of trade and expanded into geographically neighboring, interactive settlements, but without a hierarchical social structure or a strong, central authority. In contrast to primary urbanization in all the other regions of the world we have examined, Jenne-jeno may have experienced relative equality and cooperation among its citizens rather than competition, dominance, and coercion.

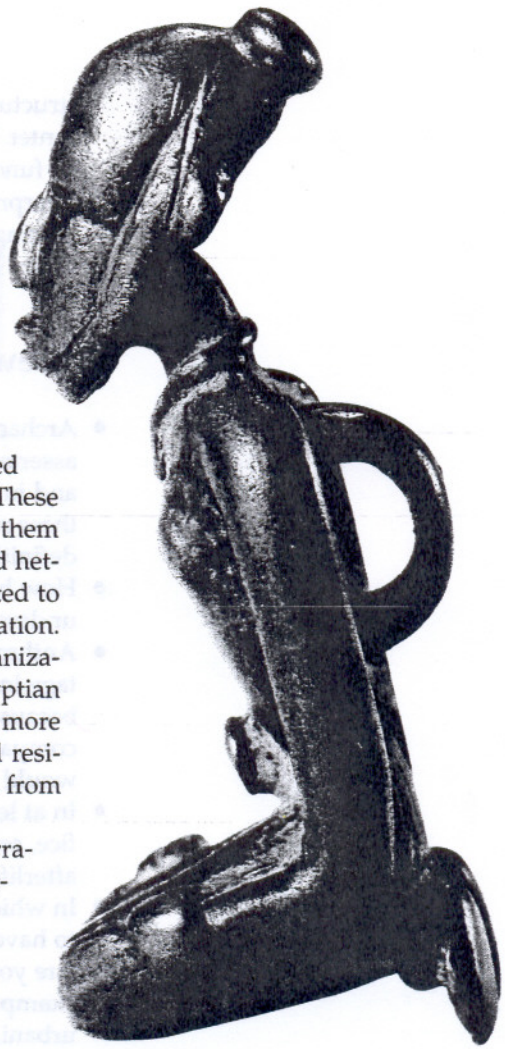
On the other hand, a comparative assessment might suggest that Jenne had developed only to about the stage of the Olmec settlements and had not yet created the kind of centralized authority that emerged clearly and powerfully among the later Maya. Had Jenne-jeno persisted longer and grown larger, perhaps centralization and stratification would have developed. Indeed the presence of a central settlement surrounded by smaller adjacent settlements suggests that some hierarchy was already emerging. Did Jenne-jeno represent an alternative kind of urbanization, or was it a settlement that was on its way to full-scale conventional urbanization? These are the kinds of questions of comparison that archaeologists—and historians—love to debate.

THE FIRST CITIES
WHAT DIFFERENCE DO THEY MAKE?

With the creation of cities, humanity entered into many new forms of living. The first of these cities, in the river valleys of Mesopotamia and the Nile almost 5500 years ago, introduced not only new scale and density in human settlement patterns but also new technology in the metallurgy of copper, tin, and bronze; monumental scale in architecture; and specialization and hierarchy in social, political, and economic life. These cities flourished also as nodes in networks for the exchange of goods and ideas. The invention of writing in these cities not only gave new life to cultural creativity, but also provided new means of record keeping for the bureaucrat, businessperson, and scholar. These new cities allowed and demanded complex and hierarchical government to keep them functioning. Although we sometimes see cities today as homes of secularism and heterogeneity, these early cities were also religious in the sense that they often existed to promote dedication to specific gods through their physical and ritual organization. Differences in climate and culture separate Egyptian from Mesopotamian urbanization, but they also shared many similarities. We know somewhat less about Egyptian urbanization because the Nile itself washed away many of its foundations, but more recent archaeology has uncovered Egyptian as well as Sumerian city walls and residential structures, suggesting that they also needed to protect their inhabitants from outsiders.

Sumer and Egypt provide what scholars sometimes refer to as a "master narrative," a conventional, widely accepted view of historical transformation, suggesting that the historical process at other times and places will follow similar patterns. Each of our subsequent case studies has reinforced some dimensions of the "master narrative" while challenging others.

- Indus valley urbanization suggested that a generally consistent civilization could extend over an immense geographical space, over thousands of years. A few of its distinctive, planned cities stood out as capitals, but even after they were evacuated, other cities of the far-flung network kept the civilization alive. Moreover, Indus agricultural practices were adopted and adapted by invaders who transplanted some of them from the Indus valley to the Ganges valley.
- Early Chinese urbanization, represented in the historical record through oracle bones and through the geometrical design of city plans, placed added emphasis on the religious dimension of cities, although the rulers did not neglect to mobilize large and powerful armed forces.
- In the Americas, cities like Teotihuacán and the later cities of the Maya demonstrated again the importance of monumental, religious architecture, although each additional excavation reveals the extent of both long-distance trade and of everyday, mundane activities as well. Urbanization in the Andes mountains indicates that not all early cities needed river beds. Urban rulers could construct fabulous networks for trade, communication, and troop movement at forbidding altitudes. From their capital cities they could launch empires. They could also administer cities, and even empires, without having invented writing.
- In the Niger River valley of west Africa, the single primary urban settlement that has been excavated challenges the "master narrative," suggesting that cities may develop through the interrelationship of adjacent smaller settlements without the need for hierarchy, centralization, government structure, and written language. The data presented thus far may be, however, subject to different interpretations. Perhaps the central mound in Jenne-jeno does, in fact, represent some hierarchical



Bronze kneeling figure, Jenne, Mali, c. 1100–1400. Archaeological activity over the last quarter century has revealed Jenne-jeno, "Old Jenne," as a commercial center on the Niger River from about 250 B.C.E. Its traditions seem to have persisted through the centuries and into "new" Jenne, the city which now stands adjacent to the older excavation. Statuettes such as this one, produced in Jenne, may have been used in worship of and for ancestors. (*Private collection*)

structure. Or perhaps it is a collection of contiguous villages rather than an urban center. The interpretation depends in part on how far the definition of a city and its functions may be—and ought to be—stretched. Continuing excavation and interpretation will help decide the degree to which the "master narrative" concerning early urbanization will hold up, and to what degree new, less rigid ideas of the role of urbanization in human history are yet be formulated.

Review Questions

- Archaeologists working with the earliest cities of Mesopotamia and Egypt asserted that a true city must have writing. In light of the findings in the Americas and in Jenne-jeno, do you agree with those archaeologists that the settlements in these regions are not cities; or do you think that they are cities and that a city's definition should be changed?
- How has the discovery and deciphering of ancient writing helped to form our understanding of urban life in ancient China and Mesoamerica?
- Anthropologist Jared Diamond says that Mesopotamia and Egypt had an advantage in technological and social development over other areas of the world because they were ecologically rich in animal and plant resources. As you compare the early urban developments in China, the Americas, and Jenne-jeno, would you agree or disagree with Diamond? Why?
- In at least six of the early seven urban locations, we find evidence of human sacrifice, or of killing some of the ruler's companions to accompany him (or her) to an afterlife. Why do you think these practices stopped?
- In which of the four urban centers represented in this chapter did the ruler seem to have the most power? What evidence can you cite to support your view?
- Are you convinced by the arguments of the McIntoshes that Jenne-jeno is an example of an unusual kind of city that challenges our understanding of early urbanization? Why or why not?

Suggested Readings

PRINCIPAL SOURCES

Blunden, Caroline and Mark Elvin. *Cultural Atlas of China* (New Haven, CT: Facts on File, 1983). One in the excellent series by this publisher, prepared by an historian and an archaeologist, with text, maps, pictures.

Coe, Michael, Dean Snow, and Elizabeth Benson. *Atlas of Ancient America* (New York: Facts on File, 1986). One in the excellent series by this publisher, prepared by experts, with text, maps, pictures.

Fagan, Brian. *People of the Earth: An Introduction to World Prehistory* (Upper Saddle River, NJ: Prentice Hall, 2000). Outstanding anthropological textbook on prehistory.

McIntosh, Roderick James. *The Peoples of the Middle Niger: the Island of Gold* (Oxford: Blackwell, 1998). Most recent book publication on Jenne-Jeno by one of the two principal archaeologists.

Murray, Jocelyn, ed. *Cultural Atlas of Africa* (New York: Facts on File, 1982). One in the excellent series by this publisher, prepared by an expert with text, maps, pictures, time lines.

Schele, Linda and David Freidel. *A Forest of Kings: The Untold Story of the Ancient Maya* (New York: William Morrow, 1990). Tells how the Mayan language was deciphered, by those who did it.

Times (London). *Past Worlds* (Maplewood, NJ: Hammond Inc., 1988). Excellent, comprehensive, scholarly introduction to archaeological prehistory, lavishly illustrated with maps and pictures.

ADDITIONAL SOURCES

Alva, Walter and Christopher Donnan. *The Royal Tombs of Sipan* (Los Angeles, CA: Fowler Museum of Cultural History, University of California, Los Angeles, 1993). Lavishly illustrated account of the excavation.

Chang, Kwang-chih. *The Archaeology of Ancient China* (New Haven, CT: Yale University Press,

From City-State to Empire

Developing military force was the key to transforming a city-state into an empire. City-states already had their offensive and defensive powers: walls, moats, soldiers and troops, and, for those situated at the water's edge, ships and sailors. The literature from Mesopotamia, pre-imperial China, ancient Greece, and Mayan Mesoamerica abounds with evidence of fighting among city-states. From Gilgamesh onward, the rulers of city-states were builders of city walls and commanders of armed forces, famed as much for their military prowess as for their administration. They were engaged in incessant warfare.

Military force turned these city-states into empires. Almost 4000 years earlier, Sargon of Akkad (*c.* 2330–2280 B.C.E.) had set the example. His victories over the quarreling city-states of Mesopotamia around 2250 B.C.E. created the first empire recorded in history.

Sargon's troops were apparently equipped with the usual weaponry of the day: wooden spears with sharp points made of stone or bone and a range of perhaps 150 feet, simple bows and arrows with a range of somewhat more than 300 feet, leather slings capable of hurling stones with deadly force up to 600 feet, and war chariots—rough wagons with solid wooden wheels, pulled by asses—bearing their spear hurlers and quivers filled with arrows. We do not have visual evidence of Sargon's armies, but we do for the Sumerians whom he defeated. The military standard from Ur depicts not only the foot soldiers, chariots, and weapons of the victors, but also the defeated enemy soldiers, some already dead, some awaiting their fate. Sargon's armies were probably not much different from Ur's in their equipment, but they were greater in numbers, organization, skill, and energy.

Sargon proceeded to conquer the cities of the middle and upper Euphrates and moved on into southern Anatolia. Then he turned eastward to dominate Susa in western Iran, the capital city of the Elamites. Sargon's empire lasted for only about a century, but from his time onward,

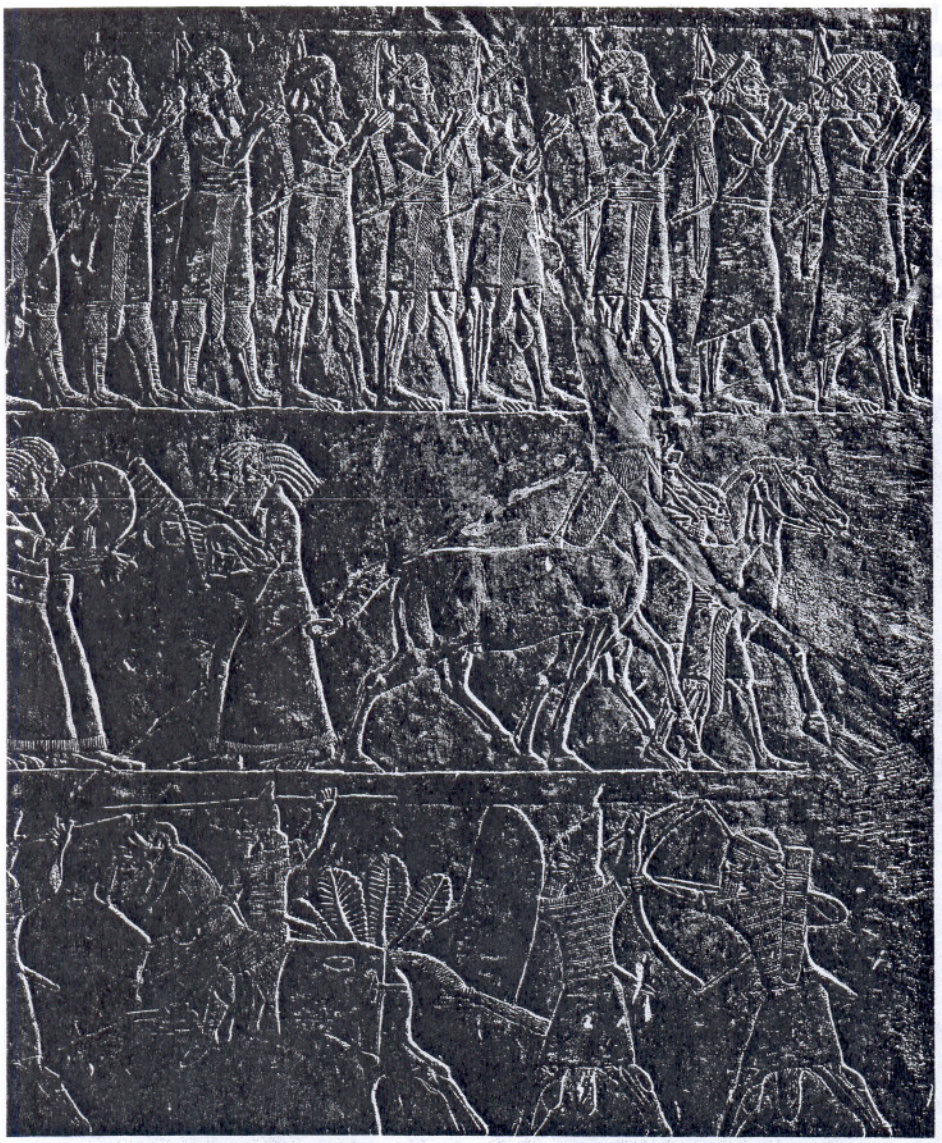
Deer hunt relief, Hittite, 9th century B.C.E. Stone. (*Museum of Anatolian Civilizations, Ankara, Turkey*)

Macedonian troops in formation, after a painting by G.D. Rowlandson.

Mesopotamia was usually ruled by one empire or another, most frequently an invading force, like his own, but sometimes a revolutionary army arising from within. City-states did not return.

Egypt also established an empire early on, by moving southward, above the first cataract—one of a series of impassable rapids—on the Nile River, into Nubia, a land famed for its gold. As early as 2500 B.C.E., the Egyptians built a city at Buhen, just below the second cataract, in an area not much populated at the time, and held it for centuries as a basis for mining and trade, until it was taken by Nubians. During the twelfth dynasty (1991–1786 B.C.E.), however, Egypt returned to the area. The Egyptians secured passage for ships around the first cataract by constructing a canal and added a parallel land route over the desert sands. At Buhen Egyptian engineers directed the construction of one of the greatest fortresses known to ancient history. Low, outer walls and towering inner walls were each protected by ditches and crenellated on top with loopholes for archers and spear- and stone-throwers. The fortress housed soldiers' barracks surrounded by their own walls, a market, government offices and residences, and, later, a temple dedicated to Horus. Buhen served as the chief outpost of Egyptian military activity, administration, and trade in Nubia. It was once again conquered by Nubians after Egypt itself was defeated by Hyksos invaders, probably from across the deserts of Sinai, about 1600 B.C.E.

At about that time, new instruments of war were being introduced into the fertile crescent by new immigrant groups, probably from the mountains to the northeast. The most significant was a new two-wheeled war chariot, light, fast, easily maneuverable, pulled by horses and commanded by archers in bronze



The Assyrian army and musicians, from the Palace of Ashurbanipal, Nineveh, 7th century B.C.E. Limestone relief. (*Louvre, Paris*)

armor shooting bronze-tipped arrows. This chariot powered the armies of the Middle East for a thousand years. The first to use it successfully were the Mitanni, centered on northern Mesopotamia, about 1500 B.C.E. They were succeeded by the Hittites, based in their capital of Hattushash (Boğazköy) in eastern Anatolia from about 1650 to about 1200 B.C.E. The Hittites, in particular, also developed the use of iron and even steel for use in weapons—defensive armor and offensive spear-, arrow-, and sword-points—and in farm tools that increased agricultural productivity.

Although chariots, horses, and asses were employed by early armies, the mainstay of most was the infantry: Greek hoplites, protected by their heavy bronze armor and massed in phalanxes several rows deep; Roman legions, less heavily armed, and grouped into smaller units for greater mobility; and Chinese foot soldiers, also by the thousands. Chinese historical records are abundant in their descriptions of armies and warfare, but archaeologists were nevertheless astonished to uncover in 1974 a ceramic army of 7000 life-sized soldiers and horses (see p. 206) arranged in military formation and armed with bronze weapons, spears, longbows, and crossbows (a Chinese invention). In 1976 a second excavation uncovered the cavalry, 1400 chariots and mounted soldiers in four military units. The next year a much smaller pit was discovered, holding what appeared to be a terra cotta officer corps. These thousands of figures were not mass produced. Each figure was modeled and painted separately, even down to its elaborate hairstyle that symbolized its specific military office. The figures apparently represented the elite of the imperial troops, and were fashioned to accompany the first emperor of China, Qin Shi Huangdi (r. 221–210 B.C.E.), to his own tomb and afterlife.

War took place on sea as well as land. In the eastern Mediterranean, in the fifth century B.C.E., the trireme (see p. 145) was the principal warship of both the Persians and the Greeks as they contested for power. With approximately 170 oarsmen arranged about equally in three tiers along each side, these ships could reach speeds of up to nine knots per hour. When such speeds were not necessary, the ships might hoist square-rigged sails and travel with the wind.

The trireme's hull was of light wooden construction, with the Greek ships usually somewhat lighter than

the Persians'. This enabled faster speeds, but it also left the ships vulnerable to the bronze-covered rams that they carried as an offensive weapon. At first, spearmen and archers accompanied the rowers. By the end of the fourth century B.C.E., the construction changed, as decks were introduced to accommodate the armed soldiers, and multiple rows of oarsmen replaced the tiers.

Psychological weapons had their place as well. One of the earliest and most common was the use of sound and instruments in urging on one's own troops—and providing communication among them—while frightening and confusing the enemy. There are ancient references to the use of trumpets and other instruments as accompaniments of warfare. The Bible includes instructions in their use as the Hebrews traversed the desert in their exodus from Egypt. As they finally reached their promised land, their leader Joshua's assault on the walled city of Jericho was accompanied by trumpeters blasting on rams' horns that, according to the Book of Judges, caused the city walls to collapse.

The legendary founding of the Persian Empire was recorded long afterwards by the tenth-century C.E. poet Firdowsi in Iran's national epic the *Shah-nameh* ("Book of Kings"). Beloved by its readers, the epic describes the victory by Rustum, one of the legendary founders of the Persian nation, over his arch-enemy Turani. The epic also captures the sounds of musical instruments used in battle.

The written record of warfare is filled with the images of death, destruction, and captivity, from virtually all imperial conquests. One of the closing scenes depicts corpses from the warfare of Mesopotamia, the earliest and most continuous site of imperial battles. The lamentations over the destruction of the third city of Ur, Ur III, is one of the earliest ever recorded, between 2000 and 1500 B.C.E. It reminds us that empire building is deadly business:

O Father Nanna, that city into ruins was made; the people groan.

...

Its walls were breached; the people groan.
In its lofty gates, where they were wont to promenade, dead bodies were lying about;
In its boulevards, where the feasts were celebrated, scattered they lay.
In all its streets, where they were wont to promenade, dead bodies were lying about;
In its places, where the festivities of the land took place, the people lay in heaps.

...

Its dead bodies, like fat placed in the sun, of themselves melted away.

(Pritchard, p. 459)

Battle of Til-Tuba between the Assyrian king Ashurbanipal and the king of Elam, from the palace of Ashurbanipal, 645 B.C.E. Stone relief. (*British Museum, London*)

QUESTIONS

1. How important are warfare and murder in the construction of empire?
2. How closely can you correlate the development of new weapons of warfare with the creation of new empires?
3. What kinds of skills and powers, beyond the military, are necessary in the construction of empires?