

PART ONE

The Emergence of Human Communities, to 500 B.C.E.

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From the Origins
of Agriculture to the First
River-Valley Civilizations,
8000–1500 B.C.E.

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Around 10,000 years ago, some human groups in various parts of the world began to cultivate plants, domesticate animals, and make pottery vessels for storage. One consequence of this shift from hunting and gathering to agriculture was the emergence of permanent settlements—at first small villages but eventually larger towns as well.

The earliest complex societies arose in the great river valleys of Asia and Africa, around 3100 B.C.E. in the valley between the Tigris and Euphrates Rivers in Mesopotamia and along the Nile River in Egypt, somewhat later in the valley of the Indus River in Pakistan, and on the floodplain of the Yellow River in China. In these arid regions, agriculture depended on irrigation with river water, and centers of political power arose to organize the massive human labor required to dig and maintain channels to carry water to the fields.

Kings and priests dominated these early societies. Kings controlled the military forces; priests managed the temples and the wealth of the gods. Within the urban centers—in the midst of palaces, temples, fortification walls, and other monumental buildings—lived administrators, soldiers, priests, merchants, craftsmen, and others with specialized skills. The production of surplus food grown on rural estates by a dependent peasantry sustained the activities of these groups. Professional scribes kept administrative and financial records and preserved their civilization's religious and scientific knowledge.

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Over time, certain centers extended their influence and came to dominate broad expanses of territory. The rulers of these early empires were motivated primarily by the need to secure access to raw materials, especially tin and copper, from which to make bronze. A similar motive accounts for the development of long-distance trade and diplomatic relations between major powers. Fueling long-distance trade was the desire for bronze, which had both practical and symbolic importance. From bronze, artisans made weapons, tools and utensils, and ritual objects. Ownership of bronze items was a sign of wealth and power. Trade and diplomacy helped spread culture and technology from the core river-valley areas to neighboring regions, such as southern China, Nubia, Syria-Palestine, Anatolia, and the Aegean.

In the Western Hemisphere, different geographical circumstances called forth distinctive patterns of technological and cultural response in the early civilizations of the Olmec in southern Mexico and Chavín in the Andean region of South America. Nevertheless, the challenges of organizing agriculture and trade led to many of the same features of complex societies—social stratification, specialization of labor, urbanization, monumental building, technological development, and artistic achievement.

1 From the Origins of Agriculture to the First River-Valley Civilizations 8000–1500 B.C.E.

CHAPTER OUTLINE

Before Civilization

Mesopotamia

Egypt

The Indus Valley Civilization

DIVERSITY AND DOMINANCE: Violence and Order in the Babylonian New Year's Festival

ENVIRONMENT AND TECHNOLOGY: Environmental Stress in the Indus Valley

Some five thousand years ago in Mesopotamia (present-day Iraq), people living in Sumer, the world's first urban civilization, cherished the story of Gilgamesh, superhero king of the city of Uruk. The goddess of creation, it recounted, fashioned the wild man Enkidu°:

There was virtue in him of the god of war, of Ninurta himself. His body was rough, he had long hair like a woman's; it waved like the hair of Nisaba, the goddess of corn. His body was covered with matted hair like Samuqan's, the god of cattle. He was innocent of mankind; he knew nothing of the cultivated land. Enkidu ate grass in the hills with the gazelle and jostled with the wild beasts at the water-holes; he had joy of the water with the herds of wild game.

When Gilgamesh learns of Enkidu from a hunter, he sends a temple prostitute to tame him. After her seduction causes the wild beasts to shun him, she says:

Come with me. I will take you to strong-walled Uruk,° to the blessed temple of Ishtar and of Anu, of love and of heaven . . . there all the people are dressed in their gorgeous robes, every day is holiday, the young men and the girls are wonderful to see. How sweet they smell! . . . O Enkidu, you who live life, I will show you Gilgamesh.¹

She clothes Enkidu and teaches him to eat cooked food, drink beer, and bathe and oil his body. Her words and actions signal the principal traits of civilized life in Sumer, just as the divine comparisons of the wild Enkidu show Sumer's dependence on grain and livestock.

The Sumerians, like other peoples, equated civilization with their own way of life. But lifestyles varied. Given the ambiguity of the term *civilization*, therefore, the common understanding that the first civi-

lizations arose in Mesopotamia and Egypt sometime before 3000 B.C.E. needs examination.

Scholars agree that settled agricultural life and certain political, social, economic, and technological traits are indicators of **civilization**, if not of every civilization. These traits include (1) cities as administrative centers, (2) a political system based on defined territory rather than kinship, (3) many people engaged in specialized, non-food-producing activities, (4) status distinctions based largely on accumulation of wealth, (5) monumental building, (6) a system for keeping permanent records, (7) long-distance trade, and (8) sophisticated interest in science and art.

The earliest societies exhibiting these traits appeared in the floodplains of great rivers: the Tigris° and Euphrates° in Iraq, the Indus in Pakistan, the Yellow (Huang He°) in China, and the Nile in Egypt (see Map 1.2). Periodic flooding fertilized the land with silt and provided water for agriculture but also threatened lives and property. To control the floods, the peoples living near the rivers created new technologies and forms of political and social organization.

In this chapter, we describe the origins of domestication among the scattered groups of foragers living at the end of the last Ice Age and the slow development of farming and herding societies. We then trace the rise of complex societies in Mesopotamia, Egypt, and the Indus River Valley from approximately 3500 to 1500 B.C.E. (China, developing slightly later, is discussed in Chapter 2). This story roughly coincides with the origins of writing, allowing us to document aspects of human life not revealed by archaeological evidence alone.

As you read this chapter, ask yourself the following questions:

- How did plant and animal domestication set the scene for the emergence of civilization?
- Why did the earliest civilizations arise in river valleys?

Enkidu (EN-kee-doo) Uruk (OO-rook)

Tigris (TIE-gris) Euphrates (you-FRAY-teez)
Huang He (hwang huh)

- How did the organization of labor shape political and social structures?
- How did metallurgy, writing, and monumental construction contribute to the power and wealth of elite groups?
- How do religious beliefs reflect interaction with the environment?

BEFORE CIVILIZATION

Evidence of human artistic creativity first came to light in 1940 near Lascaux in southwestern France with the discovery of a vast underground cavern. The cavern walls were covered with paintings of animals, including many that had been extinct for thousands of years. Similar cave paintings have been found in Spain and elsewhere in southern France.

To even the most skeptical person, these artistic troves reveal rich imaginations and sophisticated skills, qualities also apparent in the stone tools and evidence of complex social relations uncovered from prehistoric sites. The production of such artworks and tools over wide areas and long periods of time demonstrates that skills and ideas were not simply individual but were deliberately passed along within societies. These learned patterns of action and expression constitute **culture**. Culture includes material objects, such as dwellings, clothing, tools, and crafts, along with nonmaterial values, beliefs, and languages. Although it is true that some animals also learn new ways, their activities are determined primarily by inherited instincts. Only human communities trace profound cultural developments over time. The development, transmission, and transformation of cultural practices and events are the subject of **history**.

Food Gathering and Stone Technology

Stone toolmaking, the first recognizable cultural activity, first appeared around 2 million years ago. The **Stone Age**, which lasted from then until around 4,000 years ago, can be a misleading label. Stone tools abound at archaeological sites, but not all tools were of stone. They were made as well of bone, skin, and wood, materials that survive poorly. In addition, this period encompasses many cultures and subperiods. Among the major subdivisions, the **Paleolithic**^o (Old Stone Age)

Paleolithic (pay-lee-oh-LITH-ik)

lasted until 10,000 years ago, about 3,000 years after the end of the last Ice Age, long periods when glaciers covered much of North America, Europe, and Asia. The **Neolithic**^o (New Stone Age), which is associated with the origins of agriculture, followed.

Fossilized animal bones bearing the marks of butchering tools testify to the scavenging and hunting activities of Stone Age peoples, but anthropologists do not believe that early humans lived primarily on meat. Modern **foragers** (hunting and food-gathering peoples) in the Kalahari Desert of southern Africa and Ituri Forest of central Africa derive the bulk of their day-to-day nourishment from wild vegetable foods. They eat meat at feasts. Stone Age peoples probably did the same, even though the tools and equipment for gathering and processing vegetable foods have left few archaeological traces.

Like modern foragers, ancient humans would have used skins and mats woven from leaves for collecting fruits, berries, and wild seeds, and they would have dug up edible roots with wooden sticks. Archaeologists suspect that the doughnut-shaped stones often found at Stone Age sites served as weights to make wooden digging sticks more effective.

Cooking makes both meat and vegetables tastier and easier to digest, something early humans may have discovered inadvertently after wildfires. Humans may have begun setting fires deliberately 1 million to 1.5 million years ago, but proof of cooking does not appear until some 12,500 years ago, when clay cooking pots came into use in East Asia.

Studies of present-day foragers also indicate that Ice Age women probably did most of the gathering and cooking, which they could do while caring for small children. Women past child-bearing age would have been the most knowledgeable and productive food gatherers. Men, with stronger arms and shoulders, would have been better suited for hunting, particularly for large animals. Some early cave art suggests male hunting activities.

The same studies, along with archaeological evidence from Ice Age campsites, indicate that early foragers lived in groups that were big enough to defend themselves from predators and divide responsibility for food collection and preparation, but small enough not to exhaust the food resources within walking distance. Even bands of around fifty men, women, and children would have moved regularly to follow migrating animals or collect seasonally ripening plants in different places.

In regions with severe climates or lacking in natural shelters like caves, people built huts of branches, stones,

Neolithic (nee-oh-LITH-ik)

C H R O N O L O G Y			
	Mesopotamia	Egypt	Indus Valley
3500 B.C.E.		3100–2575 B.C.E. Early Dynastic	
3000 B.C.E.	3000–2350 B.C.E. Early Dynastic (Sumerian)	2575–2134 B.C.E. Old Kingdom	2600 B.C.E. Beginning of Indus Valley civilization
2500 B.C.E.	2350–2230 B.C.E. Akkadian (Semitic)	2134–2040 B.C.E. First Intermediate Period	
2000 B.C.E.	2112–2004 B.C.E. Third Dynasty of Ur (Sumerian) 1900–1600 B.C.E. Old Babylonian (Semitic)	2040–1640 B.C.E. Middle Kingdom 1640–1532 B.C.E. Second Intermediate Period 1532–1070 B.C.E. New Kingdom	1900 B.C.E. End of Indus Valley civilization
1500 B.C.E.	1500–1150 B.C.E. Kassite		

bones, skins, and leaves as seasonal camps. Animal skins served as clothing, with the earliest evidence of woven cloth appearing about 26,000 years ago. Groups living in the African grasslands and other game-rich areas probably spent only three to five hours a day securing food, clothing, and shelter. This would have left a great deal of time for artistic endeavors, tool-making, and social life.

The foundations of what later ages called science, art, and religion also date to the Stone Age. Gatherers learned which local plants were edible and when they ripened, as well as which natural substances were effective for medicine, consciousness altering, dyeing, and other purposes. Hunters learned the habits of game animals. People experimented with techniques of using plant and animal materials for clothing, twine, and construction. Knowledge of the environment included identifying which minerals made good paints and which stones made good tools. All of these aspects of culture were passed orally from generation to generation.

Early music and dance have left no traces, but visual artwork has survived abundantly. Cave paintings appear as early as 32,000 years ago in Europe and North Africa and somewhat later in other parts of the world. Because many feature food animals like wild oxen, reindeer, and horses, some scholars believe the art records hunting scenes or played a magical and religious role in hunting.

A newly discovered cave at Vallon Pont-d'Arc^o in southern France, however, features rhinoceros, panthers, bears, owls, and a hyena, which probably were not hunted for food. Other drawings include people dressed in animal skins and smeared with paint and stencils of human hands. Some scholars suspect that other marks in cave paintings and on bones may represent efforts at counting or writing.

Some cave art suggests that Stone Age people had well-developed religions, but without written texts, it is hard to know what they believed. Some graves from about 100,000 years ago contain stone implements, food, clothing, and red-ochre powder, indicating that early people revered their leaders enough to honor them in death and may have believed in an afterlife.

The Agricultural Revolutions

Around 10,000 years ago, some human groups began to meet their food needs by raising domesticated plants and animals.

Gradually over the next millennium, most people became food producers, although hunting and gathering continued in some places.

Vallon Pont-d'Arc (vah-LON pon-DAHRK)

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The term *Neolithic Revolution*, commonly given to the changeover from food gathering to food producing, can be misleading. *Neolithic* means “new stone,” but the new tool designs that accompanied the beginnings of agriculture did not define it. Nor was the “revolution” a single event. The changeover occurred at different times in different parts of the world. The term **Agricultural Revolutions** is more precise because it emphasizes the central role of food production and signals that the changeover occurred several times. The adoption of agriculture often included the domestication of animals for food (see Map 1.1).

Food gathering gave way to food production over hundreds of generations. The process may have begun when forager bands, returning year after year to the same seasonal camps, scattered seeds and cleared away weeds to encourage the growth of foods they liked. Such semicultivation could have supplemented food gathering without the permanent settlement of the group. Families choosing to concentrate their energies on food production, however, would have had to settle permanently near their fields.

Specialized stone tools first alerted archaeologists to new food-producing practices: polished or ground stone heads to work the soil, sharp stone chips embedded in bone or wooden handles to cut grasses, and stone mortars to pulverize grain. Early farmers used fire to clear fields of shrubs and trees and discovered that ashes were a natural fertilizer. After the burn-off, farmers used blades and axes to keep the land clear.

Selection of the highest-yielding strains of wild plants led to the development of domesticated varieties over time. As the principal gatherers of wild plant foods, women probably played a major role in this transition to plant cultivation, but the task of clearing fields probably fell to the men.

In the Middle East, the region with the earliest evidence of agriculture, human selection had transformed certain wild grasses into higher-yielding domesticated grains, now known as emmer wheat and barley, by 8000 B.C.E. Farmers there also discovered that alternating the cultivation of grains and pulses (plants yielding edible seeds such as lentils and peas) helped maintain fertility.

Plants domesticated in the Middle East spread to adjacent lands, but in many parts of the world, agriculture arose independently. Exchanges of crops and techniques occurred between regions, but societies that had already turned to farming borrowed new plants, animals, and farming techniques more readily than foraging groups did.

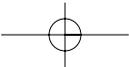
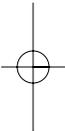
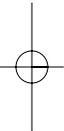
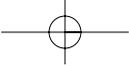
The eastern Sahara, which went through a wet period after 8000 B.C.E., preserves the oldest traces of food

production in northern Africa. As in the Middle East, emmer wheat and barley became the principal crops and sheep, goats, and cattle the main domestic animals. When drier conditions returned around 5000 B.C.E., many Saharan farmers moved to the Nile Valley, where the river's annual flood provided water for crops.

In Greece, wheat and barley cultivation, beginning as early as 6000 B.C.E., combined local experiments with Middle Eastern borrowings. Shortly after 4000 B.C.E., farming developed in the light-soiled plains of Central Europe and along the Danube River. As forests receded because of climate changes and human clearing efforts, agriculture spread to other parts of Europe over the next millennium.

Early farmers in Europe and elsewhere practiced shifting cultivation, also known as swidden agriculture. After a few growing seasons, farmers left the fields fallow (abandoned to natural vegetation) and cleared new fields nearby. Between 4000 and 3000 B.C.E., for example, communities of from forty to sixty people in the Danube Valley supported themselves on about 500 acres (200 hectares) of farmland, cultivating a third or less each year while leaving the rest fallow to regain its fertility. From around 2600 B.C.E., people in Central Europe began using ox-drawn wooden plows to till heavier and richer soils.

Although the lands around the Mediterranean seem to have shared a complex of crops and farming techniques, geographical barriers blocked the spread elsewhere. Rainfall patterns south of the Sahara favored locally domesticated grains—sorghums, millets, and (in



Ethiopia) teff—over wheat and barley. Middle Eastern grains did not grow at all in the humidity of equatorial West Africa; there, yams became an early domestic crop.

Domestic rice originated in southern China, the northern half of Southeast Asia, or northern India, possibly as early as 10,000 B.C.E. but more likely closer to 5000 B.C.E. The warm, wet climate of southern China particularly favored rice. Indian farmers cultivated hyacinth beans, green grams, and black grams along with rice by about 2000 B.C.E.

In the Americas a decline of game animals in the Tehuacán° Valley of Mexico after 8000 B.C.E. increased people's dependence on wild plants. Agriculture based on maize° (corn) developed there about 3000 B.C.E. and gradually spread. At about the same time, the inhabitants of Peru developed a food production pattern based on potatoes and quinoa°, a protein-rich seed grain. People in the more tropical parts of Mesoamerica cultivated tomatoes, peppers, squash, and potatoes. In South America's tropical forests, the root crop manioc became the staple food after 1500 B.C.E. Manioc and maize then spread to the Caribbean islands.

The domestication of animals expanded rapidly during these same millennia. The first domesticated animal, the dog, may have helped hunters track game well before the Neolithic period. Later, animals initially provided meat but eventually supplied milk, wool, and energy as well.

Refuse dumped outside Middle East villages shows a gradual decline in the number of wild gazelle bones after 7000 B.C.E. This probably reflects the depletion of wild game through overhunting by local farmers. Meat eating, however, did not decline. Sheep and goat bones gradually replaced gazelle bones. Possibly wild sheep and goats learned to graze around agricultural villages to take advantage of the suppression of predators by humans. The tamer animals may gradually have accepted human control and thus become themselves a ready supply of food. The bones of tame animals initially differ so little from those of their wild ancestors that the early stages of domestication are hard to date. However, selective breeding for characteristics like a woolly coat and high milk production eventually yielded distinct breeds of domestic sheep and goats.

Elsewhere, other wild species were evolving domestic forms during the centuries before 3000 B.C.E.: cattle in northern Africa or the Middle East, donkeys in northern Africa, water buffalo in China, humped-back Zebu° cattle in India, horses and two-humped camels in Central

Asia, one-humped camels in Arabia, chickens in Southeast Asia, and pigs in several places. Like domestic plant species, varieties of domesticated animals spread from one region to another. The Zebu cattle originally domesticated in India, for example, became important in sub-Saharan Africa about 2,000 years ago.

Once cattle and water buffalo had become sufficiently tame to be yoked to plows, long after their initial domestication, they became essential to the agricultural cycle of grain farmers. In addition, animal droppings provided valuable fertilizer. Wool and milk production also followed initial domestication by a substantial period.

In the Americas, domestic llamas provided meat, transport, and wool, while guinea pigs and turkeys provided meat. Dogs assisted hunters and also provided meat. Some scholars believe that no other American species could have been domesticated, but this cannot be proven. Domestic species could not be borrowed from elsewhere, however, because of the geographical isolation of the Americas.

Pastoralism, a way of life dependent on large herds of grazing livestock, came to predominate in arid regions. As the Sahara approached its maximum dryness around 2500 B.C.E., pastoralists replaced farmers who migrated southward (see Chapter 7). Moving herds to new pastures and watering places throughout the year made pastoralists almost as mobile as foragers and discouraged accumulation of bulky possessions and substantial dwellings. Like modern pastoralists, early cattle keepers probably relied more heavily on milk than on meat, since killing animals diminished the size of their herds. During wet seasons, they may also have engaged in semicultivation or bartered meat and skins for plant foods with nearby farming communities.

Why did the Agricultural Revolutions occur? Some theories assume that growing crops had obvious advantages. Grain, for example, provided both a dietary staple and the makings of beer. Beer drinking appears frequently in ancient Middle Eastern art and can be dated to as early as 3500 B.C.E. Most researchers today, however, believe that climate change drove people to abandon hunting and gathering in favor of pastoralism and agriculture. So great was the global warming that ended the last Ice Age that geologists gave the era since about 9000 B.C.E. a new name: the **Holocene**°. Scientists have also found evidence that temperate lands were exceptionally warm between 6000 and 2000 B.C.E., when people in many parts of the world adopted agriculture. The precise nature of the climatic crisis probably varied. In the Middle East, shortages of wild food caused by dry-

Tehuacán (teh-wah-KAHN) **maize** (mayz)
quinoa (kee-NOH-uh) **Zebu** (ZEE-boo)

Holocene (HAWL-oh-seen)

ness or population growth may have stimulated food production. Elsewhere, a warmer, wetter climate could have turned grasslands into forest and thereby reduced supplies of game and wild grains.

In many drier parts of the world, where wild food remained abundant, agriculture did not arise. The inhabitants of Australia relied exclusively on foraging until recent centuries, as did some peoples on the other continents. Amerindians in the arid grasslands from Alaska to the Gulf of Mexico hunted bison, and salmon fishing sustained groups in the Pacific Northwest. Ample supplies of fish, shellfish, and aquatic animals permitted food gatherers east of the Mississippi River to become increasingly sedentary. In the equatorial rain forest and in the southern part of Africa, conditions also favored retention of older ways.

Whatever the causes, the gradual adoption of food production transformed most parts of the world. A hundred thousand years ago, world population, mostly living in the temperate and tropical regions of Africa and Eurasia, did not exceed 2 million. The population may have fallen still lower during the last glacial epoch, between 32,000 and 13,000 years ago. Agriculture supported a gradual population increase, perhaps to 10 million by 5000 B.C.E., and then a mushrooming to between 50 million and 100 million by 1000 B.C.E.²

Life in Neolithic Communities

of the assumption that farmers enjoyed a better life than foragers did. Early farmers probably had to work much harder and for much longer periods than food gatherers. Long days spent clearing and cultivating the land yielded meager harvests. Guarding herds from predators, guiding them to fresh pastures, and tending to their needs imposed similar burdens.

Although early farmers commanded a more reliable food supply, their diet contained less variety and nutrition than that of foragers. Skeletons show that Neolithic farmers were shorter on average than earlier foragers. Death from contagious diseases ravaged farming settlements, which were contaminated by human waste, infested by disease-bearing vermin and insects, and inhabited by domesticated animals—especially pigs and cattle—whose diseases could infect people.

A dependable supply of food that could be stored between harvests to see people through nonproductive seasons, droughts, and other calamities proved decisive in the long run, however. Over several millennia, farmers

came to outnumber nonfarmers, permanent settlements generated cultural changes, and specialized crafts appeared in fledgling towns.

Some researchers envision violent struggles between farmers and foragers. Others see a more peaceful transition. Violence may well have accompanied land clearance that constrained the foragers' food supplies. And farmers probably fought for control of the best land. In most cases, however, farmers seem to have displaced foragers by gradual infiltration rather than by conquest.

The archaeologist Colin Renfrew maintains that over a few centuries, farming populations in Europe could have increased by a factor of fifty to one hundred just on the basis of the dependability of their food supply. In his view, as population densities rose, individuals with fields farthest away from their native village formed new settlements, leading to a steady, nonviolent expansion of agriculture consistent with the archaeological record. An expansion by only 12 to 19 miles (20 to 30 kilometers) in a generation could have brought farming to every corner of Europe between 6500 and 3500 B.C.E.³ Yet it would have happened so gradually as to minimize sharp conflicts with foragers, who would simply have stayed clear of the agricultural frontier or gradually adopted agriculture themselves. Studies that map similar genetic changes in the population also suggest a gradual spread of agricultural people across Europe from southeast to northwest.⁴

Like forager bands, kinship and marriage bound farming communities together. Nuclear family size (parents and their children) may not have risen, but kinship relations traced back over more generations brought distant cousins into a common kin network. This encouraged the holding of land by large kinship units known as lineages^o or clans.

Because each person has two parents, four grandparents, eight great-grandparents, and so on, each individual has a bewildering number of ancestors. Some societies trace descent equally through both parents, but most give greater importance to descent through either the mother (matrilineal^o societies) or the father (patrilineal^o societies).

Some scholars believe descent through women and perhaps rule by women prevailed in early times. The traditions of Kikuyu^o farmers on Mount Kenya in East Africa, for example, relate that women ruled until the Kikuyu men conspired to get all the women pregnant at once and then overthrew them while they were unable to fight back. No specific evidence can prove or disprove

lineage (LIN-ee-ij) **matrilineal** (mat-ruh-LIN-ee-uhl)
patrilineal (pat-ruh-LIN-ee-uhl) **Kikuyu** (Ki-KOO-yoo)

legends such as this, but it is important not to confuse tracing descent through women (matrilineality) with rule by women (matriarchy°).

Religiously, kinship led to reverence for departed ancestors. Old persons often received elaborate burials. A plastered skull from Jericho° in the Jordan Valley of modern Israel may be evidence of early ancestor reverence or worship at the dawn of agriculture.

The religions of foragers tended to center on sacred groves, springs, and wild animals. In contrast, the rituals of farmers often centered on the Earth Mother, a deity believed to be the source of new life, an all-powerful (and usually male) Sky God, and divinities representing fire, wind, and rain.

Assemblages of **megaliths** (meaning “big stones”) seem to relate to religious beliefs. One complex built in the Egyptian desert before 5000 B.C.E. includes stone burial chambers, a calendar circle, and pairs of upright stones that frame the rising sun on the summer solstice. Stonehenge, a famous megalithic site in England constructed about 2000 B.C.E., marked the position of the sun and other celestial bodies at key points in the year. In the Middle East, the Americas, and other parts of the world, giant earth burial mounds may have served similar ritual and symbolic functions.

In some parts of the world, a few Neolithic villages grew into towns, which served as centers of trade and specialized crafts. Two towns in the Middle East, Jericho on the west bank of the Jordan River and Çatal Hüyük° in central Anatolia (modern Turkey), have been extensively excavated (Map 1.2 shows their location). Jericho revealed an elaborate early agricultural settlement. The round mud-brick dwellings characteristic of Jericho around 8000 B.C.E. may have imitated the shape of the tents of foragers who once had camped near Jericho's natural spring. A millennium later, rectangular rooms with finely plastered walls and floors and wide doorways opened onto central courtyards. Surrounding the 10-acre (4-hectare) settlement, a massive stone wall protected against attacks.

The ruins of Çatal Hüyük, an even larger Neolithic town, date to between 7000 and 5000 B.C.E. and cover 32 acres (13 hectares). Its residents lived in plastered mud-brick rooms with elaborate decorations, but Çatal Hüyük had no wall. Instead, the outer walls of its houses formed a continuous barrier without doors or large windows. Residents entered their houses by climbing down ladders through a hole in the roof.

Long-distance trade at Çatal Hüyük featured obsidian, a hard volcanic rock that artisans chipped, ground,

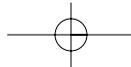
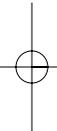
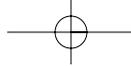
and polished into tools, weapons, mirrors, and ornaments. Other residents made fine pottery, wove baskets and woolen cloth, made stone and shell beads, and worked leather and wood. House sizes varied, but nothing indicates that Çatal Hüyük had a dominant class or a centralized political structure.

Representational art at Çatal Hüyük makes it clear that hunting retained a powerful hold on people's minds. Wall paintings of hunting scenes closely resemble earlier cave paintings. Many depict men and women adorned with leopard skins. Men were buried with weapons rather than with farm tools, and bones from rubbish heaps prove that wild game featured prominently in their diet.

Yet Çatal Hüyük's economy rested on agriculture. The surrounding fields produced barley and emmer wheat, as well as legumes° and other vegetables. Pigs

matriarchy (MAY-tree-ahr-key) **Jericho** (JER-ih-koe)
Çatal Hüyük (cha-TAHL hoo-YOOK)

legume (LEG-yoom)



were kept along with goats and sheep. Nevertheless, foragers' foods, such as acorns and wild grains, had not yet disappeared.

Çatal Hüyük had one religious shrine for every two houses. At least forty rooms contained shrines with depictions of horned wild bulls, female breasts, goddesses, leopards, and handprints. Rituals involved burning dishes of grain, legumes, and meat but not sacrifice of live animals. Statues of plump female deities far outnumber statues of male deities, suggesting that the inhabitants venerated a goddess as their principal deity. The large number of females who were buried elaborately in shrine rooms may have been priestesses of this cult. The site's principal excavator maintains that although male priests existed, "it seems extremely likely that the cult of the goddess was administered mainly by women."⁵

Metalworking became a specialized occupation in the late Neolithic period. At Çatal Hüyük, objects of copper and lead, which occur naturally in fairly pure form, date to about 6400 B.C.E. Silver and gold also appear at early dates in various parts of the world. Because of their rarity and their softness, these metals did not replace stone tools and weapons. The discovery of decorative and ceremonial objects of metal in graves indicates that they became symbols of status and power.

Towns, specialized crafts, and religious shrines forced the farmers to produce extra food for nonfarmers like priests and artisans. The building of permanent houses, walls, and towers, not to mention megalithic monuments, also called for added labor. Stonehenge, for example, took some 30,000 person-hours to build. Whether these tasks were performed freely or coerced is unknown.

MESOPOTAMIA

Because of the unpredictable nature of the Tigris and Euphrates Rivers, the peoples of ancient Mesopotamia saw themselves at the mercy of gods, who embodied the forces of nature. The Babylonian Creation Myth (**Babylon** was the most important city in southern Mesopotamia in the second and first millennia B.C.E.) climaxes in a cosmic battle between Marduk, the chief god of Babylon, and Tiamat^o, a female figure who personifies the salt sea. Marduk cuts up Tiamat and from her body fashions the earth and sky. He then creates the divisions of time, the celestial bodies, rivers, and weather phenomena. From the blood of a defeated rebel god, he creates human beings. Myths of this sort explained to the

Tiamat (TIE-ah-mat)

ancient inhabitants of Mesopotamia the environment in which they were living.

Settled Agriculture in an Unstable Landscape

Mesopotamia means "land between the rivers" in Greek. It reflects the centrality of the Euphrates and Tigris Rivers to the way of life in this region (see Map 1.3). The plain alongside

and between the rivers, which originate in the mountains of eastern Anatolia (modern Turkey) and empty into the Persian Gulf, gains fertility from the silt deposited by river floods over many millennia.

Today mostly in Iraq, the Mesopotamian plain gives way to mountains in the north and east: an arc extending from northern Syria through southeastern Anatolia to the Zagros^o Mountains that separate the plain from the Iranian Plateau. To the west and southwest lie the Syrian and Arabian deserts, to the southeast the Persian Gulf. Floods caused by snow melting in the northern mountains can be sudden and violent. They come inconveniently in the spring when crops, planted in winter to avoid the torrid summer temperatures, are ripening. Floods sometimes cause the rivers to change course, abruptly cutting off fields and towns from water and river communication.

Although the first domestication of plants and animals around 8000 B.C.E. occurred nearby, in the "Fertile Crescent" region of northern Syria and southeastern Anatolia, agriculture did not reach Mesopotamia until approximately 5000 B.C.E. "Dry" (unirrigated) farming requires at least 8 inches (20 centimeters) of rain a year. The hot, arid climate of southern Mesopotamia calls for irrigation, the artificial provision of water to crops. Initially, people probably channeled floodwater into nearby fields, but shortly after 3000 B.C.E., they learned to construct canals to supply water as needed and carry it to more distant fields.

Ox-drawn plows, developed by around 4000 B.C.E., cut a furrow in the earth into which carefully measured amounts of seed dropped from an attached funnel. Farmers favored barley as a cereal crop because it could tolerate the Mesopotamian climate and withstand the toxic effects of salt drawn to the surface of the soil by evaporation. Fields stood fallow (unplanted) every other year to replenish the nutrients in the soil. Date palms provided food, fiber, and wood. Garden plots produced vegetables. Reeds growing along the rivers and in the marshy southern delta yielded raw material for mats,

Zagros (ZAG-ruhs)

baskets, huts, and boats. Fish was a dietary staple. Herds of sheep and goats, which grazed on fallow land or the nearby desert, provided wool, milk, and meat. Donkeys, originally domesticated in northeast Africa, joined cattle as beasts of burden in the third millennium B.C.E., as did camels from Arabia and horses from the mountains in the second millennium B.C.E.

The written record begins with the **Sumerians** and marks the division, by some definitions, between prehistory and history. Archaeological evidence places the Sumerians in southern Mesopotamia at least by 5000 B.C.E. and perhaps even earlier. They created the framework of civilization in Mesopotamia during a long period of dominance in the third millennium B.C.E. Other peoples lived in Mesopotamia as well. As early as 2900 B.C.E., personal names recorded in inscriptions from the more northerly cities reveal a non-Sumerian **Semitic**° language. (*Semitic* refers to a family of languages spoken in parts of western Asia and northern Africa. They include the Hebrew, Aramaic°, and Phoenician° of the ancient world and the Arabic of today.) Possibly the descendants of nomads from the desert west of Mesopotamia, these Semites seem to have lived in peace with the Sumerians, adopting their culture and sometimes achieving positions of wealth and power.

By 2000 B.C.E., the Semitic peoples had become politically dominant. From this time on, Akkadian°, a Semitic language, took precedence over Sumerian, although the Sumerian cultural legacy survived in translation. The

Sumerian-Akkadian dictionaries compiled at the time to facilitate translations from Sumerian allow us today to read the language, which has no known relatives. The characteristics and adventures of the Semitic gods also indicate cultural borrowing. This cultural synthesis parallels a biological merging of Sumerians and Semites

Semitic (suh-MIT-ik) **Aramaic** (ar-uh-MAY-ik)
Phoenician (fi-NEE-shuhn) **Akkadian** (uh-KAY-dee-uhn)

through intermarriage. Though other ethnic groups, including Kassites^o from the eastern mountains and Elamites^o and Persians from farther south in Iran, played roles in Mesopotamian history, the Sumerian/Semitic cultural heritage remained fundamentally unaltered until the arrival of Greeks in the late fourth century B.C.E.

Cities, Kings, and Trade

Mesopotamian farmers usually lived in villages. A group of families, totaling a few hundred persons perhaps, could protect one another, work together at key times in the agricultural cycle, and share tools, barns, and threshing floors. Village society also provided companionship and a pool of potential marriage partners.

Occasionally, as a particularly successful village grew, small satellite villages developed nearby and eventually merged with the main village to form an urban center. Cities depended on agriculture and therefore on the villages. Many early Mesopotamian city dwellers went out each day to labor in nearby fields. Other city dwellers, however, depended for food on the surplus food production of the villagers. Some specialized in crafts—for example, pottery, artwork, and forging weapons, tools, and other objects out of metal. Others served the gods or carried out administrative duties. Mesopotamian cities controlled the agricultural land and collected crop surpluses from villages in their vicinity. In return, the city provided rural districts with military protection against bandits and raiders and a market where villagers could acquire manufactured goods produced by urban specialists.

The term **city-state** refers to a self-governing urban center and the agricultural territories it controlled. Stretches of uncultivated land, either desert or swamp, served as buffers between the many small city-states of early Mesopotamia. Nevertheless, disputes over land, water rights, and movable property often sparked hostilities between neighboring cities and the building of protective walls of sun-dried bricks. At other times, cities cooperated, sharing water and allowing traders safe passage through their territories.

Mesopotamians opened new land to agriculture by building and maintaining irrigation networks. Canals brought water from river to field; drainage ditches carried the water back to the river before evaporation could draw harmful salt and minerals to the surface. Weirs (partial dams) raised the water level of the river so that water could flow by gravity into the canals. Dikes along the riverbanks protected against floods. The silt carried by floods clogged the canals, which required frequent

Kassite (KAS-ite) **Elamite** (EE-luh-mite)

dredging. In some places, levers with counterweights lifted buckets of irrigation water out of a river or canal.

Successful operation of such sophisticated irrigation systems depended on leaders compelling or persuading large numbers of people to work together. Other projects called for similar cooperation: harvesting, sheep shearing, building of fortifications and large public buildings, and warfare. Two centers of power, the temple and the palace of the king, have left written records, but details of governmental life remain scanty, as are the hints at some sort of citizens' assembly that may have evolved from traditional village councils.

One or more temples, centrally located, housed each city-state's deity or deities and their associated cults—sets of religious rituals. Temples owned agricultural lands and stored the gifts that worshipers donated. The central location of the temple buildings confirms the importance of cults. Head priests, who controlled each shrine and managed its wealth, played prominent political and economic roles.

In the third millennium B.C.E., Sumerian documents show the emergence of a *lugal*^o or “big man”—what we would call a king. An increase in warfare as ever-larger communities quarreled over land, water, and raw materials may have prompted this development, but details are lacking. According to one theory, communities chose certain men to lead their armies in time of war, and these individuals found ways to prolong their authority in peacetime and assume judicial and ritual functions. Although the *lugal*'s position was not hereditary, it often passed from a father to a capable son.

The location of the temple in the city's heart and the less prominent siting of the king's palace symbolize the later emergence of royalty. The king's power grew at the expense of the priesthood, however, because the army backed him. The priests and temples retained influence because of their wealth and religious mystique, but they gradually became dependent on the palace. Some Mesopotamian kings claimed divinity, but this concept did not take root. Normally the king portrayed himself as the deity's earthly representative.

By the late third millennium B.C.E., kings assumed responsibility for the upkeep and building of temples and the proper performance of ritual. Other royal responsibilities included maintaining city walls and defenses, extending and repairing irrigation channels, guarding property rights, warding off foreign attacks, and establishing justice.

The *Epic of Gilgamesh* referred to at the beginning of this chapter shows both the ambition and the value to the community of the kings. Gilgamesh, who is probably

lugal (LOO-guhl)

based on a historical king of Uruk, stirs resentment by demanding sexual favors from new brides, but the community relies on his immense strength, wisdom, and courage. In quest of everlasting glory, Gilgamesh walls the city magnificently, stamping his name on every brick. His journey to the faraway Cedar Mountains reflects the king's role in accessing valuable resources.

A few city-states became powerful enough to dominate their neighbors. Sargon^o, ruler of Akkad^o around 2350 B.C.E., pioneered in uniting many cities under one king and capital. His title, King of Sumer and Akkad, symbolized this claim to universal dominion. Sargon and the four family members who succeeded him over 120 years secured their power in several ways. They razed the walls of conquered cities and installed governors backed by garrisons of Akkadian troops. They gave soldiers land to ensure their loyalty. Being of Semitic stock, they adapted the cuneiform^o system of writing used for Sumerian (discussed later in the chapter) to express their own language. Their administration featured a uniform system of weights and measures and standardized formats for official documents. These measures facilitated assessment and collection of taxes, recruitment of soldiers, and organization of labor projects.

For reasons that remain obscure, the Akkadian state fell around 2230 B.C.E. The Sumerian language and culture revived in the cities of the southern plain under the Third Dynasty of Ur (2112–2004 B.C.E.), a five-king dynasty that maintained itself for a century through campaigns of conquest and prudent marriage alliances. The Akkadian state had controlled more territory, but tighter government control based on a rapidly expanding bureaucracy and obsessive recordkeeping now secured Ur's dominance. Messengers and well-maintained road stations speeded up communications; and an official calendar, standardized weights and measures, and uniform writing practices improved central administration. To protect against nomadic Semitic Amorites^o from the northwest, the kings erected a wall 125 miles (201 kilometers) long. Eventually, however, nomad incursions combined with an Elamite attack from the southeast toppled the Third Dynasty of Ur.

The Amorites founded a new city at Babylon, not far from Akkad. Toward the end of a long reign, **Hammurabi**^o (r. 1792–1750 B.C.E.) initiated a series of aggressive military campaigns, and Babylon became the capital of what historians have named the “Old Babylonian” state, which eventually stretched beyond Sumer and Akkad into the north and northwest, from 1900 to

1600 B.C.E. Hammurabi's famous Law Code, inscribed on a polished black stone pillar, provided judges with a lengthy set of examples illustrating the principles to be used in deciding cases. Some examples call for severe physical punishments to compensate for crimes. These Amorite notions of justice differed from the monetary penalties prescribed in earlier codes from Ur.

Conquest gave some Mesopotamian city-states access to vital resources. Trade offered an alternative, and long-distance commerce flourished in most periods. Evidence of seagoing vessels appears as early as the fifth millennium B.C.E. Wood, metals, and stone came from foreign lands in exchange for wool, cloth, barley, and vegetable oil. Cedar forests in Lebanon and Syria yielded wood, Anatolia produced silver, Egypt gold, and the eastern Mediterranean and Oman (on the Arabian peninsula) copper. Tin, which in alloy with copper made bronze, came from Afghanistan (in south-central Asia), and chlorite, a greenish, easily carved stone, from the Iranian plateau. Jewelers and stone-carvers used black diorite from the Persian Gulf, blue lapis lazuli^o from Afghanistan, and reddish carnelian^o from Pakistan.

Most merchants worked for the palace or the temple in the third millennium B.C.E. These institutions alone commanded the financial resources and organizational skills needed for acquiring, transporting, and protecting valuable commodities. Merchants exchanged surpluses from the royal or temple farmlands for raw materials and luxury goods. In the second millennium B.C.E., independent merchants and merchant guilds gained increasing influence.

Sources do not reveal whether the most important commercial transactions took place in the area just inside the city gates or in the vicinity of the docks. Wherever they occurred, coined money played no role. Coins—stamped metal pieces of state-guaranteed value—first appeared in the sixth century B.C.E. and did not reach Mesopotamia until several centuries later. For most of Mesopotamian history, items that could not be bartered—traded for one another—had their value calculated in relation to fixed weights of precious metal, primarily silver, or measures of grain.

Mesopotamian Society

Urbanized civilizations foster social division, that is, obvious variation in the status and privileges of different groups according to wealth, social function, and legal and political rights. Urbanization, specialization of function,

Sargon (SAHR-gone) **Akkad** (AH-kahd)
cuneiform (kyoo-NEE-uh-form) **Amorite** (AM-uh-rite)
Hammurabi (HAM-uh-rah-bee)

lapis lazuli (LAP-is LAZ-uh-lee) **carnelian** (kahr-NEEL-yuhn)

centralization of power, and use of written records enabled certain groups to amass unprecedented wealth. Temple leaders and the kings controlled large agricultural estates, and the palace administration collected taxes from subjects. How elite individuals acquired large private landholdings is unknown, since land was rarely put up for sale. In some cases, however, debtors lost their land to creditors, or soldiers and priests received land in return for their services.

The Law Code of Hammurabi in the eighteenth century B.C.E. reflects social divisions that may have been valid for other places and times despite inevitable fluctuations. It identifies three classes: (1) the free landowning class—royalty, high-ranking officials, warriors, priests, merchants, and some artisans and shopkeepers; (2) the class of dependent farmers and artisans, whose legal attachment to royal, temple, or private estates made them the primary rural work force; and (3) the class of slaves, primarily employed in domestic service. Penalties prescribed in the Law Code depend on the class of the offender. The lower orders received the most severe punishments. Slaves, many of them prisoners of war from the mountains and others, insolvent debtors, played a lesser economic role than they would in the later societies of Greece and Rome (see Chapters 4 and 5). Identified by a distinctive hair style rather than chains or brands, they would have a barber shave off the telltale mark if they were lucky enough to regain their freedom. Because commodities such as food and oil were distributed to all people in proportion to their age, gender, and task, documents do not always distinguish between slaves or dependent workers and free laborers. In the Old Babylonian period, the class of people who were not dependent on the temple or palace grew, the amount of land and other property in private hands increased, and free laborers became more common.

The daily lives of ordinary Mesopotamians, especially those in villages or on large estates, left few archaeological or literary traces. Peasants built with mud brick and reeds, which quickly disintegrate, and they had few metal possessions. Being illiterate, they left no written record of their lives. Male domination of the position of **scribe**—an administrator or scholar charged by the temple or palace with reading and writing tasks—further complicates efforts to reconstruct the lives of women. For the most part, their writings reflect elite male activities. Archaeology only partially fills this gap.

Anthropologists theorize that women lost social standing and freedom with the spread of agriculture. In hunting and gathering societies, they believe, women's foraging provided most of the community's food. But in Mesopotamia, food production depended on the heavy

physical labor of plowing, harvesting, and digging irrigation channels, jobs usually performed by men. Since food surpluses made larger families possible, bearing and raising children became the primary occupation of many women, leaving them little time to acquire the specialized skills of a scribe or artisan.

Women could own property, maintain control of their dowry, and even engage in trade, but men monopolized political life. Some women worked outside the household in textile factories and breweries or as prostitutes, tavern keepers, bakers, or fortune-tellers. Home tasks for nonelite women probably included helping with farming, growing vegetables, cooking, cleaning, fetching water, tending the household fire, and weaving baskets and textiles.

The standing of women seems to have declined further in the second millennium B.C.E., perhaps because of the rise of an urbanized middle class and an increase in private wealth. Husbands gained authority in the household and benefited from marriage and divorce laws. A man normally took just one wife, but he could obtain a second if the first gave him no children. In later Mesopotamian history, kings and rich men had several wives. Marriage alliances arranged between families made women instruments for preserving and enhancing family wealth. Alternatively, a family might decide to avoid a daughter's marriage, with the resulting loss of a dowry, by dedicating her to temple service as "god's bride." Constraints on women's lives that eventually became part of Islamic tradition, such as remaining at home and wearing veils in public, may date back to the second millennium B.C.E. (see Chapter 8).

Gods, Priests, and Temples

The Sumerian gods embodied the forces of nature: Anu the sky, Enlil the air, Enki the water, Utu the sun, Nanna the moon. The goddess Inanna governed sexual attraction and violence. When the Semitic peoples became dominant, they equated their deities with those of the Sumerians. The Sumerian gods Nanna and Utu, for example, became the Semitic Sin and Shamash, while the goddess Inanna became Ishtar. The Semitic gods took over the myths and many of the rituals of their Sumerian predecessors.

People imagined their gods as anthropomorphic^o, that is, like humans in form and conduct. The gods had bodies and senses, sought nourishment from sacrifice, enjoyed the worship and obedience of humanity, and ex-

anthropomorphic (an-thruh-phu-MORE-fik)

perienced the human emotions of lust, love, hate, anger, and envy. Religious beliefs instilled fear of the gods, who could alter the landscape, and a desire to appease them.

Public, state-organized religion stands out in the archaeological record. Cities built temples and showed devotion to the divinity or divinities who protected the community. All the peoples of Sumer regarded Nippur (see Map 1.3) as a religious center because of its temple to the air god Enlil. As with other temples, they considered it the god's residence and believed the cult statue in its interior shrine embodied his life-force. Priests attended this divine image, trying to anticipate and meet its every need in a daily cycle of waking, bathing, dressing, feeding, moving around, entertaining, soothing, and revering. These rituals reflected the message of the Babylonian Creation Myth that humankind existed only to serve the gods. Several thousand priests may have staffed a large temple like that of the god Marduk at Babylon.

Priests passed their office and sacred lore to their sons, and their families lived on rations of food from the deity's estates. The amount an individual received depended on his rank within a complicated hierarchy of status and specialized function. The high priest performed the central acts in the great rituals. Certain priests pleased the gods with music. Others exorcised evil spirits. Still others interpreted dreams and divined the future by examining the organs of sacrificed animals, reading patterns in rising incense smoke, or casting dice.

A high wall surrounded the temple precinct, which contained the shrine of the chief deity; open plazas; chapels for lesser gods; housing, dining facilities, and offices for priests and other temple staff; and buildings for crafts, storage, and other services. The compound focused on the **ziggurat**^o, a multistory, mud-brick, pyramid-shaped tower approached by ramps and stairs. Scholars are still debating the ziggurat's function and symbolic meaning.

Scholars similarly debate whether common people had much access to temple buildings and how religious practices and beliefs affected their everyday lives. Individuals placed votive statues in the sanctuaries in the belief that these miniature replicas of themselves could continually seek the deity's favor. The survival of many **amulets** (small charms meant to protect the bearer from evil) and representations of a host of demons suggests widespread belief in magic—the use of special words and rituals to manipulate the forces of nature. They believed, for example, that a demon caused headaches and could be driven out of the ailing body. Lamashtu, the demon who caused miscarriages, could be frightened off if

ziggurat (ZIG-uh-rat)

a pregnant woman wore an amulet with the likeness of the hideous but beneficent demon Pazuzu. A god or goddess might also be persuaded to reveal the future in return for a gift or sacrifice.

Elite and common folk came together in great festivals such as the twelve-day New Year's festival held each spring in Babylon as the new grain was beginning to sprout in the fields. In the early days of the festival, in conjunction with rituals of purification and invocations of Marduk, a priest read to the god's image the text of the Babylonian Creation Epic. Many subsequent activities in the temple courtyard and streets reenacted the events of the myth. Following their belief that time moved in a circular path through a cycle of birth, growth, maturity, and death, they hoped through this ritual to persuade the gods to grant a renewal of time and life at winter's end (see Diversity and Dominance: Violence and Order in the Babylonian New Year's Festival).

Technology and Science

The term *technology* comes from the Greek word *techne*, meaning “skill” or “specialized knowledge.” It normally refers

to the tools and processes by which humans manipulate the physical world. However, many scholars also use it more broadly for any specialized knowledge used to transform the natural environment and human society. Ancient Mesopotamian irrigation techniques that expanded agricultural production fit the first definition, priestly belief in their ability to enhance prosperity through prayers and rituals the second.

Writing, which first appeared in Mesopotamia before 3300 B.C.E., partakes more of the second definition than of the first. The earliest inscribed tablets, found in the chief temple at Uruk, date from a time when the temple was the community's most important economic institution. The most plausible current theory maintains that writing originated from a system of tokens used to keep track of property—sheep, cattle, wagon wheels—as wealth accumulated and the volume and complexity of commerce strained people's memories. The shape and number of tokens inserted in clay “envelopes” (balls of clay) indicated the contents of a shipment or storeroom, and pictures of the tokens incised on the outside of the envelope reminded the reader of what was inside.

Eventually people realized that the incised pictures, the first written symbols, provided an adequate record of the transaction and made the tokens inside the envelope redundant. Each early symbol represented a thing, but it could also stand for the sound of the word for that thing when that sound was a syllable of a longer word. For

DIVERSITY AND DOMINANCE

VIOLENCE AND ORDER IN THE BABYLONIAN NEW YEAR'S FESTIVAL

The twelve-day Babylonian New Year's Festival was one of the grandest and most important religious celebrations in ancient Mesopotamia. Complex rituals, both private and public, were performed in accordance with detailed formulas. Fragmentary Babylonian documents of the third century B.C.E. (fifteen hundred years after Hammurabi) provide most of our information about the festival, but because of the continuity of culture over several millennia, the later Babylonian New Year's Festival is likely to preserve many of the beliefs and practices of earlier epochs.

In the first days of the festival, most of the activity took place in inner chambers of the temple of Marduk, patron deity of Babylon, attended only by ranking members of the priesthood. A particularly interesting ceremony was a ritualized humiliation of the king, followed by a renewal of the institution of divinely sanctioned kingship:

On the fifth day of the month Nisannu . . . they shall bring water for washing the king's hands and then shall accompany him to the temple Esagil. The *urigallu*-priest shall leave the sanctuary and take away the scepter, the circle, and the sword from the king. He shall bring them before the god Bel [Marduk] and place them on a chair. He shall leave the sanctuary and strike the king's cheek. He shall accompany the king into the presence of the god Bel. He shall drag him by the ears and make him bow to the ground. The king shall speak the following only once: "I did not sin, lord of the countries. I was not neglectful of the requirements of your godship. I did not destroy Babylon. The temple Esagil, I did not forget its rites. I did not rain blows on the cheek of a subordinate." . . . [The *urigallu*-priest responds:] "The god Bel will listen to your prayer. He will exalt your kingship. The god Bel will bless you forever. He will destroy your enemy, fell your adversary." After the *urigallu*-priest says this, the king shall regain his composure. The scepter, circle, and sword shall be restored to the king.

Also in the early days of the festival, in conjunction with rituals of purification and invocations to Marduk, a priest recited the entire text of the Babylonian Creation Epic to the image of the god. After relating the origins of the

gods from the mating of two primordial creatures, Tiamat, the female embodiment of the salt sea, and Apsu, the male embodiment of fresh water, the myth tells how Tiamat gathered an army of old gods and monsters to destroy the younger generation of gods.

When her labor of creation was ended, against her children Tiamat began preparations of war . . . all the Anunnaki [the younger gods], the host of gods gathered into that place tongue-tied; they sat with mouths shut for they thought, "What other god can make war on Tiamat? No one else can face her and come back" . . . Lord Marduk exulted, . . . with racing spirits he said to the father of gods, "Creator of the gods who decides their destiny, if I must be your avenger, defeating Tiamat, saving your lives, call the Assembly, give me precedence over all the rest; . . . now and for ever let my word be law; I, not you, will decide the world's nature, the things to come. My decrees shall never be altered, never be annulled, but my creation endures to the ends of the world" . . . He took his route towards the rising sound of Tiamat's rage, and all the gods besides, the fathers of the gods pressed in around him, and the lord approached Tiamat. . . . When Tiamat heard him her wits scattered, she was possessed and shrieked aloud, her legs shook from the crotch down, she gabbled spells, muttered maledictions, while the gods of war sharpened their weapons. . . . The lord shot his net to entangle Tiamat, and the pursuing tumid wind, Imhullu, came from behind and beat in her face. When the mouth gaped open to suck him down he drove Imhullu in, so that the mouth would not shut but wind raged through her belly; her carcass blown up, tumescent. She gaped. And now he shot the arrow that split the belly, that pierced the gut and cut the womb.

Now that the Lord had conquered Tiamat he ended her life, he flung her down and straddled the carcass; the leader was killed, Tiamat was dead her rout was shattered, her band dispersed. . . . The lord rested; he gazed at the huge body, pondering how to use it, what to create from the dead carcass. He split it apart like a cockle-shell; with the upper half he constructed the arc of sky, he pulled down the bar and set a watch on the waters, so they should never escape. . . . He

projected positions for the Great Gods conspicuous in the sky, he gave them a starry aspect as constellations; he measured the year, gave it a beginning and an end, and to each month of the twelve three rising stars. . . . Through her ribs he opened gates in the east and west, and gave them strong bolts on the right and left; and high in the belly of Tiamat he set the zenith. He gave the moon the luster of a jewel, he gave him all the night, to mark off days, to watch by night each month the circle of a waxing waning light. . . . When Marduk had sent out the moon, he took the sun and set him to complete the cycle from this one to the next New Year. . . .

Then Marduk considered Tiamat. He skimmed spume from the bitter sea, heaped up the clouds, spindrift of wet and wind and cooling rain, the spittle of Tiamat. With his own hands from the steaming mist he spread the clouds. He pressed hard down the head of water, heaping mountains over it, opening springs to flow: Euphrates and Tigris rose from her eyes, but he closed the nostrils and held back their springhead. He piled huge mountains on her paps and through them drove water-holes to channel the deep sources; and high overhead he arched her tail, locked-in to the wheel of heaven; the pit was under his feet, between was the crotch, the sky's fulcrum. Now the earth had foundations and the sky its mantle. . . . When it was done, when they had made Marduk their king, they pronounced peace and happiness for him, "Over our houses you keep unceasing watch, and all you wish from us, that will be done."

Marduk considered and began to speak to the gods assembled in his presence. This is what he said, "In the former time you inhabited the void above the abyss, but I have made Earth as the mirror of Heaven, I have consolidated the soil for the foundations, and there I will build my city, my beloved home. A holy precinct shall be established with sacred halls for the presence of the king. When you come up from the deep to join the Synod you will find lodging and sleep by night. When others from heaven descend to the Assembly, you too will find lodging and sleep by night. It shall be BABYLON the home of the gods. The masters of all crafts shall build it according to my plan". . . . Now that Marduk has heard what it is the gods are saying, he is moved with desire to create a work of consummate art. He told Ea the deep thought in his heart.

"Blood to blood
I join,
blood to bone
I form
an original thing,
its name is MAN,
aboriginal man
is mine in making.

"All his occupations
are faithful service . . ."

Ea answered with carefully chosen words, completing the plan for the gods' comfort. He said to Marduk, "Let one of the kindred be taken; only one need die for the new creation. Bring the gods together in the Great Assembly; there let the guilty die, so the rest may live."

Marduk called the Great Gods to the Synod; he presided courteously, he gave instructions and all of them listened with grave attention. The king speaks to the rebel gods, "Declare on your oath if ever before you spoke the truth, who instigated rebellion? Who stirred up Tiamat? Who led the battle? Let the instigator of war be handed over; guilt and retribution are on him, and peace will be yours for ever."

The great Gods answered the Lord of the Universe, the king and counselor of gods, "It was Kingu who instigated rebellion, he stirred up that sea of bitterness and led the battle for her." They declared him guilty, they bound and held him down in front of Ea, they cut his arteries and from his blood they created man; and Ea imposed his servitude. . . .

Much of the subsequent activity of the festival, which took place in the temple courtyard and streets, was a reenactment of the events of the Creation Myth. The festival occurred at the beginning of spring, when the grain shoots were beginning to emerge, and the essential symbolism of the event concerns the return of natural life to the world. The Babylonians believed that time moved in a circular path and that the natural world had a life cycle consisting of birth, growth, maturity, and death. In winter the cycle drew to a close, and there was no guarantee that it would repeat and that life would return to the world. Babylonians hoped that the New Year's Festival would encourage the gods to grant a renewal of time and life, in essence to recreate the world.

QUESTIONS FOR ANALYSIS

1. According to the Creation Epic, how did the present order of the universe come into being? What does the violent nature of this creation tell us about the Mesopotamian view of the physical world and the gods?
2. How did the symbolism of the events of the New Year's Festival, with its ritual reading and recreation of the story of the Creation Myth, validate such concepts as kingship, the primacy of Babylon, and mankind's relationship to the gods?
3. What is the significance of the distinction between the "private" ceremonies celebrated in the temple precincts and the "public" ceremonies that took place in the streets of the city? What does the festival tell us about the relationship of different social groups to the gods?

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example, the symbols *shu* for “hand” and *mu* for “water” could be combined to form *shumu*, the word for “name.”

The usual method of writing involved pressing the point of a sharpened reed into a moist clay tablet. Because the reed made wedge-shaped impressions, the early pictures, which were more or less realistic, evolved into stylized combinations of strokes and wedges, a system known as **cuneiform** (Latin for “wedge-shaped”) writing. Mastering cuneiform, which in any particular period involved several hundred signs, as compared to the twenty-five or so in an alphabetic system, required years of practice. In the “tablet-house” attached to a temple or palace, students learned writing and mathematics under a stern headmaster and endured bullying by older student tutors called “big brothers.” The prestige and regular employment that went with their position may have made scribes reluctant to simplify the cuneiform system. In the Old Babylonian period, the growth of private commerce brought an increase in the number of people who could read and write, but literacy remained a rare accomplishment.

Developed originally for the Sumerian language, cuneiform—a system of writing rather than a language—later served to express the Akkadian language of the Mesopotamian Semites as well as other languages of

western Asia such as Hittite, Elamite, and Persian. The remains of the ancient city of Ebla^o in northern Syria illustrate the Mesopotamian influence on other parts of western Asia. Ebla’s buildings and artifacts follow Mesopotamian models, and thousands of tablets inscribed with cuneiform symbols bear messages in both Sumerian and the local Semitic dialect. The high point of Ebla’s wealth and power occurred from 2400 to 2250 B.C.E., roughly contemporary with the Akkadian Empire. Ebla then controlled extensive territory and derived wealth from agriculture, manufacture of woolen cloth, and trade with Mesopotamia and the Mediterranean coast.

Economic concerns predominate in the earliest Sumerian documents, but cuneiform came to have wide-ranging uses beyond the recordkeeping that apparently inspired its invention. Legal acts that had formerly been validated by the recitation of oral formulas and performance of symbolic acts came to be accompanied by written documents marked with the seals of the participants. Cuneiform similarly served political, literary, religious, and scientific purposes.

In the physical realm, irrigation, the basis of Mesopotamian agriculture, required the construction and

Ebla (EH-bluh)

maintenance of canals, weirs, and dikes. Cattle drew carts and sledges in some locations. In the south, where numerous water channels cut up the landscape, boats and barges predominated. In northern Mesopotamia, donkeys served as pack animals for overland caravans in the centuries before the advent of the camel around 1200 B.C.E.

To improve on stone tools, the Mesopotamians imported ores containing copper, tin, and arsenic. From these they made bronze, a form of copper alloyed with either of the other two elements. Craftsmen poured molten bronze into molds shaped like weapons or tools. The cooled metal took a sharper edge than stone, was less likely to break, and was more easily repaired. Yet stone implements remained in use among poor people who could not afford bronze.

Clay, Mesopotamia's most abundant resource, went into the making of mud bricks. Whether dried in the sun or baked in an oven for greater durability, these constituted the main building material. Construction of city walls, temples, and palaces required practical knowledge of architecture and engineering. For example, the reed mats that Mesopotamian builders laid between the mud-brick layers of ziggurats served the same stabilizing purpose as girders in modern high-rise construction. Abundance of good clay also made pottery the most common material for dishes and storage vessels. By 4000 B.C.E., potters had begun to use a revolving platform called a potter's wheel. Spun by hands or feet, the potter's wheel made possible rapid manufacture in precise and complex shapes.

Military technology changed as armies evolved from militias called up for short periods in the earliest periods to well-trained and well-paid full-time soldiers by the late third and second millennia B.C.E. In the early second millennium B.C.E., horses appeared in western Asia, and the horse-drawn chariot, a technically complicated device, came into vogue. Infantry found themselves at the mercy of swift chariots carrying a driver and an archer who could easily overtake them. Using increasingly effective siege machinery, Mesopotamian soldiers learned to climb over, undermine, or knock down the walls protecting the cities of their enemies.

In another area where the Mesopotamians sought to gain control of their physical environment, they used a base-60 number system (the origin of the seconds and minutes we use today), in which numbers were expressed as fractions or multiples of 60 (in contrast to our base-10 system). Such advances in mathematics along with careful observation of the skies made the Mesopotamians sophisticated practitioners of astronomy. Mesopotamian priests compiled lists of omens or unusual

sightings on earth and in the heavens, together with a record of the events that coincided with them. They consulted these texts at critical times, for they believed that the recurrence of such phenomena could provide clues to future developments. The underlying premise was that the elements of the material universe, from the microcosmic to the macrocosmic, were interconnected in mysterious but undeniable ways.

EGYPT

No other place exhibits the impact of the natural environment on the history and culture of a society better than ancient Egypt. Though located at the intersection of Asia and Africa, Egypt was less a crossroads than an isolated land protected by surrounding barriers of desert and a harborless, marshy seacoast. Where Mesopotamia was open to migration or invasion and was dependent on imported resources, Egypt's natural isolation and material self-sufficiency fostered a unique culture that for long periods had relatively little to do with other civilizations.

The Land of Egypt: "Gift of the Nile"

The world's longest river, the Nile flows northward from Lake Victoria and draws water from several large tributaries in the highlands of tropical Africa.

Carving a narrow valley between a chain of hills on either side, it terminates at the Mediterranean Sea (see Map 1.4). Though bordered mostly by desert, the banks of the river support lush vegetation. About 100 miles (160 kilometers) from the Mediterranean, the river divides into channels to form a triangular delta. Most of Egypt's population lives on the twisting, green ribbon of land along the river or in the Nile Delta. Bleak deserts of mountains, rocks, and dunes occupy the remaining 90 percent of the country. The ancient Egyptians distinguished between the low-lying, life-sustaining "Black Land" with its dark soil and the elevated, deadly "Red Land" of the desert. The fifth-century B.C.E. Greek traveler Herodotus^o demonstrated insight when he called Egypt the "gift of the Nile."

Travel and communication centered on the river, with the most important cities located upstream away from the Mediterranean. Because the river flows from south to north, the Egyptians called the southern part of

Herodotus (he-ROD-uh-tuhs)

the country “Upper Egypt” and the northern delta “Lower Egypt.” The First Cataract of the Nile, the northernmost of a series of impassable rocks and rapids below Aswan° (about 500 miles [800 kilometers] south of the Mediterranean), formed Egypt’s southern boundary in

Aswan (AS-wahn)

most periods, but Egyptian control sometimes extended farther south into what they called “Kush” (later Nubia, today part of southern Egypt and northern Sudan). The Egyptians also settled certain large oases, green and habitable “islands” in the midst of the desert, which lay west of the river.

The hot, sunny climate favored agriculture. Though rain rarely falls south of the delta, the river provided water to irrigation channels that carried water out into the valley and increased the area suitable for planting. In one large depression west of the Nile, drainage techniques reduced the size of Lake Faiyum° and allowed land to be reclaimed for agriculture.

Each September, the river overflowed its banks, spreading water into the bordering valley. Unlike the Mesopotamians, the Egyptians needed no dams or weirs to raise the level of the river and divert water into channels. Moreover, the Nile, unlike the Tigris and Euphrates, flooded at the best time for grain agriculture. When the flood receded and its waters drained back into the river, the land had a fertile new layer of mineral-rich silt, and farmers could easily plant their crops in the moist soil. The Egyptians’ many creation myths commonly featured the emergence of a life-supporting mound of earth from a primeval swamp.

The level of the flood’s crest determined the abundance of the following harvest. “Nilometers,” stone staircases with incised units of height along the river’s edge, recorded each flood. Too much water washed out the dikes protecting inhabited areas and caused much damage. Too little water left fertile land unirrigated and hence uncultivable, plunging the country into famine. The ebb and flow of successful and failed regimes seems linked to the cycle of floods. Nevertheless, remarkable stability characterized most eras, and Egyptians viewed the universe as an orderly and beneficent place.

Egypt’s other natural resources offered further advantages. Papyrus reeds growing in marshy areas yielded fibers that made good sails, ropes, and a kind of paper. The wild animals and birds of the marshes and desert fringe and the abundant river fish attracted hunters and fishermen. Building stone could be quarried and floated downstream from a number of locations in southern Egypt. Clay for mud bricks and pottery could be found almost everywhere. Copper and turquoise deposits in the Sinai desert to the east and gold from Nubia to the south were within reach, and the state organized armed expeditions and forced labor to exploit these resources. Thus, Egypt was substantially more self-sufficient than Mesopotamia.

Faiyum (fie-YOUM)

The farming villages that appeared in Egypt as early as 5500 B.C.E. relied on domesticated plant and animal species that had emerged several millennia earlier in western Asia. Egypt's emergence as a focal point of civilization, however, stemmed at least partially from a gradual change in climate from the fifth to the third millennium B.C.E. Before that time, the Sahara, today the world's largest desert, had a relatively mild and wet climate. Its lakes and grasslands supported a variety of plant and animal species as well as populations of hunter-gatherers (see Chapter 7). As the climate changed and the Sahara began to dry up, displaced groups migrated into the then marshy Nile Valley, where they developed a sedentary way of life.

Divine Kingship

The increasing population called for greater complexity in political organization, including a form of local kingship. Later generations of Egyptians saw the unification of such smaller units into a single state by Menes°, a ruler from the south, as a pivotal event. Scholars question whether this event, dated to around 3100 B.C.E., took place at the hands of a historical or a mythical figure, but many authorities equate Menes with Narmer, a historical ruler who is shown on a decorated slate palette exulting over defeated enemies. Later kings of Egypt bore the title “Ruler of the Two Lands”—Upper and Lower Egypt—and wore two crowns symbolizing the unification of the country. Unlike Mesopotamia, Egypt discovered unity early in its history.

Following the practice of Manetho, an Egyptian priest from the fourth century B.C.E., historians divide Egyptian history into thirty dynasties (sequences of kings from the same family). The rise and fall of dynasties often reflects the dominance of one or another part of the country. Scholars also divide Egyptian history into “Old,” “Middle,” and “New Kingdoms,” each a period of centralized political power and brilliant cultural achievement. “Intermediate Periods” signal political fragmentation and cultural decline. Although experts debate the specific dates, the chronology (on page 7) reflects current opinion.

The Egyptian state centered on the king, often known by the New Kingdom term **pharaoh**, from an Egyptian phrase meaning “palace.” From the Old Kingdom on, if not earlier, Egyptians considered the king a god on earth, the incarnation of Horus and the son of the sun-god Re°. In this role he maintained **ma'at**°, the divinely authorized order of the universe. As a link between the

people and the gods, his benevolent rule ensured the welfare and prosperity of the country. The Egyptians' conception of a divine king, the source of law and justice, may explain the apparent absence in Egypt of an impersonal code of law comparable to Hammurabi's Code in Mesopotamia.

So much depended on the kings that their deaths evoked elaborate efforts to ensure the well-being of their spirits on their journey to rejoin the gods. Carrying out funerary rites, constructing royal tombs, and sustaining the kings' spirits in the afterlife by perpetual offerings in adjoining funerary chapels demanded massive resources. Flat-topped, rectangular tombs made of mud brick sufficed for the earliest rulers, but around 2630 B.C.E., Djoser°, a Third Dynasty king, ordered the construction of a stepped **pyramid**—a series of stone platforms laid one on top of the other—at Saqqara°, near Memphis. Rulers of the Fourth Dynasty filled in the steps of Djoser's tomb to create the smooth-sided, limestone pyramids that most often symbolize ancient Egypt. Between 2550 and 2490 B.C.E., the pharaohs Khufu° and Khefren° erected huge pyramids at Giza, several miles north of Saqqara, the largest stone structures ever built. Khufu's pyramid originally reached a height of 480 feet (146 meters).

Egyptians accomplished this construction with stone tools (bronze was still expensive and rare) and no machinery other than simple levers, pulleys, and rollers. Calculations of the human muscle power needed to build a pyramid within a ruler's lifetime indicate that large numbers of people must have been pressed into service for part of each year, probably during the flood season, when no agricultural work could be done. The Egyptian masses probably considered this demand for labor a kind of religious service that would help ensure prosperity. Most of Egypt's surplus resources went into constructing these artificial mountains of stone. The age of the great pyramids lasted about a century, though construction of pyramids on a smaller scale continued for two millennia.

Administration and Communication

Ruling dynasties usually placed their capitals in the area of their original power base. **Memphis**, near today's Cairo at the apex of the Nile delta, held this central position during the Old Kingdom; but **Thebes**, far to the south, often supplanted it during the Middle and New Kingdom periods (see Map 1.4). A complex

Menes (MEH-nee-z) **Re** (ray) **ma'at** (muh-AHT)

Djoser (JO-sur) **Saqqara** (suh-KAHR-uh) **Khufu** (KOO-foo)
Khefren (KEF-ren)

bureaucracy kept detailed records of the country's resources. Beginning at the village level and progressing to the district level and finally to the central government based in the capital, bureaucrats kept track of land, labor, products, and people, extracting as taxes a substantial portion—as much as 50 percent—of the annual revenues of the country. This income supported the palace, bureaucracy, and army; paid for building and maintaining temples; and made possible great monuments celebrating the king's grandeur. The government maintained a monopoly over key sectors of the economy and controlled long-distance trade. The urban middle-class traders who increasingly managed the commerce of Mesopotamia had no parallel in Egypt.

Literacy according to a writing system developed before the Early Dynastic period marked the administrative class. **Hieroglyphics**^o, the earliest form of this system, featured picture symbols standing for words, syllables, or individual sounds. We can read ancient Egyptian writing today only because of the discovery in the early nineteenth century C.E. of the Rosetta Stone, an inscription from the second century B.C.E. that gave hieroglyphic and Greek versions of the same text.

Hieroglyphic writing long continued in use on monuments and ornamental inscriptions. By 2500 B.C.E., however, administrators and copyists had developed a cursive script, in which the original pictorial nature of the symbol was less apparent, for their everyday needs. They wrote with ink on a writing material called **papyrus**^o, made from the stems of the papyrus reed that grew in the Nile marshes. Papyrus makers laid out the stems in a vertical and horizontal grid pattern, moistened them, and then pounded them with a soft mallet until they adhered into a sheet of writing material. A uniquely Egyptian product, papyrus served scribes throughout the ancient world and was exported in large quantities. The word *paper* comes from Greek and Roman words for papyrus.

Apart from administrative recordkeeping, Egyptian literary compositions included tales of adventure and magic, love poetry, religious hymns, and instruction manuals on technical subjects. Scribes in workshops attached to the temples made copies of traditional texts.

Strong monarchs appointed and promoted officials on the basis of merit and accomplishment, giving them grants of land cultivated by dependent peasants. Low-level officials worked in villages and district capitals; high-ranking officials served in the royal capital. During the Old Kingdom, the tombs of officials lay near the

monumental tomb of the king so they could serve him in death as they had in life.

Egyptian history exhibits a recurring tension between the centralizing power of the monarchy and the decentralizing tendencies of the bureaucracy. The shift of officials' tombs from the vicinity of the royal tomb to home districts where they spent much of their time and exercised power more or less independently signaled the breakdown of centralized power in the late Old Kingdom and First Intermediate Period. Inheritance of administrative posts similarly indicated a decline in centralized power. The early monarchs of the Middle Kingdom restored centralized power by reducing the power and prerogatives of the old elite and creating a new middle class of administrators.

The common observation that Egypt was a land of villages without real cities stems from its capitals being primarily extensions of the palace and central administration. Compared to Mesopotamia, a far larger percentage of the Egyptian population lived in farming villages, and Egypt's wealth derived to a higher degree from cultivating the land. The towns and cities that did exist unfortunately lie buried beneath modern urban sites, since Egypt has too little land in its cultivable region to afford abandonment of a large area.

Egypt largely stuck to itself during the Old and Middle Kingdoms, all foreigners being technically regarded as enemies. When necessary, local militia units backed up a small standing army of professional soldiers. Nomadic groups in the eastern and western deserts and Libyans to the northwest posed a nuisance more than a real danger. The king maintained limited contact with other advanced civilizations in the region. Egypt's interests abroad focused on maintaining access to resources rather than on acquiring territory. Trade with the Levant^o coast (modern Israel, Lebanon, and Syria) brought in cedar wood in return for grain, papyrus, and gold.

Egypt's strongest interests involved goods from the south. Nubia contained gold mines (in Chapter 2 we examine the rise in Nubia of a civilization influenced by Egypt but also vital, original, and long lasting), and the southern course of the Nile offered access to sub-Saharan Africa. In the Old Kingdom, Egyptian noblemen living at Aswan on the southern border led donkey caravans south in search of gold, incense, and products from tropical Africa such as ivory, ebony, and exotic animals. Forts along the border protected Egypt from attack. In the early second millennium B.C.E., Egyptian forces invaded Nubia and extended the Egyptian border as far as

hieroglyphics (high-ruh-GLIF-iks) **papyrus** (puh-PIE-ruhs)

Levant (luh-VANT)

the Third Cataract of the Nile, taking possession of the gold fields.

The People of Egypt

The estimated million to a million and half inhabitants of Egypt included various physical types, ranging from dark-skinned people related to the populations of sub-Saharan Africa to lighter-skinned people akin to the populations of North Africa and western Asia who spoke Berber and Semitic languages, respectively. Though Egypt experienced no migrations or invasions on a scale common in Mesopotamian history, settlers periodically trickled into the Nile Valley and mixed with the local people.

Egypt had less pronounced social divisions than Mesopotamia, where a formal class structure emerged. The king and high-ranking officials enjoyed status, wealth, and power. Below them came lower-level officials, local leaders, priests and other professionals, artisans, and well-to-do farmers. Peasants, at the bottom, constituted the vast majority of the population.

Peasants lived in rural villages and devoted themselves to the seasonally changing tasks of agriculture: plowing, sowing, tending emerging shoots, reaping, threshing, and storing. They maintained irrigation channels, basins, and dikes. Fish and meat from domesticated animals—cattle, sheep, goats, and poultry—supplemented a diet based on wheat or barley, beer, and vegetables. Villages probably shared implements, work animals, and storage facilities and helped one another at peak times in the agricultural cycle and in building projects. Festivals to the local gods and other public celebrations occasionally brought feasting and ceremonies into their lives; labor conscripted for pyramid construction and other state projects brought hardship. If the burden of taxation or compulsory service proved too great, flight into the desert usually offered the only escape.

This account of village life depends on guesswork and bits and pieces of archaeological and literary evidence. Tomb paintings of the elite sometimes depict the lives of common folk. The artists employed conventions to indicate status: obesity for the rich and comfortable, baldness and deformity for the working classes. Egyptian poets frequently employed metaphors of farming and hunting, and papyrus documents preserved in the hot, dry sands tell of property transactions and legal disputes among ordinary people.

Slavery existed on a limited scale and was of little economic significance. Prisoners of war, condemned criminals, and debtors could be found on country estates or in the households of the king and wealthy fami-

lies. But humane treatment softened the burden of slavery, as did the possibility of being freed.

Scarceness of sources also clouds the experiences of women. What is known about the lives of elite women derives from the possibly distorted impressions of male artists and scribes. Tomb paintings, rendered with dignity and affection, show women of the royal family and elite classes accompanying their husbands and engaging in domestic activities. Subordination to men is evident. The convention of depicting men with a dark red and women with a yellow flesh tone implies that elite women stayed indoors, away from the searing sun. In the beautiful love poetry of the New Kingdom, lovers address each other in terms of apparent equality and express emotions akin to our own ideal of romantic love. Whether this poetry represents the attitudes prevalent in other periods or among nonelite groups remains unknown.

Legal documents show that Egyptian women could own property, inherit from their parents, and will their property to whomever they wished. Marriage, usually monogamous, arose from a couple's decision to establish a household together rather than through legal or religious ceremony. Either party could dissolve the relationship, and the woman retained rights over her dowry in case of divorce. At certain times, queens and queenmothers played significant behind-the-scenes roles in the politics of the royal court, and priestesses sometimes supervised the cults of female deities. In general, the limited evidence suggests that women in ancient Egypt enjoyed greater respect and more legal rights and social freedom than women in Mesopotamia and other ancient societies.

Belief and Knowledge

Egyptian religion evoked the landscape of the Nile Valley and the vision of cosmic order that this environment fostered.

The sun rose every day into a clear and cloudless sky, and the river flooded on schedule every year, ensuring a bounteous harvest. Recurrent cycles and periodic renewal seemed a part of the natural world. Egyptians imagined the sky to be a great ocean surrounding the inhabited world. The sun-god Re traversed its waters in a boat by day, then returned through the Underworld at night, fighting off the attacks of demonic serpents so that he could be born anew each morning. In one especially popular story, Osiris°, a god who once ruled the land of Egypt, dies at the hand of his jealous brother Seth, who

Osiris (oh-SIGH-ris)

scatters his dismembered remains. Isis, Osiris's sister and wife, finds and reassembles the pieces, while Horus, his son, takes revenge on Seth. Restored to life and installed as king of the Underworld, Osiris represented hope for a new life in a world beyond this one.

The king, represented as Horus and as the son of Re, fit into the pattern of the dead returning to life and the sun-god renewing life. As Egypt's chief priest, he intervened with the gods on behalf of his land and people. When a particular town became the capital of a ruling dynasty, the chief god of that town gained prominence throughout the land. Thus did Ptah° of Memphis, Re of Heliopolis°, and Amon° of Thebes become gods of all Egypt, serving to unify the country and strengthen the monarchy.

Egyptian rulers zealously built new temples, refurbished old ones, and made lavish gifts to the gods, at the same time overseeing construction of their own tombs. Thus, much of the country's wealth went for religious purposes in the ceaseless effort to win the gods' favor, maintain the continuity of divine kingship, and ensure the renewal of life-giving forces.

Some deities normally appear with animal heads; others always take human form. Few myths about the origins and adventures of the gods have survived, but there must have been a rich oral tradition. Many towns had temples in which locally prominent deities were thought to reside. Such local deities could be viewed as manifestations of the great gods, and gods could merge to form hybrids, such as Amon-Re. Ordinary believers were excluded from cult activities in the inner reaches of the temples, where priests served the daily needs of the deity by attending to his or her statue. Food offered to the image was later distributed to temple staff. As in Mesopotamia, some temples possessed extensive landholdings worked by dependent peasants, and the priests who administered the deity's wealth played an influential role locally and sometimes throughout the land.

During great festivals, the priests paraded a boat-shaped litter carrying the shrouded statue and cult items of the deity around the town. This brought large numbers of people into contact with the deity in an outpouring of devotion and celebration. Little is known about the day-to-day beliefs and practices of the common people, however. At home, family members revered and made small offerings to Bes, the grotesque god of marriage and domestic happiness, to local deities, and to the family's ancestors. They relied on amulets and depictions of demonic figures to ward off evil forces. In later

times, Greeks and Romans commented on the Egyptian devotion to magic.

Egyptians believed in the afterlife. They prepared extensively for a safe passage and a comfortable existence once they arrived. Hazards abounded on the soul's journey after death. The Egyptian Book of the Dead, present in many excavated tombs, contained rituals and spells to protect the journeying spirit. The weighing of the deceased's heart (believed to be the source of personality, intellect, and emotion) in the presence of the judges of the Underworld presented the ultimate challenge—the one that determined whether the deceased had led a good life and deserved to reach the blessed destination.

The Egyptian obsession with the afterlife produced concerns about the physical condition of the dead body and a perfection of mummification techniques for preserving it. The idea probably derived from the slow decomposition of bodies buried in hot, dry sand on the edge of the desert, an early practice. The elite classes spent the most on mummification. Specialists removed vital organs for preservation and storage in stone jars laid out around the corpse and filled the body cavities with various packing materials. After immersing the cadaver for long periods in dehydrating and preserving chemicals, they wrapped it in linen. They then placed the **mummy** in one or more decorated wooden caskets with a tomb.

Building tombs at the edge of the desert left the lowlands free for farming. Pictures and samples of food and objects from everyday life accompanied the mummy to provide whatever he or she might need in the next life. Much of what is now known about ancient Egyptian life comes from examining utilitarian and luxury household objects found in tombs. Small figurines called *shawabtis*° represented the servants whom the deceased might need or the laborers he might send as substitutes if asked to provide compulsory labor. The elite classes ordered chapels attached to their tombs and left endowments to subsidize the daily attendance of a priest and offerings of foodstuffs to sustain their spirits for eternity.

The form of the tomb also reflected wealth and status. Simple pit graves or small mud-brick chambers sufficed for the common people. Members of the privileged classes built larger tombs and covered the walls with pictures and inscriptions. Kings erected pyramids and other grand edifices, employing trickery to hide the sealed chamber containing the body and treasures, as well as curses and other magical precautions to foil tomb robbers. Rarely did they succeed, however. Archaeologists have seldom discovered an undisturbed royal tomb.

Ptah (puh-TAH) **Heliopolis** (he-lee-OP-uh-lis)
Amon (AH-muhn)

shawabtis (shuh-WAB-tees)

The ancient Egyptians explored many areas of knowledge and developed advantageous technologies. They learned about chemistry through developing the mummification process, which also provided opportunities to learn about human anatomy. Egyptian doctors served in royal courts throughout western Asia because of their relatively advanced medical knowledge and techniques.

The endless cycle of flooding and irrigation spurred the development of mathematics for determining the dimensions of fields and calculating the quantity of agricultural produce owed to the state. Through careful observation of the stars, they constructed the most accurate calendar in the world, and they knew that when the star Sirius appeared on the horizon shortly before sunrise, the Nile flood surge was imminent.

For pyramids, temple complexes, and other monumental building projects, vast quantities of earth had to be moved and the construction site made level. Large stones had to be quarried, dragged on rollers, floated downstream on barges, lifted into place along ramps of packed earth, carved to the exact size needed, and then made smooth. Long underground passageways connected mortuary temples by the river with tombs near the desert's edge. More practically, several Egyptian kings

dredged a canal more than 50 miles (80 kilometers) long to connect the Nile Valley to the Red Sea and expedite the transport of goods.

Besides river barges for transporting building stones, the Nile carried lightweight ships equipped with sails and oars. These sometimes ventured into the Mediterranean and Red Seas. Canals and flooded basins limited the use of carts and sledges, but archaeologists have discovered an 8-mile (13-kilometer) road made of slabs of sandstone and limestone connecting a rock quarry with Faiyum Lake. The oldest known paved road in the world, it dates to the second half of the third millennium B.C.E.

THE INDUS VALLEY CIVILIZATION

Civilization developed almost as early in South Asia as in Mesopotamia and Egypt. Just as each Middle Eastern civilization centered on a great river valley, so civilization in the Indian subcontinent originated on a fertile floodplain. In the valley of the Indus River, settled farming created the agricultural surplus essential to urbanized society.

Natural Environment

A plain of more than 1 million acres (400,000 hectares) stretches between the mountains of western Pakistan and the Thar° Desert to the east in the central portion of the Indus Valley, the province of Sind° in modern Pakistan (see Map 1.2). Silt carried downstream and deposited on the land by the Indus River over many centuries has elevated the riverbed and its banks above the level of the plain. Twice a year, the river overflows and inundates surrounding land as far as 10 miles (16 kilometers) distant. Snowmelt from the Pamir° and Himalaya° mountains feeds the flood in March and April. In August, seasonal winds called monsoons (see Chapter 13) bring rains from the southwest that feed a second flood. Though extremely dry for the rest of the year, Sind's floods make two crops a year possible. In ancient times, the Hakra° River (sometimes referred to as the Saraswati), which has since dried up, ran parallel to the Indus about 25 miles (40 kilometers) to the east and supplied water to a second cultivable area.

Adjacent regions shared distinctive cultural traits with this core area. In Punjab (literally “five waters”), to the northeast, five rivers converge to feed the main stream of the Indus. Closer to the northern mountains, the Punjab receives more rainfall but less floodwater than Sind. Culturally similar settlements extend from the Punjab as far east as Delhi° in northwest India. Settlement also extended through the Indus delta in southern Sind down into India's hook-shaped Kathiawar° Peninsula, an area of alluvial plains and coastal marshes. The Indus Valley civilization, as scholars labeled this area of cultural homogeneity when they first discovered it eighty years ago, covered an area roughly equivalent to modern France.

Material Culture

Although archaeologists have located several hundred communities that flourished from approximately 2600 to 1900 B.C.E., the remains of two urban sites, known by the modern names **Harappa** and **Mohenjo-Daro**°, best typify the Indus Valley civilization. Unfortunately, the high water table at these sites makes excavation of the earliest levels of settlement nearly impossible.

Thar (tahr) **Sind** (sinned) **Pamir** (pah-MEER)
Himalaya (him-uh-LAY-uh) **Hakra** (HAK-ruh)
Delhi (DEL-ee) **Kathiawar** (kah-tee-uh-WAHR)
Mohenjo-Daro (moe-hen-joe-DAHR-oh)

Scholars once believed that the people who created this civilization spoke Dravidian° languages related to those spoken today in southern India. Invaders from the northwest speaking Indo-European languages, they thought, conquered these people around 1500 B.C.E., causing some of them to migrate to the southeast. Skeletal evidence, however, indicates that the population of the Indus Valley has remained stable from ancient times to the present. Settled agriculture in this region seems to date back to at least 5000 B.C.E. Archaeological investigations have not yet revealed the relations between the Indus Valley civilization and earlier cultural complexes in the Indus Valley and the hilly lands to the west or the forces that gave rise to the urbanization, population increase, and technological advances that occurred in the mid-third millennium B.C.E. Nevertheless, the case for continuity with earlier cultures seems stronger than the case for a sudden transformation due to the arrival of new peoples.

The writing system of the Indus Valley people contained more than four hundred signs to represent syllables and words. Archaeologists have recovered thousands of inscribed seal stones and copper tablets. The inscriptions are so brief, however, that no one has yet deciphered them, though some scholars believe they represent an early Dravidian language.

Harappa, 3½ miles (5.6 kilometers) in circumference, may have housed a population of 35,000 and Mohenjo-Daro several times that. These cities show marked similarities in planning and construction: high, thick, encircling walls of brick; streets laid out in a rectangular grid; and covered drainpipes to carry away waste. The consistent width of streets and length of city blocks, and the uniformity of the mud bricks used in construction, suggest a strong central authority, located possibly in the citadel—an elevated, enclosed compound containing large buildings. Scholars think the well-ventilated structures near the citadel stored grain for local use and for export. The presence of barracks may point to some regimentation of skilled artisans.

Though it is presumed that these urban centers controlled the surrounding farmlands, different centers may have served different functions, which might account for their locations. Mohenjo-Daro seems to dominate the great floodplain of the Indus. Harappa, which is nearly 500 miles (805 kilometers) to the north, sits in the zone where farmlands give way to pasturelands. No settlements have been found west of Harappa, which may have served as a gateway for copper, tin, precious stones,

Dravidian (druh-VID-ee-uhn)

and other resources coming from the northwest. Coastal towns to the south engaged in seaborne trade with Sumer and lands around the Persian Gulf, as well as fishing and gathering highly prized seashells.

While published accounts of the Indus Valley civilization tend to treat Mohenjo-Daro and Harappa, the most extensively excavated sites, as the norm, most people surely lived in smaller settlements, which exhibit the same artifacts and the same standardization of styles and shapes as the large cities. Some scholars attribute this standardization to extensive exchange of goods within the zone of Indus Valley civilization rather than to a strong and authoritarian central government.

Metal appears more frequently in Indus Valley sites than in Mesopotamia or Egypt. Tools and other useful objects outweigh in importance the decorative objects—jewelry and the like—so often found in those other regions. Largely the possessions of elite groups in the Middle East, metal goods belonged to a broad cross-section of the population in the Indus Valley.

Technologically, the Indus Valley people showed skill in irrigation, used the potter's wheel, and fired bricks to rocky hardness in kilns for use in the foundations of large public buildings (sun-dried bricks exposed to floodwaters would have dissolved quickly). Smiths worked with various metals—gold, silver, copper, and tin. The varying ratios of tin to copper in their bronze objects suggest awareness of the hardness of different mixtures. They used less tin, a relatively scarce metal, in objects that did not require maximum hardness, like knives, and more tin in things like axes that had to be harder.

Archaeological finds point to widespread trading contacts. Mountain passes through the northwest granted access to the valuable resources of eastern Iran and Afghanistan, as well as to ore deposits in western India. These resources included metals (such as copper and tin), precious stones (lapis lazuli, jade, and turquoise), building stone, and timber. Rivers provided thoroughfares for transporting goods within the zone of Indus Valley culture. The undeciphered writing on the many seal stones, some scholars feel, may represent the names of merchants who stamped their wares.

Inhabitants of the Indus Valley and of Mesopotamia obtained raw materials from some of the same sources. The discovery of Indus Valley seal stones in the Tigris-Euphrates Valley indicates that merchants from the former region may have acted as middlemen in long-distance trade, obtaining raw materials from the northwest and shipping them to the Persian Gulf.

We know little about the political, social, economic, and religious structures of Indus Valley society. Efforts to link artifacts and images to cultural features characteris-

tic of later periods of Indian history (see Chapter 7), including sociopolitical institutions (a system of hereditary occupational groups, the predominant role of priests), architectural forms (bathing tanks like those later found in Hindu temples, private interior courtyards in houses), and religious beliefs and practices (depictions of gods and sacred animals on the seal stones, a cult of the mother-goddess), remain speculative. Further knowledge on these matters awaits additional archaeological finds and deciphering of the Indus Valley script.

Transformation of the Indus Valley Civilization

The Indus Valley cities were abandoned sometime after 1900 B.C.E. Archaeologists once thought that invaders destroyed them, but they now believe this civilization suffered “systems failure”—a breakdown of the fragile interrelationship of political, social, and

Environmental Stress in the Indus Valley

The three river-valley civilizations discussed in this chapter were located in arid or semiarid regions. Such regions are particularly vulnerable to changes in the environment. Scholars' debates about the existence and impact of changes in the climate and landscape of the Indus Valley illuminate some of the possible factors at work, as well as the difficulties of verifying and interpreting such long-ago changes.

One of the points at issue is climatic change. An earlier generation of scholars believed that the climate of the Indus Valley was considerably wetter during the height of that civilization than it is now. As evidence, they cited the enormous quantities of timber, cut from extensive forests, that would have been needed to bake the millions of mud bricks used to construct the cities (see photo), the distribution of human settlements on land that is now unfavorable for agriculture, and the representation of jungle and marsh animals on decorated seals. This approach assumes that the growth of population, prosperity, and complexity in the Indus Valley in the third millennium B.C.E. required wet conditions, and it concludes that the change to a drier climate in the early second millennium B.C.E. pushed this civilization into decline.

Other experts, skeptical about radical climate change, countered with alternative calculations of the amount of timber needed and evidence of plant remains—particularly barley, a grain that is tolerant of dry conditions. However, recent studies of the stabilization of sand dunes, which occurs in periods of heavy rainfall, and analysis of the sediment deposited by rivers and winds have been used to strengthen the claim that the Indus Valley used to be wetter and that in the early- to mid-second millennium B.C.E. it entered a period of relatively dry conditions that have persisted to the present.

A much clearer case can be made for changes in the landscape caused by shifts in the courses of rivers. These shifts are due, in many cases, to tectonic forces such as earthquakes. Dry channels, whether detected in satellite photographs or by on-the-ground inspection, reveal the location of old riverbeds, and it appears that a second major river system, the Hakra, once ran parallel to the Indus some distance to the east. The Hakra, with teeming towns and fertile fields along its banks, appears to have been a second axis of this civilization. Either the Sutlej, which now feeds into the Indus, or the Yamuna, which now pours into the Ganges, may have been the main source of water for this long-gone system before undergoing a change of course. The consequences of the drying-up of this major waterway must have been immense—the loss of huge amounts of arable land and the food that it

produced, the abandonment of cities and villages and consequent migration of their populations, shifts in the trade routes, and desperate competition for shrinking resources.

As for the Indus itself, the present-day course of the lower reaches of the river has shifted 100 miles (161 kilometers) to the west since the arrival of the Greek conqueror Alexander the Great in the late fourth century B.C.E., and the deposit of massive volumes of silt has pushed the mouth of the river 50 miles (80 kilometers) farther south. Such a shift of the river bed and buildup of alluvial deposits also may have occurred in the third and second millennia B.C.E.

A recent study concludes: "It is obvious that ecological stresses, caused both climatically and technically, played an important role in the life and decay" of the Indus civilization.

Source: Quotation from D. P. Agarwal and R. K. Sood in Gregory L. Possehl, ed., *Harappan Civilization: A Contemporary Perspective* (Warminster, England: Aris and Phillips, 1982), 229.

economic systems that sustained order and prosperity. The precipitating cause may have been one or more natural disasters, such as an earthquake or massive flooding. Gradual ecological changes may also have played a role as the Hakra river system dried up and salinization (an increase in the amount of plant-inhibiting salt in the soil) and erosion increased (see Environment and Technology: Environmental Stress in the Indus Valley).

Towns left dry by a change of riverbed, seaports removed from the coast by silt deposited in deltas, and regions suffering loss of fertile soil would have necessitated the relocation of populations and a change in the livelihood of those who remained. The causes, patterns, and pace of change probably varied, with urbanization persisting longer in some regions than in others. The urban centers eventually succumbed, however, and village-based farming and herding took their place. As the interaction between regions lessened, regional variation replaced the standardization of technology and style of the previous era.

Historians can do little more than speculate about the causes behind the changes and the experiences of the people who lived in the Indus Valley around 1900 B.C.E. Two tendencies bear remembering, however. In most cases like this, the majority of the population adjusts to the new circumstances. But members of the political and social elite, who depend on urban centers and complex political and economic structures, lose the source of their authority and merge with the population as a whole.

CONCLUSION

Tens of thousands of years elapsed between the first appearance of the earliest ancestors of humankind and the agricultural revolutions that made possible the transition to civilization. Domesticated plants and animals contributed to the settling down of wandering groups of foragers and, in time, produced sufficient surplus food to relieve a small minority of people from the labor of tilling fields and watching flocks. Some of these people availed themselves of this opportunity to advance already existing skills—painting, stone-working, weaving, building—to higher levels requiring more specialized techniques. Others specialized in warfare, administration, religious ceremonies, and accumulation of knowledge. Thus did humanity pass from the prehistoric era to the era of civilized history.

The first civilizations developed high levels of political centralization, urbanization, and technology because their situations in river valleys too arid to support

agriculture through rainfall forced communities to work together on constructing and maintaining canals, dams, weirs, and dikes. Crops harvested from irrigated fields not only fed the farming populations of Mesopotamia, Egypt, and the Indus Valley, but produced enough surplus to support artisans with specialized expertise in engineering, mathematics, and metallurgy.

Unpredictable and violent floods constantly threatened communities in the Tigris-Euphrates Basin, but the opportune and gradual Nile floods usually brought joy and satisfaction to those in Egypt. Relationships with nature stamped the worldview of both peoples. Mesopotamians tried to appease their harsh deities in order to survive in an unpredictable world. Egyptians trusted in and nurtured the supernatural powers they believed guaranteed orderliness and prosperity.

In both Egypt and Mesopotamia, kingship emerged as the dominant political form. The Egyptian king's divine origins and symbolic association with the forces of renewal made him central to the welfare of the entire country and gave him a religious monopoly, superseding the authority of the temples and priests. Egyptian monarchs lavished much of the country's wealth on their tombs, believing that a proper burial would ensure the continuity of kingship and the attendant blessings that it brought to the land and people. Mesopotamian rulers, who were not normally regarded as divine, built new cities, towering walls, splendid palaces, and religious edifices as lasting testaments to their power.

Both cultures revered a hierarchy of gods, ranging from protective demons and local deities to gods of the state, whose importance rose or fell with the power of the political centers with which they were associated. Cheered by the stability of their environment, Egyptians conceived a positive notion of the gods' designs for humankind. They believed that despite hazards, the righteous spirit could journey to the next world and look forward to a blessed existence. In contrast, terrifying visions of the afterlife torment Gilgamesh, the Mesopotamian hero: disembodied spirits of the dead stumbling around in the darkness of the Underworld for all eternity, eating dust and clay, and slaving for the heartless gods of that realm.

Cultural continuity marked both Egypt and Mesopotamia despite substantial ethnic diversity. Immigrants assimilated to the dominant language, belief system, and lifestyles of the civilization. Culture, not physical appearance, served as the criterion of personal identification. Reduced freedom and legal privilege for Mesopotamian women in the second millennium B.C.E. may relate to a high degree of urbanization and class stratification. In contrast, Egyptian pictorial documents, love

poems, and legal records indicate an attitude of respect and a higher degree of equality for women in the valley of the Nile.

In the second millennium B.C.E., as the societies of Mesopotamia and Egypt consolidated their cultural achievements and entered new phases of political expansion, and as the Indus Valley centers went into irreversible decline, a new and distinctive civilization, based on exploiting the agricultural potential of a floodplain, emerged in the valley of the Yellow River in eastern China. We turn to that area in Chapter 2.

■ Key Terms

civilization	scribe
culture	ziggurat
history	amulet
Stone Age	cuneiform
Paleolithic	pharaoh
Neolithic	ma'at
foragers	pyramid
Agricultural Revolutions	Memphis
Holocene	Thebes
megalith	hieroglyphics
Babylon	papyrus
Sumerians	mummy
Semitic	Harappa
city-state	Mohenjo-Daro
Hammurabi	

■ Suggested Reading

Reliable textbooks are Brian Fagan's *People of the Earth: An Introduction to World Prehistory*, 9th ed. (1997), and Robert J. Wenke, *Patterns in Prehistory: Humankind's First Three Million Years*, 4th ed. (1999).

Ann Sieveking, *The Cave Artists* (1979), Mario Ruspoli, *The Cave Art of Lascaux* (1986), and N. K. Sanders, *Prehistoric Art in Europe* (1968) provide overviews of major European sites.

For ideas on the transition to food production, see Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (1997), and Allen W. Johnson and Timothy Earle, *The Evolution of Human Societies: From Foraging Group to Agrarian State* (1987). Jean-Pierre Mohen, *The World of Megaliths* (1990), analyzes early monumental architecture. James Mellaart, the principal excavator of Çatal Hüyük, discusses his work for the general reader in *Çatal Hüyük: A Neolithic Town in Anatolia* (1967).

Jack M. Sasson, ed., *Civilizations of the Ancient Near East*, 4 vols. (1993), contains up-to-date articles and a bibliography on a wide range of topics. An excellent starting point for geogra-

phy, chronology, and basic institutions and cultural concepts in ancient western Asia is Michael Roaf, *Cultural Atlas of Mesopotamia and the Ancient Near East* (1990). Amelie Kuhrt, *The Ancient Near East, c. 3000–330 B.C.*, 2 vols. (1995), is the best and most up-to-date introduction to the historical development of western Asia and Egypt, offering a clear and concise historical outline and a balanced presentation of continuing controversies. Other general historical introductions can be found in A. Bernard Knapp, *The History and Culture of Ancient Western Asia and Egypt* (1988); Hans J. Nissen, *The Early History of the Ancient Near East, 9000–2000 B.C.* (1988); H. W. F. Sagg, *Civilization Before Greece and Rome* (1989); and Georges Roux, *Ancient Iraq*, 3d ed. (1992). Joan Oates, *Babylon* (1979), focuses on the most important of all the Mesopotamian cities. J. N. Postgate, *Early Mesopotamia: Society and Economy at the Dawn of History* (1992), offers deep insights into political, social, and economic dynamics. Daniel C. Snell, *Life in the Ancient Near East 3100–322 B.C.E.* (1997), emphasizes social and economic matters for advanced students. Stephanie Dalley, ed., *The Legacy of Mesopotamia* (1998), explores Mesopotamian interactions with other parts of the ancient world.

David Ferry's *Gilgamesh: A New Rendering in English Verse* (1992) is an attractive translation. The evolving mentality of Mesopotamian religion comes through in Thorkild Jacobsen, *The Treasures of Darkness: A History of Mesopotamian Religion* (1976). Stephanie Dalley, *Myths from Mesopotamia* (1989), Henrietta McCall, *Mesopotamian Myths* (1990), and Jeremy Black and Anthony Green, *Gods, Demons and Symbols of Ancient Mesopotamia* (1992), cover myth, religion, and religious symbolism. Pierre Amiet, *Art of the Ancient Near East* (1980), introduces various arts with good illustrations. Dominique Collon, *First Impressions: Cylinder Seals in the Ancient Near East* (1988), reveals much about art and daily life.

C. B. F. Walker, *Cuneiform* (1987), is a concise guide to the Mesopotamian writing system. James B. Pritchard, *Ancient Near Eastern Texts Relating to the Old Testament*, 3d ed. (1969), contains translated documents and texts from western Asia and Egypt. For women's matters, see Barbara Lesko, "Women of Egypt and the Ancient Near East," in *Becoming Visible: Women in European History*, 2d ed., ed. Renata Bridenthal, Claudia Koonz, and Susan Stuard (1994), and Guity Nashat, "Women in the Ancient Middle East," in *Restoring Women to History* (1988). Harvey Weiss, ed., *Ebla to Damascus: Art and Archaeology of Ancient Syria* (1985), and Giovanni Pettinato, *Ebla: A New Look at History* (1991), discuss Syria's relationship with Mesopotamia.

A lavishly illustrated introduction to ancient Egyptian civilization is David P. Silverman, ed., *Ancient Egypt* (1997). John Baines and Jaromir Malek, *Atlas of Ancient Egypt* (1980), and T. G. H. James, *Ancient Egypt: The Land and Its Legacy* (1988), are organized around the sites of ancient Egypt and provide general introductions. Historical treatments include B. G. Trigger, B. J. Kemp, D. O'Connor, and A. B. Lloyd, *Ancient Egypt: A Social History* (1983); Barry J. Kemp, *Ancient Egypt: Anatomy of a Civilization* (1989); and Nicholas-Cristophe Grimal, *A History of Ancient Egypt* (1992). John Romer, *People of the Nile: Everyday Life in*

Ancient Egypt (1982); Miriam Stead, *Egyptian Life* (1986); and Eugen Strouhal, *Life of the Ancient Egyptians* (1992), emphasize social history. For women, see the chapter by Lesko cited above; Barbara Watterson, *Women in Ancient Egypt* (1991); Gay Robins, *Women in Ancient Egypt* (1993); and the articles and museum exhibition catalogue in Anne K. Capel and Glenn E. Markoe, eds., *Mistress of the House, Mistress of Heaven: Women in Ancient Egypt* (1996).

Stephen Quirke, *Ancient Egyptian Religion* (1990), is a highly regarded treatment of a complex subject. George Hart, *Egyptian Myths* (1990), presents evidence for what must have been a thriving oral tradition. Pritchard's collection, cited above, and Miriam Lichtheim, *Ancient Egyptian Literature: A Book of Readings*, Vol. 1, *The Old and Middle Kingdoms* (1973), provide translated texts and documents. William Stevenson Smith, *The Art and Architecture of Ancient Egypt* (1998), and Gay Robins, *The Art of Ancient Egypt* (1997), cover the visual record.

For the Indus Valley civilization, see the brief treatment by Stanley Wolpert, *A New History of India*, 3d ed. (1989). Jonathan Mark Kenoyer, *Ancient Cities of the Indus Valley Civilization* (1998),

supersedes the occasionally still useful works of Mortimer Wheeler, *Civilizations of the Indus Valley and Beyond* (1966) and *The Indus Civilization*, 3d ed. (1968). Gregory L. Poschl has edited two collections of articles: *Ancient Cities of the Indus* (1979) and *Harappan Civilization: A Contemporary Perspective* (1982).

Notes

1. N. K. Sandars, *The Epic of Gilgamesh* (Baltimore: Penguin Books, 1960), 61–63.
2. Colin McEvedy and Richard Jones, *Atlas of World Population History* (New York: Penguin Books, 1978), 13–15.
3. Colin Renfrew, *Archaeology and Language: The Puzzle of Indo-European Origins* (Cambridge: Cambridge University Press, 1988), 125, 150.
4. Luigi Cavalli-Sforza, L. Luca, Paolo Menozzi, and Alberto Piazza, *The History and Geography of Human Genes* (Princeton, NJ: Princeton University Press, 1994).
5. James Mellaart, *Çatal Hüyük: A Neolithic Town in Anatolia* (New York: McGraw-Hill, 1967), 202.

Document-Based Question

Early Civilizations and the Physical Environment

Using the following documents, analyze the role of the physical environment in the development of early civilizations in Mesopotamia, Egypt, and the Indus Valley.

DOCUMENT 1

Excerpt from the story of Gilgamesh (p. 5)

DOCUMENT 2

Map 1.2 River-Valley Civilizations, 3500–1500 B.C.E (p. 13)

DOCUMENT 3

Reed Huts in the Marshes of Southern Iraq (photo, p. 15)

DOCUMENT 4

Violence and Order in the Babylonian New Year's Festival (Diversity and Dominance, p. 20)

DOCUMENT 5

Mesopotamian Cylinder Seal (photo, p. 22)

DOCUMENT 6

Map 1.4 Ancient Egypt (p. 24)

DOCUMENT 7

Mud-Brick Fortification Wall of the Citadel at Harappa (photo, p. 32)

Evaluate the ways in which the documents demonstrate the human ability to modify the physical environment. What additional types of documents would help you understand the importance of the physical environment in early civilizations?