CHAPTER 1

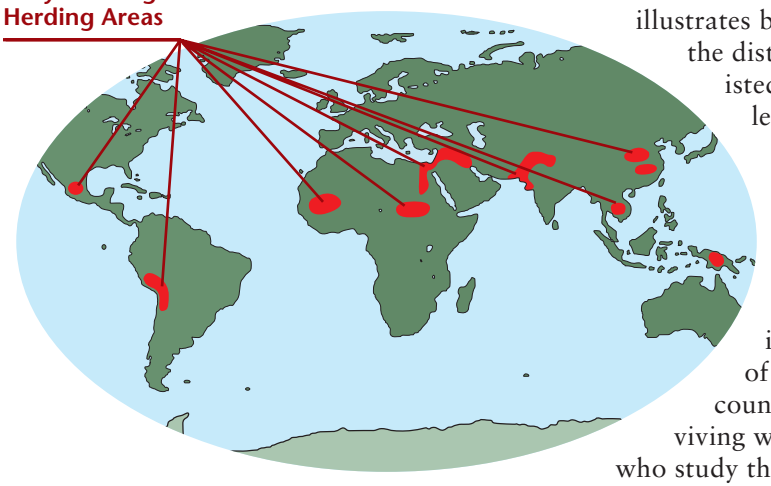
The Emergence of Human Societies, to 3000 B.C.E.

Early Human Cave Art

Fossils and cultural artifacts, such as these dramatic paintings on cave walls in southern France, provide us with insights into the lives and societies of early humans (pages 8-9).

In July 2001, in a desolate, sun-baked region of the north-central African nation of Chad, a group of professional fossil-hunters, searching for remnants of life in past ages, made an astonishing discovery. There, in the windswept, shifting sands, they came upon a small crusty object that appeared to have teeth. At first they thought it was the fossilized jaw of a pig, but on further examination they concluded that it was the flat-faced skull of a **hominid** (*HAH-mih-nid*), a term scientists apply to human beings and their two-legged pre-human predecessors. Later testing showed that the skull was seven million years old—the oldest hominid fossil yet discovered.

Early Farming and Herding Areas



This discovery, which created great excitement, illustrates both the allure and challenge of studying the distant past. Although hominids have existed for millions of years, humans have left behind written records only for about 5,000 years. Recorded history thus covers only a small fraction of human experience. The preceding ages, encompassing all human existence before the emergence of writing, are often called the prehistoric era, despite the probability that people who lived then kept track of their history by passing on oral accounts. Since these early people left no surviving written records, however, modern scholars who study this era must rely mainly on analysis of fossils and cultural artifacts, augmented by enlightened speculation subject to scholarly debate. Several scholars, for instance, challenged the Chad discovery, claiming that the skull might belong to an ancient gorilla rather than a hominid.

Despite such disputes, the general outlines of our ancestry are reasonably clear. Hominids first emerged in Africa at least five million years ago, and for millions of years most likely survived by eating wild plants. Over many generations, they learned to communicate by spoken language, form small nomadic groups for cooperation and protection, fashion stone tools, hunt wild animals, and use fire, passing on their knowledge and skills to their young. In their quest for food, some hominid groups migrated from Africa to parts of Eurasia. Over time, most early hominid species died out, but one branch of the hominid family survived, evolving within the past half million years into modern humans like ourselves.

Equipped with greater intelligence and communication skills than their hominid forerunners, humans formed larger communities, devised better tools and weapons, learned to hunt more effectively, and occasionally fought with other groups vying for food. Some communities, seeking new food sources, migrated to Australia and the Americas. Some eventually figured out how to raise food, by growing crops and domesticating certain animals. Farming and herding made possible even larger communities, such as cities and states, that established commercial, cultural, and political connections, inaugurating the historical era.

Our Earliest Ancestors

Since no historical records survive from before five thousand years ago, most of what we know of the prehistoric era is based on the work of archeologists and anthropologists, who study early hominids through fossils, cultural artifacts, and genetic comparisons with other animals. Using such sources, scholars surmise that humans are descended from hominids who lived in east-central Africa millions of years ago (and hence that we all have African ancestry). By modern human standards, early hominids were small, standing only three or four feet tall, with brains that were smaller and less complex than ours. But hominids had larger brains than other animals, and voice boxes that could make more complex sounds, enabling them to better communicate what they learned with each other and with their offspring. And hominids walked on two feet rather than four, enabling them to use their arms and hands for creative purposes, such as fashioning and using tools and weapons.

Hominids, with improved communication, hunt and migrate in groups

About two million years ago, as hominids grew in dexterity and brainpower, some began to chip and shape pieces of stone into rough-hewn tools. Modern researchers have characterized this activity—the first indication of conscious cultural behavior—as the onset of the Old Stone Age or **Paleolithic** (*pā-lē-ō-LITH-ik*) period, the earliest and longest stage of cultural development, lasting from approximately 2,000,000 B.C.E. until about 10,000 B.C.E. During this extended period, hominids vastly improved their social and communicative skills, learned to hunt in groups that pursued prey from one region to another, and migrated to diverse regions, including northern Africa and parts of Eurasia. In the process they developed diverse ways of life.

Hominids and Cultural Adaptation

Beginning in the Paleolithic period, hominids diverged from other animals in a significant way. Rather than adjusting to their environment mainly through biological evolution, as most other organisms did, hominids also developed through **cultural adaptation**, the process of using their intellectual and social skills to adjust to their surroundings and improve their chances for survival. Organized into small kinship groups that traveled from place to place, they developed a number of new techniques that they shared with each other and their young, thus transmitting their knowledge and skills to future generations.

Hominids use their intelligence to adapt to their surroundings

With their growing intellectual capacities, hominids increasingly found better ways to make use of and adapt to their environment. From long and sometimes bitter experience, for example, they learned which plants were digestible, which could be harmful or lethal, and which had certain medicinal or intoxicative properties. In time some hominid groups learned how to hunt with the use of crude stone axes, which they used to hurl at their prey and then to strip away the hides for clothing and the meat for food. Later, they learned to use fire for cooking meats and plants to make them more digestible, for warding off wild animals, and for providing nighttime warmth and light.

Hominids pass on what they learn to each other and their young

Furthermore, as their powers of memory and speech improved, hominids transmitted their discoveries to each other and their offspring by sharing ideas and learning from one another. A hominid woman who learned to build a fire, for example, could share

Early hominid tools.

this knowledge with the rest of her group, and also teach it to her children. A hominid band returning from the hunt could sit around the fire, cook their meat, share their experiences, and pass on wisdom and practices from earlier generations. One result was that hominids could build upon their knowledge from one generation to the next, and thus could adapt more quickly than other animals. Another result was that separate human societies eventually developed their own **cultures**: unique combinations of customs, beliefs, and practices—including languages, arts, rituals, institutions, and technologies—that distinguished these societies from each other.

Foraging, Family, and Gender

Early hominids apparently were scavengers, moving about in small nomadic groups that survived mainly by gathering wild nuts and berries, feeding occasionally on the carcasses of dead animals. Then, after exhausting the readily accessible food resources in a particular region, the hominid groups moved on. As they learned to hunt they not only increased their consumption of meat, but also killed or drove away their prey, so they still relocated periodically to find new sources of game. Since these groups survived by searching for and scouring food, they are often called **foragers**—those who subsist by gathering wild plant foods and hunting wild animals.

Hominids, connected by kinship, travel in foraging bands

Having no written records of these early foraging societies, modern scholars study them by examining archeological remains, comparing what they learn with the practices of the few foraging cultures that still exist today in Siberia, South Africa, Australia, and the Americas. These sources suggest that Paleolithic peoples traveled in foraging bands, mobile communities of perhaps thirty to sixty people connected by kinship. While large enough to provide their members with sustenance and protection, groups of this size, unencumbered by material possessions, were small enough to easily pack up camp and relocate to find new food sources and adjust to changing seasons or climates. As members of the same **kinship group**—an extended family comprising grandparents, parents, siblings, aunts, uncles, cousins, and other relatives—they were also bound together by familial obligations and affections.

Hominids live in family groups that raise children

Compared with many other large mammals, which grow to almost full maturity within a few months or years, human children remain physically immature, and thus dependent on older caregivers, for a dozen years or more. They therefore require a high level of protection, nurturing, and supervision, usually provided by their parents and other relatives, for an extended time. Furthermore, unlike many other animals, adult humans frequently form an enduring emotional bond with a specific sexual companion. These traits and conditions help to explain why human parents often stay together to care for their children, and why the central institution of most human societies has been the family.

Hominid families develop flexible gender roles

Family concerns may also help explain why our ancestors probably divided their work along gender lines. Evidence suggests that in foraging societies men usually did the hunting and fighting, while women were more likely to gather plant food, attend to the campsite, and care for the young. This division of labor was by no means rigid: women at times no doubt helped with the hunting or defense, while men at times assisted in tending the hearth and taking care of the children. Nor did the gender roles imply that women were valued less than men. On the contrary, since a group's survival depended on women to bear children, and since gathering plant food supplied a more reliable source of nutrition than

hunting wild game, the functions of the women may well have been considered more important than those of the men. A community, after all, could endure the loss of several adult males, but women and children were essential to its long-term survival. Since the men were thus more expendable, under normal conditions it made sense for them to perform the dangerous duties of hunting wild animals and defending the camp against predators and outsiders, and for women to handle the safer yet more essential tasks of minding the campfire, foraging for plant food, preparing meals, and nurturing the young.

Since the foraging band was relatively small and its members were mostly related, its structure was probably quite simple. Although some members might have greater influence as a result of intellect, experience, or personality, there was no real need for government officials or class divisions such as those that would later arise in larger, more diverse societies.

Foraging societies have simple structures based on collaboration

The absence of rank in foraging bands did not mean that everyone was equal, but rather that the adults in the group could collaborate in making decisions, securing the campsite, procuring food, raising the young, and moving to new places. Societies in which the members cooperated—supporting one another, sharing both the burdens and the bounty, and passing on their knowledge to their young—tended to be stable and enduring. Some were also able, when the need arose, to migrate substantial distances to ensure their survival or improve their way of life.

Ice Age Migrations and *Homo Sapiens*

The Paleolithic period corresponded roughly with what geologists call the Pleistocene (*PLĪ-stuh-sēn*) epoch, also called the **Great Ice Age**, an immense stretch of time (roughly 2,000,000 B.C.E. to 8000 B.C.E.) marked by frigid glacial stages when enormous ice masses called glaciers spread across much of the globe (Map 1.1). These prolonged cold spells, or "ice ages," each lasting tens of thousands of years, alternated with somewhat shorter intervals of relative warmth. Although tropical regions did not experience glaciers, their climates fluctuated considerably, bringing major changes in vegetation and animal life.

Ice Age hominids migrate to Eurasia and adapt to new environments

Induced perhaps by growing populations or by environmental changes that threatened their food supply, many mammals migrated during the Pleistocene epoch to new habitats. Among these mammals were foraging hominid bands, some of which left Africa and traveled to Asia, possibly following herds of wild animals, by about 1.8 million years ago. Much later, by about 800,000 years ago, other groups of foraging hominids made their way to Europe. These hominid migrants used their cultural skills to adapt to their new surroundings, employing local materials such as wood, bamboo, and rock to make shelters, hatchets, and hunting axes.

Some hominids evolve into *Homo sapiens,* our human species

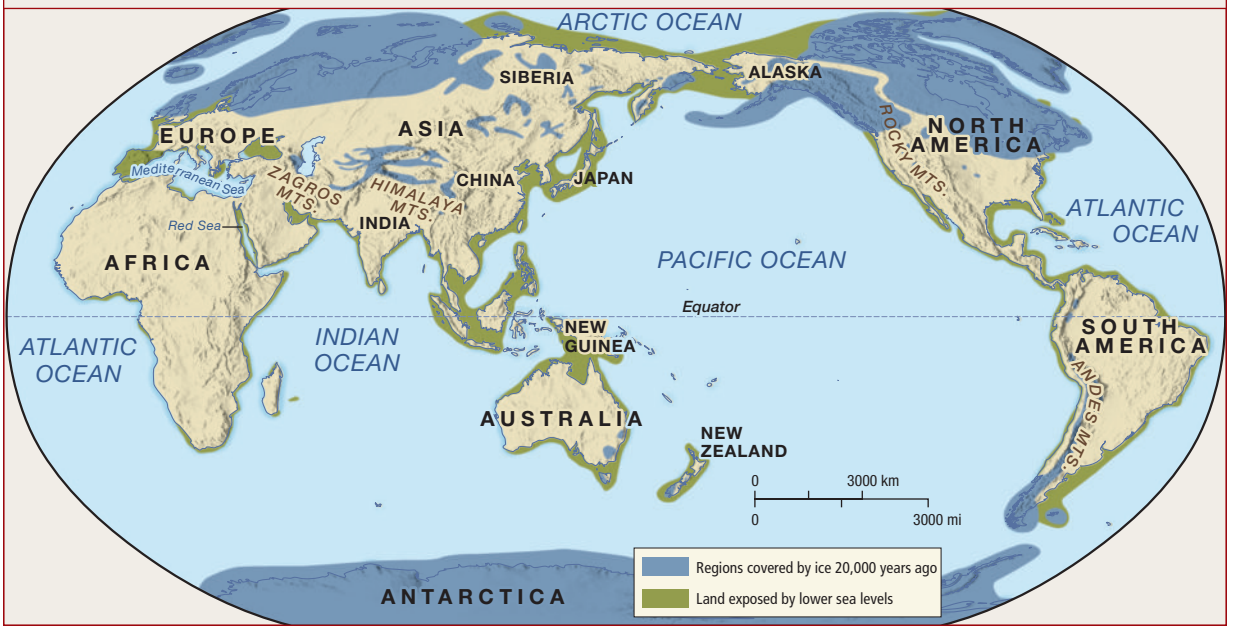
Then, by about 150,000 to 200,000 years ago, as hominid development and migrations continued, there emerged a new species now called ***Homo sapiens*** (*HŌ-mō SĀ-pē-enz*). This term, which means "wise human," designates the species that includes all modern people, and distinguishes us from other types of hominids that no longer exist.

Other hominid groups eventually become extinct

The complex processes by which our species developed, and the reasons why it prevailed while other hominids died out, are far from being fully understood. Humans, it is clear, have larger skulls, housing larger brains, than earlier hominid species. But so did the people modern scholars call **Neanderthals**, an extinct group of large-brained hominids whose remains were first discovered in 1856 in Germany's Neander Valley, and who existed from roughly 200,000 to 30,000 years ago.

FOUNDATION MAP 1.1 The Great Ice Age, 2,000,000–8000 B.C.E.

In the Great Ice Age, or Pleistocene epoch (2,000,000–8000 B.C.E.), ice covered much of the Earth's land surface during prolonged glacial stages, commonly called ice ages. Notice that the areas in green, which are now under water, were exposed as dry land as sea levels dropped during the last ice age. How might this development have aided human migrations, especially to the Americas?



Even the basic outlines of what happened have been subject to dispute. Some experts, for example, formerly asserted that distinct groups of *Homo sapiens* developed independently in separate parts of Africa and Eurasia, evolving from earlier hominids already living there. Most experts, however, now believe that *Homo sapiens* first appeared only in Africa, migrating later to Eurasia and thence to the rest of the world (Map 1.2).

Humans develop enhanced reasoning and communicating skills

In any case, *Homo sapiens* eventually developed greater intellectual and linguistic skills than other hominids and thus were able more effectively to reason, communicate, and cooperate, sharing information with each other and passing it on to future generations. Early humans thereby developed more effective tools and weapons, including needles and fishhooks carved from the antlers and tusks of wild animals and spears that could be hurled at large animals from a safe distance. Using sturdy plant fibers, people also began to fashion ropes and lines that could be tied to hooks and harpoons, used to make nets and traps, and eventually strung onto bows from which to shoot arrows at prey.

As hunting skills improve, human populations and migrations increase

These innovations helped some early humans to hunt more effectively, and thus to acquire warmer clothes and larger amounts of animal meat, which they could now supplement with fowl and fish. Modern scholars speculate that, with access to more and better food, people may have lived longer and been able to support more children. Increasing population no doubt led to growing competition for food, inducing some

Map 1.2 Humans Inhabit the Continents, 200,000–10,000 B.C.E.

Although prehuman hominids migrated from Africa to Asia over a million years ago, most scholars think that human beings (*Homo sapiens*) first emerged in Africa by about 150,000–200,000 years ago. Note that, about 100,000 years ago, humans began to migrate out of Africa, and that by about 12,000 years ago (10,000 B.C.E.), they inhabited all the continents except Antarctica. What factors prompted early humans to move to distant places?

groups to migrate to new regions in quest of new food sources. Hence, as their hunting skills improved, human societies spread out across Africa and Eurasia. Eventually human hunters depleted the numbers of such mammals as bears, lions, deer, and gazelles, and destroyed the herds of fur-covered mammoths that once roamed across Eurasia.

Human groups migrate to Australia and the Americas

In their ongoing search for sustenance, some human societies migrated even farther. By 50,000 B.C.E., according to evidence uncovered by archeologists, people had made their way from Southeast Asia to Australia, an impressive feat that entailed venturing out in boats on the open seas. Other humans apparently migrated from northeast Asia to the Americas by at least 12,000 B.C.E., during the last ice age, when the huge glaciers absorbed so much water that sea levels dropped by hundreds of feet, thus exposing a broad land bridge that connected Siberia with Alaska (Map 1.1). From Alaska the migrants spread throughout the Americas, where they found pristine lands that still teemed with mammoths, bears, and gazelles. By the end of the Paleolithic period, in almost every region of the globe that was fit for human habitation, there were human societies.

Physical and Cultural Diversity

As humans moved to various lands and latitudes, their bodies adjusted to different climates and conditions. Over time, this biological adaptation apparently produced some modest physical differences. For example, some of the peoples who lived in northern

regions eventually developed lighter skin coloration, which was better able to produce nutrients from the scarcer sunlight, and sometimes hairier bodies to protect them from the cold. Those who inhabited hotter regions typically had darker pigmentation, which was better able to protect them from the harmful rays produced by abundant sunshine.

Although skin colors differ, humans are all one species

Despite such differences in outward appearance, however, all human beings belong to the same species (*Homo sapiens*), and they can readily mate and produce healthy offspring with those of different coloration and other physical features. Thus the concept of **race**, which divides human beings into categories based on external characteristics, skin color in particular, relies on relatively insignificant distinctions. Indeed, in mapping the human genome, modern scientists have found that genetic variability among humans is remarkably small, providing no scientific basis for racial categorization.

From a historical perspective, far more important than physical diversity has been cultural diversity, resulting from the variety of ways in which separate human societies have adapted over time to their separate circumstances. In a number of ingenious ways, people have adjusted their habits and lifestyles to take advantage of the terrain, vegetation, climate, and wildlife of the regions they inhabit.

Even in Paleolithic times, substantial differences emerged among cultures in various parts of the world. People who lived on warm prairies, including the great grasslands of Africa, wore lightweight clothes made from skins and fibers and dwelt in easily assembled structures made of grasses or skins. Those who lived in colder regions, such as the northern parts of Eurasia and North America, needed more protection from the elements; these people wore rugged hides and furs and resided for months at a time in seasonal camps with warmer, sturdier shelters. Where the terrain was rocky or mountainous, people lived in stone structures and caves; where it was wooded they built their lodgings from branches, boughs, and bones. Those who lived near lakes or rivers teeming with fish had little need to travel for food; they thus built permanent, durable dwellings made of wood and stone.

Humans adapt to diverse conditions and develop diverse cultures

These early distinctions gradually developed into different ways of life, with societies diverging not only in clothing and shelter, but also in customs, institutions, languages, practices, and beliefs. Consequently, the great diversity among human beings has not been physical but cultural. The study of world history thus focuses mainly on the development of diverse cultures, their similarities and differences, and on the connections and conflicts that have arisen among them.

Paleolithic Cultural and Spiritual Perspectives

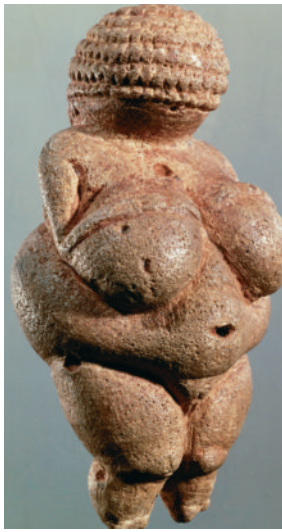
As Paleolithic peoples pondered the world around them, and thought about the meaning of life and death, they developed new forms of expression. Paintings, carvings, and burial sites surviving from the Stone Age attest to the various forms of art and ritual practiced by early peoples, seeking no doubt to understand and influence the forces shaping their lives.

Early humans develop symbols and artistic expression

In southern Africa, for example, researchers have found rocks adorned with geometric symbols, suggesting that more than 100,000 years ago humans may have been using symbols to express abstract ideas. Other discoveries, on the inner walls of caves in Australia, northern Africa, southern Europe, and southern South America, include impressive illustrations dating from between 35,000 and 10,000 years ago. Using charred sticks, brushes made of ferns, furs, or feathers, and natural pigments from the soil mixed

with animal fats, prehistoric artists in these regions created life-sized paintings of large animals in motion (see page 1). Dramatic images of horses, reindeer, bulls, and buffaloes, many of them galloping or gamboling, leave little doubt that the artists who drew them were creative and contemplative human beings who could communicate and conceptualize as we do. Perhaps these artists were simply decorating their caves by portraying scenes from the world around them. Or perhaps, as some scholars have suggested, they were engaged in a magic or religious ritual by which they sought to capture or command the spirits and vitality of the beasts they portrayed, hoping to ensure the success of the hunt.

Other works of art from this era include sketches of humans adorned with paints and animal hides, discovered on cave walls in southern France, and little statues of women with enlarged breasts and reproductive organs, found throughout central Europe. The former may depict people engaged in a community ritual or celebration. The latter, which have been labeled Venus figurines, reflect a fascination with sexual reproduction, and they may have played a role in ancient fertility rites. These and other artifacts seem to suggest that early humans believed in spiritual forces and sought to influence them, employing arts and rituals in efforts to make hunting, gathering, and procreation more fruitful.



Venus figurine.

Burial practices provide further insights into Paleolithic outlooks. Archeological evidence suggests that people have been burying their dead for at least 100,000 years. At many prehistoric grave sites, found in central Asia, southwest Asia, and central Europe, human remains are often accompanied by tools, clothing, and other ornaments. The burial of such objects with the deceased might simply reflect a desire to show respect and honor for the dead. Or, more intriguingly, it might indicate that early humans believed in some form of life after death, and were equipping their departed loved ones with the essentials for an eternal journey.

Early humans engage in arts, rituals, and burials

Intercultural Connections and Conflicts

Although separate societies created distinctive cultures, they typically did not develop in isolation from each other. At various times and places, in the process of moving about or expanding their domains, some human groups inevitably came into contact with others. Scholars believe that most foraging groups developed contacts with neighboring societies, leading often to fairly extensive intercultural connections.

At times these connections were no doubt practical, based on agreements to divide up or share lands and other essential resources. At times the links may well have been familial, marked by intermarriage between members of separate communities, forming family ties and mutual interests that bound the communities together. At times connections involved exchanges of goods and information, sometimes over vast areas: in southwest Australia, for example, researchers have found prehistoric artifacts produced several thousand miles away, in that continent's northwest regions. These early connections helped pave the way for more elaborate arrangements, including formal trade agreements and diplomatic relations, that emerged later as societies grew larger.

Early societies form practical, familial, and commercial connections

Connections at times could also result in conflicts, especially when sharing or trading arrangements failed to meet the needs of all involved. If hunting depleted a region's wild game, for example, groups that had earlier shared the hunting grounds might clash,

Early societies engage in conflicts for resources and survival

compelling the losers to move elsewhere, where they might forge new connections or come into conflict with other groups. With resources scarce and survival at stake, human societies had to protect their habitats and hunting grounds against intrusions by others, or move to a new region if the outsiders proved stronger. People thus often feared outsiders as potentially dangerous foes.

Connections and conflicts have since been central to human societies

Because the Paleolithic period covered most of the duration of human existence, the behavior patterns that evolved in that era had a lasting effect on later societies. Hence throughout history humans have tended to identify closely with their own cultures, to connect with societies having similar interests, to unite with others in the face of common threats, and to engage in countless struggles for resources (such as land and food) against competing societies. Connections and conflicts among divergent cultures have thus been central components of the human experience.

The Origins and Impact of Agriculture

By the end of the last ice age, about 10,000 B.C.E., people in some regions, prompted perhaps by environmental changes, were beginning to turn from nomadic foraging toward a more settled way of life. In West Asia, in particular, as the warming climate expanded the area covered by grasses and grains, people developed new techniques to gather and process them for food. They made sickles out of flint stone, for example, to cut down the grain and grinding stones to husk and pulverize the kernels. Archeologists who first found evidence of such tools dating from this era designated it as the onset of a New Stone Age. But something far more important was happening than the use of new stone tools. People were beginning to grow their own food.

In Neolithic times people start raising their own food

In the New Stone Age, or **Neolithic** (*nē-ō-LITH-ik*) period, which lasted roughly from 10,000 to 3000 B.C.E., people not only developed better tools but also domesticated plants and animals, cultivated crops, herded livestock, and established permanent settlements. This transition from foraging to farming, one of history's most momentous developments, has been called the Neolithic or Agricultural Revolution. Although it took several thousand years, when compared to the many millennia of foraging that preceded it, and when measured by its immense long-range impact, agriculture's onset was revolutionary indeed.

The Origins of Farming and Herding

Farming and herding begin in West Asia by 8000 B.C.E.

Based on archeological evidence, including the remains of early farm settlements and tools, scholars have surmised that farming first began in West Asia, between 9000 and 8000 B.C.E., in a crescent-shaped region (sometimes called the "Fertile Crescent") that today encompasses Israel, Syria, and Iraq (Map 1.3). Although experts disagree about specific dates and events, they have provided a general outline of what probably took place.

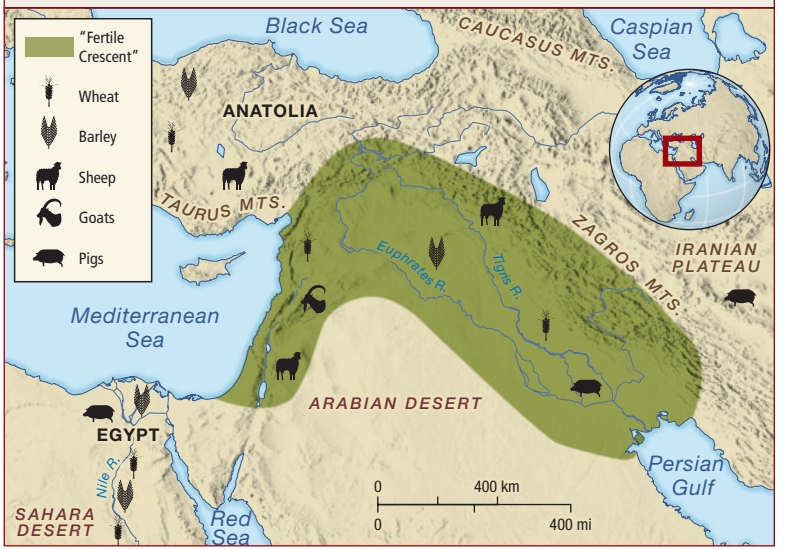
As climate changes increase wild grains, some people settle in one place

Scholars believe that by 12,000 B.C.E., as the last ice age ended, a warming of the climate and melting of the glaciers had left much of this region—today mostly desert—covered with forests and grasslands. Over the next few millennia, some of the people who lived there began to subsist mainly by harvesting the wild wheat and barley grains

that grew in abundance in the grasslands. Since they no longer had to move about in search of wild game and plant food, these people often settled in the same place for a number of years. Unlike nomads, whose need to move around precluded them from having too many children and possessions, the West Asian settlers had little need to limit their families or belongings. With less need to move, and more food to feed their offspring, these settlers could sustain larger families, build more permanent shelters, and accumulate a wider variety of tools, clothes, and other belongings. Their numbers thus began to grow as their mobility declined.

Map 1.3 Agriculture Emerges in West Asia, 9000–8000 B.C.E.

Scholars believe that humans first began to practice agriculture between 9000 and 8000 B.C.E. in a region of West Asia sometimes called the "Fertile Crescent." Observe that this region, extending from the Mediterranean Sea to the Zagros Mountains, included the valleys of the Tigris and Euphrates Rivers. What factors may have aided the rise of farming and herding in this region?



Eventually, however, as the region's population increased, and perhaps as drier weather reduced the abundance of wild wheat and barley that grew there, the supply of wild plant food was no longer sufficient to feed all the inhabitants. Some no doubt responded to this challenge by moving elsewhere to resume their nomadic ways. But others, encumbered by large families and numerous possessions, opted instead to stay put.

Settlements and food surplus foster population growth

Those who stayed put, in order to survive, gradually found new ways to produce more food. They learned that they could enhance the yield of the wild grains by pulling out the weeds that grew up among them. They also discovered that if they took the seeds from the most productive plants and sprinkled them in bare spots elsewhere, new plants would eventually grow there. In time some people found that they could save the seeds and sow them the next year, enabling them to plant and raise their own crops. These first farmers were most likely female, since women were the traditional gatherers of plant foods. Although they could scarcely have foreseen the immense long-term impact of their efforts, the resourceful people who first developed farming rank among the most influential innovators of all time.

As populations grow, settlers cultivate grain to enhance yield

Meanwhile, West Asian hunters were also developing another, equally momentous, food production process. They discovered that certain game animals, such as wild sheep and goats, could be captured and kept alive in captivity rather than killed in the hunt. At first this practice merely provided a useful standby food source: by keeping a few live animals, a family or community could kill the creatures and eat the meat from them when other edibles ran out. Eventually, however, people learned that sheep and goats—as well as cattle, pigs, and horses—would mate and reproduce in captivity. These animals thus

West Asians start raising, not just hunting, animals

were domesticable: they could be bred and adapted by people to meet the needs of human societies. People could raise their own herds and produce their own meat.

Domesticated animals furnish clothing, food, fertilizer, labor, and transport

Eventually many other uses were found for domesticable animals. Their fleeces and hides, for example, were used to make blankets and clothes. Their manure served as a fertilizer to replenish the soil and prolong its productivity. The milk provided by cows, mares, and ewes furnished an ongoing food source, readily available without killing the creature that supplied it. In time people also began to use large animals to pull plows and carts, providing enormous advantages for farming, transport, and travel.

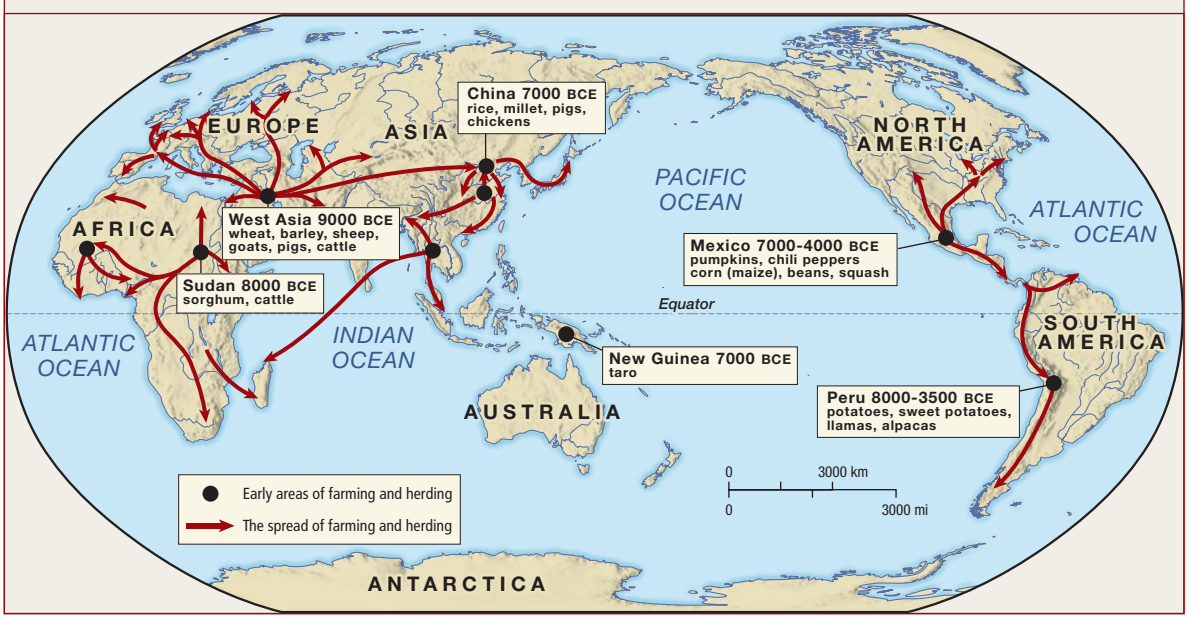
Agricultural Innovation and Expansion

East Asians and Africans develop distinct forms of farming and herding

Although West Asians were probably the first inventors of agriculture, they were not the only ones. In places far from West Asia, adapting to their own environments and challenges, inhabitants developed different forms of farming and herding, using plants and animals native to their locales (Map 1.4). In the north central African region called the Sudan, for example, where grasslands then covered much of what is now the Sahara desert, people began herding cattle and cultivating sorghum (a starchy grain), perhaps

Map 1.4 Agriculture Develops and Spreads, 9000 B.C.E. – 1000 C.E.

Over thousands of years, through human ingenuity and contacts among cultures, agriculture developed and spread from its early areas of origin to other regions, as indicated by the arrows on this map. Note the large dots that indicate early areas of plant and animal domestication, with boxes indicating early food crops, domesticated animals, and estimated dates. What factors may have contributed to the development and spread of agriculture? Why did people domesticate different plants and animals in different parts of the world?



as early as 8000 B.C.E. In China, in the valleys of the great rivers, settlers started to grow crops of millet and rice, and to domesticate pigs, by about 7000 B.C.E. By this time also, on the island of New Guinea, early farmers were probably growing taro, a starchy root crop, on swamplands they had drained by digging ditches to channel away the water.

Cultural connections spread farming and herding practices

Farming and herding also spread through contacts among cultures. By around 7000 B.C.E., for example, agriculture had begun in ancient India's Indus Valley, and by 6000 B.C.E. it had started in Europe and Egypt's Nile Valley. The proximity of these regions to West Asia, and the fact that plants (such as wheat and barley) and animals (such as sheep and goats) domesticated in West Asia were raised in all these regions, suggests that agriculture probably spread there through intercultural connections. In exchanging goods and ideas, early societies also most likely exchanged knowledge about farming and herding.

Egypt, India, and Europe develop new crops, foods, and drinks

Farmers and herders in these new areas, however, were by no means mere borrowers. They cultivated native food crops (such as oats in Europe and figs in Egypt), domesticated local animals (such as different types of cattle in the Nile and Indus Valleys), and eventually grew fibers (such as flax in Europe and cotton in Egypt and India) that could be woven into lightweight linens and clothes. But crops such as wheat and barley continued to predominate in these regions, especially as people learned to grind the grains into flour, to bake the flour into bread, and (especially in West Asia and Egypt) to brew the barley into a beverage similar to what we now call beer.

People in Mexico and Peru independently develop farming

In the Western Hemisphere, where people had no contact with farmers and herders in Africa and Eurasia, agriculture developed differently, with different crops predominating. In what is now southern Mexico, archeologists have found indications of farming as early as 7000 B.C.E., and evidence that, by 4000 B.C.E., farmers there were growing corn, beans, and squash, the cultivation of which would later spread throughout much of North America. By 3500 B.C.E., and perhaps much earlier, people in what is now Peru were planting potatoes and sweet potatoes (Map 1.4). In the Americas, however, since human hunters had earlier killed off most large domesticable animals, livestock herding was virtually unknown—except in Peru where people raised llamas and alpacas.

Spread of farming promotes population growth and deforestation

The spread of farming was also interwoven with population growth. As farmers and herders produced more food, the size of their societies grew, leading them to cultivate additional lands and to clear away forests for farming. After all, only a small percentage of the plants that grew in the forest were edible, while almost everything that grew in a grain field could be used for human or animal consumption. An acre of crops could feed far more people than an acre of woods.

Therefore, to increase the land available for farming, people began to cut and burn down trees and bushes, diminishing bit by bit the forests themselves. In the process, they discovered that burned-over forests were extremely fertile, as the ashes from the burned vegetation served as a superb fertilizer. After several years of nourishing crops, however, the soil would be exhausted of its nutrients, and thus produce less food. So the Neolithic farmers simply moved to another region, cut and burned down more forests, and started the process anew. This "slash and burn" practice was in some ways quite destructive: it ravaged the habitats of wild plants and animals and undermined the subsistence of local hunters and gatherers. At the same time, however, it enabled

farming societies to expand their food supplies, and helped to spread the practice of farming to additional places.

Foragers, Hunter-Farmers, and Pastoral Nomads

Not all groups of people, however, were quick to take up agriculture. Since raising crops and herds typically took more time and required harder work than hunting and gathering, societies were unlikely to turn to farming unless compelled to do so by some combination of population growth and diminished food supply. Even then, they could do so only where the climate and terrain made farming feasible, where some of the local plants and animals were suitable for domestication, and where people had developed the tools and techniques for planting, harvesting, breeding, pasturing, and storing. As a result, the transition from foraging to farming was a long, uneven process that lasted thousands of years. Clearly farming and herding were not the answers for everyone.

Foraging persists in regions too cold or too dry for farming

Some groups, indeed, never took up farming and continued to live as hunters and gatherers in small mobile foraging bands. In the far northern regions of Eurasia and North America, for example, where it was too cold to grow crops, people sustained themselves largely by hunting and fishing. In the arid plains and deserts of Australia, Africa, and central North America, where there was insufficient water for farming, foraging supported relatively sparse populations.

Societies without large domesticated animals combine farming and hunting

Other groups adopted farming but not herding, especially in the Americas, where there were few large domesticable animals. In eastern and southwestern North America, for instance, even after societies took up farming, hunting and fishing continued to play a key role, providing people with meat and fish to supplement crops of corn, beans, and squash. In many of these societies women did most of the farm work, since the men were often away hunting.

Pastoral nomads in semi-arid lands practice herding but not farming

Still other societies embraced herding but not farming, especially in Central Asia, where the arid climate and sparse vegetation were suitable for grazing animals but not for growing crops. Mobile herders such as these are known as **pastoral nomads**: people who raise livestock for subsistence and move occasionally with their herds in search of fresh grazing grounds.

Pastoral nomads connect and conflict with settled farming societies

Always looking for new pasturelands, without which they could not endure, pastoral nomads occasionally came into contact with settled agricultural societies. Sometimes the nomads clashed with the farming communities, fighting desperate battles for the use of lands that both groups saw as vital. Sometimes, however, the two groups traded, exchanging the herders' hides and fleeces for the farmers' grains and flour. Eventually, ranging across the open expanses between the settled societies, the nomads also served as conduits of commerce and information, conveying goods (such as carpets, cloth, and jewels) and techniques (such as horse breeding and metalworking) to distant and disparate cultures.

Thus, for many millennia, pastoral nomads coexisted uneasily with settled agricultural societies. Equipped by their harsh, itinerant existence with ruggedness and mobility, the nomads often managed to prevail in conflict. In the long run, however, since agriculture could support far more people than nomadic herding or foraging, settled societies eventually gained huge advantages in population, weapons, possessions, and power—enabling them to defeat, attract, or displace almost all nomadic peoples. The future belonged mainly to societies based on farming.

Agricultural Society: Village, Family, and Land

As time went on, the lives of farmers increasingly diverged from those of nomadic peoples. Although both farmers and pastoral nomads centered their societies on families and divided their duties by gender, many differences developed between them.

Most farmers live in villages and raise food on surrounding lands

One key difference was permanence of place. Unlike nomads, who moved from place to place, farmers typically settled in one location. Almost everywhere they dwelt in **farming villages**, small settlements of homes in a compact cluster, surrounded by lands on which the villagers raised food. Village homes were mostly simple structures, fashioned from local materials such as earth, thatch, wood, or stone, and grouped together to facilitate socialization and defense. The lands around the village often included not only farm fields but also pasturelands for grazing livestock. A typical farming village was a permanent settlement: those who were born there usually lived and died there, and their descendants likely did the same for many generations.

Stability and food supply increase the size of farming societies

Another key contrast was size. Agricultural communities frequently grew much larger than nomadic groups, whose numbers were limited by the need for mobility. A typical farming village, sustained by a steady food supply and stabilized by permanence of place, might include a few hundred people, and sometimes substantially more. Furthermore, as neighboring villages formed connections with each other, creating networks based on mutual protection and support, agricultural societies grew even larger.

Larger size of farming societies requires greater organization

The growing size of these societies, and the need to parcel out farmlands among families, required a higher degree of structure than was normally present among nomads. Possession of land, scarcely a concern for nomads, became an essential interest in agricultural societies, where people's livelihood depended largely on the land. As families grew larger, they often sought to maintain and expand their access to various lands and to pass this access on to their offspring. Thus, as village families intermarried with each other and with families from other villages, it became increasingly important to keep track of who was descended from whom, in order to determine who would control which lands.

Farming societies develop structured families and gender roles

Family relationships in farming communities therefore tended to be more structured than the informal kinship ties that existed in nomadic societies. Marriages between farming families were typically arranged by the parents of the bride and groom and often sealed by a transfer of assets, such as land or livestock, between the two families. Marriages between members of different agricultural societies, moreover, frequently took the form of an alliance, designed in part to create closer ties or to formalize arrangements for cooperation and support.

Farmers also diverged from nomads in terms of gender roles and status. In foraging bands, the role of women was crucial to the group's survival, since the women's work supplied the plant food on which the whole group relied and since women often had to manage the group while the men were off on a hunt. Among pastoral nomads, where women were often responsible for tending, breeding, birthing, and milking the livestock, their role was also essential to the society. In many farm communities, however, the men produced most of the food, laboring daily in the fields, while women for the most part stayed behind in the village. Their roles, which typically involved raising children, maintaining the household, and helping in the fields when needed, came to be seen as subordinate to the roles of men.

Women and men doing farm work in the Americas.

In farming societies women bear and raise many children

Family sizes further affected gender roles. In nomadic societies, where mobility was at a premium, large families could be a burden, so parents tended to keep their families small, freeing women to assume many duties outside of child-raising. In agricultural societies, however, where many hands were needed to help work the fields at sowing and harvest times, large families were considered desirable. Expected to bear, nurse, and raise many children, farming village women had limited ability to get much involved in affairs outside the household.

Farming societies are often patriarchal, dominated by men

Gender roles and gender status nonetheless varied among agricultural societies. In the Americas, for example, in farming villages where there was no livestock to provide meats and hides, the men often hunted wild game while women did most of the farming. In such societies, since women were the primary food producers and men were often absent on the hunt, women sometimes played a key role in managing village affairs. And even in Eurasia and Africa, capable women with strong personalities often played a prominent role in running their families and villages. For the most part, however, agricultural societies the world over tended to be **patriarchal** (*PĀ-trē-ARK-ul*), dominated by males who served as heads of household and as community leaders.

The Impact of Agriculture

Farming societies require hard labor and foster disease

Initially, agriculture's impact was not always advantageous. Early farmers and herders, for example, typically had to work much harder than gatherers and hunters. Farmers had to clear the land, till the soil, sow the seeds, tend the fields, pull the weeds, and do their best to shield their crops from insects, animals, and birds. They also had to harvest, process, and preserve the food that they grew, as well as to care for their livestock and protect it from predators. Furthermore, judging by remains found in excavations of early farming villages, Neolithic farmers appear to have been smaller, and probably less healthy, than nomadic foragers. From living in close contact with their pigs and cattle, farmers acquired new illnesses, the forerunners of deadly scourges such as influenza and smallpox. By settling continuously in the same place, they accumulated garbage and waste, which fouled their water and attracted disease-bearing insects and rodents. And, unlike small nomadic groups whose mobility and flexibility provided access to a variety of plant and animal foods, settled farming societies typically relied on a few basic crops to feed many people, leaving them vulnerable to disasters such as floods, droughts, crop failures, insect infestations, and famines.

Settled farming societies produce surplus food

In the long run, however, societies based on agriculture had a crucial advantage: they had the ability to produce surplus food. In good years the farmers could grow more food than they consumed, then store the surplus to meet future needs, initially in pits but later in bins and silos that were raised to protect against flooding.

Surplus food enables some to specialize in nonfarming pursuits

The production of surplus food in turn had enormous implications. It provided agricultural societies with a backup food supply, helping to ensure their survival, even during deadly droughts and famines. It enabled farming families to support more children, allowing their communities to grow into settlements of hundreds or thousands of people, and contributing to an overall increase in human population. And it freed some people in settlements based on farming from the need to provide their own food, allowing them to specialize in other pursuits—including arts, crafts, commerce, religion, warfare, and governance. Agriculture thereby supported and sustained the development of large, complex, regional societies, which would increasingly dominate human history.

The Emergence of Complex Societies

Toward the end of the Neolithic period, beginning in West Asia and North Africa, several factors combined to produce complex societies—large, organized, stable communities in which farm surpluses enabled many people to specialize in occupations other than farming. These societies included towns and cities, sizable permanent settlements supported by surplus food from surrounding farms. To manage their substantial populations, many of these societies formed governments, engaged in trade, organized religions, and extended control over surrounding territories, eventually creating very large and populous regional societies. The rest of this chapter discusses general features of early regional societies; the chapters that follow then examine the development of specific societies, as each was shaped by internal and external connections and conflicts.

Towns, Cities, Occupations, and Religion

Surplus food makes possible the rise of towns and cities

By the seventh millennium B.C.E., as food supplies increased, the populations of some West Asian settlements were starting to grow quite large. Jericho (*JER-ih-kō*) in Palestine and Çatal Hüyük (*chah-TAHL hoo-YOOK*) in what is now Turkey, for example, developed into towns—large settlements, home to several thousand people, that served not only as residential centers but also as trading hubs (Map 1.5). Jericho, perhaps the world's oldest town, apparently started as a farming village, at some point before 8000 B.C.E., with huts constructed of mud-dried brick around a natural fresh-water spring. By 7000 B.C.E. it had many such homes, was surrounded by a stone defensive wall, and had become an active center of trade. Çatal Hüyük, an even more substantial population and trading center, had also emerged as a sizable town by around 7000 B.C.E. It included numerous houses made of mud brick, shrines to various gods and goddesses, and marketplaces for exchange of various foods and goods.

Over many centuries, the population of some settlements continued to grow. By the fourth millennium B.C.E., near the Tigris (*TĪ-gris*) and Euphrates (*yoo-FRĀ-tēz*) rivers in what is now Iraq, communities such as Ur (*OOR*), Uruk (*OO-rook*), and Lagash (*lah-GAHSH*) had developed into cities—

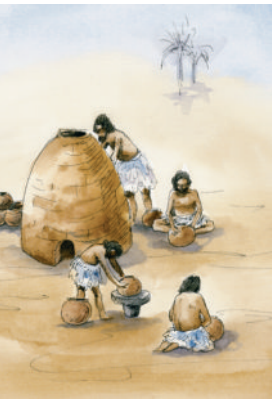
Map 1.5 Early Towns and Cities Emerge in West Asia, 8000–3000 B.C.E.

In the millennia after 8000 B.C.E., towns and cities emerged in regions of West Asia where people practiced farming and herding. Note that most of these early towns and cities developed on or near rivers. How did the emergence of farming make possible the rise of towns and cities? Why were so many early towns and cities located on or near rivers?

very large, complex, densely populated settlements in which many people engaged in occupations other than farming. These early cities, which housed up to 30,000 people, also featured sizable buildings, bustling marketplaces, and extensive fortifications.

City-dwellers specialize in arts, crafts, production of goods, and commerce

Although towns and cities depended on farming, their most influential inhabitants were those who did not farm. With their food supplied by others, these people could specialize in various occupations. Some, for example, were artisans who specialized in tool making, basket weaving, pottery, and carpentry, as indicated by the remnants of their handiwork at archeological sites such as Çatal Hüyük and Uruk. Others no doubt were merchants, who exchanged goods in the urban marketplaces unearthed at these sites. Still others may have been artists and sculptors, as suggested by excavations of shrines and temples embellished with wall paintings and statues of goddesses and gods.



Early potters and pottery in West Asia.

These excavations also reflect the emergence of organized religion. Early peoples, as we have seen, probably engaged in rituals, summoning spirits to help secure food and ensure fertility. As societies grew more complex, these rituals grew more elaborate: people came to worship various gods and goddesses, divine beings believed to embody and control essential forces such as sun and rain, plants and animals, storms, rivers, forests, and fertility. Hoping to please or appease these divinities, priests and priestesses—people who specialized in the performance of religious rituals—conducted ceremonies and sacrifices in city shrines and temples. These religious structures also may have reinforced the authority of rulers, depicting them as divinities or as agents of the gods.

Organized religions and powerful rulers emerge in large complex societies

Other excavations add to the impression that rulers exercised great authority. Fortifications and weapons found at Ur, Uruk, and other early cities suggest that they must have had numerous laborers to build the walls and watchtowers, soldiers to defend against outsiders, and governing officials with the authority to organize and supervise large groups of workers and warriors. Also uncovered at these sites were remains of palaces, and royal tombs in which officials and servants were buried alongside the rulers, adding to the evidence that early cities were run by strong central governments.

States and Civilizations

Before complex societies emerged there was little need for strong central governments. Decisions could be made and conflicts resolved in foraging bands by the group as a whole, and in villages by the patriarchal leaders. If one villager injured another, for example, the heads of households could readily get together to determine punishment and compensation, usually in accord with community customs. Since everyone was acquainted, and frequently related, such informal mechanisms normally sufficed.

Large societies develop complex governance structures

As settlements grew so large that not everyone knew each other, however, residents could no longer rely on family and village leaders to settle disputes or decide issues for the whole community. Large societies hence developed governments, often starting with a single strong leader who, as the need arose, empowered others to assist him. Over time the result was an array of officials who carried out decisions, maintained order, organized food reserves, supervised construction projects, and resolved conflicts among strangers. If one city resident harmed another, the injured party could thus appeal, not to family and friends, but to a government official with the authority to impose punishment and compensation.

A government's main functions, however, were to secure the society's sustenance, ensure the survival of its ruling elite, and defend it against outsiders. Some cities, therefore, secured their food supply by exerting dominion over neighboring villages, using armed warriors to force village farmers to part with a portion of their produce. Some of this food was then used to feed the ruler and officials, as well as other urban residents, and some might be stored as a hedge against future shortages. The ruler and his warriors, in return, protected the villagers from conquest by rival outsiders.

To secure food supplies, cities exert control over neighboring farm villages

By 3500 B.C.E. the rulers of several West Asian cities, including Ur and Uruk, were using this system, commonly called tribute, to maintain their food supplies and control the surrounding countryside. By thus establishing governance over a specific territory, these early West Asian rulers effectively formed **states**—territorial entities ruled by a central government. Several centuries later in North Africa, a legendary ruler called Menes (*MĀ-nāz*) extended his sway over numerous settlements in the Nile valley, creating an Egyptian state that stretched for hundreds of miles.

In governing sizable territories, early rulers form states

Historians have long noted that these early states, and others emerging somewhat later in northwest India and northern China (Map 1.6), all arose in river valleys in semi-arid regions. Many scholars have held that such environments prompted the formation of states, claiming that they were most likely created to organize vast numbers of people to build banks and dikes for flood control and to dig irrigation ditches for

Early states arise along rivers

Map 1.6 Early States and Civilizations Emerge in River Valleys, 4000–2000 B.C.E.

In the fourth and third millennia B.C.E., early cities, states, and civilizations arose near rivers in Egypt, Mesopotamia, the Indus Valley, and China. Notice that these early complex societies also developed commercial and cultural connections with surrounding regions. What factors may have aided the emergence of early states and civilizations?

bringing river water to nearby farm fields. Other scholars, however, citing evidence that irrigation ditches existed before states in West Asia and China, have suggested instead that these societies formed states mainly to manage and control their growing populations. Whatever the case, it is clear that the rivers, by supplying plentiful water for people, crops, and livestock, and by enriching valley soils with periodic floods that left behind fertile silt, facilitated the formation and growth of permanent settled societies.

It is also clear that, by providing a convenient means of transportation, the rivers helped connect these societies up and down the river valleys. Thus, over many centuries, through trade, alliances, and conquests, cities and states along these waterways formed commercial, cultural, and political connections with each other. The result was the emergence of large, complex, regional societies in West Asia and Egypt by 3000 B.C.E., in India not long thereafter, and in China about a thousand years later.

River connections promote the rise of early regional civilizations

These large, complex regional societies are customarily characterized as history's first **civilizations**—a term applied to very large, complex societies, or regional groups of complex societies, with widely shared or similar customs, institutions, and beliefs. Historically, however, the word civilization has also been used to indicate an "advanced" level of social and cultural achievement, and hence by some peoples to claim they are superior to others. People in large, complex societies, for example, have frequently deemed themselves more "civilized" (that is, more culturally advanced) than outsiders, whom they have sometimes disparaged as savages and barbarians. To prevent ambiguity and avoid this kind of cultural bias, we will avoid the latter usage of the word, while noting nonetheless that the emergence of the early civilizations, discussed in the next four chapters, traditionally marks the beginning of the historical era.

Chapter Review

Putting It in Perspective

For tens of thousands of years, early humans lived in small, nomadic bands that were based on kinship and survived by hunting and gathering. Over time, as they adapted to a growing range of challenges and environments, our ancestors migrated to distant lands, eventually spreading throughout the entire world. They devised new tools and weapons, developed distinctive cultural expressions, divided their work along gender lines, formed marriage and family connections, exchanged information and goods, and occasionally engaged in conflicts with each other. Still, as long as they had to forage for food and move periodically from place to place, their societies remained simple and small.

Then came the advent of agriculture. People in some areas started to raise crops and animals and to form permanent settlements, some of which eventually grew into larger, more complex communities. In time some villages grew into towns, and some towns became cities, with large populations of people who specialized in nonfarming pursuits such as commerce, carpentry, tool making, warfare, religion, construction work, and governance. Some of these cities expanded their control over neighboring villages and towns, thereby creating states, which in turn would form the basis of large, complex, regional societies later called civilizations.

Henceforth, although nomadic cultures would long endure in areas unfit for farming, history would largely be dominated by complex, regional societies, and by the connections and conflicts that transpired among them. The first such regional societies, discussed in the next chapter, emerged in the fourth millennium B.C.E. along rivers in West Asia and North Africa.

Reviewing Key Material

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ASK YOURSELF

1. How did hominid development differ from that of other animals? Why did hominids organize into nomadic kinship groups? Why did they divide their work along gender lines?
2. Why did early hominids, and later early humans, migrate to distant lands? Why did human societies develop a wide range of diverse cultures?
3. Why did humans begin to grow their own food? What were the advantages and disadvantages of farming and herding? Why did some societies remain nomadic?
4. How did agricultural societies differ from nomadic ones? What were the major long-range impacts of the emergence and expansion of agriculture?
5. Why did some Neolithic peoples organize cities and states? What were the major features and advantages of these complex societies?

GOING FURTHER

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Key Dates and Developments

Paleolithic Period/Pleistocene Epoch 2,000,000–10,000 years ago

by 2,000,000 years ago	Early hominids use stone tools
by 1,800,000 years ago	Early hominids migrate from Africa to Asia
by 800,000 years ago	Early hominids migrate to Europe
by 150,000–200,000 years ago	Modern humans (Homo sapiens) emerge in Africa
by 100,000 years ago	Humans in Africa fish, mine, and carve symbols
by 100,000 years ago	Humans begin to inhabit Eurasia
by 50,000 years ago	Humans migrate to Australia
by 35,000–10,000 years ago	Humans produce cave art in Australia, Africa, Europe, South America
by 12,000 years ago (10,000 B.C.E.)	Humans migrate to the Americas

Neolithic Period 10,000–3,000 b.c.e.

by 9000 B.C.E.	Farming begins in West Asia
by 8000 B.C.E.	Farming begins in the African Sudan
by 7000 B.C.E.	Farming begins in India, China, New Guinea, and Mexico
by 7000 B.C.E.	Towns emerge in West Asia
by 6000 B.C.E.	Farming begins in Egypt and Europe
by 3500 B.C.E.	Farming begins in Peru
by 3000 B.C.E.	Cities and states emerge in West Asia and Egypt