

Chapter 6
Technological and
Environmental
Transformations: to
c. 600 B.C.E.

I. CHAPTER OVERVIEW

There's a lot of stuff in this chapter, so before you begin, read through the outline below so you'll know where to find what you're looking for when you return to this chapter for a mini-review. (Remember, the key to doing well is to go through the chapter once, delve into the areas you are clueless or semi-clueless about, then return here for a mini-review.)

I. Chapter Overview

You're reading it!

II. Stay Focused on the Big Picture

Organize the zillions of facts from the era covered in this chapter into some big-picture concepts.

III. History Review to 600 B.C.E.

This is the bulk of the chapter, where we plow through the major civilizations, people, and events. Again, we suggest that if you're totally clueless on a section, review the corresponding section in your textbook. Here's a list of the major sections.

- A. Nomads: Following the Paleo(lithic) Diet
- B. Settling Down: The Neolithic Revolution
- C. The Big, Early Civilizations: Rivers Deliver
- D. Early Mesoamerica and Andean South America: For Every Rule There's an Exception

IV. Technology and Innovations to 600 B.C.E.

Farming tools, metallurgy, and ability to manipulate the environment move humans from nomadic hunters and gatherers to builders of civilizations and empires

V. Changes and Continuities in the Role of Women

Women not only birthed, raised, and socialized the children but also contributed to the "gatherer" part of the "hunter-gatherer" equation, which was no small feat.

VI. Pulling It All Together

A quick review of the review that focuses on themes and trends

VII. Timeline of Major Developments 8000 B.C.E. to 600 B.C.E.

II. STAY FOCUSED ON THE BIG PICTURE

As you review the details of the ancient civilizations in this chapter, stay focused on some big-picture concepts, including the following:

1. What are civilizations all about? Think about what makes a civilization a civilization in the first place. As you read through this chapter, we'll give you some ideas. Focus on things like the existence and development of cities, formal institutions (including political, economic, and religious), different social levels and occupations, the use of technology (we're not talking the Internet here, but basic and hugely important things such as wheels and weapons), the arts, and methods of communication and transportation.
2. How does change occur within a society? When change occurs, think about what caused it. Sometimes a society changed because it was exposed to a different way of doing things when it interacted with another culture (an effect that is sometimes called cultural diffusion). Other times a society changed because its members invented something new, or realized how to use something in a new way. Always pay attention to why things changed in a particular society or civilization.
3. How are people impacted by, and how do they impact, geography and climate? Focus on the interaction between people and nature. We'll draw your attention to this issue constantly in this chapter. Geography and climate help to explain where people live and build cities, why people suddenly move from one place to another, and how early civilizations chose to defend themselves against attack. They also greatly influenced which civilizations interacted with, or were isolated from, other civilizations. But people also use technology to impact their surroundings. Civilizations change the landscape by diverting water, moving natural resources, and building transportation networks. Nature impacts people; people impact nature. It's a great, big complicated cycle...that's why the AP people love to talk about it so much.

III. HISTORY REVIEW TO 600 B.C.E.

Historians use periods of time to organize history. Be aware that not everything will fit neatly into a predetermined period, but we'll try to group events.

The first period we will look at is defined by the fact that everything that happened in these years sets the stage or provides the foundation for what happens later. This period is marked by some major changes: Nomadic movements and migration, figuring out farming and what happens when there actually is enough to eat, early settlers and civilizations, and the expansion and contraction of civilizations. Not bad for one chapter, huh?

A. Nomads: Following the Paleo(lithic) Diet

Imagine early people. Really early people. They hadn't yet built cities. They didn't know how to farm. Their sole focus in life was to satisfy their most basic needs: shelter and food. Because they didn't have any advanced tools and hadn't yet developed anything as sophisticated as farming, the best way for them to get shelter was to find it, and the best way to get food was to follow it.

This was the Paleolithic Period, and it was marked mostly by the use of stone tools. You won't be asked a lot of questions about nomadic societies. However, you do need to understand why the development of more stable civilizations (which you will be asked a lot of questions about) was so significant, and the best way to do that is to learn what came before them. As you review world history before the Neolithic Revolution, focus only on the major developments. During this time period, those include the development of spoken language, the ability to control and use fire, and the ability to make simple tools out of stone.

Foraging Societies: Hunting and Gathering

Foraging societies (hunter-gatherer clans) were composed of small groups of people who traveled from point to point as the climate and availability of plants and animals dictated. Because they depended on nature for sustenance, they were also at the mercy of nature. Climate changes, disease, famine, and natural disasters could endanger or eliminate entire communities. Even when times were good, foraging societies were limited by the capacity of their surroundings, and by their inability to store food long-term. Members of these societies did not build permanent shelters and had only a few personal belongings. Think about how much you can carry in your backpack: That will give you an idea how many possessions they had.

Pastoral Societies: Taming the Animals

Pastoral societies were characterized by the domestication of animals. These societies were often found in mountainous regions and in areas with insufficient rainfall to support other forms of settlement. Many of these societies used small-scale agriculture to supplement the main food supply of animal products (usually milk or eggs, which were much easier to produce and store than meat). The extended family was a major institution. Women had very few rights; however, these societies were more egalitarian than those that came later. Stratification and social status, which were limited in foraging societies, were based on the size of one's herd in pastoral societies. But as in foraging societies, people in pastoral societies had few personal possessions. Even though they had domesticated animals (as opposed to having to hunt for animals), they didn't settle down in towns because they had to continually search for new grazing areas and water for the herds.

As pastoral societies increasingly domesticated more and more animals, they also began to experiment with securing a more dependable food supply through the cultivation of plants. This was a revolutionary development that led to...

B. Settling Down: The Neolithic Revolution

Agricultural Societies: This Is My Land

In a span of several thousand years from approximately 8000 B.C.E. to 3000 B.C.E., groups of people moved from nomadic lifestyles to agricultural lifestyles and town and city life. This transition period is often called the Neolithic (“New Stone”) Revolution or the Agricultural Revolution. Keep in mind that we still aren’t talking about full-blown civilizations. People still lived in relatively small, independent groups or communities. To be sure, the towns and cities that they built were bigger than anything else that came before them, but civilizations on a grand scale didn’t get rolling until around 3000 B.C.E., give or take a few centuries, depending on the region of the world.

Here’s how it worked: When people figured out how to cultivate plants, they could stay in the same place, as long as there was good soil and a stable source of water. Because they also knew how to domesticate animals and use simple tools, they could rely on a relatively varied and constant supply of food, and this encouraged them to stay in the same place for longer periods of time.

Staying in the same place changed things dramatically, because people in a community stayed within close proximity of each other, which added to their sense of unity and helped them build and sustain cultural traditions. What’s more, unlike nomadic societies, agricultural communities were not just collections of people, but people tied to a particular piece of land. In other words, they began to think of property in terms of ownership.

Important Consequence of Agriculture: A Food Surplus

Imagine two people who only grow enough food for themselves. They both have to farm all day every day. There’s little time left to do anything else. Now imagine that one person farms enough food for two people. The second person can do something else, say, make tools or dig an irrigation ditch or study to become a philosopher or religious leader. Now imagine that one person can farm enough food for five people, or ten people, or a hundred people. Now the other ninety-nine people can build towns, organize armies, develop a system of writing, create art, experiment, and discover new technologies. In other words, individual labor becomes specialized. Each person can get really good at doing a particular task because he or she no longer has to worry about where the next meal is coming from.

Contrast Them: Nomadic versus Agricultural Societies

The difference between nomadic and agricultural societies is about more than just moving around versus staying put. It also involves emotional and psychological issues. Think about it this way: When you and everybody else are on the move a lot, the land more or less belongs to everybody. But when people stay in the same place for generations, they begin to think of the particular piece of land that they live on as home—*their* home. If someone else comes along and drinks from their river or builds a house on *their* hill, they might begin to think of the newcomers as intruders or invaders, not as neighbors. Once nomads started interacting with sedentary societies through trade or conflicts, things started to get complicated.

As agricultural societies became more complex, organized economies, governmental structures, and religious organizations began to emerge to keep things as predictable and orderly as possible. Suddenly, there was society, or the beginnings of what we'd call a civilization.

With the invention of irrigation techniques, lands that previously couldn't be farmed could be used for additional surpluses. This would lead to more growth and complexity, which would lead to more agricultural advancements, which would lead to more growth and complexity, and so on.

Focus On: What Contributes to the Development of a Civilization?

Specialization of labor is key. If everyone has to farm to have enough food, a great civilization won't develop. If a certain number of farmers can provide a surplus of food, then other people in the community are free to build, invent, and create tools, art, and institutions.

Impact of Agriculture on the Environment

There's no question that the Agricultural Revolution had an impact on the environment. Farming villages began to dramatically change the lay of the land by diverting water, clearing

land for farming, and creating farmland where none previously existed. As villages grew into more permanent towns and cities, roads were built to link them, further altering the landscape. Stones were unearthed and cut to build increasingly large buildings and monuments. All of this activity led to a world in which land and resources were continually being reconfigured to fit the needs of growing, geographically stable populations.

What's more, the impact on the animal kingdom was equally momentous. With the development of large-scale agriculture, animals began to be used not only as a source of food and clothing, but also as a direct source of agricultural labor. For example, oxen were used to pull plows on ever-expanding farmland. This enabled farmers to increase the size of their fields dramatically because they no longer had to turn the soil by hand.

Technology: Metal Workers Deserve Medals

If there had been a stock market for new technologies in the Neolithic Era, it would have attracted many investors. During this period, hard stones such as granite were sharpened and formed into farming tools such as hoes and plows. Pottery was made to use for cooking. Weaving was invented to shape baskets and nets; more complex and comfortable clothing was designed. Eventually, wheels were invented for use on carts, and sails for use on boats. The list goes on and on.

But perhaps one of the most significant advances of the Neolithic Era was the knowledge of how to use metals. This greatly advanced the development of not only tools, but also weapons. When people figured out how to combine copper with tin to create an even harder metal, bronze, the building of civilizations was well on its way. This development was so significant that some people call the latter part of the Neolithic Era the Bronze Age. Bronze was superseded by the discovery of iron, but more on that later.

C. The Big, Early Civilizations: The Rivers Deliver

Most of the world's early great civilizations were located in river valleys. Think about it. Rivers provided a regular supply of water, which is, of course, necessary for survival. Also important is that the lowlands around rivers tend to be covered with soil that is loaded with nutrients, which are deposited when the river recedes after floods to nourish the soil. The river itself may be home to animals and plants that could also provide food for people. Rivers were also a vital means of transportation.

When we talk about civilizations, we're talking about large areas of land with large populations and distinct, organized cultures, as opposed to the smaller farming communities that characterized earlier time periods. Pay attention to the social, political, and economic developments of the civilizations in this section: These developments are what made them civilizations in the first place.

A piece of advice: Do not assume that all civilizations were headed by a central authority. Many early civilizations, in fact, were composed of loosely connected city-states, which were made up of an urban center and the agricultural land around it under its control. These city-states were sometimes combined into one because they shared common cultural characteristics; but they were also independent of each other in many ways and often competed with each other. This is true in modern times as well, of course. When we speak of Western civilization, for example, we mean a whole host of countries that have similar characteristics and cultures but that are distinct from one another and, often, compete with one another.

Major early civilizations developed and became dominant starting at around 3000 to 2000 B.C.E. They were located in Mesopotamia, Egypt, India, and China.

Mesopotamia: Lots of Water, Lots of History

Mesopotamia literally means "between the rivers"; the rivers were the Tigris and the Euphrates. A series of ancient civilizations—most notably Sumer, Babylon, and Persia—thrive along their banks. Mesopotamia is part of a larger area of relatively arable land known as the Fertile Crescent, which extends westward from Mesopotamia toward the Mediterranean.

Unfortunately, the flooding of the Tigris and Euphrates Rivers was very unpredictable, so some early settlements were frequently washed away. But soon people learned to build canals and dikes, and began to build their towns farther uphill, enabling large city-states to emerge. By 3000 B.C.E., Ur, Erech, and Kish were the major city-states of the first major civilization of Sumer.

Sumer: The First Major Mesopotamian Civilization

Sumerian civilization rose in the southern part of Mesopotamia. In addition to successful agriculture and river management, the Sumerians developed a form of writing known as cuneiform. Scribes used this form of writing to set down laws, treaties, and important social and religious customs; soon the use of cuneiform spread over the trade routes to many other parts of the region. Trade was also enhanced by the introduction of the wheel, a major development that greatly reduced the time it took to transport both goods and people between two points.

Sumerians also developed a twelve-month calendar and a mathematical system based on units of sixty (as in sixty seconds and three-hundred-sixty degrees). They also used geometry to survey the land and to develop architectural enhancements such as arches and columns.

Sumerians were **polytheistic**, meaning that they worshipped more than one god. The interesting thing about Sumerian polytheism was that each city-state had its own god that was worshipped only by its people. In addition, there were a bunch of gods that all the city-states worshipped collectively. Sumerians built temples, called **ziggurats**, which were terraced pyramids, to appease their gods. They believed that when disaster struck—such as a particularly devastating flood—it was because the gods were angry.

Disaster often struck; no temple could stop the relentless flow of invasions of Sumeria. And by around 1700 B.C.E., the civilization had been completely overthrown; however, its conquerors adopted many Sumerian traditions and technologies.

From Sumer to Babylon to Nineveh to Babylon

As the Sumerian city-states declined, the city of Akkad, which was north of Sumer, rose to dominate the region. The Akkadians major contribution was they developed the first known code of laws, which they wrote in cuneiform, which they learned from the Sumerians. But by 1700 B.C.E., Akkad was overrun by a new powerhouse in Mesopotamia, **Babylon**. King Hammurabi of Babylon expanded on this idea of a code of laws by developing an extensive code that dealt with every part of daily life. **The Code of Hammurabi**, as it has come to be called, is often credited as a significant step toward our modern legal codes. It distinguished between major and minor offenses (a big deal at the time) and it established a sense of justice and fairness by applying the laws to nearly everyone (the beginnings of “rule of law”).

But Babylon quickly fell due to the invasions of the Kassites and then the **Hittites**. By 1500 B.C.E., the Hittites dominated the region, especially because they learned how to use iron in their weapons. Because iron is a lot stronger than bronze, the Hittites quickly became a military superpower.

As you’ve no doubt figured out by now, news spread quickly even in ancient civilizations. As soon as one civilization figured out a new way to do something, the information was passed via the trade routes to other groups, who would quickly adopt and adapt the new technology to suit their cultures. In this way, within a hundred years, the **Assyrians** had learned to use iron, the very technology the Hittites had used to defeat them. This enabled the Assyrians to establish a capital at Nineveh and eventually build an empire that swept across the entire Fertile Crescent. Highly disciplined but cruel, the Assyrian army was hated by those it conquered. As a result, there were frequent uprisings against the Assyrian authorities, who, in response, sent large groups of people into exile. This action also played a part in enhancing cultural diffusion across the entire region and beyond.

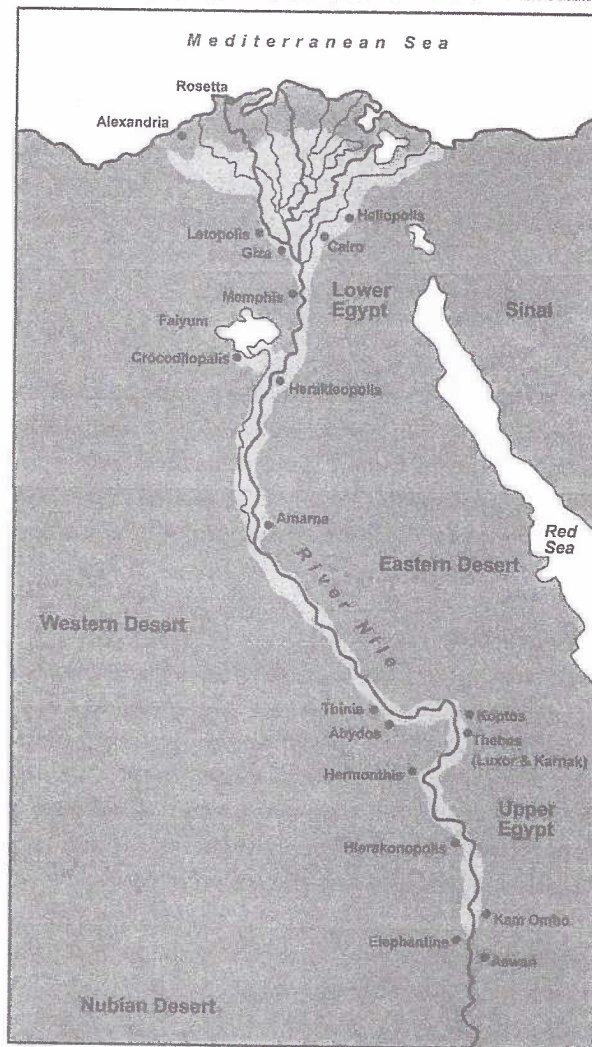
In spite of their power, within a few hundred years the Assyrians were defeated by the Medes and the Chaldeans. The Chaldean king, **Nebuchadnezzar**, rebuilt Babylon as a showplace of architecture and culture. He extended his empire through-

out the Fertile Crescent, as the Assyrians had done before him. But like all the civilizations before it, the new Babylon was doomed to fall. A new civilization, the Persian Empire, developed into a major world force.

Focus On: Continuity through Change

You probably won't need to know specifics about the long list of civilizations that emerged, one after the other, in Mesopotamia in the centuries between the Sumerian and Persian Empires. However, the Code of Hammurabi and the growing use of iron are both pretty big developments. That said, we've given you a quick review because it is essential that you understand, and can demonstrate, that as civilizations were conquered, their cultural heritage, religions, laws, customs, and technologies were rarely lost. Commonly, conquering civilizations adopted and adapted the customs and technologies of those they defeated. The series of civilizations that grew, and then fell, in Mesopotamia demonstrates this point well.

Ancient Egypt: Stay Awhile Along the Nile



The Egyptian Empire (1450 B.C.E.)

The ancient **Egyptian** civilization developed along the Nile River, where the soil was rich and the agricultural opportunities were plentiful. The Nile cuts through an otherwise arid landscape, so the people clustered along the riverbanks, where, in addition to farms, they constructed towns and cities. Though we often think of ancient Egypt in terms of massive construction projects, such as the pyramids, most Egyptians lived in smaller towns. Unlike the Tigris and Euphrates Rivers, the Nile floods at a predictable time of the year and in relatively predictable stages. This made it possible for the ancient Egyptians to follow a very stable agricultural cycle and compile substantial food surpluses.

Three Kingdoms, One Civilization

You might remember from your studies that, as various dynasties rose to and fell from power, ancient Egypt was reorganized into different kingdoms. You don't need to remember all the details about the many kingdoms, but you should know that there were three major ones—Old, Middle, and New—and that it was during the New Kingdom that the ancient Egyptian civilization reached its height. By 1400 B.C.E., it stretched from the upper Nile River Valley (at least 800 miles upstream from Memphis) through the eastern Mediterranean regions of Palestine and parts of Asia Minor (present-day Turkey).

Egyptian Achievements

Even before the Old Kingdom, the entire river valley was united under **King Menes**, who built his capital at Memphis and led efforts to manage the floodwaters and build drainage and irrigation systems. As a result of the unification, the civilization became wealthy and powerful. Rulers, known as **pharaohs**, directed the construction of obelisks and the pyramids, enormous tombs for their afterlife. In addition, the Egyptians used a writing system to communicate. Known as **hieroglyphics**, this system consisted of a series of pictures (hieroglyphs) that represented letters and words. The Egyptians were also very interested in astronomy, which led to their creation of a fairly reliable calendar.

Over time, the civilization became dependent on trade because its people needed a constant supply of timber and stone for their many ambitious building projects and because Egyptian culture valued luxuries such as gold and spices. Besides giving the Egyptians access to the goods they wanted and needed, trading had an enormous impact on the them because it brought them into contact with other civilizations.

You *Can* Take It with You

Like most Mesopotamian societies, the Egyptians were polytheistic. The most significant aspect of their religious beliefs was the focus on life after death—the afterlife. Many societies shared this belief, but the Egyptians were convinced they could take earthly belongings with them to the afterlife, where they would be happy and well-fed and would continue doing many of the same things they did while in their earthly lives. They also believed that they would be able to use their bodies in the afterlife, and this led to the invention of mummification, a process of preserving dead bodies (though this was only available to the wealthier members of Egyptian society). The pharaohs, as you know, built huge pyramids to house their mummified bodies and earthly treasures.

Egyptian Women, Hear Them Roar

The first female ruler known in history was **Queen Hatshepsut**, who ruled for 22 years during the New Kingdom. She is credited with greatly expanding Egyptian trade expeditions. The relatively high status of women extended beyond royalty with most Egyptian women enjoying more rights and opportunities to express individuality than their counterparts in Mesopotamia. During the New Kingdom in particular, women could buy, sell, and inherit property and choose to will their property how they pleased. Women also had the right to dissolve their marriages (under certain circumstances).

That said, women were still expected to be subservient to men and were valued most when they bore children. Young girls were also not educated nearly as well as young boys.

Egyptian Social Structure: Another Pyramid

The tombs of the pharaohs weren't the only pyramids in Egypt. Egyptian social structure was in the form of a pyramid as well.

At the top of the pyramid was the pharaoh, of course, and below him were the priests. Below the priests were nobles, followed by merchants and skilled artisans, which included physicians; at the bottom of the pyramid was the largest group: peasants. The peasants worked the land and generated most of the wealth for the kingdom. Specifically, the pharaoh owned all the land in the kingdom, so the goods produced on the land were considered his property. Typically, the peasants were expected to give over half of what they produced to the kingdom. Also at the bottom level of the pyramid were the slaves, who were mostly either prisoners of war captured during the Egyptian conquest of surrounding regions or the descendants of those prisoners. It cannot be denied that most slaves lived a hard life, but in many cases they were not much worse off than many of the free peasants. Slaves worked on the land or on irrigation or building projects alongside the peasants, and on occasion were appointed to trusted positions within the government or within the palaces.

Ancient Egypt in Decline

By 1100 B.C.E. and for the next thousand years, ancient Egypt fell into decline, and both the Assyrian Empire and the Persian Empire conquered parts of this once-great civilization. Later, the Greeks occupied Egypt, and eventually the Romans completely absorbed Egypt into their empire. More on the Greeks and Romans later.

Pyramid Symbolism

The iconic pyramids of ancient Egypt, one of the wonders of the world, also serve as a symbol of the culture's social hierarchy, with the pharaoh at the top and slaves at the bottom, or base.

Indus Valley Civilization: Indus Industry Ruled

Like Mesopotamia and Egypt, the Indus Valley civilization was built along the banks of a river system. However, because of the huge mountains north and west of the Indus River, contact with outside civilizations was more limited there than in Mesopotamia, which was under continual threat by invaders. That is not to say that the Indus Valley was entirely cut off. The Khyber Pass through the Hindu Kush Mountains provided a connection to the outside world and was used by merchants on trade excursions. Later, as you might guess, it also gave invading forces a way into the land.

Compare Them: The Decline of Egypt and Mesopotamian Civilizations

Be sure to take note of the fact that whenever a civilization became powerful and prosperous, it attracted a lot of attention and envy from its neighbors, who wanted a piece of the action. Typically, this was the breeding ground for invasions. By the time it came under attack, the wealthy civilization was often so big it couldn't adequately protect all its borders, so over a period of time it began to weaken. This was true of the empires that arose in Mesopotamia and in ancient Egypt. As you continue to read, you'll learn that it was true of the Greeks and Romans as well.

From at least 2500 to around 1500 B.C.E., the ancient Indus Valley civilization stretched for more than 900 miles along the Indus River in what today is northwestern India. Its two major cities, **Harappa** and **Mohenjo-Daro**, were each home to perhaps more than 100,000 people—enormous cities by ancient standards. There is strong evidence that the cities were master-planned, uniformly constructed, and had sophisticated wastewater systems. This indicates that the Indus people had a strong central government, probably led by a priest-king. Like the major religions of Egypt and Sumer, those in the Indus Valley were polytheistic.

Like the architecture of its cities, Indus Valley industry was top-notch. In addition to using technologies such as potter's wheels, the Indus Valley farmers grew cotton and its artisans made cloth, which became an extremely important trade item among merchants traveling through the Khyber Pass to Mesopotamia.

Sometime around 1900 B.C.E., the cities of the Indus Valley were abandoned for reasons that remain unknown today. All that is known is that by 1500 B.C.E., the civilization crumbled with the arrival of the Aryans.

The Arrival of the Aryans

The Aryans were nomadic tribes from north of the Caucasus Mountains (near the Black and Caspian Seas). Using horses and advanced weaponry, they easily defeated the populations in the Indus Valley. Each of the Aryan tribes migrated to India independently; over a period of time, they began to settle in the Indus Valley, where they would give up their nomadic lifestyles.

The important thing to remember about the Aryan conquest of the Indus Valley is the establishment of their religious beliefs on the Indian subcontinent, in particular their belief in reincarnation. The Aryans, yet another polytheistic people, recorded their beliefs and traditions in the Vedas and the Upanishads. Over centuries, these early Aryan beliefs evolved to form the basis for what later became **Hinduism**.

The Aryan social structure also had a major impact on later developments in India. Combined with Hinduism, it formed the basis of what later became the caste system. Initially, the Aryan social structure divided its people into three classes, in this order from top to bottom: warriors, priests, and peasants. Later, a class of landowners and merchants would be added above the peasant class; the priest class (known as **Brahmans**) would be moved above the warrior class because its members were considered closer to the gods.

In the early days of this system, movement between classes was allowed. However, as the system became more complex and ingrained in society, it became more rigid. Eventually, subcastes were added to the four main castes, and social mobility among the castes was prohibited. Because members of different castes could not marry, children were born into the same castes as their parents and stayed there.

Early China: Shang on the Hwang

Shang China rose in the Hwang Ho River Valley (also known as the Yellow River Valley), and, like other river-basin communities, used its stable agricultural surplus to build a trade-centered civilization. At its height, the Shang controlled large parts of northern China and were militarily quite powerful. Thousands of Shang workers built walls around the towns and cities along the river; Shang warriors used chariots to defeat their enemies. The Shang dynasty controlled the Yellow River Valley from around 1600 to around 1100 B.C.E.

However, Shang China had limited contact with the rest of the world, though it did trade with Mesopotamia (a very long journey!). The Shang were so isolated, in fact, that they believed themselves to be at the center of the world, which explains why they called their civilization “All Under Heaven.” This belief contributed to the Shang’s ethnocentric attitude, which means that they considered themselves superior to all others.

The Shang certainly had reasons to be proud. Not only were they accomplished bronze workers, but they also used horse-drawn chariots, developed the spoked wheel, and became experts in the production of pottery and silk. What’s more, they devised a decimal system and a highly accurate calendar.

Focus on the Family

The extended family was an important institution in many ancient civilizations across the globe, but nowhere was it more important than in Shang China. There, multiple generations of the same family lived in the same household in a **patriarchal** structure (led by the eldest male). Shang religion held that gods controlled all aspects of peoples' lives; people also believed that they could call on the spirits of their dead ancestors to act as their advocates with the gods. This gave the extended family even greater significance.

Enter the Zhou

Around 1100 B.C.E., the Shang were ousted by Wu Wang, who established the **Zhou Dynasty** (also spelled Chou Dynasty), which maintained many of the traditions and customs developed under the Shang Dynasty (sound familiar?). The Zhou ruled China for nearly 900 years, longer than any other dynasty. Think of how long the United States has existed as an independent country, then multiply it by four. Now you have an idea of how long the Zhou dynasty existed.

The Zhou Dynasty believed in what was called the **Mandate of Heaven**, meaning that heaven would grant the Zhou power only as long as its rulers governed justly and wisely. Put another way, the Zhou Dynasty would remain in power only as long as it had the blessing of heaven.

The Zhou developed a feudal system in China, similar to that of Europe during the Middle Ages (which we'll talk about more in the next chapter). The king was the ruler of the entire empire, but because it was too big for one person to manage, nobles were given power over smaller regions within the empire. This worked out well for a couple hundred years. The king gave each noble protection as long as the noble remained loyal to him. As time passed, however, a number of the nobles built up a lot of wealth and power within the regions under their control and eventually split off into independent kingdoms. Some of the most complex kingdoms developed **bureaucracies** within their governments, which was a way of organizing government tasks by department, or **bureau**, so that different parts of the government could specialize and stabilize. A bureaucratic form of government remained popular in China for thousands of years. Eventually, though, fighting and warfare among the feudal kingdoms brought an end to the Zhou Dynasty in 256 B.C.E.

West Africa: Bantu Migrations and the "Stateless Society"

Beginning around 1500 B.C.E., farmers in the Niger and Benue River valleys in West Africa began migrating south and east, bringing with them their languages (from the **Bantu** family of languages) and their knowledge of agriculture and metallurgy. These migrations, usually referred to as the **Bantu migrations**, continued over the course of the next 2,000 years. Bantu speakers gradually moved into areas formerly occupied by nomads. Some of the nomads simply moved on, and some of them adopted the more sedentary culture of the Bantu.

It is generally believed that the migration was spurred by climactic changes, which made the area now known as the Sahara Desert too dry to live in. People moved south out of the Sahara into the Bantu's homeland, which in turn caused them to move to the forests of Central Africa, then eventually beyond the forests to the east and south.

However, not all Bantu-speakers moved away. Further north in the upper Niger River valley are the remains of Jenne-Jeno, which is believed to be the first city in sub-Saharan Africa. Beginning as a small fishing settlement around 250 B.C.E. and reaching urban size in 400 C.E., **Jenne-Jeno** is unusual because although it reached urban density, its architecture suggests that it was not a hierarchically organized society. Instead, archeologists believe that it was a unique form of urbanism comprising a collection of individual communities. It just goes to show, once again, that not all human societies have followed the same path toward sophistication, and that urbanization doesn't necessarily mean centralization.

Focus On: Migrations

Why do people migrate? People migrate for the same reason animals do: to find food and a hospitable environment in which to live. Nomadic peoples by definition are migratory, moving from place to place with the seasons to follow food sources. Agricultural peoples also migrated, following the seasons and therefore agricultural cycles. To maintain a stable home, people also migrated to avoid natural disasters or climatic changes that permanently change the environment, making it too hot and dry (the Sahara Desert's expansion), too cold (Ice Ages), or too wet (flooding cycles of major rivers such as the Yellow River in China).

Migration isn't always solely the result of random environmental change. Overpopulation of a particular area can exhaust the food supply, forcing people to move elsewhere, often displacing a smaller or weaker population in the process. Massive migrations of people from Ireland during the famines of the mid-nineteenth century were caused by a mix of politics, destructive farming methods, and an unpleasant fungus that wiped out the populace's main source of food. The Jewish diaspora, the slave trade, and the waves of immigrants coming from Europe to the Americas in the late nineteenth and early twentieth centuries are examples of more modern-day migrations caused by people rather than nature.

D. Early Mesoamerica and Andean South America: For Every Rule There's an Exception

In the Americas, two early civilizations existed: the **Olmec**, in what we know today as Mexico, from 1500 to 400 B.C.E., and the **Chavin** in the Andes from 900 to 200 B.C.E.

The Olmec were an urban society supported by surpluses of corn, beans, and squash. Like most early societies, they mastered irrigation techniques and constructed large-scale buildings; they were polytheistic and developed a system of writing and a calendar.

The Chavin were another urban civilization, and their people were also polytheistic. While mostly agricultural, they also had access to the coast, and therefore supplemented their diet with seafood. The Chavin developed ways to use metals in tools and weapons. Interestingly, the Chavin used llamas as their beasts of burden.

If much of this sounds familiar to you, it's because the Olmec and the Chavin developed similarly to other early civilizations discussed previously. So why bring them up separately? Two reasons. First, they demonstrate that the same patterns of development occurred in an entirely different part of the globe, a part that had no contact with the other civilizations discussed in this chapter. This suggests that developments within civilizations can occur independently—not necessarily as a result of exposure to other civilizations.

Second, neither the Olmec nor the Chavin civilization developed in a river valley. True, the Olmec and Chavin had access to water from streams and small rivers, but no major river system served as the generator of agricultural production or as the hub of culture and transportation. Their existence, therefore, disproves the hypothesis that river valleys are essential for the emergence of early civilizations. That's not to say, however, that rivers aren't extremely important—after all, the civilizations in the river valleys were among the most powerful and wealthy in all history.

Contrast Them: Olmec and Chavin Civilizations and Other Early Civilizations
Although you probably won't have to remember the details of the Olmec and Chavin civilizations, you should definitely remember this: They are unique in that they didn't develop in river valleys, as did all the other major early civilizations.

IV. TECHNOLOGY AND INNOVATIONS TO 600 B.C.E.

Farming tools, metallurgy, and the ability to manipulate the environment caused humans to transition from nomadic hunters and gatherers to builders of civilizations and empires in this 10,000-year period. In order to farm successfully, people need tools, a way to transport what they've grown, and a place to store their surplus. Thus, the most important technologies developed by early civilizations included farming tools: ploughs, hoes, rakes, the wheel (and therefore the cart), and finally, pottery in which to store surplus for the off-season. While effective tools can be made out of bone and stone, they last longer and work more efficiently if they're made of metal. Copper was the first metal used, and other metallurgical techniques developed from there.

From such primitive techniques developed more complex technologies that benefitted society in greater ways. The earliest public works projects focused on irrigation—often simple dikes and canals to capture flood water and precious fertile silt. As cities grew, populations needed steady water supplies and a fairly reliable plumbing and sewage system. The large cities of the Indus River Valley (around 2500 B.C.E.) had elaborate public and private sewers, and similar systems were built much later in the Roman Empire. The most visible technological achievements are massive architectural monuments built by all civilizations—pyramids, ziggurats, walls, temples, aqueducts, coliseums, theaters, stadiums, and roads. These structures were used to assert the authority of leaders, facilitate the functioning of the state, and to keep the populace healthy, employed, and entertained.

A stable supply of food allowed people to develop specialized skills and crafts beyond the basic needs of their neighbors. Although a lot of the trade in early societies tended to be smaller luxury items—silk, cotton and wool, semi-precious gems, and jewelry; heavier goods including olive oil and spices were also traded.

V. CHANGES AND CONTINUITIES IN THE ROLE OF WOMEN

In hunter-gatherer Paleolithic cultures, the role of women tended to be more important than it was in Neolithic cultures. While a woman's first duty was always the nurturing of children, she was also responsible for the "gathering" part of the hunter-gatherer equation. Berries, nuts, seeds, edible plants—whatever could be scrounged up from the ground was her domain, and often, when the men were unsuccessful in killing an animal, these small efforts constituted the tribe's meals. The analysis of teeth and hair found in "Ice Man"—a perfectly preserved Paleolithic corpse discovered in the snows of the Alps in 1991—proves that most of his protein was in fact derived from vegetables and grains. Also, remember that such tribes had no method of refrigerating meat, so the importance of women's food-gathering efforts during this period makes sense.

Another role of Paleolithic women was the socialization of their children. Infants begin to learn how to speak primarily from their mothers, and since language forms the basis of community, it's through these verbal efforts that humanity ultimately began to learn to cooperate on bigger projects such as large-scale agriculture.

Other possible roles that women filled included lawgivers, counselors, storytellers, healers, shamans, and magicians.

VI. PULLING IT ALL TOGETHER

There are many ways to think about the big-picture themes that have emerged in this chapter, but we'll stay focused on the three presented in Section II of this chapter.

1. Civilizations

By now, you should have a good understanding of the types of developments common to most civilizations; for example, agriculture, written language, and the use of metals all contributed to the growth of early civilizations. You should also be able to explain how civilizations grow when people are less concerned with where their next meal is coming from than how they spread their influence (primarily through trade routes and conquest). Furthermore, you should be able to describe what happens when civilizations become so dominant that they have no rivals (a period of peace and prosperity or golden age emerges, making it possible to devote time and money to the arts and sciences). Finally, you should be able to explain why those dominant civilizations begin to fall apart (they get too big, their own people get restless, foreign threats gain confidence and power, etc.).

By taking note of the patterns woven throughout the expansion and contraction of civilizations, you'll be well prepared to tackle the essays.

2. Sources of Change

Regarding change occurring in civilizations through cultural diffusion, keep in mind that the two main methods are trade and conquest. Expansion of major belief systems also plays a major role, but don't forget that belief systems followed the trade routes and the military movements, too.

Notice that some civilizations were more innovative while others were more adaptive, but most cultures innovated and adapted simultaneously. Whatever they invent, they spread to others; whatever they borrow, they adapt for their own purposes. That said, certain civilizations adapted an incredible amount from others—the Romans and the Macedonians, for example, were hugely influenced by the Greeks.

Invention and Innovation

You should be able to discuss some examples of changes brought about by invention and innovation.

Two important ones are the use of the wheel and the use of iron.

3. Humans versus Nature

You should be able to name many ways in which civilizations have changed their surroundings to suit their own purposes. The digging of canals and irrigation ditches, stone-cutting, plowing, and metal-working are just a few examples. Don't forget the more subtle examples, such as the development of calendars and sundials, which were very significant in the human quest to predict and control nature for its own purposes. To be sure, humans can't change the repetitive patterns that underlie the yearly calendar, but by understanding those patterns and keeping track of them, humans can predict and use them for their own purposes.

Notice that as civilizations developed, they were less subject to natural events causing their demise but more subject to other civilizations doing so. Notice also that as major belief systems developed, civilizations became less interested in appeasing the gods to protect them from the great unknowns and more interested in internal peace, oneness with a great human force, or salvation. This interest corresponds to humans' ability to figure out nature. Thus, people's focus shifted from the need for bodily protection to the desire for internal peace.

As you continue to review the major world events in the upcoming chapters, always keep in mind that if you can compare, contrast, and figure out how things are changing, you will be able to write very thoughtful essays.

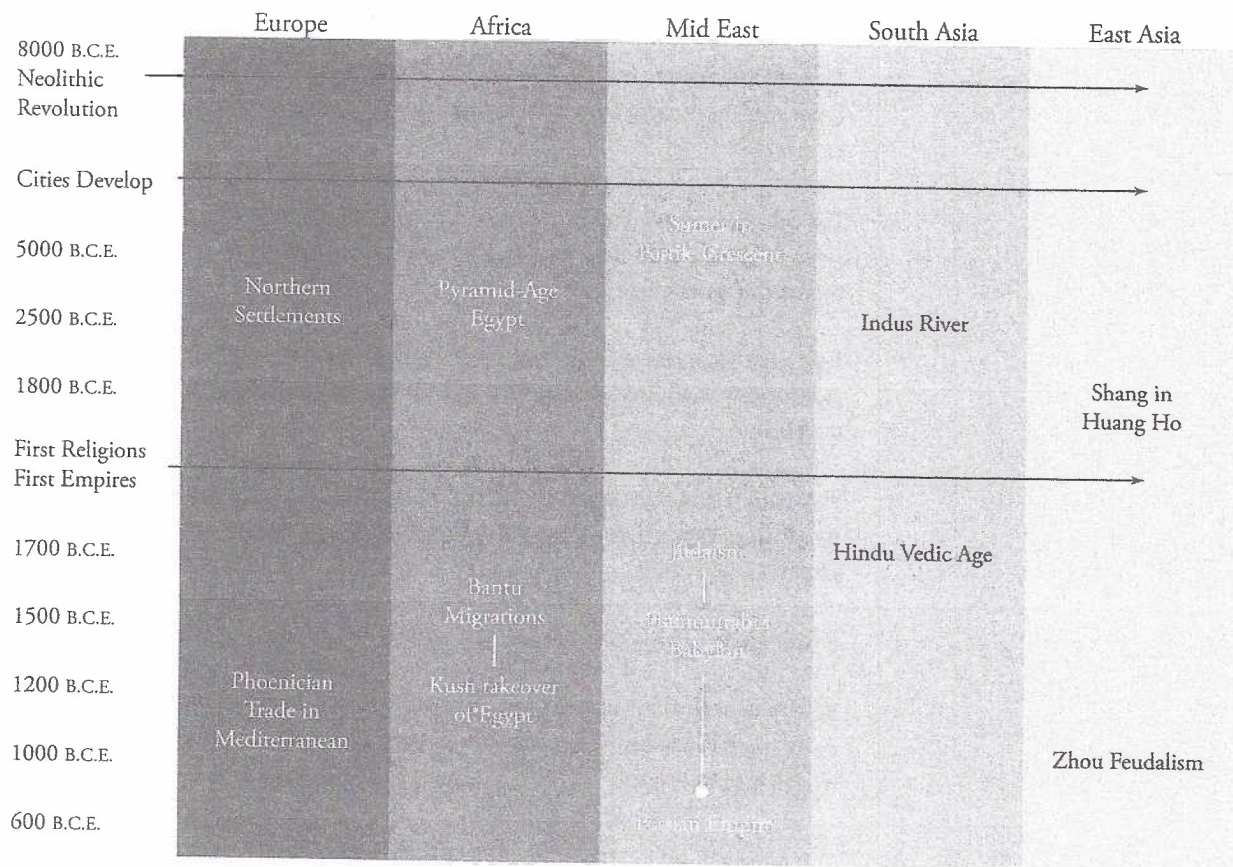
Key Terms

nomad
foraging societies
pastoral societies
cuneiform
polytheistic
ziggurat
Code of Hammurabi
pharaohs
hieroglyphics
mummification
pyramids
river valley
calendar
Hinduism
the Vedas
the Upanishads
Brahmans
patriarchy
Mandate of Heaven
bureaucracy, bureau
migration
Zhou Dynasty

Key People, Places, and Events

Neolithic Revolution
(Agricultural Revolution)
Bronze Age
Mesopotamia
Sumerian civilization
Tigris and Euphrates Rivers
Babylon
Hittites
Assyrians
Nebuchadnezzar
Persian Empire
Egyptian civilization
King Menes
Queen Hatshepsut
Indus Valley
Fertile Crescent
Khyber Pass
Harappa and Mohenjo-Daro
Aryans
Shang China
Bantu migrations
Olmec and Chavin

VII. TIMELINE OF MAJOR DEVELOPMENTS 8000 B.C.E.—600 B.C.E.



REFLECT

Respond to the following questions:

- For which content topics discussed in this chapter do you feel you have achieved sufficient mastery to answer multiple-choice questions correctly?
- For which content topics discussed in this chapter do you feel you have achieved sufficient mastery to discuss effectively in a short-answer response or essay?
- For which content topics discussed in this chapter do you feel you need more work before you can answer multiple-choice questions correctly?
- For which content topics discussed in this chapter do you feel you need more work before you can discuss effectively in a short-answer response or essay?
- What parts of this chapter are you going to re-review?
- Will you seek further help outside of this book (such as a teacher, tutor, or AP Students) on any of the content in this chapter—and, if so, on what content?