Chapter 1

The Neolithic Revolution and the Birth of Civilization

OUTLINE

I. Introduction

The history of civilizations comprises only a tiny fraction of the time that the genus *Homo* has inhabited the earth. Civilized societies, those that relied on sedentary agriculture, developed social stratification and economic specialization, and created population densities sufficient to support urban life, have existed for the last 9,000 years. In order to understand civilizations, it is necessary to look at prehistorical precedents for human development in the *Paleolithic* and *Neolithic* ages. The rise of sedentary agricultural communities during the Neolithic is one of the first great transformations of human society.

II. Human Life in the Era of Hunters and Gatherers

A. Introduction

*Homo sapiens*, one of a number of human-like species, was able to achieve biological dominance over its rivals and to spread over much of the earth by 10,000 B.C.E. The success of *Homo sapiens* was in part due to the manual dexterity that permitted the production of tools, enhancing the physical capabilities of early humans, and to the intelligence that allowed the development of spoken language, enabling groups of humans to engage in cooperative behavior.

B. Paleolithic Culture

One of the earliest cultural traditions of *Homo sapiens* was the use of fire for cooking, for curing animal hides, for making weapons, and as a source of heat and light. By the late Paleolithic age, human groups practiced mixed hunting and gathering. The surviving technology of this period consists of stone tools, the earliest of which date back more than two million years. Later Paleolithic human culture also featured artistic elements. The most impressive early works of art were cave paintings that may have had religious significance. It is also possible that these early works of art were primitive calendars or counting systems.

C. The Spread of Human Culture

Fire and the use of tools made it possible for humans to spread beyond Africa. By 12,000 B.C.E., human societies spread to Europe, Asia, North America, South America, and Australia.

D. Human Society and Daily Life at the End of the Paleolithic Age

While most human societies at the end of the Paleolithic period migrated in pursuit of game, some groups were more sedentary. More stable groups harvested wild grains that grew in profusion near
their settlements, and some of these societies progressed to true farming by domesticating plants and animals. Some of these groups subsequently reverted to hunting and gathering, suggesting that humans developed different strategies that produced sufficient quantities of food. Only those groups that adopted agriculture proved capable of producing civilizations. Hunting and gathering groups were limited to about 30 people and required extensive amounts of territory to support themselves. Migratory groups tended to live in the open rather than in caves and probably developed a sense of territoriality over the lands that produced their food. Labor was organized by gender, with males responsible for hunting and protection of the group, while females gathered food from plants.

E. Settling Down: Dead Ends and Transitions

Between 8000 B.C.E. and 5000 B.C.E., some hunting-gathering groups developed more intensive techniques that permitted them to establish more sedentary settlements. In what is now central Russia, for example, groups were able to hunt wooly mammoths and supplement meat supplies with intensive gathering. The establishment of sedentary communities allowed intensive hunting and gathering groups to establish social stratification and commerce with other similar groups. An even more specialized society associated with the Natufian complex of the Middle East depended on the intensive gathering of wild grasses, primarily barley and wheat. Natufian society was stratified and probably matrilocal and matrilineal. Despite the development of intensive gathering and sophisticated storage of grains, Natufian society did not create any technological innovations. The dependence of Natufian society on regional grasses left them vulnerable to changes in the climate. Due to desiccation of the region, Natufian communities disappeared around 9000 B.C.E.

F. A Precarious Existence

Whether grouped in small bands of nomadic hunters and gatherers or more densely clustered in intensive hunting and gathering groups, life for all Homo sapiens remained precarious. With limited technology and a vulnerability to alterations in the migratory patterns of prey or climatic alterations that created changes in the ecosystems on which they depended, all human communities experienced the constant threat of extinction.

III. Agriculture and the Origins of Civilization: The Neolithic Revolution

A. Introduction

Beginning around 8000 B.C.E., many human cultures became increasingly dependent on cultivated crops and domesticated animals to secure their supply of food. By 7000 B.C.E. sedentary agriculture was able to support towns with populations of more than 1,000, such as Jericho and Çatal Hüyük. By 3500 B.C.E., the first civilizations appeared in the Middle East. While no one knows for certain what conditions caused the shift from hunting and gathering to sedentary agriculture, changes in the climate may have been significant factors. It is also probable that increases in human population prompted changes in food production.

B. The Domestication of Plants and Animals

The first plants domesticated were the wild grains - barley and wheat - that were common in many regions of the Middle East. The transition from hunting and gathering to agriculture took place slowly. Only as additional crops were added to the agricultural system did societies diminish efforts to hunt and gather. Early agriculturalists may have continued a seminomadic lifestyle. At approximately the same time as the domestication of wild grains, agricultural societies also began to domesticate animals. Dogs, sheep, goats, and pigs were among the first animals domesticated
around 8500 B.C.E. Cattle, more aggressive and faster than the other animals, were added to the agricultural system around 6500 B.C.E. Domesticated animals improved the supplies of available protein, provided hides and wool for clothing materials, and increased the manuring of agricultural land.

C. The Spread of the Neolithic Revolution

The greater effort expended in agricultural systems made the shift to sedentary communities impractical for many groups. Hunting and gathering societies and agricultural communities continued to coexist. Some groups practiced pastoralism, based on the dependence on domesticated animals. Pastoral societies often thrive in semiarid regions incapable of supporting large populations of farmers. Pastoral societies were often strongly militarized. During the period of the Neolithic revolution (8000 B.C.E. to 5000 B.C.E.), agricultural techniques of production spread from the Middle East to other areas of the globe where the climate permitted. The cultivation of wheat and barley expanded from the Middle East to India and Europe. From Egypt the cultivation of grain crops spread southward along the Nile. Africa south of the Sahara desert developed an independent agricultural system around 2000 B.C.E. based on root and tree crops. In China, Neolithic agricultural societies developed a separate system of crops based on millet. Somewhat later, farmers of Southeast Asia began to cultivate rice. American agricultural systems featured maize, manioc, and sweet potatoes.

D. The Transformation of Material Life

With the shift toward sedentary communities typical of the Neolithic revolution, the human population rapidly expanded. Villages and cultivated fields became the dominant features of human society. The development of sedentary settlements accelerated the pace of technological development. Many of these innovations were directly connected to agriculture, including plows, implements, techniques of seed selection, and irrigation. The development of better tools led to better housing and systems for the storage of grain. More dependable food supplies and better housing created conditions conducive to population growth.

E. Social Differentiation

The production of food surpluses allowed social differentiation and economic specialization. Some people were freed from the processes associated with the production of food to make other commodities, such as cloth, pottery, and leather goods. Economic specialization led to social stratification and the creation of elite classes of rulers. Regional economic specialization often centered on commodities indigenous to the region in which the community was located. In order to provide an equitable distribution of goods, trade was established among regions featuring different goods. Social stratification in early agricultural communities was limited. Property may have been held by all members of communities in common. The position of women in agricultural communities may have declined. Men took over the critical tasks of agriculture and began to monopolize the use of the new tools.
IV. The First Towns: Seedbeds of Civilization

A. Introduction

By 7000 B.C.E., agricultural productivity was sufficient to support large communities, including many nonagriculturalists. In larger communities numbering in the thousands, social stratification increased and trade became critical to the communities’ survival. Two of the earliest of these large communities were located at Jericho in Palestine and Çatal Hüyük in Turkey. Although few in number and isolated from surrounding villages and nomadic peoples, the earliest urban centers accelerated the pace of change and made major contributions to the technological revolution of the fourth millennium B.C.E.

B. Jericho

Jericho’s site was favored by access to water. The site extended to more than 10 acres by 7000 B.C.E. The later city consisted of many domestic dwellings built of brick and some religious shrines. A huge wall surrounded the entire settlement. Although Jericho was primarily an agricultural community, there is substantial evidence of both trade and hunting. The residents of Jericho traded their local supplies of salt, sulfur, and pitch for goods from Turkey, Sinai, and the Red Sea. Structures at Jericho reveal substantial social and economic stratification and the existence of a governing elite.

C. Çatal Hüyük

Founded in 7000 B.C.E., Çatal Hüyük was larger than Jericho and included a more diversified population. Houses were standardized throughout the community and served as fortifications as well as residences. Standardization implies a stronger ruling elite at Çatal Hüyük than at Jericho. Numerous religious shrines also suggest a powerful priesthood. The economy of Çatal Hüyük was more diverse than that of Jericho. Pastoralism and domesticated animals were more widely used. Trade in a variety of goods was widespread. Artifacts also suggest the existence of a skilled population of craftsmen making obsidian objects.

V. The 4th Millennium B.C.E.: Another Watershed

New technologies, agricultural techniques and forms of political organization and social specialization developed and reinforced each other in the 4th millennium B.C.E., spreading across Afro-Eurasia, spurring a rapid increase in human societies. More advanced states arose, fostering increased interaction between groups at various levels of development and expanding trade networks. Improved communications, stemming from these networks and the development of writing, increased cultural contact and the power of a centralizing and expansionist elite.

VI. Global Connections: The Neolithic Revolution as the Basis for World History

Farming and the domestication of animals made possible larger concentrations of people and rising populations, while providing materials for new forms of communication, warfare, and technology. The spread of new foodstuffs and technologies demonstrated
the development of links between formerly isolated groups. Food surpluses enabled the development of specialized classes, including full-time governing elites. Pectoralism, while providing an alternative to sedentary agriculture, had been more limited in fostering specialization.
**TIMELINE**

Insert the following events into the timeline. This should help you to compare important historical events chronologically.

- first Natufian settlements
- rise of Çatal Hüyük
- transition to use of bronze

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000 B.C.E.</td>
<td>era of Neolithic revolution</td>
</tr>
<tr>
<td>10,500 B.C.E.</td>
<td>beginning of cultivation of rice</td>
</tr>
<tr>
<td>8000–5000 B.C.E.</td>
<td>end of last Ice Age</td>
</tr>
</tbody>
</table>

**TERMS, PEOPLE, EVENTS**

The following terms, people, and events are important to your understanding of the chapter. Define each one.

- hunting and gathering: Paleolithic
- Neolithic culture: savages
- band: Homo sapiens
- agrarian revolution: Neanderthals
- matrilocal: Natufian complex
- pastoralism: Jericho
- Çatal Hüyük: domestication
- Bronze Age: social differentiation
MAP EXERCISE

The following exercise is intended to clarify the geophysical environment and the spatial relationships among the important objects and places mentioned in the chapter. Locate the following places on the map.

The text refers to the regions in which sedentary agriculture first emerged as core areas. Locate the core areas of agriculture for Asia, India, the Middle East, Africa, and the Americas.

1. What does the location of the core areas suggest about necessary climatic conditions for the origins of agricultural systems? How are the core areas distributed in terms of latitude and longitude?

2. How would the location of core areas determine the geographical locations of the first civilizations?
MAKING CONNECTIONS

The following questions are intended to emphasize important ideas within the chapter.

1. What characteristics are associated with civilization?
2. Compare and contrast the terms civilized, barbarian, and savage as they were used in the eighteenth century. What cultures were often associated with these terms?
3. Describe the culture of Paleolithic hunting and gathering societies.
4. What is the difference between hunting and gathering societies and intensive hunting and gathering societies?
5. Why was the domestication of animals important?
6. Where were the first sedentary agricultural communities established? How are the first sites connected to the spread of sedentary agriculture?
7. How did the Neolithic revolution transform the material life and social organization of human communities?
8. What were the advances of the Bronze Age during the fourth millennium?

PUTTING LARGER CONCEPTS TOGETHER

The following questions test your ability to summarize the major conclusions of the chapter.

1. How has the definition of civilization changed over the centuries? What accounts for the changing definition of what constitutes a civilization?
2. Compare and contrast Paleolithic human culture with Neolithic culture. What accounts for the greatest changes?
SELF-TEST OF FACTUAL INFORMATION

1. In many civilizations, the creation of farming surpluses often results in
   a. urbanization and social stratification.
   b. an industrial revolution.
   c. matrilocal patterns of marriage.
   d. a lack of economic specialization.

2. The Neolithic revolution allowed all of the following to take place EXCEPT the
   a. spread of regularly cultivated fields.
   b. development of towns.
   c. abandonment of hunting and gathering as a form of social organization.
   d. domestication of animals.

3. In the 19th century, Europeans began to define civilization according to
   a. population.
   b. degree of urbanization.
   c. cultural characteristics.
   d. race.

4. Combinations of the ideas, objects, and patterns of behavior that result from human social interactions are referred to as
   a. culture.
   b. society.
   c. civilization.
   d. social stratification.

5. By what time had humans successfully colonized all of the continents except Antarctica?
   a. 12,000 B.C.E.
   b. 10,000 B.C.E.
   c. 8000 B.C.E.
   d. 5000 B.C.E.

6. In both central Russia and the Natufian complex, successful societies based their subsistence on
   a. sedentary agriculture.
   b. intensive, sedentary hunting and gathering.
   c. fishing.
   d. the exploitation of obsidian mines.
7. The term *matrilocal* means
   a. young women go to live with their husbands’ families.
   b. young men go to live with their wives’ families.
   c. inheritance passes through the female line.
   d. inheritance passes through the male line.

8. Climatic changes were most likely to affect societies engaging in
   a. sedentary agriculture.
   b. pastoralism.
   c. intensive hunting and gathering.
   d. nomadic hunting and gathering.

9. Which of the following was *NOT* an advantage gained from the domestication of animals?
   a. additional sources of protein
   b. expanded choice of materials for clothing
   c. the provision of animal power for farming
   d. the ability to abandon pastoralism

10. The economy of Jericho was based primarily on
   a. pastoralism.
   b. hunting and trade.
   c. the manufacture of flint tools.
   d. farming of barley and wheat.