CHAPTER

1 10,000 Years of Social Evolution

Today people live in a globalizing world in which the world's societies are rapidly becoming interconnected economically, politically, militarily, and culturally. There are fewer than 190 autonomous nation-states in the contemporary world, although many of these states contain communities that maintain old-fashioned ways of life based on hunting and gathering, preindustrial agriculture, animal herding, or some combination thereof. Prior to 10,000 years ago, hunting and gathering was the subsistence mode by which all humans on earth lived, and there were tens of thousands of hunter-gatherer communities. In the intervening 10 millennia, agriculture developed, civilizations and states emerged, and an industrial revolution occurred throughout much of the world. How and why did these things happen? How did the world go from tens of thousands of tiny hunter-gatherer societies to just a handful of huge nation-states? Why is the world becoming increasingly interconnected, and why is the pace of this interconnection constantly accelerating? These questions and others are the central focus of this book, which is an introduction to human societies past and present and their evolution over the past 10,000 years.

The Ancestral Environment

Hominids—members of the human family—began to separate from the common ancestor of modern apes and humans some 5 to 7 million years ago, but it was not until after 200,000 years ago that anatomically modern humans—*Homo sapiens*, the genus and species to which all living humans belong—appeared on the scene. The predominant line of thinking, generally known as the "Out of Africa" hypothesis, is that all anatomically modern humans originated in Africa and that sometime around 100,000 years ago some groups began to migrate north into Asia and then later into Europe (Stringer and Gamble, 1993; Shreeve, 1995; Klein, 1999).

Despite their differences, all of these groups led a common way of life centered on the hunting of wild animals and the gathering of wild plants. We know much more about the social patterns of modern hunter-gatherer societies than we do about their ancient counterparts. Most modern hunter-gatherer societies live in small bands or camps that seldom exceed 50 individuals and that may average only about 25. Economic life revolves around the band, with men doing most of the hunting and women doing most of the gathering. Bands move frequently in search of game

and plant food and thus lead a nomadic existence, and most groups are highly egalitarian in their social relations and worldviews. Undoubtedly, many hunter-gatherers in the ancient past lived similarily, but it is likely that many others lived in larger groups that moved less frequently because they enjoyed richer and more productive environments than those inhabited by the majority of modern hunter-gatherers. Many ancient hunter-gatherers may also have been less egalitarian because of the greater productivity of their environments.

The Neolithic Revolution

Although ancient hunters and gatherers probably knew for tens of thousands of years how plants and animals could be domesticated (Cohen, 1977), it was not until about 10,000 years ago that some of them began to devote themselves to the practice of agriculture. Although some ancient hunter-gatherers lived in settled villages, once the transition to agriculture was made settled village life became the norm. This transition of humankind to an agricultural (technically, **horticultural**) mode of existence based on settled villages is known as the **Neolithic Revolution.** Actually, this term is somewhat misleading, since there was not a single revolutionary transition. The transition to agriculture occurred on an independent basis in several different regions of the world and at somewhat different times.

It is widely understood that the adoption of agriculture occurred first in southwest Asia (the Middle East) around 10,000 years ago, or perhaps slightly earlier. Somewhat later, around 9,000 years ago, agricultural communities began to develop in southeast Asia (M. Cohen, 1977; Fagan, 1989), and by 8000–7000 BP ("before the present") agriculture emerged in China (Chang, 1986). Agriculture also arose in two other areas of the Old World. In Europe, agriculture developed earliest in Greece and its adjacent regions, possibly as early as 8000 BP (Milisauskas, 1978; Fagan, 1989). After about 7000 BP, farmers migrating into temperate Europe carried agriculture with them, and by approximately 5500 BP, agriculture had reached northern Europe (Scandinavia and the British Isles) (Fagan, 1989). In Africa, agriculture developed earliest in Egypt (around 7000 BP) and slightly later in west and central Africa (around 6500 BP), the Sudan and Ethiopia (around 6000 BP), and northern Kenya (around 4500 BP). In most of Africa below the equator, agriculture developed much later, not beginning until after about 2000 BP (Phillipson, 1985).

Agriculture was also independently invented or adopted in several regions of the New World: Mesoamerica (what is now Mexico and parts of Central America), South America, and North America. In Mesoamerica, agriculture can be dated from about 7000 BP (MacNeish, 1978), although it is possible that it might have begun in some regions as early as 9000 BP (Fiedel, 1987). Settled village life, however, did not emerge until several thousand years later. This is a striking contrast with the Old World, where agriculture and sedentary village life usually emerged together (M. Harris, 1977). Another contrast between Old World agriculture and that in Mesoamerica was the absence of any large animal domesticates in the latter, apparently because of a lack of species suitable for domestication (M. Harris, 1977). In South America, especially Peru, agriculture arose around 8000 BP. In Ecuador, it is possible

that maize was being grown as early as 5000 BP, and in the Amazon Basin, it is thought that manioc was being cultivated perhaps as early as 4000 BP (Fiedel, 1987). In North America, the cultivation of such crops as squash and sunflowers arose sometime after 4500 BP in the eastern part of the continent, and the cultivation of maize, along with beans and squash, began in the western part of the continent perhaps as early as 3500 BP (Bogucki, 1999).

As recently as the 1960s, it was believed that agriculture was invented only once, in the Middle East, and then spread from that agricultural center to other world regions. The argument was basically that it was agricultural knowledge, or the *idea* of agriculture, that spread. Researchers now know that this older view is incorrect. It has come to be generally accepted that agriculture was invented independently in at least four different world regions: the Middle East, North China, Mesoamerica, and eastern North America (Bogucki, 1999). It has been argued that agriculture was independently invented in almost every place where it first appeared (cf. Sanderson, 1999b:23–34), but this is probably overstating the case. It is now well established that agriculture arose in Europe because of the influence of Middle Eastern agricultural communities. In some European regions, agriculture was introduced as the direct result of the migration of agricultural groups from the Middle East, who brought with them their own crops, livestock, and sedentary lifestyles. In other parts of Europe, people adopted agriculture as a result of contact with groups already practicing it (Bogucki, 1999). Bogucki (1999) points out that the wild ancestors of wheat and barley were not indigenous to Europe, nor were there any wild sheep or goats in Europe. Since these were among the major cultigens and livestock of European agriculture, they had to have been introduced from elsewhere. Similarly, the western part of North America was not home to the wild ancestors of their principal cultigens, maize and beans, thus the conclusion is that these domesticates were adopted from Mesoamerican agricultural communities (Bogucki, 1999).

The Rise of Civilization and the State

Agriculture developed slowly and gradually in virtually all regions of the world. Hunter-gatherers did not become agriculturalists overnight, but gradually added cultivated plants to their diet while continuing to hunt and to gather. In some regions, it took several thousand years before agriculture became the only, or even the primary, mode of subsistence. However, once agriculture was adopted as the primary or only subsistence mode, its practice was intensified over time in many regions of the world, largely as a result of expanding populations. People began to adopt new tools and methods of production, and the scale of social life increased.

Early horticultural societies were usually not politically organized beyond the village level. The many villages that may have constituted a tribe interacted, but there was no centralized coordination among them. In later horticultural societies, however, centralized coordination often developed, and societies known as **chiefdoms** began to arise. Early chiefdoms may have numbered only a few thousand people, but later and more complex ones sometimes reached 100,000 members. Chiefdoms themselves were precursors to still more complex forms of social organi-

zation known as **civilizations,** which were politically ruled by **states** (Carneiro, 1981). Civilizations were complex and large-scale societies characterized by such features as towns and cities, monumental architecture, craft specialization and occupational differentiation, writing and record keeping, and extreme social and economic inequalities. States were political bodies that, like chiefdoms, centrally coordinated large populations, but they were different in several crucial respects. They typically organized much larger populations, contained more numerous and more specialized political officials, and possessed much more power to contend with rebellion and revolt from dissatisfied groups.

Civilizations arose in at least six regions of the Old World and at least two regions of the New World. For the most part, these were the same regions where agriculture first emerged. The earliest of the Old World civilizations evolved in Mesopotamia (what is now mainly Iraq) and Egypt in approximately 5000 BP (Fagan, 1989; Wenke, 1990). Civilizations arose in other parts of Africa somewhat later—for example, in 3600 BP in Kerma on the middle Nile, in 2500 BP in Ethiopia, and in west Africa in approximately CE 200 (Connah, 1987). In China, an indigenous civilization began to emerge with the creation of the Shang Dynasty around 3800 BP (Chang, 1986). In north India (in what is now Pakistan), the famous civilization known as the Harappan was evolving around 4600 BP (Possehl, 1990). There were also early civilizations in Europe. In Mediterranean Europe (mainly Greece), the first civilizations arose no later than 2700 BP (Champion, Gamble, Shennan, and White, 1984) and possibly as early as 4000 BP (Milisauskas, 1978; Fagan, 1989). In temperate Europe, the first states, those of the Celts, were emerging around 2200 BP (Champion et al., 1984). Many of these Old World civilizations emerged in geographical regions dominated by major rivers, or, in the case of Mediterranean Europe, in the vicinity of a large sea. Thus, the earliest Mesopotamian civilizations arose in the fertile area between the Tigris and Euphrates Rivers, civilization in China evolved along the Yellow River in northern China, and the Harappan civilization emerged along the Indus River in northern India.

In the New World, civilizations evolved somewhat later. The two regions of civilizational origins in the New World were Mesoamerica and Peru. In the Mesoamerican lowlands, the first civilizations to emerge were those created by the Olmec and Maya. Olmec civilization flourished between 3200 and 2800 BP, whereas Mayan civilization achieved its peak between approximately CE 300 and 900 (Fiedel, 1987). In the Mesoamerican highlands, just north of what is now Mexico City, the first civilization formed around the city of Teotihuacán in approximately CE 1 (Fiedel, 1987). The most powerful of the Mesoamerican highland civilizations, though, was established by the Aztecs, whose capital city was known as Tenochtitlán. The Aztecs reached the apex of their development in the early sixteenth century. Sometime around CE 1 in Peru, a series of wars and conquests led to the formation of more complex and extensive political units. These eventually reached imperial scope and culminated in the establishment of the Inca empire, which reached its zenith in the fifteenth and sixteenth centuries (Fiedel, 1987).

A classic study by Robert Adams (1966) provides a clear picture of the nature of early civilizations and their parallel development in the Old and New Worlds. Adams's study is devoted to a comparative analysis of the formation of civilizations

in one Old World case, Mesopotamia, and one New World case, central Mexico. It is quite likely that the evolutionary processes at work in Mesopotamia and Mexico were broadly similar to those involved in the emergence of early civilizations elsewhere. Basic to the emergence of civilization in these two cases was the development of social stratification, or class distinctions. At the pinnacle of Mesopotamian society stood princely families who, during late Early Dynastic and Akkadian times, were increasingly extending their control of land. These ruling families apparently headed manorial estates. A significant proportion of the labor force employed on these estates consisted of slaves. At the top of the Aztec social hierarchy were royal households that in due time evolved into an endogamous (in-marrying) nobility sharply distinguished from the rest of the population by wealth, education, diet, and dress. Great estates were at the king's disposal; large amounts of surplus production were generated by these estates, the surplus flowing as tribute from commoners to the ruling class. At an intermediate level in the social hierarchy were groups of warriors and merchants. Below them were localized kin groups that were internally stratified and held corporate (collective) title to land. Below these, in turn, were persons who cultivated the private lands of the nobility and who have been likened to medieval serfs. At the very bottom of the social order were slaves.

In both Mesopotamia and Mexico we find a general pattern of political evolution characterized by the emergence of theocratic polities—ones in which religion and politics were fused—and their eventual transformation into militaristic and, ultimately, conquest states. The early formation of civilization in both cases was marked by a decidedly religious focus, with much emphasis on temple building and governance by priesthoods. The dominance of religious groups, however, soon gave way to the rise to power of militaristic groups. Political power came to be increasingly concentrated in dynastic institutions at the expense of earlier communal and religious bodies. Archaeological evidence demonstrates the existence of palaces containing private apartments for the ruling family and the families of top-ranking administrative officials and personal servants. In Mesopotamia there is good evidence for the existence of an array of political functionaries such as gatekeepers, cooks, servants, messengers, and slaves. Clearly, the palace structure associated with both civilizations indicates the development of highly stratified societies in which the power and complexity of governing bodies had been erected on a major scale. Both societies had parallel conceptions of kingship, and both evolved into major conquest states that extended territorial control over wide regions. This increasing conquest of neighboring lands and peoples brought greater demands for tribute, increasing stratification, and yet further intensification of the autocratic features of the state.

The Rise of Modern Capitalism and Industrialism

The era dominated by these kinds of civilizations lasted several thousand years. Many things changed—for example, technology advanced, states got bigger and more powerful, and trade between civilizations expanded—but the overall character of social life remained much the same. Life was rural and most people lived by cultivating the soil. Towns and cities existed, within which merchants and artisans were

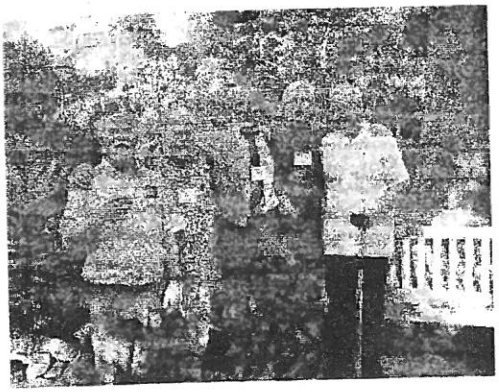
the center of economic life, but the members of these occupational groups played a secondary role in the vast majority of societies. But by the sixteenth century CE, a dramatic evolutionary transformation was underway: the rise of modern capitalism. The production of goods and their sale in markets began to gain the upper hand in economic life, whereas for thousands of years this kind of mercantile activity had been held in check almost everywhere. By the eighteenth century, the new capitalist development led to a dramatic technological revolution, the Industrial Revolution, which began in England around 1760 and eventually occurred throughout much of Europe and North America in the nineteenth and twentieth centuries. The Industrial Revolution was characterized by the replacement of manual labor with machinery and the large-scale development of the factory system. A new type of society, industrial capitalist society, came into being.

Industrialization had enormous consequences for the organization of social life, with virtually every aspect of social life being touched by it. One was an increase in economic productivity on a scale totally unprecedented in human history. To take a simple case, in England in 1750 the import of raw cotton for spinning amounted to £3 million, but by 1784 the figure had climbed to £11 million, by 1799 to £43 million, and by 1802 to £60 million (Heilbroner, 1972). Likewise, the production of pig iron increased dramatically from 68,000 tons in 1788 to 1,347,000 tons in 1839 (Heilbroner, 1972). Moreover, the productivity of labor increased continually from these early days of industrial capitalism to the present and is vastly greater today than it was in the early nineteenth century.

Another consequence of industrialization was the creation of an industrial proletariat, or working class. This proletariat consisted of the mass of workers—men, women, and children—who worked in the factories. In the early days of industrial capitalism, these workers labored under conditions of severe hardship (Engels, 1973; orig. 1845). They were brutally overworked in the factories and paid extremely low wages, in many cases barely enough to keep them alive. They lived in overcrowded slums and suffered frequently from malnutrition and disease. Many of them were children, who could be paid even lower wages than adult men and women. The situation in industrial England in the first half of the nineteenth century was thus one characterized by the exploitation and degradation of a large mass of the population. It was precisely this situation that led to Karl Marx's scathing critique of capitalism.

A third result of industrialization occurred within the realm of work: the increasing specialization of labor. This phenomenon, whereby the worker has increasingly become a small cog in a large machine, developed especially rapidly and extensively since the late nineteenth century. In Marx's view, this growing specialization of labor made work more and more meaningless and stifling for the worker. This was another feature of industrial capitalism that led him to be extremely critical of it. The *alienation* of the worker that Marx observed in the nineteenth century became far more prominent in the twentieth (Braverman, 1974).

A fourth consequence of the emergence of industrial capitalism was the extensive urbanization of society. Social life shifted from the rural countryside to cities, many of them of vast scale. As Heilbroner (1972) notes in regard to the urban development of the United States, in 1790 only 24 towns and cities exceeded 2,500 citizens,



Five specialists in the study of very long-term social change. Left to right: Stephen K. Sanderson, Thomas D. Hall, Christopher Chase-Dunn, Albert Bergesen, and Andre Gunder Frank.

and collectively these towns constituted only 6 percent of the total population. But by 1860, 20 percent of the population was located in the 392 largest cities, and by 1970, much of the eastern seaboard had evolved into practically one gigantic city containing more than 60 percent of the total population of the country.

In the view of Immanuel Wallerstein (1974a, 1974b), capitalism was born as a world-economy and was never a phenomenon confined to individual nation-states. It has always been global, he says. This is true so long as we do not use the term *global* in its literal sense, for the capitalist world-economy in the sixteenth and seventeenth centuries doubtless made up no more than 20 percent of the habitable earth. By the late twentieth century, though, it had become literally global, having gobbled up the whole world. And now this globalization process is continuing on a massive scale. And where will it end? With the extension of industrial capitalism to every society and nation-state? With a single world-government? With everyone speaking a single language? Or, on the other hand, with the collapse of capitalist civilization (Sanderson, 1999b) and the transition to a very different mode of economic life (Wallerstein, 1998)? No one knows the answers to these questions today, and it may be a long time before anyone does. But let us go back to the beginning and see how we got to the point where we are at the present time.

FOR FURTHER READING

The Evolution of Human Societies (1987; 2nd ed. 2000), by anthropologists Allen W. Johnson and Timothy Earle, is a very good overview of the main lines of social evolution from the simplest foraging societies to complex agrarian states. Robert Wenke's *Patterns in Prehistory* (1990; 4th ed. 1996) treats the main lines of social evolution from an archaeological perspective. Peter Bogucki's *The Origins of Human Society* (1999) is a similar work. Stephen Sanderson's *Social Transformations* (1999b) develops a general theory of social evolution and applies it to the three major evolutionary transformations discussed in this chapter. *The Social Cage: Human Nature and the Evolution of Society* (1992), by sociologists Alexandra Maryanski and Jonathan Turner, provides an interesting perspective on long-term social evolution from the authors' unique perspective on human nature.

CHAPTER

2 Theories of Social Evolution and Development

Evolutionary theories are those that attempt to describe and explain sequences of long-term social change. Evolutionists generally argue that many societies have undergone broadly similar changes from earliest times to the present, and they are concerned with identifying the nature of these changes and explaining why they have occurred. Erik Olin Wright (1983) provides a more precise conception of an **evolutionary theory.** He suggests that all evolutionary theories share the following characteristics:

- They organize history into a typology of stages.
- They assume that this stage ordering represents a direction along which societies tend to evolve.
- They postulate that the probability of movement to a later (or "higher") stage exceeds the probability of movement back to an earlier (or "lower") stage.
- They identify a mechanism or set of mechanisms that is intended to explain the movement from one stage to another.

As Wright is at pains to point out, evolutionary theories need not assume that the sequence of stages through which societies move is a rigid one that is the same for all societies, or that **social evolution** is some sort of automatic process of the unfolding of latent tendencies or potentialities inherent in the nature of societies. They do not even need to assume that forward movement always occurs. Regression is acknowledged as a possible (and sometimes actual) occurrence, and it is fully recognized that for many societies and at many times in history long-term steady states (rather than social transformation) may be the normal order of things. It is important that these points be established and well understood, because there are still many misconceptions concerning the nature of evolutionary theories (Sanderson, 1990).

Classical Evolutionism

Evolutionary approaches to social life were extremely popular among both sociologists and anthropologists in the second half of the nineteenth century. In fact, evolu-

tionary theorizing dominated these two disciplines at that time. One of the most famous of the nineteenth-century evolutionists was the English philosopher and sociologist Herbert Spencer (1820–1903), who developed a theory of social evolution that was similar in some ways to Darwin's theory of biological evolution (Spencer, 1972). Spencer attempted to understand the operation of all things in the universe by reducing them to a single universal principle that he called the *Law of Evolution.* According to this law, all things in the universe have a tendency to "evolve from a state of indefinite, incoherent, homogeneity to a state of definite, coherent, heterogeneity." What Spencer meant was that all things tend to develop from simple and unspecialized forms into more complex and specialized ones. Spencer saw this universal tendency as the master key to unlocking all the great riddles of the universe. He considered the evolution of human societies as but a special instance of a great cosmological tendency inherent in the nature of the universe itself.

With respect to the evolution of societies, what Spencer was describing was a process of *increasing social differentiation.* Societies could be placed on an evolutionary ladder in which there were four main societal stages or types. *Simple* societies have no, or only very rudimentary, formal political leadership. *Compound* societies have formal leadership and centralized political control, systematic social ranking, and a more complex division of labor. *Doubly compound* societies extend the process of differentiation even further. They have more complex government and are much more technologically advanced. They also have laws, towns, and roads. *Trebly compound* societies are characterized by the great ancient civilizations, such as the Egyptian and Roman empires and by modern-day Britain and France, and are the most differentiated of all societies.

Spencer also had another evolutionary scheme, which involved the distinction between *militant* and *industrial* societies. *Militant societies* are ones in which warfare and military organization dominate social life, whereas in *industrial societies* militarism and warfare take second place to economic activities in the areas of agriculture,

Herbert Spencer (1820–1903). This English philosopher and social theorist developed a grandiose evolutionary scheme that is not acceptable by modern scholarly standards, but some of his more specific ideas about social evolution provide important insights.

commerce, or industry. Militant societies are also characterized by the subordination of individual freedom to the group, but in industrial societies the individual has a much greater capacity to stand apart from the group or rise above it. Spencer thought that there was a generalized tendency for militant societies to give way to industrial ones in the process of social evolution; however, he was never quite able to connect this evolutionary typology with his four levels of social differentiation.

Another well-known nineteenth-century evolutionist was the American anthropologist Lewis Henry Morgan (1818–1881). Morgan (1974; orig. 1877) was much concerned with the evolution of technology. He divided human history into three great stages, each of which was associated with a different level of technological development: Savagery, Barbarism, and Civilization. The stage of *Savagery* was characteristic of peoples who subsisted primarily by hunting wild animals and gathering wild plants. The transition to *Barbarism* was marked by the domestication of plants and animals and the development of additional improvements in overall technology. The emergence of *Civilization* marked the transition from "primitive society" (what Morgan called *societas*) to "civil society" (what Morgan called *civitas*). Morgan saw the development of the phonetic alphabet and writing as a major characteristic of this stage.

Morgan's distinction between *societas* and *civitas* was an important contribution. Societies at the stage of *societas* are organized on the basis of kinship ties and are characterized by highly egalitarian and democratic social relations. With the passage to *civitas*, kinship declined in importance as an organizing principle and was replaced by property and territory as the mechanisms that held society together. Social and economic inequalities became prominent and societies were based much more on the use of force, often being ruled by despots.

The third major nineteenth-century evolutionist was Edward Burnett Tylor (1832–1917), an English anthropologist. Tylor (1871, 1878; 1924) was committed to a general evolutionary perspective and employed the same evolutionary stages as those used by Morgan (Savagery, Barbarism, and Civilization). However, unlike Morgan, he was more interested in the ideational or mental aspects of social life than in the evolution of technology, economics, and politics. He had a special concern for the evolution of language, myth, and religion. With respect to religion, Tylor thought that there had been an overall evolution from a belief in souls to a belief in spirits, which was then followed by polytheistic and later by monotheistic religions (i.e., from religions with a pantheon of several high gods to religions with a single high god). Tylor argued that the evolution of religion was a rational and progressive process whereby humans achieved a better and better understanding of the world.

Although the ideas of these and other early evolutionists were provocative, they contained a number of serious flaws. One of these was the tendency to pass off mere descriptions of evolutionary transformations as explanations for those transformations. They thought that social evolution was inherent in the very nature of things, and often seemed to regard this observation as sufficient to explain why social evolution occurred. But merely to note that evolution tends to occur says nothing about why it does so. Another flaw in the thinking of the nineteenth-century evolutionists was their ethnocentrism. They viewed their own society (Western civilization) as superior to all others, holding that societies at earlier evolutionary stages

represented various gradations of inferiority to their own. They therefore claimed that social evolution was indicative of progress, of a general improvement in human rationality, happiness, and morality. They tended to see Western civilization as the end point of social evolution, as the culmination of millennia of human progress. These are views that are rejected, or at least questioned, by many modern sociologists and anthropologists.

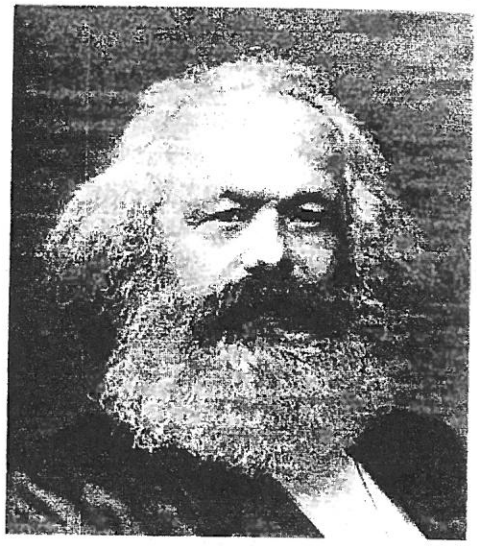
Marxian Evolutionism

An important evolutionary approach to social life was also developed by the famous nineteenth-century German social theorists Karl Marx (1818–1883) and Friedrich Engels (1820–1895). Marx and Engels (1970; orig. 1846) developed a theoretical perspective that they referred to as the "materialist conception of history," and what has since come to be known as *historical materialism* (sometimes called *dialectical materialism*). This was a theoretical approach to social life developed in direct opposition to the current of **idealism** that prevailed at that time in German philosophy. The leading advocate of idealism was German philosopher G. W. F. Hegel (1770–1831). Hegel (1956, orig. 1830–31; 1953, orig. 1837) held the view that the foundation of every society consisted in its basic way of viewing the world, especially as this was embodied in its religion, philosophy, and art. Although Marx and Engels accepted a good deal of Hegelian philosophy, they turned its idealism upside down and replaced it with a **materialist** conception of social life.

Historical materialism was constructed primarily as a means of understanding modern capitalist societies, but Marx and Engels understood it to be applicable as well to the whole range of human societies in both the past and the present. They divided human societies into two major components. One of these they referred to as the *infrastructure* or *base*, sometimes also called the *mode of production*. The base was in turn divided into two categories: the forces of production and the relations of production. The *forces of production* consisted of the raw materials and social creations necessary for a society to engage in economic production: the available level of technology and the specific nature of natural resources, such as the quality of the land. The *relations of production*, on the other hand, referred to the ownership of the forces of production. Marx and Engels noted that in some societies the forces of production were owned communally (by the entire group), but in other societies private ownership of the productive forces had emerged. The group that acquired ownership of the productive forces was able to compel other groups to work for it. Marx and Engels noted that several different forms of private relations of production existed in different societies.

The other major component of human societies identified by Marx and Engels was the *superstructure*. This component consisted of all those aspects of a society not included in the base, especially politics, law, family life, religion, and ideas and ideals.

Marx and Engels held that a society's base and its superstructure were directly related. Although they noted that the superstructure could occasionally influence the base, they argued that the primary direction of causation ran from the economic



Karl Marx (1818–1883). Marx was born in Germany, lived for brief periods in Paris and Brussels, and resided in London for the second half of his life. Although most famous for his analysis of the capitalist system produced in his great work Capital, *Marx contributed one of the most important evolutionary approaches in the history of the social sciences.*

base to the superstructure. They believed, in other words, that the patterns of human thought and action found within a society's superstructure were largely shaped by the features of that society's economic base. In his famous eulogy at Marx's funeral, Engels (1963:188–189; orig. 1883) explained why this must be the case:

> Just as Darwin discovered the law of evolution in organic nature, so Marx discovered the law of evolution in human history; he discovered the simple fact . . . that mankind must first of all eat and drink, have shelter and clothing, before it can pursue politics, science, religion, art, etc., and that therefore the production of the immediate material means of subsistence and consequently the degree of economic development attained by a given people or during a given epoch, form the foundation upon which the state institutions, the legal conceptions, the art and even the religious ideas of the people concerned have been evolved, and in the light of which these things must therefore be explained.

If this is how societies are organized or put together, how then did they change? Here is where Marx and Engels borrowed directly from Hegel. Hegel's view of historical change was *dialectical*, by which he meant that it occurs through the inner contradictions or conflicts that something contains. For Hegel, dialectical contradictions occurred within the realm of the human mind, within ideas. Any idea that humans put forth (a thesis) contains its own logic opposite (or antithesis). For example, the idea of freedom implies its opposite, the idea of slavery. The idea "all people are free" implies its polar opposite "no people are free." The human mind wishes to resolve such contradictions, and so produces a third idea that is partly like the thesis and partly like the antithesis. This is the synthesis. In the preceding example it could be the idea "some people are free." But the new synthesis is also a second thesis, which produces a second antithesis, out of which emerges a second

synthesis, which is itself yet a third thesis, and so on. This process produced increasingly better ideas and would continue, Hegel thought, until thought had been perfected. There would then be a society that had perfect religious, artistic, and philosophical institutions, and these institutions would form the basis for an ideal society.

Marx and Engels accepted Hegel's notion that historical change was dialectical, but they thought that the contradictions occurred within the economic base, not in the realm of ideas. Contradictions within the economic base led to changes within it that eventually led to its disintegration, and as the old economic base distintegrated it gave rise to a new economic base. Since economic bases condition or determine superstructures, the emergence of a new economic base led to the emergence of a new superstructure. Thus, changes within the superstructure were brought about mainly by changes that had already occurred within the base.

Marx and Engels marked off four major stages of social life, with one still to come. *Primitive communism* was the earliest stage of history and the simplest form of society. It was characterized by a rudimentary subsistence technology based on hunting and gathering, simple agriculture, or animal herding. The relations of production were communal and no social class divisions existed. The main contradiction of this stage was that between humans and nature—the limited nature of technology, making life a continual struggle for bare subsistence. With technological advance, humans were able to overcome their bare existence, but with this change also came private property and class divisions. *Slavery,* or the *ancient mode of production,* was the result. Here, class divisions existed in the form of masters and slaves. Ancient Greece and Rome were the leading representatives of this mode of production. In time, the contradictions of the slave mode led to its disintegration and the formation of the *feudal mode of production*. This occurred in the centuries after the fall of the Roman Empire. Feudalism was characteristic of Europe until the fifteenth or sixteenth centuries and was based on a class division between landlords and serfs. But this system, like previous modes of production, was unstable, and its contradictions eventually led to its downfall and the gradual emergence of *capitalism*. Capitalism was based on the production of goods and their sale in markets in order to make the maximum profit. Industrialization occurred on a massive scale and a new class, the capitalist class, came to dominate society and to subordinate a working class to its economic aims. But capitalism, too, contained fatal contradictions that would tear it apart in the end. Workers would revolt against capitalism and establish a workers' state that would end class divisions and exploitation. Thus, *socialism* was born, which would mark the end of history because socialism would not contain any fundamental contradictions.

This theory leaves much to be desired. Its stages of historical development pertain more to European history than to world social evolution, and it greatly oversimplifies the evolutionary process by seeing it as the result of a dialectic of class struggle. Important causal factors, especially population growth and environmental change, are ignored. Moreover, Marx's predictions about the transition from capitalism to socialism have failed miserably. The working class has shown little if any revolutionary potential in advanced capitalist societies, and socialist revolutions

have occurred instead in much less developed agrarian societies where the peasantry was the largest and most revolutionary class. To make matters worse, socialism has not fulfilled Marx's expectations at all (with the possible exception of being more egalitarian than capitalism), and the major socialist societies broke down in the late 1980s and early 1990s and began evolving back toward capitalism. Nevertheless, the theory is moving in the right direction with its materialist understanding of social life and its view that material conditions are the driving forces of social change. Even though its predictions of the nature of capitalist breakdown have failed, it does pinpoint some of the problems that capitalism continues to confront, and it is indeed a distinct possibility that capitalism could break down in the longer run and give way to some other mode of production (Wallerstein, 1998). So the theory cannot be thrown on the intellectual junkpile just yet. It contains important insights even though a better overall theory of social evolution is needed.

Twentieth-Century Evolutionism: First Generation

Toward the end of the nineteenth century, evolutionary thinking began to come under severe criticism, and as the criticisms mounted against it, evolutionism was ultimately abandoned by most social scientists. Throughout the early decades of the twentieth century, social scientists turned their attention to questions and problems other than those dealing with long-term social change. But evolutionism was not dead; it was only dormant. A number of scholars began to see that this "antievolutionary reaction" was a gross overreaction; it made many exaggerated claims based on a superficial reading of the works of the classical evolutionists, and some of its accusations were just flatly wrong (see Sanderson, 1990:36–49; 1997). Beginning in the 1930s and 1940s, it staged a significant revival, and the whole problem of long-term evolutionary change began once again to preoccupy the minds of many social scientists.

V. Gordon Childe

The first major figure in the evolutionary revival was archaeologist V. Gordon Childe (1936, 1951, 1954), an Australian who spent his career at the University of Edinburgh in Scotland. Childe identified two great technological and social revolutions in human history and prehistory. The first, what he called the *Neolithic Revolution*, was so named because it was associated with the development of polished stone tools. However, its real importance was that it involved the domestication of plants and animals and thus the emergence of the first agricultural societies. The transition from food collection to food *production* allowed for the production of an economic surplus—a quantity of food above and beyond that necessary for survival—and the support of larger and denser populations.

As Neolithic communities continued to evolve over the millennia in several parts of the world, the way was paved for a second revolution, or the so-called *Urban Revolution*. The Urban Revolution was made possible by the invention of the plow.

The plow brought about dramatic increases in soil fertility; much greater quantities of food could be produced, which meant much bigger economic surpluses and still larger and denser populations. All of this led to the development of cities and urban life, craft specialization, sharp class divisions, and the creation of powerful governments needed to contain increasing social conflict and advance the interests of wealthy classes.

What was the driving force of social evolution? Childe considered himself a Marxist and advocated what he referred to as the "realist conception of history." However, he was a Marxist in only the most general sense of emphasizing technological and economic factors as the primary evolutionary forces. Technology seemed to loom larger than economics. He often spoke of the different forms of social organization that followed from the use of stone, bronze, or iron tools. His discussion of the Urban Revolution focused more on the causal significance of technological factors, especially the invention of the plow, than on anything else.

Leslie White

After Childe came the American anthropologist Leslie White (1943, 1945, 1949, 1959). White refused to call himself a neoevolutionist because he insisted that his ideas were simply a reconstruction and restatement of the basic ideas of the classical evolutionists, Lewis Henry Morgan in particular. White distinguished between evolutionary and historical modes of explanation. *Historical accounts* are those that attempt to trace out and explain unique sequences of events, whereas *evolutionary accounts* ignore historical uniqueness and focus on the evolution of human culture as a whole. White adopted a threefold classification of the components of cultural systems: technology, social systems, and ideology. *Technology* consisted of the tools and techniques people had developed with respect to both subsistence and military aggression and defense. *Social systems* were the patterned social relationships that people carried on—kinship and family life, political organization, religious ritual, and the like. *Ideology* was mental rather than behavioral and consisted of the beliefs, values, philosophies, and symbolic systems that people shared.

White was a vigorous materialist and thus regarded the technological component as the foundation of culture and as determining both social systems and ideology. His technology-social systems-ideology compartmentalization of culture, in fact, recalls Marx's base-superstructure distinction, and many features of his analysis, especially as found in his major evolutionary work *The Evolution of Culture* (1959), are decidedly Marxist in tone. However, White gave technology a much greater causal role in social evolution than Marx ever did. This is obvious in White's formulation of his so-called *Law of Evolution:* Culture evolves as humans increase the amount of energy they harnessed per capita and per year, or as they increase the efficiency with which they put energy to work. Technological change, of course, is what makes the harnessing of increased energy and its more efficient use possible.

Like Childe, White identified two great technological revolutions in human history. The first, the *Agricultural Revolution*, was simply Childe's Neolithic Revolution. But whereas Childe's second revolution was the Urban Revolution, White's

was what he called the *Fuel Revolution*, which has been more commonly called the Industrial Revolution. This second revolution began in England in the eighteenth century and was associated with the replacement of human manual power by machine power. Each of White's two technological revolutions had enormous consequences for the evolution of the other dimensions of culture.

White's evolutionary thinking was also permeated by Morgan's famous distinction between *societas* and *civitas*. The transition from *societas*, or primitive society, to *civitas*, or civil society, was brought about by the Agricultural Revolution. The development of an agricultural technology led to increasing population sizes and densities, and societies became more complex and occupationally specialized. There emerged carpenters, potters, weavers, metalworkers, and so on. Private ownership of the means of production replaced communal ownership, and class divisions and class struggles emerged and intensified. For White, the transition to civil society was associated with a number of economic, political, and social evils; here, he clearly reveals his more Marxist side.

Julian Steward

Julian Steward (1949, 1955, 1977) was the third main figure in the evolutionary revival. Despite contributing to this revival, though, Steward clearly tried to distance himself from both Childe and White. Steward drew a distinction between three types of evolutionary analysis, which he called unilinear, universal, and multilinear evolutionism. By *unilinear* evolutionism Steward meant the theories of the nineteenth-century evolutionists. These he rejected as much too simplistic and as overstating parallel changes in human societies. *Universal* evolutionism involved the theories of Childe and Steward, which he thought operated at such an abstract and general level that they were of little real use—not wrong, necessarily, but at the same time not telling us very much. In place of these forms of evolutionary theorizing Steward proposed *multilinear* evolutionism. Multilinear evolutionism was much less sweeping in its generalizations, and instead concentrated on "those limited parallels of form, function, and sequence which have empirical validity" (Steward, 1955:19). Steward actually started out as a kind of unilinear evolutionist (Carneiro, 1973), but in time he became increasingly timid and nervous about it. His multilinear evolutionism was intended to be a sort of compromise between unilinear and universal evolutionism on the one hand and the analysis of unique historical sequences on the other. He wanted to generalize about long-term social change, but he also wanted to particularize, or take into account the unique features of societies and their historical sequences.

A good example of Steward's multilinear evolutionism is his analysis of parallel changes between two Indian tribes, the Algonkians of North America and the Mundurucu of South America. These societies were once very different but over

as a result began to produce goods for sale in outside economic markets. This involvement in commercialism produced similar changes in both societies. Most significantly, their traditional kinship networks decayed in favor of the development of small nuclear families as the primary social group.

Steward was a materialist like Childe and White before him, but he put more causal emphasis on *ecological factors* than on technology and economics. In a famous early essay (1949), Steward adopted the famous hypothesis of Karl Wittfogel (1957) that highly despotic societies evolved in especially dry regions of the world to coordinate the irrigation works people had constructed in order to be able to farm the land at all. Steward gave such consistent emphasis to the causal role of ecology that he has long been recognized as the founder of the anthropological school of thought known as *cultural ecology* (Harris, 1968).

Twentieth-Century Evolutionism: Second Generation

Childe, White, and Steward can be criticized for a number of false steps, outright errors, and confusions of various sorts. Nevertheless, their thinking reestablished the legitimacy of evolutionary thinking in the social sciences, and they set the stage for later theorists who could improve on their works. They also reestablished the legitimacy of a materialist mode of explanation, which had gone into hiding during the early decades of the twentieth century. All three thinkers had a profound influence on the next generation of evolutionary theorizing.

Talcott Parsons's Idealist Evolutionism

The most famous sociological theorist of the middle of the twentieth century was a man by the name of Talcott Parsons. For most of his career Parsons showed little interest in social change, and his theories were often severely criticized because they seemed unable to explain why social change should occur at all. However, in the 1960s and 1970s, Parsons reformulated his thinking so that it could account for change. In fact, he went much further and developed a very elaborate theory of long-term social evolution (Parsons, 1966, 1971). Unlike the two thinkers whom we shall discuss next, Parsons showed no knowledge at all of the works of Childe, White, and Steward. Parsons's theory of social evolution owed much more to the ideas of the early sociologists Max Weber (1864–1920) and Emile Durkheim (1858–1917), and in unacknowledged ways to the philosophical idealism of Hegel.

The key concepts in Parsons's evolutionary theory are social differentiation, adaptive upgrading, and evolutionary universals. Social evolution for Parsons is primarily a process of *differentiation*, or one in which societies develop greater and greater levels of functional specialization and more elaborate forms of integration of their specialized parts. As societies become more differentiated, they undergo *adaptive upgrading*, which means that they experience improvements in the functional efficiency with which they operate. *Evolutionary universals* are social innovations

allow a society to function better and that provide the foundation for additional adaptive upgrading.

In Parsons's thinking, all of these concepts are closely intertwined. Three types of societies, and thus three stages of social evolution, are identified. *Primitive societies* are highly undifferentiated. Social life revolves around kinship and other dimensions of society, such as politics, economics, or religion; all occur within the framework of kinship relations. At some point in the development of primitive societies the evolutionary universal *social stratification* emerges. By rewarding some people more than others, primitive societies are able to develop more effective forms of leadership and thus function better. A second evolutionary universal at this early stage is *cultural legitimation*. This allows a society to develop a distinct identity separate from the cultural identities of other societies, and to develop core values and goals and establish means of realizing them.

The stage is then set for the emergence of *intermediate societies*. Parsons distinguishes two subtypes of these societies: archaic societies and historic empires. *Archaic societies* have literate priesthoods, which represents a religious differentiation between specialists and laypersons. Archaic societies are also characterized by a third evolutionary universal, *adminstrative bureaucracy*, and there is substantial separation between the political officials who staff this bureaucracy and religious officials. Egypt and Mesopotamia are the two leading examples of this type of society. *Historic empires*, of which the leading four examples are historic China, India, Islamic civilization, and ancient Rome, differ from archaic societies largely in terms of what Parsons calls their *philosophical breakthroughs*. China, India, and Islam developed much more advanced philosophical and religious systems than any society before them, and they were also characterized by the substantial development of a fourth evolutionary universal, *money and markets*. Ancient Roman society retained a polytheistic religious system, but it went much farther than the other three empires in terms of the development of money and markets. Its major philosophical breakthroughs were made with respect to concepts of law and citizenship. It developed an elaborate system of law that formed the basis for modern legal systems, and it developed an early form of citizenship and democracy.

Modern societies represent the third and final stage of social evolution. The first modern societies, England, France, and Holland, emerged in the sixteenth century. England was the most modern of these three because it was the most differentiated. Commercial farming arose, and the newly established Protestantism played a role in breaking down the traditional fusion of religion and government. Parliamentary government and legal changes emphasizing individual rights also developed. The most important developments in the emergence of modern societies were the industrial and democratic revolutions. The Industrial Revolution was extremely important because it led to massive differentiation within the economy and freed labor from the constraints to which it had been subject in earlier medieval society. The democratic revolution established a whole new value system, one emphasizing achievement and equality of opportunity.

The development of modern societies was also closely tied to the emergence of the final two evolutionary universals: generalized universalistic norms and the

apply to a whole society. Rome pioneered in this area, but English common law took things much further. The *democratic association* involves the election of political leaders to office and it allowed power to be based on a broad societal consensus.

Although England led the way into modernity, modernity is epitomized today by the United States, which Parsons refers to as "the new lead society of contemporary modernity." This society is the most highly differentiated society that has ever existed, and it has carried universalistic norms farther than ever before. Its emphasis on achievement has been greater than that of any other society in human history.

So much for how the evolutionary process works according to Parsons. What is driving it? Here, Parsons departs radically from the materialists of the evolutionary revival—whose work he probably never bothered to read—and formulates a distinctively idealist theoretical argument in the tradition of Hegel. Parsons emphasizes as the primary causal factors in social evolution such things as symbolic codes, philosophical and religious systems, and legal norms. For example, the transition to the historic empires was made possible by important philosophical breakthroughs, and Judaism and Christianity were important to the development of modernity because they were universalistic monotheistic religions. Moreover, modernity was only made possible by the emergence of generalized universalistic norms and democratic values. All throughout social evolution, it appears, the human mind has been doing most of the work. It has been thinking itself to higher and higher levels and creating societies with greater and greater levels of adaptive capacity.

There are many problems with Parsons's theory of social evolution, only the most serious of which can be noted here (cf. Sanderson, 1990:118–130). His master concept is that of social differentiation. For Parsons, this is overwhelmingly the great trend of the evolutionary process. There is little doubt that increasing differentiation has been *one* trend in long-term social evolution, but is it the master trend? We think not. There are many aspects of social evolution that have little or nothing to do with differentiation. The evolution of increasingly sophisticated subsistence technologies, for example, represents the emergence of new *kinds* of technology whose differences involve much more than just increasing complexity. Moreover, as Charles Tilly (1984) points out, much of social evolution involves decreasing rather than increasing differentiation. Such evolutionary processes as the steadily decreasing number of political units in the world over the past several thousand years, the development of capitalist mass consumption, and increasing linguistic standardization are actually processes of *de*differentiation.

The problems with the differentiation concept become more serious when it is linked with the notion of adaptive upgrading. There are two difficulties here. First, Parsons thinks of entire societies as the units that do the adapting. We would argue that this is a logical error, a form of what is called *reification*. To reify something is to give it a type or level of reality that it cannot logically possess. Parsons does this with societies. But societies cannot do any adapting, only individuals can. Only individuals possess a brain and consciousness, and thus only they can adjust themselves to circumstances in ways designed to meet their needs and promote their goals.

The second difficulty involves Parsons's notion that the level of adaptiveness somehow increases throughout social evolution. Parsons clearly states that primitive societies have the lowest adaptive capacity, whereas modern capitalist and industrial

societies have the most (thus implying that the latter are "better" than the former). It is certainly true that modern societies have improved the quality of human life in many ways compared to primitive societies (e.g., improving the standard of living, reducing infant mortality, lengthening the life span). But primitive societies lasted for tens of thousands of years, and modern societies—which have been around only a very short time by comparison—are rapidly damaging their environments and live with the continual threat of ecological collapse and nuclear holocaust; they are therefore at risk of having the shortest existence of all known societies. In what sense is this an increase in a society's adaptive abilities? Parsons has fallen into the trap that has snared many a social evolutionist—that bigger and later are necessarily better than smaller and earlier. It isn't always the case, by any means.

Finally, Parsons's explanatory account of social evolution leaves a great deal to be desired. Here, Parsons largely falls back on an old chestnut—the notion that the evolution of society is driven by the expanding powers of the human mind. But if this is the case, why does the mind itself evolve? Parsons provides no clear answer to this critical question. He seems to be implicitly saying that the mind just has some sort of natural tendency to advance, to think itself to higher and higher levels. This is extremely unconvincing and unsatisfying. In this regard, Parsonian evolutionism closely resembles Hegel's philosophy of history, although without the concept of dialectics. (At least Hegel provided a mechanism of mental change, no matter how wrong his philosophy of history may have been!) It will be our contention in this book that the evolution of ideas is not much of an independent driving force, and that mental evolution is itself largely a product of other, more basic, evolutionary changes.

Gerhard Lenski's Technological Evolutionism

Although a sociologist, Gerhard Lenski's (1966, 1970) evolutionism was little influenced by sociologists, despite resembling Parsonian evolutionism in some respects. Rather, his ideas bear the unmistakable imprint of Childe and White and, indeed, are substantially derived from them.

In Lenski's view, social evolution is primarily a process whereby societies mobilize increasing levels of *energy* and especially *information* in adapting to their environments. Lenski borrowed White's compartmentalization of societies into technology, social systems, and ideology, and restated as well White's notion that social systems and ideologies are largely shaped by the nature of technologies. Technological advance produces a wide range of important consequences for social systems and ideologies. Because it allows societies to utilize their environments more efficiently, technological advance leads to population growth. More mouths can be fed and more lives supported. As people gain increasing control over their food supply, they begin to live in larger and more permanent settlements.

Technological advance also leads to increases in economic productivity, and as a result social and economic inequalities open up and progressively widen because people struggle for control over the wealth that is being created. As the stakes get larger, people have more incentives to compete to get more for themselves. Increasing technological sophistication also leads to social differentiation and increasing

occupational specialization. Many people become freed from the necessity of producing their own living by hunting, farming, or herding and move into specialized roles involving managing the economy and coordinating governmental activity. And as all of these things happen, people experience an overall increase in the amount of leisure time available to them, time that can be used to develop the noneconomic dimensions of society and culture. Some people become, for example, priests, artists, or educators. The symbolic and ideational aspects of culture become increasingly elaborate. Lenski has repudiated the label *technological determinist*, which he has often been given, because he says that technology is not the only important causal force. Nevertheless, technological change is clearly the primary force of social evolution for Lenski.

A very important contribution made by Lenski was the development of a better and more precise evolutionary typology of societies (he actually borrowed from the anthropologist Walter Goldschmidt, 1959, in this regard). He distinguishes six major types of societies on the main evolutionary line of development. *Hunting and gathering societies* are the simplest and earliest. Their members live in small, nomadic bands and hunt wild game and collect wild plants. With the Neolithic Revolution that began some 10,000 years ago came the earliest and crudest agriculture, and thus were born *horticultural societies*. They cultivated the land in the form of small gardens using hand tools. *Simple horticultural societies* used only digging sticks as cultivating implements, but *advanced horticultural societies* used metal hoes, which allowed them to work the land more efficiently.

As agricultural methods improved, *agrarian societies* emerged between about 4,000 and 5,000 years ago. The key technological advance here was the development of the plow and the harnessing of animal energy for plowing. Agrarian societies without iron plows or other tools Lenski refers to as *simple agrarian societies;* those with iron plows and other tools he calls *advanced agrarian societies. Industrial societies* began to arise two and a half centuries ago with the English industrial revolution. They are based on the substitution of machine power for manual power and the factory system. As industrialization intensified, people moved off the land into towns and cities, and thus industrial societies became highly urbanized societies.

Lenski also distinguishes three types of societies not on the main line of social evolution. *Fishing societies* are nonagricultural societies, but they depend on fishing rather than hunting for their supply of meat. *Herding societies* specialize in animal herding rather than agriculture in dry environments not suitable for cultivation. *Industrializing societies* are the less-developed societies of the contemporary world.

Lenski's evolutionism was a major contribution to sociology when it first emerged in the mid-1960s. It helped to recapture the comparative and historical outlook that sociology had once had but had lost in the early part of the twentieth century. Nevertheless, his evolutionary perspective is not without flaw. We note only in passing that Lenski's evolutionism is similar to Parsons's in that society is the unit that is doing the adapting, and societies increase their adaptive capacity as they evolve. We have already criticized this idea.

The most serious problem with Lenski's theory is that it gives far too much emphasis to technological change as the primary causal force. It is certainly true that technological advance is a major part of the evolutionary process and that it is

closely intertwined with the other dimensions of social evolution. However, Lenski is never able to demonstrate that technological change is what is causing the other changes. More recent work, in fact, suggests that technological change is itself more often—perhaps much more often—an effect rather than a cause. Moreover, if technological change is a primary, first cause, as Lenski claims, what is driving it? Lenski's tacit assumption is that technological change is basically a matter of improving human knowledge. Lenski is a technological Socratic: The society that knows the good chooses the good. Technological change is almost always a good thing because it allows people to adapt more efficiently to nature, and once people have invented new technologies they will almost always put them to use.

As will be seen in the discussion that follows and elsewhere in this book, there are good reasons for questioning not only Lenski's claim about the causal role of technological change but also his claim that people always perceive technological change as good and will automatically use new technologies when they become available. In fact, people often resist them because, contrary to Lenski, new technologies usually increase the workload and thus actually decrease the amount of leisure time most people have available to them.

Marvin Harris's Cultural Materialism

Virtually all of the evolutionists we have discussed thus far have been *progressivists;* that is, they have all regarded social evolution as leading to overall **progress,** defined either as improved societal functioning or an improvement in the quality of the human condition. Even Marx, who was a bitter critic of capitalist society, regarded it as an improvement over feudalism in many respects and as a necessary way-station in the transition to socialism. With Marvin Harris (1968, 1977, 1979) one encounters a very different kind of thinker. Harris's evolutionary theorizing is the antithesis of the extreme progressivism of Parsonian evolutionism, and it differs from Parsonian theory in almost every other way possible. It is primarily individuals rather than societies that adapt, and societies do not experience increased adaptiveness as they evolve. Harris is one of the few social evolutionists who is a non- or antiprogressivist.

Harris was greatly influenced by Childe, White, and Steward, but also by Marx. Although Childe thought of himself as a Marxist, and although White showed Marxian influences that he never acknowledged, Harris is more Marxian than both without ever thinking of himself as a Marxist. He gives much more attention to economic relationships, and much less attention to technology, than either of these other thinkers.

In the 1950s, Harris began to create a general theoretical perspective that continued to develop throughout the 1960s and 1970s. He called this perspective *cultural materialism.* Cultural materialism divides all societies into three components that are reminiscent of Marx's base-superstructure distinction and White's distinction between technology, social systems, and ideology. For Harris, all societies have the components that he calls infrastructure, structure, and superstructure. The *infrastructure* consists of technology, ecosystems, technoenvironmental relationships, and the

demographic features of societies (the features of a society's population, such as its size, density, growth rate, age and sex ratios, and the technology of birth control and population regulation). The *structure* contains two subcomponents, *political economy* (ownership of the means of production, class and caste structures, political organization, and war) and *domestic economy* (marriage and family patterns, gender relations, and age roles). The *superstructure* is the mental or ideational component of societies; it includes a society's basic beliefs, values, and norms, as well as philosophies, religion, science, art, music, and ritual.

Harris conceptualizes the relationship between these three major components in terms of his *principle of infrastructural determinism.* This holds that the infrastructure conditions the structure which in turn conditions the superstructure. The principle is probabilistic—this is what happens most but not all of the time—and allows for the occurrence of other causal relationships. As a principle applied to social evolution, it holds that changes are most often initiated within the infrastructure and these changes set off reverberating changes in the structure and superstructure.

Why should things work this way? Harris's answer is that the infrastructure has a logical causal priority because it involves those dimensions of human social life that are most fundamental to human survival and reproduction. Without the infrastructure, humans cannot live, nor can they produce more humans; this gives it a critical importance not possessed by the structure and superstructure, even though these other two components are very important in their own right. Since the parts of societies need to have a basic compatibility with one another so everything does not break down, the logically prior existence of the infrastructure constrains the ways in which the structure and superstructure can develop. They must develop in ways reasonably consistent with how the members of a society get a living and how they create the next generation.

Although Harris always had an evolutionary view of social life, with the publication of his book *Cannibals and Kings: The Origins of Cultures* (1977) he formulated a more precise theory of social evolution. Here, he attempts to explain the broad outlines of the past 10,000 years of social evolution by making use of the concepts of **environmental depletion** and **intensification of production.** The application of technology to the environment, and the steady (even if very slow) growth of population, invariably produce a situation in which people's environments become depleted, which means that they yield less energy (mostly less food) for the same effort. Living standards decline. People may tolerate decline for a while, but any further decline may make the situation unacceptable. At this point, people intensify their productive efforts. Initially, this need not involve any changes in the nature of technology; people simply work harder and longer and make more vigorous use of existing resources. This helps to prevent living standards from dropping even lower, but only for a while. Eventually, a new type of intensification, one based on advancing the level of technology, must be introduced. Hunter-gatherers start cultivating and eventually become virtually full-time horticulturalists. Simple horticulturalists gradually become more advanced horticulturalists. And so on and so forth. But in the long run, this technological intensification is a losing proposition. Like Alice in

Wonderland, people have to run faster and faster just to keep from falling further and further behind.

The trump card in this whole process is the growth of population. People have discovered a variety of ways of limiting childbirth and controlling population, but these techniques are seldom effective enough to prevent population from growing at all. Throughout the tens of thousands of years that humans lived as hunter-gatherers, their populations grew very slowly, but grew they did. As a result, hunter-gatherers eventually depleted their environments to the point where they had to start adopting plant and animal domestication (something they had heretofore resisted because it took more time and energy). With the transition to horticultural societies people relaxed their birth control techniques because now they could produce more food to feed many more people. But this was soon counterproductive, because the rate of population growth accelerated, leading to even more rapid depletion. The process of social evolution itself accelerated.

Agrarian societies eventually replaced horticultural ones, and eventually a massive form of technoenvironmental intensification occurred in the form of the Industrial Revolution, which is rapidly depleting the earth's resources on an unprecedented scale. What would have happened had humans been able to keep their populations from growing? The answer is, we would all still be hunting game and collecting plants (and no one would be reading this book, which would not exist). But we couldn't, and therefore we aren't. We are caught up in an evolutionary process that, Harris surmises, will threaten our very existence unless we can discover heretofore unimagined technologies.

It is important to see how different Harris's theory is from the technological determinism of Childe, White, and Lenski. For Harris, technology advances not simply because knowledge increases, but because humans are compelled by declining living standards to work harder and longer to feed more mouths. Moreover, technological advance is not producing continual improvement in Lenski's sense; on the contrary, living standards continue to go down in spite of technological advances (but would go down even more, and foreshadow human extinction, without technological advance). The Industrial Revolution involved such a massive technological advance that the quality of life has certainly improved for most people—they live longer, healthier, more interesting lives, for example—but most of this improvement has occurred within two centuries or less. For nearly all of the past ten millennia humans have been on a downward spiral, however much that conclusion may conflict with one's preconceptions about human history.

Harris's overall cultural materialist approach, and his more specific intensification-depletion-renewed intensification evolutionary model, represent a major intellectual advance in understanding long-term social change. Rather than engage in a general critique here (see Sanderson, 1990:164–168; 1994c; 2001:114–119), we shall limit ourselves to one main point. As an anthropologist, Harris has naturally focused his attention on preindustrial societies and preindustrial social evolution. His ideas have relevance for modern industrial societies, and he has applied them as such (see in particular Harris, 1981). However, Harris's strong emphasis on ecological and demographic factors has made his model much less useful for the analysis of the modern world than for its precursors.

The modern world got its start in the sixteenth century with the rise of the capitalist mode of production (Wallerstein, 1974a, 1974b, 1979), and this created an "evolutionary rupture" within the evolutionary process. The "rules of the evolutionary game," so to speak, were partially rewritten. Economics became a lot more important than demography and ecology. Harris recognizes this to some extent, but his models are not fully equipped to deal with it. Note that in the Marxian base-superstructure model the relations of production are part of the infrastructure or base, whereas in Harris's cultural materialist model these relations have been shifted to the structure (more specifically, into political economy). Whereas economic relations have now assumed center stage, and thus should be considered a crucial part of the insfrastructure in modern capitalism, Harris has relegated them to the structure, which does much less of the causal work.

Let us end this theoretical discussion before we overtax you. Suffice it to say that Harris's ideas are extremely important, but they can be improved on, especially by infusing them with ideas from other theoretical traditions. This leads us to what might be called the third phase of twentieth-century evolutionary thinking.

Twentieth-Century Evolutionism: Third Generation

Since the late 1970s, a variety of evolutionary theories have been developed. An especially popular type of evolutionary theory relies on an analogy with Darwin's theory of biological evolution by natural selection. Theories such as this have been developed by, for example, Donald Campbell (1965), John Langton (1979), L. L. Cavalli-Sforza and Marcus Feldman (1981), and, in a slightly different form, W. G. Runciman (1989). Since these theories focus largely on the *process* of evolution rather than its *fact and course*, and, since they seem to draw much too close a connection between Darwinian natural selection and social evolution, we have not found them especially useful (see Sanderson, 1990:170–174, for a critique).

Another recent popular type of theory is what has been called a *coevolutionary* theory. Theories of this nature have been set forth by Charles Lumsden and E. O. Wilson (1981), Robert Boyd and Peter Richerson (1985), and William Durham (1991). These theories attempt to show that social evolution is a product of both genetic transmission and social or cultural transmission, and, indeed, that the two are often closely intertwined. Coevolutionary theories have certain valuable uses, but they, like natural selectionist theories, have not been especially effective in either describing or explaining social evolution over the long term (see Sanderson, 1990:174–180, for a critique).

One of the most ambitious recent attempts to explain the fact and course of long-term social evolution has been that of Stephen Sanderson. His theory, which he calls **evolutionary materialism,** is set forth in a highly detailed propositional manner (see Sanderson, 1994c, 1995, 1999b:3–16). Evolutionary materialism builds directly on Harris's cultural materialism and may be thought of as a formalization and extension of it. It accepts Harris's division of societies into infrastructure, structure, and

superstructure but slightly reformulates the notion of infrastructure. Harris had divided "economy" into two major components: *subsistence economy* on the one hand and *political economy* on the other. The first was placed in the infrastructure, the second in the structure. Sanderson has kept these two components of economy together and placed them both in the infrastructure. This makes it possible to produce a much more logical infrastructural analysis of the contemporary world. Sanderson formulates infrastructure, structure, and superstructure as follows:

1. **Infrastructure:** The raw materials and social forms relevant to human survival and adaptation.
   - *Technology:* The information, tools, and techniques that underlie economic action.
   - *Economy:* The organized system whereby goods and services are produced, distributed, and exchanged among individuals and groups.
   - *Ecology:* The totality of the physical or natural environment to which humans must adapt.
   - *Demography:* The nature and dynamics of human populations and the technology of birth control.

2. **Structure:** The organized patterns of social behavior carried out among the members of a society, excluding those social patterns that belong to the infrastructure.
   - *Stratification systems:* Class and caste divisions and the relationships between such groups.
   - *Racial and ethnic stratification:* Social divisions based on putative physical and/or cultural differences between and among groups.
   - *Political organization:* Structures of leadership and rule characteristic of a society.
   - *Gender roles and relations:* Social arrangements between the sexes with respect to power, authority, and rights and perquisites.
   - *Family and kinship:* Patterns of marriage and the organization of people into households and groups based on descent and genealogical affiliation.

3. **Superstructure:** The shared ways in which the members of a society think, conceptualize, evaluate, and feel.
   - *Beliefs, values, and norms:* Shared cognitive assumptions about truth and falsehood, socially defined conceptions of worth, and shared standards or rules regarding proper or improper social conduct.
   - *Religion:* Shared beliefs, values, and norms pertaining to postulated supernatural beings, powers, or forces.
   - *Science:* Techniques for the acquisition and accumulation of knowledge relying on systematic observation and experience.
   - *Art:* Symbolic images or representations having aesthetic, emotional, or intellectual value for the artistic producers and other members of society. Broadly defined to include *music* and *literature*.

Evolutionary materialism also contains a **Principle of Infrastructural Determinism** (as well as Marx's and Harris's claim about why the infrastructure has logical priority) but modifies Harris's version slightly. Sanderson's version of the principle postulates that ecology and demography are the most frequent infrastructural determinants in small-scale societies resting on hunting and gathering, simple agriculture, or animal herding; that these factors plus technology and economy are all important causal forces in large-scale agrarian civilizations; and that economy, especially "political economy," is the most likely infrastructural determinant in the modern capitalist world. Sanderson emphasizes that throughout the process of social evolution there have been "evolutionary ruptures," so that with the transition to a new type of society there may be a reconstitution of the "evolutionary rules of the game" such that different "evolutionary logics" appear in different historical or prehistorical eras. In other words, the logic whereby modern capitalist society evolves is different in some crucial respects from the logic whereby hunter-gatherer or horticultural societies evolve.

Evolutionary materialism also accepts Harris's distinction (developed by earlier scholars) among parallel, convergent, and divergent evolution. **Parallel evolution** occurs when two or more societies evolve in basically similar ways and at similar rates. Beginning about 10,000 years ago, for example, human communities in various regions of the world independently began to domesticate plants and animals and to live increasingly by agriculture. The adoption of agriculture in these communities led to strikingly similar changes in their structures and superstructures. Likewise, several thousand years later, societies in many of the same regions where agriculture first arose underwent parallel changes in social and political structure that led to the emergence of civilizations. **Convergent evolution** results when societies that have originally been dissimilar evolve in ways that make them increasingly alike. The United States and Japan, for example, have evolved along convergent lines in the past 100 years or so, and other east Asian societies, such as Taiwan and South Korea, are beginning to converge with Western societies. **Divergent evolution** occurs when originally similar societies evolve along lines of increasing dissimilarity. Japan and Indonesia, for example, were much more similar in the sixteenth and seventeenth centuries than they are today (Geertz, 1963). Japan is a modern industrial nation with a very high standard of living, whereas Indonesia remains a poor, underdeveloped country. Harris has suggested that parallel and convergent evolution have figured more significantly in human history than divergent evolution, and evolutionary materialism accepts that premise. This book therefore concentrates on the first two evolutionary modes and says less about the third mode.

Any good evolutionary theory must also recognize three other processes or outcomes of human adaptation: continuity, devolution, and extinction (recognized explicitly by Lenski and implicitly by Harris). Evolutionary materialism explicitly acknowledges these outcomes. **Social continuity** is the relative lack of change from one generation, or a whole series of generations, to the next. There is no such thing as a totally unchanging society, but there are societies that change little over long periods of time. Some hunter-gatherer societies, for example, have survived into the modern era, as have some horticultural and pastoral societies. In general, the smaller

a society is in scale, and the simpler its mode of technology and economic life, the less likely it is to undergo fundamental changes.

Social devolution is a reversal of evolutionary change; it involves the movement of a society back to an earlier evolutionary stage, or at least the adoption of some characteristics of societies at earlier stages of development. This might mean a decrease in complexity, a loss of social cohesion, or a reversion to subsistence methods more characteristic of an earlier evolutionary stage. The Ik of Uganda provide a striking illustration of a society that lost virtually all of its social cohesion (Turnbull, 1972). The Ik were a hunter-gatherer society that experienced economic disaster when their traditional hunting grounds were turned into a game preserve by the Ugandan government. This event precipitated the virtual collapse of Ik society. With the loss of their traditional means of subsistence, and with the shift to agriculture made difficult or impossible, the Ik experienced a substantial decline in population and lost their basis of political cohesion.

Ester Boserup (1965) points out that communities will often regress to earlier and simpler techniques of cultivation when their population densities decline. This has occurred in South America in recent centuries, and in parts of Africa and south and southeast Asia in the twentieth century. People will often shift back to simpler cultivation methods because they involve less work and are sufficient to feed a sparser population.

Sometimes large-scale societies undergo major collapses. Joseph Tainter (1988) has called attention to the frequency with which agrarian empires have collapsed, usually because they have invested so many resources in building a highly complex society that it becomes too costly to sustain it for more than a limited time. The most famous example of the collapse of an ancient empire is, of course, the collapse of the Roman Empire in the fifth century CE. Rome had created a huge empire, which extended all the way from Egypt in the south to the British Isles in the north. The diverse regions of the empire were linked by a marvelous system of roads, and the empire was centralized economically, politically, and militarily. When the empire finally fell apart after a long and slow period of decline, Europe devolved into a vast region filled with largely economically self-sufficient villages and principalities.

Social extinction involves the complete obliteration of a society. This has been the fate of numerous hunter-gatherer societies in recent times, as well as various societies of greater evolutionary complexity. A society can become extinct either through the physical extermination of its members or through its absorption into another society by means of political conquest. Both of these processes have occurred frequently in human history, especially since the rise of modern capitalism in the sixteenth century. The North American continent, for example, was once filled with hundreds of Indian tribes. With the emergence and expansion of the new American civilization, most of the members of these tribes were killed in bloody wars. Those who remained were eventually herded onto reservations, their aboriginal way of life largely lost.

Cultural materialism emphasizes the adaptive character of social evolution, and evolutionary materialism does likewise. What is meant by calling social evolution an **adaptive** process is that *social patterns are created by humans as rational responses*

to the problems of existence that they confront, and when the nature of these problems changes, as invariably happens, the responses must and will change as well. Several important clarifications and qualifications of the concept of **adaptation** need to be made.

First, to say that a social pattern is adaptive is not to imply that it is therefore "good" or "morally desirable." A claim about adaptation is a scientific assessment of how various types of social patterns originate, persist, and change. A claim about "goodness," by contrast, is completely different. It is a judgment about whether one likes or approves of the things that people do. Thus, it is perfectly possible to identify a social pattern as adaptive and feel a moral repugnance for it. For example, in many societies in the contemporary Middle East, clitoridectomy (surgical removal of the clitoris) and infibulation (sewing the vaginal opening shut) are common practices. Members of Western societies usually find these practices repugnant, but they can be regarded as adaptations (at least for males) intended to reduce female sexual response and to control female sexual behavior. To understand this fact is to make a scientific statement, not a judgment of moral desirability.

Similarly, in all types of societies infanticide—the selective killing of infants, most commonly females—has been practiced, often with great frequency. Infanticide occurs even occasionally in modern industrial societies. Infanticide is adaptive for couples when they lack sophisticated birth control techniques and when the circumstances for rearing a child are poor. They may lack the economic resources to support another child, or attempting to support that child may have a negative impact on the well-being of older children. Infanticide may also occur when people want a child of the opposite sex; female infants may be killed when parents desire a son, male infants when they desire a daughter. These are the most common reasons why infanticide occurs (Hrdy, 1999), and thus mothers, couples, or older children benefit from it. But to explain infanticide is one thing; condoning or accepting it in a moral sense is quite another.

We also need to be clear about the kind of unit to which the concept of adaptation applies—about just what it is that does the adapting. Sociologists such as Parsons have assumed that the adaptive unit is an entire society. But such a notion is misplaced. As argued earlier in this chapter, societies are not comparable to organisms or individual persons; they do not have brains or consciousness, or needs and desires, and thus they cannot adapt to anything. Since only individual persons have these properties, only they can be units of adaptation. Of course, we sometimes speak about whether or not a social pattern is adaptive for a group or even a whole society, but when we do this it is clear that we can only be referring to an aggregate of individuals, and that it is from the point of view of each individual that the adaptation is judged.

This leads to another crucial point: An adaptive social pattern may not be equally beneficial for all individuals or groups within a society. It is frequently the case that a pattern that benefits some individuals or groups is maladaptive for others. Indeed, the more evolutionarily complex a society is, the more this is likely to be the case. In the earlier example, clitoridectomy and infibulation have been introduced because they benefit men at the expense of women, and men have sufficient power over women to have developed the social patterns and to keep them alive.

Moreover, early industrial capitalism was adaptive for wealthy factory owners, but it was highly maladaptive for the many factory workers who died from exhaustion, malnutrition, and disease (Engels, 1973; orig. 1845). And modern world capitalism is much more adaptive for the members of some societies than the members of others. It benefits people in the rich industrial countries much more than it does the members of poor ones.

As pointed out earlier with respect to Parsonian evolutionism, it is extremely important to recognize that it is inappropriate to claim that adaptation necessarily increases throughout social evolution. This notion of "increased adaptive capacity" has been a common one, being endorsed by some evolutionary materialists (cf. Childe, 1936; L. White, 1959) in addition to Parsons and his followers. This book rejects such a view, which is difficult to support by scientifically objective criteria (Granovetter, 1979). New social forms emerge as adaptations, but these altered adaptations should be regarded simply as new and different adaptations rather than as better ones. This does not mean that progress has never occurred. Indeed, it has, especially with the formation of modern industrial societies. But throughout much of social evolution, as stressed by Harris, things have often run downhill in terms of the quality of human life for most people. However, even with progress, *there is no warrant for claiming that society somehow functions better or more efficiently.* Such a statement involves a reification of society and contradicts the notion that it is individuals and their needs and desires that are the units of adaptation.

Finally, we must acknowledge that not all social patterns are adaptations, and thus the concept of adaptation does not have universal applicability. But even though we cannot use the concept everywhere and at all times, we are still far better off with it than without it. Indeed, by having a notion of adaptation as a guiding premise we will be in a position to identify which social traits are not adaptations and why they are not.

FOR FURTHER READING

Sanderson's *Social Evolutionism: A Critical History* (1990) provides a detailed explication and critical evaluation of theories of social evolution from the mid-nineteenth century to the present. Bruce Trigger's *Sociocultural Evolution* (1998) is a similar effort. An article by Robert Carneiro (1973) lays out four types of social evolution that have been identified by social scientists, and his book *Evolutionism in Cultural Anthropology* (2003) is a good succinct history of evolutionary theorizing, especially classical evolutionism. G. A. Cohen's *Karl Marx's Theory of History: A Defence* (1978) is a celebrated analysis of the subtleties and nuances of Marxian historical materialism, although its arguments are highly controversial and rejected by many (see Sanderson, 1990:50–74, for a critique and reformulation). Parsons's theory of social evolution is discussed in a pair of books, *Societies: Evolutionary and Comparative Perspectives* (1966) and *The System of Modern Societies* (1971).

Harris's *The Rise of Anthropological Theory* (1968) is a classic history of anthropological theory with considerable emphasis on evolutionary theories. His *Cultural Materialism: The Struggle for a Science of Culture* (1979) lays out his general theoretical perspective in great detail, and his *Cannibals and Kings: The Origins of Cultures* (1977) presents his intensification-

depletion-renewed intensification model of social evolution. Lenski's main arguments are presented in his *Power and Privilege: A Theory of Social Stratification* (1966) and *Human Societies: A Macro-level Introduction to Sociology* (1970). Sanderson's evolutionary materialism and its application to the major evolutionary changes in world history and prehistory is presented in *Social Transformations: A General Theory of Historical Development* (1995; expanded ed. 1999b). An article-length version of the same is Sanderson (1994c).

Graeme Donald Snooks, an economic historian, has written a trilogy of books that deal in important conceptual and theoretical ways with the whole problem of historical development over the past several thousand years: *The Dynamic Society: Exploring the Sources of Global Change* (1996), *The Ephemeral Civilization: Exploding the Myth of Social Evolution* (1997), and *The Laws of History* (1998). These books raise deep theoretical questions and are extremely provocative interpretations of long-term historical change. Snooks presents a resolutely materialist interpretation of history that reveals many crucial insights. Although he argues against an evolutionary interpretation of history, he is in fact a type of social evolutionist.

David Christian's *Maps of Time: An Introduction to Big History* (2004) is an extraordinary attempt to do what he calls "Big History." He not only provides an excellent analysis of the evolutionary dynamics of the past 10,000 years of human history but he also discusses the origin of the universe, the origin of life on earth, and human origins and evolution. Christian also projects the human future over the near, medium, and long term.

CHAPTER

3 Preindustrial Societies

Hunter-Gatherers and Horticulturalists

In order for their members to survive, all societies obviously must develop technology and establish some form of economic life. Technology and economy are very closely related in every society but are by no means the same thing. A society's **technology** consists of the tools, techniques, and knowledge that its members have created in order to meet their needs and wants. A society's **economy,** on the other hand, consists of the socially organized way in which goods and services are produced and distributed. This chapter and Chapter 4 discuss the evolution of preindustrial forms of technology, conceived here as *subsistence technology*, or the technology directly related to getting and maintaining a living, as well as the types of political economy that correspond to these technological forms. We will look at five types of societies arranged in a general evolutionary order: hunter-gatherer, simple horticultural, and intensive horticultural societies, and, in Chapter 4, agrarian and pastoral societies. At the end of Chapter 4 we will discuss the reasons one type of society has replaced another in the evolutionary history of the human species. Industrialism as a mode of technological, social, and economic life will be discussed in Chapter 6.

Hunter-Gatherer Societies

Subsistence Technology

For about 99 percent of their history, humans subsisted entirely by hunting wild animals and gathering wild plant foods. The total monopoly of the hunting and gathering way of life was not broken until some 10,000 years ago, when some societies began to subsist by the practice of agriculture. During the past 10,000 years, **hunter-gatherer societies** have grown fewer and fewer in number, and only a handful remain today. Most of these are found in relatively isolated geographical locations, such as the arid and semiarid regions of Australia, the central rain forest and southwestern desert regions of Africa, and the Arctic. It is unlikely that even these will

survive more than a few decades longer. The hunting and gathering way of life is soon destined to be only a historical relic known to ethnography and archaeology.

Most of what is currently known about hunter-gatherers is based on fieldwork conducted among surviving hunting and gathering groups. It cannot be known with any certainty how similar these groups may be to hunting and gathering societies of prehistoric times. No doubt there are a number of differences, but it is also likely that there are many striking similarities. In any event, the description of the hunting and gathering way of life that follows is based primarily on the results of contemporary ethnographic research.

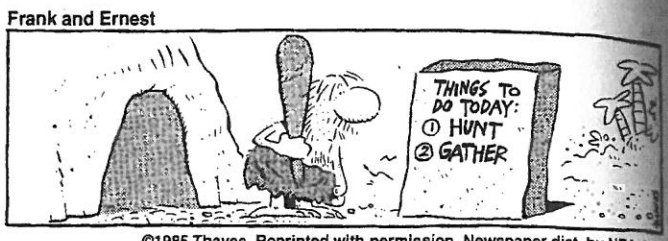
Hunter-gatherers live in small groups known as *local bands*. These are groups of about 25 to 50 men, women, and children who cooperate with each other in the quest for subsistence. Each local band is a more or less politically autonomous and economically self-sufficient unit. However, many local bands are usually connected by ties of intermarriage into a much larger cultural unit, sometimes known as a **tribe.** A tribe is a network of bands all of whose members share the same cultural patterns and speak the same language. Furthermore, the composition of each local band is constantly shifting, with people frequently moving from one band to another. Such movement may arise from marriage or from a need to create a more even balance between population size and the food supply.

How do hunter-gatherers divide their time between hunting and gathering? Some years ago Richard Lee (1968) estimated that contemporary hunting and gathering societies derive approximately two-thirds of their diet from gathered foods of all sorts, holding that this figure closely corresponds to the subsistence activities of prehistoric hunter-gatherers. This idea has come to be widely accepted by social scientists, even to the extent that the suggestion has been made that such societies might be more appropriately named "gatherer-hunter" societies.

However, a closer look suggests a rather different picture. Carol Ember (1978), using a sample of 181 contemporary hunter-gatherer societies drawn from the *Ethnographic Atlas* (Murdock, 1967), a larger and more inclusive sample than the one used by Lee, shows that hunter-gatherers are rather evenly divided in their emphasis on the activities of gathering, hunting, and fishing. Gathering is the most important activity in 30 percent of the societies, hunting most important in 25 percent, and fishing most important in 38 percent. However, if fishing is treated as a type of hunting, which is logical since fishing involves the procurement of wild animal protein, then 63 percent of hunter-gatherer societies emphasize hunting over gathering.

Another way of looking at this problem is to calculate the percentage of societies in which a particular subsistence activity contributes half or more of the calories that people consume. Ember (1978) shows that in only 23 percent of societies does gathering contribute more than half of the calories. If Ember's data are reliable, then, they show that in hunting and gathering societies hunting is clearly the dominant subsistence activity. This is consistent with what experts have long known about hunter-gatherers: They usually spend more time hunting than gathering and meat is more highly valued than plant food.

Since hunter-gatherers are food collectors rather than food producers, they must wander over wide geographical areas in search of food. They are thus



Hunter-gatherer societies are highly noteworthy for their low level of economic specialization.

generally nomadic, and the establishment of permanent settlements is highly unusual.

The technological inventory of hunting and gathering societies is quite limited. The tools and weapons used directly for subsistence typically include spears, bows and arrows, nets, and traps used in hunting, as well as digging sticks used for plant collecting. Tools are crude and simple, generally being made of stone, wood, bone, or other natural materials. There are usually few or no techniques for food storage or preservation, and food is thus generally consumed immediately or within a short span of time.

Hunter-gatherer societies are the simplest in structure of all human societies, the division of labor being based almost exclusively on age and sex distinctions. Primary responsibility for subsistence ordinarily falls to persons who are in middle adulthood, with both young and old members contributing less to the subsistence needs of the group. Hunting is conducted by males, gathering by females. Although women may occasionally hunt or trap small game animals, they are seldom involved in big game hunting. Likewise, men sometimes share in gathering activities, but they are the principal gatherers in no hunter-gatherer society. Hunter-gatherers are notoriously lacking in occupational specialization beyond subsistence tasks. There are no specialized "arrow makers" or "bow makers," for example. Each man makes all of the tools that he needs in the subsistence quest, and the women do the same.

The primary unit of subsistence among hunter-gatherers is the family, and hence economic life may be termed *familistic* (Service, 1966). Yet individual families within each local band are linked together into a total economic unit, the local band itself. While individual families produce their own subsistence, they also contribute in significant ways to the subsistence of other families within their band.

Hunter-gatherers, or at least most of them, are well known for their failure to produce an **economic surplus,** an excess of goods over and above what is needed for subsistence. Until recently, it was widely believed that this was due simply to an inability to do so—an inability resulting from a marginal and precarious existence. Contemporary research contradicts this view. Social scientists now generally agree that the failure to produce a surplus is due to a lack of any real need. Since the resources of nature are always there for the taking, nature itself becomes a kind of great storehouse. However, in recent years it has come to be increasingly recognized that some hunter-gatherers do produce an economic surplus, in some cases a considerable one. This has led to an important distinction between hunter-gatherer societies that store food and those that do not (Testart, 1982, 1988). Although nonstoring

hunter-gatherers predominate, hunter-gatherers who store food are probably more common than experts have realized, and in any event differ in important respects from those societies that do not. Storing hunter-gatherers are more likely to be sedentary rather than nomadic, to have bigger populations and higher population densities, and to be organized in a more complex way.

Contemporary hunter-gatherers who store food can be found, but such groups seem to have been particularly prominent in the last few millennia before the development of agriculture (around 15,000 to 10,000 years ago) (M. Cohen, 1985), and probably represented hunting and gathering societies on the verge of developing an agricultural economy. It might be useful to call both prehistoric and contemporary hunter-gatherers who do not store food *simple* hunter-gatherers, while referring to those who do store food as *complex* hunter-gatherers (cf. Kelly, 1995).

The !Kung San serve as an excellent example of a contemporary hunter-gatherer society (the "!" stands for a "click" sound in the language). Some 45,000 San are found scattered throughout the territories of Botswana, Angola, and Namibia in southern Africa. These people are divided into several different linguistic groups, one of which is !Kung, spoken by about 13,000 people. Many of these people are now either under the direct control of local governments or heavily influenced in their way of life by means of contact with more technologically advanced peoples. The last of the hunting and gathering !Kung number some 1,600 clustered around water holes in northwestern Botswana. The ethnographic account that follows is based on a population of 466 !Kung located in the Dobe area of Botswana studied by Richard Lee (1972; cf. Lee, 1979, 1984).

!Kung life is organized around eight permanent water holes and 14 independent camps. These camps are moved about five or six times a year. The population density is approximately 0.4 person per square mile, a density typical for hunter-gatherers. The habitat is the Kalahari Desert, a region surprisingly abundant in resources. Nearly 500 species of plants and animals are known and named by the !Kung. The climate is characterized by hot summers with a four-month rainy season and by moderate winters with no rainfall.

The !Kung enjoy a secure existence. They depend primarily on vegetable foods (Lee estimates that about 37 percent of their diet consists of meat). Their most important food plant is the mongongo or mangetti nut, a highly nutritious and superabundant staple. Other major plant foods are also available, but the !Kung tend to eat only those that are more attractive in terms of taste or ease of collection. Game animals are less abundant and less predictable. A type of large antelope is regularly hunted, as are warthogs and smaller antelopes. Game birds are captured in ingenious snares, and a large tortoise is a great favorite.

The camp or local band is the basic residential unit and the primary focus of subsistence activities. Members of each local group move out each day individually or in small groups to exploit the surrounding area, returning each evening to pool collected resources. Women do the gathering in groups of three to five. The men do the hunting, which is primarily an individual activity. Bows and poisoned arrows serve as effective weapons. Food is extensively shared, although the sharing of meat is more formally organized than the sharing of vegetable foods. Large game is

butchered and divided into three portions: about one-fifth remains with the family, one-fifth is cut into strips for drying, and the remaining three-fifths are distributed to closely related households. Meat division is carried out with considerable care. The hunter may call in other men to advise him, or he may even ask his father-in-law to conduct the division. Absolute sharing is the ideal in !Kung camps even though it is seldom attained in practice. It is noteworthy that the most common verbal disputes concern accusations of improper meat distribution and improper gift exchange.

The Original Affluent Society?

Social scientists used to depict hunter-gatherers in largely negative terms. It was widely believed that they led a precarious and difficult life, one in which people had to work hard and long just to eke out a bare subsistence. As Marshall Sahlins noted over three decades ago (1972:1):

> Almost universally committed to the proposition that life was hard in the paleolithic, our textbooks compete to convey a sense of impending doom, leaving one to wonder not only how hunters managed to live, but whether, after all, this was living? The specter of starvation stalks the stalker through these pages. His technical incompetence is said to enjoin continuous work just to survive, affording him neither respite nor surplus, hence not even the "leisure" to "build culture."

Since the late 1960s, social scientists have radically altered this view of hunter-gatherers. In a famous argument, Sahlins (1972) dubbed them the "original affluent society." By this, he did not mean that they are rich and enjoy a great abundance of material possessions, which would be an absurd claim. That is affluence in the modern sense. What Sahlins meant was that hunter-gatherers have very limited needs and wants and are able to satisfy them with a minimum of effort. To assess Sahlins's claim, we need to look carefully at the hunter-gatherer standard of living and at how hard and long hunter-gatherers typically work.

Despite the fact that virtually all contemporary hunter-gatherers exist in marginal environments, these environments often turn out to be surprisingly abundant in resources. For example, Richard Lee (1968) notes that the !Kung San are able to rely on a wide variety of resources of considerable quality. As mentioned earlier, their most important food source is mongongo nuts, and thousands of pounds of these rot on the ground each year for want of picking. Furthermore, the !Kung habitat contains 84 other species of edible plants, and !Kung gathering never exhausts all the available plant foods of an area. Similarly, James Woodburn (1968) shows that the Hadza of Tanzania enjoy an exceptional abundance of game, and he thinks it is almost inconceivable that they would die of starvation. It would thus appear that both the !Kung and the Hadza obtain a standard of living that is perfectly adequate in meeting basic human subsistence requirements.

This impression is reinforced by Mark Cohen's (1989) survey of studies of diet and nutrition among many contemporary hunting and gathering groups. Cohen's review of numerous studies suggests to him that most hunter-gatherers generally

enjoy diets that are fully adequate in nutrition. Some groups, such as the !Kung, may barely obtain a sufficient number of calories, but their diets are otherwise abundant in animal proteins and various nutrients. Many hunter-gatherers do experience seasonal bouts of hunger and food anxiety, and starvation may sometimes occur (Yesner, 1994). However, there is nothing unusual about hunter-gatherers in this respect. Settled agricultural populations also experience such difficulties, and often to an even greater extent.

Moreover, prehistoric hunter-gatherers seem to have been better nourished than prehistoric agricultural populations. Cohen and Armelagos (1984) summarize the findings from paleopathological studies—studies examining evidence of biological stress and disease in ancient skeletal and dental remains—carried out by over a dozen biological anthropologists. These studies were carried out on remains from virtually all major regions of the world, covering the time period after 30,000 BP. Most of the studies found that infection was a more frequent and severe problem for farming populations than for hunter-gatherers. Chronic malnutrition was also more common in agricultural populations. Indicators of biological stresses leading to the disruption of childhood growth told basically the same story.

If hunter-gatherers generally enjoy adequate diets, how long and hard do they have to work to obtain them? A good deal of evidence suggests that many such groups work neither hard nor long. Reviewing data collected on the subsistence activities of the hunter-gatherers of Arnhem Land in northern Australia, Sahlins (1972) notes that these people do not work hard or continuously, that the subsistence quest is highly intermittent, and that plenty of spare time is available. Along the same lines, Lee (1979) has calculated that the typical !Kung adult spends an average of only 17 hours per week in direct food-getting activities. Woodburn (1968) shows that the Hadza obtain sufficient food with relative ease, and that life for them is anything but a difficult struggle for existence. His impression is that they spend less time and energy obtaining subsistence than do their agricultural neighbors.

Some other studies of hunter-gatherer workloads are not as encouraging, at least on the surface. Since Lee's data on !Kung work patterns were collected during the dry season, John Yellen (1977) studied a group of !Kung during the wet season. He found that during this time of year they worked considerably longer. In addition, Kim Hill, Hilliard Kaplan, Kristen Hawkes, and Ana Magdelena Hurtado (1985) find that men among the Aché, a hunter-gatherer society in Paraguay, spent perhaps 40 to 50 hours a week hunting. But this figure is probably highly atypical.

Robert Kelly (1995) presents data on the workload in 11 hunter-gatherer societies in five different world regions. These data show that the average amount of time both men and women spend foraging is only about 3.8 hours a day, which comes to slightly less than 27 hours a week (assuming that foraging is undertaken every day). If one calculates the total subsistence effort in these same 11 societies by adding in the amount of time people spend at such tasks as manufacturing and repairing tools and processing food, then people are spending only 6.5 hours a day (45.5 hours a week). This is well below the figure for the members of modern industrial societies, who work a 40-hour week and spend many more hours in such subsistence-related activities as getting to and from work, shopping for food, cooking, and maintaining

their households. Most interestingly, Bruce Winterhalder (1993) shows that most hunter-gatherers must limit their subsistence efforts because failure to do so will be counterproductive. In most hunter-gatherer environments, if people work too hard they will deplete their resources and lower their productivity in the long run. As he notes, low to intermediate levels of effort are associated with the largest sustainable populations and the highest rates of food acquisition.

It would seem, when all is said and done, that Sahlins's original affluent society thesis holds up reasonably well. This appears to be especially true when we realize that most of what researchers know about the standard of living and the work patterns of hunter-gatherers is based on contemporary groups. Since nearly all of these groups live in marginal environments, prehistoric hunter-gatherers, most of whom would have existed in much more favorable environments, would have been even better off. It is crucial that we avoid romanticizing the hunting and gathering lifestyle as being some sort of primitive paradise. Clearly, that would be a gross oversimplification. Nonetheless, hunter-gatherers have fared much better than social scientists used to imagine. As Elizabeth Cashdan (1989:26) concludes, it is now possible to "demolish with confidence the old stereotype that hunter-gatherers had to work all the time simply to get enough food to eat." And it is also possible to demolish with confidence the old stereotype that hunter-gatherers did not eat well.

Economic Life

When considering how goods are produced in all societies, a vital question concerns who owns the forces of production—that is, who owns those resources that are of greatest significance in carrying out productive activities. In the middle of the nineteenth century, Karl Marx speculated that the earliest mode of economic life in human history was what he termed **primitive communism.** By this, Marx meant a type of society in which people subsisted by hunting and gathering or by simple forms of agriculture or animal herding, and in which all of the vital resources of nature were held in common. Private ownership of resources by individuals or small groups was not found, he believed, in this type of society.

Although many social scientists over the years have challenged Marx's view on this matter, contemporary social science provides considerable evidence that Marx was basically correct. The vast majority of hunter-gatherers studied by modern anthropologists display a mode of resource ownership that can be adequately characterized by Marx's notion of primitive communism. Although much economic activity among hunter-gatherers is centered on the family, all individuals in such societies have equal access to those resources of nature that are necessary for their subsistence. No person in a hunter-gatherer band may be deprived by any other person or group of an equal opportunity to hunt game, collect plants, use a water hole, or camp on the land. Thus, everyone owns these resources collectively (it is sometimes said that since everyone has an equal right to their use, *no one* owns them). In fact, some hunter-gatherers do not even restrict the ownership of resources to their own local band; instead, they provide equal access to resources to all other individuals and groups who may have need for them (Woodburn, 1968). Even in those in-

stances where resources may be "owned" privately by individual families, there are typically no restrictions on other families *using* these resources. Among the !Kung San, for instance, water holes are frequently said to be "owned" by individual families, but these families do not prevent other families from using them (Lee, 1968, 1972).

It is true that among hunter-gatherers items such as jewelry and art objects are owned privately, but this fact does not invalidate the claim that primitive communism is the principal ownership mode of hunting and gathering peoples. Jewelry and art objects are not part of the *forces of production*, as Marx called the vital resources necessary to economic production. Rather, they are items of what is more appropriately referred to as *personal property*. Since they are not used in the productive process, the nature of their ownership is irrelevant to the Marxian thesis of primitive communism. Even then, one finds that these items of personal property are seldom kept for long as private objects. Instead, they continually circulate among members of the group, and thus their use is community wide.

Hunter-gatherers generally distribute economic goods through a process known as **reciprocity,** which is the obligation to repay others for what they have given to or done for us, or the actual act of repaying others. Two distinct types of reciprocity, known as balanced and generalized reciprocity, exist. **Balanced reciprocity** occurs when individuals are obligated to provide equivalent and often immediate repayment to others. Balanced reciprocity can be identified by the fact that individuals deliberately and openly calculate what they are giving each other and openly declare the nature of the repayment to be made. Each party to the transaction expects to benefit in some way, but there is a clear expectation of mutual benefit and a lack of "exploitation."

Generalized reciprocity occurs when individuals are obligated to give to others without expecting any immediate or equivalent repayment. As opposed to balanced reciprocity, generalized reciprocity does not involve any direct or open agreement between the parties involved. There is a general expectation that equivalent repayment of a debt shall be made, but there is no particular time limit set for the repayment, nor is there any specification as to just how the repayment shall be made. The terms of repayment in generalized reciprocity are notoriously vague. Marvin Harris (1974) notes that one can tell whether generalized reciprocity is the prevailing mode of distribution by noticing whether people say "thank you." As Harris (1974:124) puts it, when generalized reciprocity is the distributive mode

> it is rude to be openly grateful for the receipt of material goods or services. Among the Semai of central Malaya, for example, no one ever expresses gratitude for the meat that a hunter gives away in exactly equal portions to his companions. Robert Dentan, who has lived with the Semai, found that to say thank you was very rude because it suggested either that you were calculating the size of the piece of meat you had been given, or that you were surprised by the success and generosity of the hunter.

One might also say that it is rude to express gratitude when generalized reciprocity is the distributive norm because under such circumstances giving things away to others is a social obligation, not an act of kindness.

Whereas generalized reciprocity occurs to some extent in all societies (it occurs among friends and family members in U.S. society, for instance), it constitutes the very essence of economic life among hunter-gatherers, where it is most frequently found. Hunting and gathering peoples are famed for their extensive food sharing. Individuals constantly give food to others and receive food in return. When a man returns to camp with an animal that he has killed, he will divide it into portions and then give these away, typically first to members of his family and then to other members of the band. Similarly, women constantly give away portions of food they have gathered. When a hunter gives meat to others, he expects only that he will probably be repaid in some way at some time. The hunter may give to others time after time without any repayment taking place and without any mention being made of this fact. He understands that the chances are excellent that his acts will eventually be reciprocated. A failure to reciprocate only becomes a cause for concern and conflict when it appears that one person is "freeloading" off another.

Where generalized reciprocity is a pervasive feature of economic life, sharing and individual humility become compulsory social habits. As Richard Lee comments in regard to the !Kung (1978:888):

> The most serious accusations that one !Kung can level against another are the charge of stinginess and the charge of arrogance. To be stingy or "far-hearted" is to hoard one's goods jealously and secretively, guarding them "like a hyena." The corrective for this in the !Kung view is to make the hoarder give "till it hurts," that is, to make him give generously and without stint until everyone can see that he is truly cleaned out. In order to ensure compliance with this cardinal rule, the !Kung browbeat each other constantly to be more generous and not to set themselves apart by hoarding a little nest-egg. . . .
>
> But as seriously as they regard the fault of stinginess, the !Kung's most scathing criticisms are reserved for an even more serious shortcoming: the crime of arrogance. . . . A boasting hunter who comes into camp announcing "I have killed a big animal in the bush" is being arrogant. A woman who gives a gift and announces her great generosity to all is being arrogant. Even an anthropologist who claims to have chosen the biggest ox of the year to slaughter for Christmas is being arrogant. The !Kung perceive this behavior as a danger sign, and they have evolved elaborate devices for puncturing the bubble of conceit and enforcing humility. These leveling devices are in constant daily use, minimizing the size of others' kills, downplaying the value of others' gifts, and treating one's own efforts in a self-deprecating way. "Please" and "thank you" are hardly ever found in their vocabulary; in their stead we find a vocabulary of rough humor, back-handed compliments, putdowns, and damning with faint praise.

What explains the pervasiveness of sharing among hunter-gatherers? The most commonly offered explanation is that it is a rationally chosen strategy of *variance reduction* (Cashdan, 1985; Winterhalder, 1986a, 1986b; Kelly, 1995). Hunter-gatherers intimately depend on one another for survival. Although resources are typically not highly scarce in a general sense, they are notoriously subject to marked fluctuations in availability. Thus, a man may encounter a long run of bad luck in hunting. If others do not give meat to him during this time, he must go without. They give meat to

him because they know that they too will eventually have their turn with bad hunting luck, during which time they will expect to receive meat from him. Therefore, to give regularly to others is to help ensure one's own well-being in the long run (Weissner, 1982; Cashdan, 1985).

Generalized reciprocity, then, is a special instance of what is known as *enlightened self-interest*—cooperating with or assisting others when it is to one's own personal advantage to do so, not because one has natural altruistic feelings toward others. There can be nothing surprising in the fact that hunter-gatherers show great disdain for the occasional individual who is competitive, selfish, and boastful. Such a person is a serious threat to the economic well-being of others and must be subjected to strong pressure to change his or her ways.

Social Inequalities and Political Life

Because of their emphasis on sharing and the absence of true private property among most hunter-gatherer societies, they usually lack **social stratification**, or structured inequalities of power and privilege. Yet the absence of class divisions does not mean that perfect equality prevails among the members of these societies. Inequalities do exist. These are mainly inequalities of prestige or social influence and are typically based on such factors as age, sex, and certain personal characteristics. As is the norm throughout the world, men tend to have higher status than women among hunter-gatherers, and, likewise, the older members of society are often given more honor and respect than the younger ones. In addition, the possession of certain personal traits is generally a basis for the acquisition of prestige. Men who are particularly skilled hunters, who show special courage, or who are thought of as having great wisdom are often accorded high prestige. Such individuals typically assume leadership functions because they are deemed to be worthy of the trust and confidence of others.

However, men of prestige and influence among hunter-gatherers are no more than "firsts among equals," and they typically have no special privileges not available to others. It must also be noted that the acquisition of prestige and influence comes from an individual's own abilities and efforts, not from any mechanism of social heredity. Prestige is both personally gained and personally lost. Individuals must continually justify such honor, and should their abilities or efforts fail them, their status will fall and others will replace them.

It must be stressed that the degree of prestige that can be gained among hunter-gatherers is very mild when compared to the nature of prestige in other societies. Hunter-gatherers loathe boasting and self-glorification, and they use strong sanctions against those persons who come to think too highly of themselves. Their emphasis is clearly on communal well-being and general social equality. In this sense, they are quite aptly described as **egalitarian societies** (Woodburn, 1982).

Yet not all hunter-gatherers have been egalitarian, and some have been characterized by considerable inequalities in privilege. The distinction made by Alain Testart (1982) between storing and nonstoring hunter-gatherers is relevant here. Using a representative sample of 40 hunter-gatherer societies, Testart has shown that

8 of the 10 that stored food were stratified, whereas only 2 of the 30 nonstoring societies had stratification. There is obviously a pronounced relationship between food storing and the presence of stratification.

By far the best examples of stratified hunter-gatherer societies are those Indian tribes that have inhabited the Northwest Coast of the United States. Although there has been some disagreement as to the actual nature and extent of the inequalities present, a number of anthropologists believe that the Northwest Coast was characterized by an exploitative class system. Anthropologist Eugene Ruyle (1973), for instance, makes a strong claim for the existence of a ruling class, rent or taxation, and slavery. These societies have been famous among social scientists for their elaborate competitive feasts known as *potlatches*. During these potlatches, Northwest Coast chiefs would attempt to shame rival chiefs by giving away large quantities of wealth and by ranting and raving about their own greatness. Among the Kwakiutl, for example, chiefs seemed obsessed with maintaining and enhancing their high status.

There is also strong evidence that a number of hunter-gatherer societies in late pre-Neolithic times (about 12,000–10,000 years ago) had crossed the threshold into stratification, or at least had developed extensive inequalities of social status or rank (Mellars, 1985). Like the Northwest Coast tribes, these societies very likely consisted of dense populations in regions of abundant resources that had adopted the practice of food storing. And, also like the Northwest Coast tribes, these prehistoric societies were uncharacteristic of hunter-gatherer societies the world over. Their uniqueness should not be allowed to detract from what is most commonly found at the hunting and gathering stage of social life—pervasive social and economic equality.

It might be suspected that the striking egalitarianism of hunter-gatherers is a "natural" phenomenon, or one that results from the absence of motivations toward status seeking and wealth acquisition at this stage of social life. Such motivations, it might be presumed, develop only at later evolutionary stages. But this would be an incorrect inference. As Elizabeth Cashdan (1980) and James Woodburn (1982) point out, social and economic equality is always threatened by individuals who seek to attain more than others, and it takes constant vigilance to maintain it. The equality that results from pervasive reciprocity and sharing seems to be an essential condition for human survival and well-being among most hunter-gatherers because it is a necessary means of overcoming temporal and spatial variations in the food supply. But since there is nothing natural about strict equality, powerful techniques of socialization must be used to bring it about and maintain it (Cashdan, 1980; Lee, 1978). The emergence of significant inequalities, then, results from the lifting of restrictions once placed on human motivations (Cashdan, 1980). It is among food-storing hunter-gatherers and, more significantly, horticultural and agrarian societies that these restrictions come to be lifted.

Political leadership in most hunter-gatherer societies rests on informal influence and typically lacks any sort of real power (Fried, 1967). In addition, leadership tends to be displayed in transient fashion, frequently shifting from one person to another. Political leaders, or *headmen* as they are usually called, seldom possess any real power or authority to command the actions of others. !Kung San leaders, for example, direct migration and subsistence activities and perform certain ceremonies

but the position they hold contains no power, honors, or rewards. Fried appears to catch the essence of political organization at the band level when he says (1967:83):

> It is difficult, in ethnographies of simple egalitarian societies, to find cases in which one individual tells one or more others, "Do this!" or some command equivalent. The literature is replete with examples of individuals saying the equivalent of "If this is done, it will be good," possibly or possibly not followed by somebody else doing it. More usually the person who initiates the idea also performs the activity. . . . The leader is unable to compel any of the others to carry out his wish.

Simple Horticultural Societies

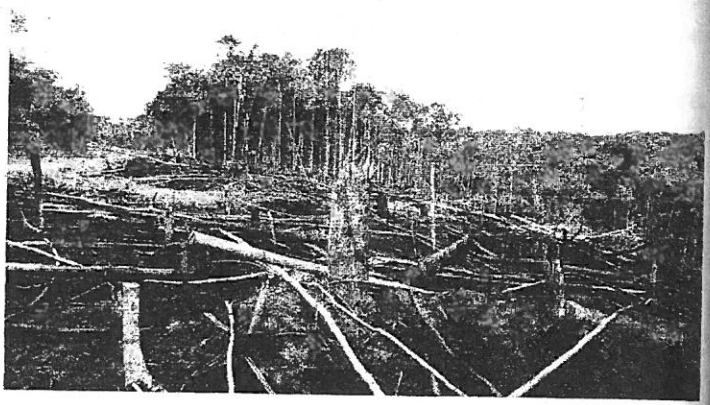
Subsistence Technology

A number of **simple horticultural societies** can be found in the modern world. Most of these are found in Melanesia, a chain of islands in the southern Pacific (generally said to include New Guinea), and in various regions of South America. Extensive ethnographic research has been conducted among these societies, and the results of this research provide the basis for the discussion that follows.

Simple horticulturalists live in small villages ordinarily containing from 100 to 200 persons. Although villages substantially larger than this are known to exist, they are not common. Each village is in essence economically and politically self-sufficient. Nevertheless, important intervillage ties do exist. Marriage often takes place between individuals from different villages, and persons residing in separate villages often come together on ceremonial occasions. Members of culturally and linguistically related villages collectively constitute a tribe, a sociocultural unit that may contain tens of thousands or even hundreds of thousands of persons.

Most simple horticulturalists in recent times have lived in heavily forested environments and practice a form of cultivation known as **slash-and-burn** (also known as *shifting cultivation*). This cultivation technique involves cutting down a section of forest growth and then setting fire to the accumulated debris. The remaining ashes serve as a fertilizer, and usually no other fertilizer is added. The crops are then planted in these cleared plots (usually no more than an acre in size) with the aid of a digging stick, a long pole with a sharpened and fire-hardened end. A given plot may be devoted to a single crop, but a more common practice is to plant several minor crops along with one main staple (Sahlins, 1968). The task of clearing and preparing the plots generally falls to the men, while that of planting and harvesting is most often carried out by women.

Since wood ashes generally serve as the only fertilizer, slash-and-burn cultivation is associated with short-term soil fertility. Freshly produced ashes are washed away by rain after a year or two, and for this reason a plot of land can be cultivated only for that length of time. It must then be allowed to remain fallow long enough for the forest to regenerate so that new ashes can be produced. The fallow period ordinarily lasts approximately 20 to 30 years. When the forest growth has returned, the process of cutting, burning, and cultivating can begin again.



Slash-and-burn cultivation. This area of tropical forest in the Amazon Basin has just been cleared for garden preparation.

Because the slash-and-burn system requires lengthy fallow periods, any society practicing it must have much more land at its disposal than it will have under actual cultivation at any given time (Sahlins, 1968). The Tsembaga Maring of New Guinea, for example, had only 42 acres of land under actual cultivation in 1962–1963, but about 864 acres of their territory had been gardened at one time or another (M. Harris, 1975). Such land use requirements put limits on population density, and tropical forest cultivators often maintain population densities of less than 10 persons per square mile (Sahlins, 1968).

Cultivated plants constitute the bulk of the dietary intake among simple horticulturalists, but a number of simple horticultural societies also possess domesticated animals. Domesticated pigs, for instance, are found throughout Melanesia. But most simple horticulturalists lack domesticated animals, and such groups must rely on hunting or fishing for their supply of animal protein.

Simple horticulturalists produce more food per unit of land than do hunter-gatherers, and some even produce small economic surpluses. Yet it cannot be concluded that they enjoy a superior standard of living. Indeed, as noted earlier, it has been suggested that the standard of living for simple horticulturalists is *inferior* to that of hunter-gatherers (M. Cohen, 1977, 1989). They do not consume more calories, and their intake of protein appears to be lower. Furthermore, considerable evidence has accumulated in recent years to show that simple horticulturalists commonly work harder than hunters and gatherers (M. Cohen, 1977). It generally takes more time and energy to clear land and plant, tend, and harvest crops than to collect what nature automatically provides. Thus, simple horticulture is a more intensive system of technology than hunting and gathering, but it does not lead to greater material benefits.

The Yanomama (Chagnon, 1983, 1992) exemplify a surviving simple horticultural society. They are a South American Indian tribe living in southern Venezuela and adjacent portions of northern Brazil. There are perhaps some 125 widely scattered villages having populations ranging from 40 to 250 inhabitants, with an average village size of about 75 to 80 persons. Several hundred years ago, the Yanomama may have relied primarily on hunting and gathering, and so they may only have

it may, their current subsistence practices nicely illustrate the simple horticultural mode of production. These practices have been described in some detail by Napoleon Chagnon (1983, 1992), one of their principal ethnographers.

The natural environment of the Yanomama is a relatively dense tropical forest. The land is entirely covered with jungle, even the tops of mountain ridges. The Yanomama survive in this environment with only a simple technology. All tools and techniques are uncomplicated, and none requires the use of specialized labor. Among the elements of technology the Yanomama have developed are crude clay pots, bows and arrows, agouti-tooth knives (made from the lower incisor of the agouti, a rodent), and canoes (which are so crude that they are generally used only once and then discarded). The Yanomama are slash-and-burn cultivators. In earlier times, they had only stone axes for clearing the land, but they now have steel axes that have been supplied by local missionaries. Each man clears his own land. Each village has a local headman, and he usually has the largest garden. The headman must produce larger quantities of food, as he is expected to give food away at feasts. By far the largest crop is plantains (similar to bananas), and each garden usually contains three or four varieties of both plantains and bananas. A root crop, sweet manioc, is also grown, and this is refined into a rough flour and then converted into a thick, baked bread. Other crops include taro, sweet potatoes, and a palm tree that produces a large crop of fruit. Maize is cultivated as an emergency crop, but it does not figure prominently in the daily diet. Tobacco is another cultivated crop, and the men, women, and children all chew it. Cotton is also grown and is used for making hammocks.

While perhaps 85 percent or more of the Yanomama diet consists of cultivated plants, the Yanomama spend almost as much time hunting as they do gardening. Since they have no domesticated animals, they rely exclusively on hunting (as well as some fishing and the collection of small animals and insects) for their source of animal protein. Game animals are not abundant, which is typical of tropical forest environments. The most frequently hunted game animals are several species of monkeys, two species of wild pig, armadillos, anteaters, deer, small alligators, small rodents, and several species of smaller birds. All game animals are shot with arrows. Several varieties of insects, some species of caterpillar, and large spiders are collected and eaten. Wild honey, considered a real delicacy, is collected in large quantities.

The suggestion that the Yanomama were hunter-gatherers in the recent past seems confirmed by the fact that some villages have made the transition to horticulture only very incompletely. People in these villages regularly leave them to spend long periods of time trekking through the forest, surviving largely on whatever game they can kill and plant foods they collect (Good, 1993). These treks may last anywhere from three to six weeks, and as many as six treks might be made in a year's time. It is easily seen that these groups of Yanomama spend nearly as much time away from their villages as in them.

Economic Life

Among many small-scale horticultural peoples, primitive communism in the strict sense ordinarily does not prevail. Instead, most simple horticulturalists have a mode

of property ownership that can best be designated **lineage ownership.** Lineage ownership occurs when large-scale kinship groups, known as *lineages* (or sometimes as clans), hold property in common. Of course, in such societies the most important form of property is land. When lineages own land in common, individual members of the group participate in the use of lineage land only because they are lineage members. Their right to the use of this land is granted only by the lineage itself as a corporate body; the leaders of the lineage, acting as representatives of the lineage as a whole, bestow these rights.

Lineage ownership is similar to primitive communism in that it is not a private form of property holding. Property is still held and used communally. But there is an important difference between lineage ownership and primitive communism. Lineage ownership is more exclusive or more restrictive inasmuch as it makes ownership and use of valuable resources dependent on kinship group membership. In societies resting on lineage ownership, not all members of the society have equal access to the forces of production, even though all members of the same lineage do. Lineage ownership is thus a small step away from primitive communism and toward private ownership. Still, it is closer to primitive communism than to private ownership, since in true lineage ownership the lineages themselves have relatively equal access to resources.

As you saw in the case of hunter-gatherers, as goes ownership so goes distribution. Reciprocity is a common practice in simple horticultural societies, but they are also characterized by another process that anthropologists have called **redistribution.** When redistribution occurs, products are funneled from individual households to a central source and then returned to those households in some sort of systematic manner. Redistribution differs from reciprocity in that redistribution is a more formalized process involving the movement of goods into the hands of some person or group that serves as the focal point for their reallocation.

Two types of redistribution may be identified: *pure* and *partial* (Moseley and Wallerstein, 1978), sometimes called *egalitarian* and *stratified* (M. Harris, 1975). In **pure redistribution,** the redistributive process is complete in the sense that the redistributive agent reallocates all goods and keeps no extra portion for himself. By contrast, where **partial redistribution** occurs the redistributive process is incomplete inasmuch as the redistributive agent retains a portion of goods for his own use.

Pure redistributive economies, which are most commonly associated with small-scale horticulturalists, work somewhat differently from one society to another. One version of a redistributive economy is widespread among simple horticultural groups in Melanesia. These societies contain extremely ambitious men known as **big men,** who seek prestige and renown through their roles as organizers of economic production. The typical aspiring big man begins his career by cultivating larger gardens and raising bigger pig herds. He does this by drawing on the help of close relatives and neighbors, who themselves have a stake in his success. If he is successful at his attempts to increase the productivity of his own gardens and herds, he will eventually have accumulated enough foodstuffs to hold a large feast, at which time these foodstuffs will be redistributed to other village members. Prestige and some renown fall upon him through the holding of a successful feast. But there are usually other

individuals in his village with the same aspirations who are holding feasts of their own. If he is consistently able to hold larger feasts than those organized by his competitors, he is generally recognized as the village big man and given considerable prestige. But should he falter at this task, his status is quickly lost, and he will be replaced by one of the competitors who has outdone him. Also, he is expected to be generous in his distribution of products and must place considerable emphasis on the welfare of the entire village. Big men who are not sufficiently generous and keep too much for themselves are frequently killed (M. Harris, 1974, 1977).

The quest for high status on the part of aspiring Melanesian big men has definite economic consequences. Such a quest strongly enhances economic productivity, leading to a general increase in the quantity of garden products, domesticated animals, fish, and other economic products (Oliver, 1955). The circulation of goods is also substantially increased, as feast preparation involves numerous exchanges of goods and services. In addition, there is typically a notable increase in the consumption of many goods by the members of the entire village (Oliver, 1955). The process of competitive feasting is therefore a vital part of the economic systems of Melanesian horticulturalists.

The Kaoka-speakers, a simple horticultural group in Melanesia, are characterized by a classic big-man redistributive system (Hogbin, 1964). The native expression for a leader of prestige and renown is *mwanekama*, which literally means "man-big." The natives generally agree that there is at any given time only one real big man in a village. He is usually a man over 40 years old who carries himself with assurance and dignity, lives in the most solidly built house, extends extraordinary hospitality, and is shown deference by the villagers.

To win the support of relatives and neighbors in order to launch a career toward bigmanship, a man must be forceful, even tempered, tactful, industrious, and a good organizer. A man's ambition to pursue such a career usually becomes apparent in his early thirties. When a man intends to strive toward bigmanship, he begins by cultivating larger gardens, a task for which he enlists the aid of close relatives. He also attempts to increase the size of his pig herd. When in time his gardens are flourishing and he has perhaps 10 fat pigs and several smaller ones, the man makes it known that he wishes to build a new dwelling, one that is larger and better built than usual. This move is usually taken as a public declaration that he is a candidate for the highest honors of the village. The celebration to mark the end of the job, what the Kaoka-speakers call "the feast-to-remove-the-splinters," is highly elaborate (M. Harris, 1974, 1977).

One such feast was that of Atana, a man who was already notable but not as yet a rival to the acknowledged village big man. Toward this feast, Atana and his immediate kinsmen contributed 250 pounds of dried fish, 3,000 yam cakes, 11 bowls of yam pudding, and 8 pigs. Other villagers attending the feast also brought along additional foodstuffs. When these were added to what was provided by Atana and his kinsmen, the final count was 300 pounds of fish, almost 5,000 yam cakes, 19 bowls of pudding, and 13 pigs. It was then Atana's task to redistribute this food to all those who were in some way connected with the feast. By the time he was finished, he had made 257 separate presentations, and only the remnants were left for him.

The Kaoka-speakers considered this to be the proper result. As they said, "The giver of the feast takes the bones and the stale cakes; the meat and the fat go to others" (M. Harris, 1974, 1977).

Further progress toward village bigmanship requires that there be more and bigger feasts. If a man can continue to do this, he is eventually likely to become the village big man. If he does succeed, however, he can never rest on his laurels. As soon as the size of his gardens and pig herds begins to shrink, he subsides into insignificance. He is always faced with competitors who are waiting to take his place should he be unable to maintain a sufficiently intense level of economic productivity.

Marvin Harris (1974, 1977) points out that the big man is an economic intensifier. His actions lead to an increase in the level of production beyond what it would otherwise be. As such, it is easy to see why big men are not found among hunter-gatherers. Big men in hunter-gatherer societies would be economically maladaptive, for they would exploit the resources of nature beyond their natural recovery points and thus destroy the ecological and economic foundation of hunter-gatherer society. Thus, the very personalities that may be highly beneficial for many horticultural societies would produce disastrous consequences for hunter-gatherers.

Social Inequalities and Politics

Like most hunter-gatherers, most simple horticulturalists lack hereditary class divisions and thus true social stratification. However, as should be clear from the preceding discussion, status-seeking behavior is carried considerably further in simple horticultural societies. They are examples of what Morton Fried (1967) has termed **rank societies.** As Fried defines it, "A rank society is one in which positions of valued status are somehow limited so that not all those of sufficient talent to occupy such statuses actually achieve them" (1967:109). Those who achieve high rank, or big men, come to be held in considerable respect, envy, and sometimes even awe. The Siuai of Bougainville in the Solomon Islands heap considerable praise on these men of high rank. They also show much respect for a high-ranking individual's name and person. He is generally not addressed by name, but usually called instead by a kinship term or simply *mumi* ("big man"). Even in reference his personal name may not be used, and on these occasions he may be referred to by the name of his clubhouse or by the name of one of his assistants. The respect given his name typically continues even after his death. Big men are also usually given considerable deference. As the Siuai's principal ethnographer, Douglas Oliver, comments (1955:401):

> Leaders are usually spared menial jobs; others fetch water for them, and climb palms to get coconuts and areca nuts for their refreshment. Boisterous talk usually becomes quieter when a leader approaches, and boys leave off rough-housing. In fact, one of the sternest lessons impressed upon a child is to stay away from a leader, or else remain quiet in his presence. ("Never play when a *mumi* is nearby; you might disturb him or hit him with your toys.") Females, especially, appear awed near the great men, often looking shyly to the ground. Men usually wait for a leader to open conversations, and take their cues from him concerning when to laugh, to commend, or to decry.

No supernaturally sanctioned taboos surround a leader's person in order to insulate him from plain physical contact with other natives, but few people would assume enough familiarity with him to place a friendly hand on his shoulder—a common gesture among equals.

Despite their prestige and the deference usually shown them, big men are like hunter-gatherer headmen in the sense that their leadership role confers no ability to command the actions of others. Big men advise, suggest, and cajole, and more often than not, their wishes will be followed. But since they lack the capacity to force others to do their bidding, they possess no real power or authority. The political structure of big-man leadership, therefore, rests on informal influence and requires the voluntary consent of those they attempt to lead. Lacking the capacity to command others, big men are successful leaders only to the extent that they serve the public good. In a real sense they are servants of the people, servants who depend on the good graces of their followers to retain high status. The status of a big man is symbiotic with society at large; in exchange for prestige and renown, big men must serve long-range societal interests, or else they will not continue to be big men. Failure to serve the public good ends in demotion from big-man status.

Intensive Horticultural Societies

Subsistence Technology

Many of the simple horticultural societies that were ushered into existence by the Neolithic Revolution in due time evolved into **intensive horticultural societies.** No doubt, hundreds of intensive horticultural societies have existed during the past several thousand years of human history. Until the influx of the Europeans in the late eighteenth century, such societies were widespread throughout Polynesia, a vast island chain in the southern Pacific that includes the islands of Hawaii, Tahiti, and Tonga, among many others. Prior to the end of the nineteenth century, they flourished throughout large parts of sub-Saharan Africa. South America and southeast Asia are also regions where numerous intensive horticulturalists were once located. Today, however, few remain. Most of these are found in parts of sub-Saharan Africa, and perhaps in some portions of South America and southeast Asia.

Like simple horticulturalists, intensive horticulturalists are dependent on cultivated garden products for the bulk of their food supply, and they cultivate by the slash-and-burn method. Some of them keep domesticated animals, whereas others hunt or fish to obtain their supply of meat. However, intensive horticulturalists differ in several significant ways from simple horticulturalists. One principal difference involves the length of time that land is allowed to remain fallow. Simple horticulturalists generally permit the land to lie fallow for 20 or 30 years before using it again. Intensive horticulturalists, by contrast, shorten the fallow period to perhaps as little as 5 to 10 years, thus cropping a given plot of land more frequently. Some intensive horticulturalists have reduced the length of the fallow period even further, occasionally to the point of cultivating land almost continuously. Ancient Hawaii, for example, fell into this category. To compensate for the decrease in soil fertility that

accompanies more frequent cropping, intensive horticulturalists further fertilize the soil by adding such things as humus or animal manure.

The shortening of the fallow period has the effect of eventually converting thick forest growth to bush. Land that has been cleared of bush must be prepared for cultivation in a way that is unnecessary for land cleared of forest. Thus, many intensive horticulturalists have invented or adopted hoes for the purpose of properly preparing land for cultivation. As Boserup explains, "After the burning of real forest the soil is loose and free of weeds and hoeing of the land is unnecessary. By contrast, when the period of fallow is shortened and, therefore, the natural vegetation before clearing is thin or grassy the land must be prepared with a hoe or similar instrument before the seeds or roots can be placed" (1965:24).

Some intensive horticulturalists employ elements of technology in addition to, or instead of, the ones just mentioned. Polynesian intensive horticulturalists, for example, although they never made use of hoes, did engage in the terracing and irrigation of land. It is clear, then, that intensive horticulturalists have achieved a level of technological development beyond what is typical for simple horticulturalists. It is also clear that people work harder and longer under intensive horticulture. Preparing the land by hoeing and terracing and irrigating land are demanding and time-consuming activities. Since people work harder and longer, and since any given area of land is cultivated more frequently, it is obvious why this mode of subsistence technology is referred to as *intensive* horticulture.

Compared to simple horticulture, intensive horticulture is considerably more productive per unit of land. Intensive horticulturalists, in fact, produce sizable economic surpluses, and these surpluses are used to support a class of persons who are freed from direct involvement in agricultural production. In many intensive horticultural societies, the members of this class are regarded, theoretically at least, as the owners of all the land, and in all such societies they direct many economic activities. Their standard of living is higher than that of everyone else. The standard of living of most of the members of intensive horticultural societies is difficult to determine, but it seems likely that it differs little from that typically found among simple horticulturalists. Yet it should not be forgotten that intensive horticulturalists work significantly harder just to achieve the same material results.

As noted earlier, aboriginal Polynesia contained many simple horticultural societies. Most of the population of this region lived on the so-called high islands, which are rugged, eroded remnants of great volcanic cones. The arable land is very rich and covered with dense tropical growth. One of these high islands is Tahiti, a member of the Society Islands group. Tahiti is about 35 miles long and about half as wide. In the eighteenth century the island supported a population of approximately 100,000 (Service, 1963).

The Tahitians are sophisticated horticulturalists, considerably more so than groups like the Yanomama. They make very efficient use of the land for their gardens by terracing hillsides, diverting streams for irrigation, and enriching the soil in various ways. The primary horticultural tool is the simple digging stick. Since there are no metals, they have never developed the metal hoes characteristic of many other intensive horticulturalists. Tahiti's main domesticated plants were brought

from Indonesia, and these include coconut palms, breadfruit trees, taro, yams, sweet potatoes, bananas and plantains, and sugar cane. The most important food is breadfruit, a fruit that is plentiful and nutritious and stores well. The most versatile domesticated plant is the coconut palm. The coconut meat is a nourishing food and coconut milk is used for drinking. Palm leaves are used for thatch, and the fiber is used for the manufacture of mats and baskets. Fishing is also an important part of the Tahitian subsistence pattern, and the technology available for it is diversified and elaborate. This technology includes basketry traps, many forms of nets, fish poisons, harpoons, and many kinds of hooks and lines. Tahitians of both sexes are excellent swimmers. Women dive for crabs and other shellfish and even capture octopi. Men and boys dive to great depths for pearl oysters, the flesh of which is used for food and the shell for various implements and ornaments. Aside from seafood, the main source of protein is pork, and pigs are carefully fed and tended. Chickens are also raised.

Economic Life and Stratification

What might be called **paramount ownership** is an evolutionary variation on the theme of lineage ownership. This type of ownership is ordinarily found among more intensive horticultural societies, although it has been known to exist in a few atypical hunter-gatherer societies and some simple horticultural societies. Paramount ownership prevails when a powerful individual—a chief—who is the head of a lineage, of an entire village, or of a vast network of integrated villages, claims personal ownership of the land within his realm and attempts to deprive those persons living on this land of full rights to its use. Actually, the ownership of all the land within a chief's realm is to a certain extent a fiction. The ownership rights of the chief are not as "real" as they are often made out to be. The Kpelle of Liberia in west Africa are intensive horticulturalists with a paramount mode of ownership, yet the ownership rights of the chief are quite limited. As James Gibbs explains (1965:200–201):

> Formally, land is said to be "owned" by the paramount chief, who divides it into portions for each town in the chiefdom, using for boundaries cottonwood and kola trees, creeks and hills. Each town chief divides the land for his town into segments for each quarter, using similar boundaries. These portions, in turn, are further split . . . into parcels for each of the "families" or unnamed lineages. . . .
>
> Because each man in the lineage is entitled to the use of a portion of the land, the lineage head cannot refuse to allot a piece of it to each household head in the lineage. Once land is parceled out, it stays within the lineage and reverts to the quarter elder or other original "owner" only when a lineage dies out or some other unusual event occurs. Thus, although a town chief, a quarter elder, or a lineage head is, like a paramount chief, called "owner of the land," each is really a steward, holding the land for the group he represents.
>
> Actually, in everyday situations, the head of the household to whom lineage land has been allocated is spoken of as the owner of the land. He decides which bit of "his" land he will work during a given year and which portions he will allow to lie fallow. Most farms are individually owned by the heads of the households and

> are worked with the help of the farmer's household group and cooperative work groups.

Thus, even though chiefs are the official owners of the land among the Kpelle, the powers of these chiefs appear to be significantly restricted. Since ordinary individuals make most of the daily decisions regarding the actual productive use of the land, these individuals are, in a sense, also its "owners."

Intensive horticulture and paramount ownership commonly imply partial redistribution. Marshall Sahlins (1963) highlights the important differences between pure and partial redistribution by comparing the distributional systems of Melanesian and Polynesian societies. As he notes, most Melanesian societies have had small-scale horticulture and big-man systems, whereas most Polynesian societies have been characterized by more intensive horticulture and partial redistribution.

Melanesian big men are persons who *seek prestige and renown* through the holding of elaborate feasts, but, as we have seen, their high status is relatively fragile and can quickly disappear when their elaborate feast giving declines. By contrast, Polynesian chiefs are *installed in office* through a system of hereditary succession and hold substantial economic leverage over the large mass of the population. One of their primary aims is the production and maintenance of a constant economic surplus, which they accomplish by compelling the people to relinquish a portion of their harvests. This leads to the formation of a "public treasury," a great storehouse over which the chief exercises control. The uses of this storehouse are plentiful. Chiefs support themselves and their families from it and also use it for providing lavish entertainment for visiting dignitaries, initiating major public projects such as irrigation works, building temples, sponsoring military campaigns, and supporting a vast range of political functionaries and administrative officials. In addition, portions of the storehouse are redistributed to the people as the need arises, and chiefs are expected to be generous with it. Those who are not sufficiently generous or who make excessive demands on the people's harvests are sometimes killed.

Polynesian partial redistributive systems are redistributive in the sense that they involve a continual flow of goods between the chiefs and the people. In this case, however, the flow of goods is an unequal flow: The people clearly give more than they receive in return. Although clearly similar in principle to the pure redistributive systems of small-scale horticulturalists, these intensified redistributive systems of more advanced horticulturalists are different in that they serve to promote a system of true social stratification. Three main social classes—consisting roughly of chiefs, subchiefs, and commoners—are a common pattern. These classes are distinguished by their differences in social rank, power, dress and ornamentation, patterns of consumption of luxury and other goods, direct involvement in economic production, availability of leisure time, and general styles of life.

Stratification systems of this type have been found among many of the intensive horticultural societies of sub-Saharan Africa as they existed in the eighteenth and nineteenth centuries. Here, the familiar three-class system of stratified life was frequently found (Lenski, 1966). The dominant class consisted of a small minority of powerful and privileged persons who lived off the economic surplus generated from

those below. An intermediate class of officials and specialists served the fancies of the dominant class and carried out some of the lesser functions of political rule. The lowest class consisted of the large majority of ordinary people who were charged with producing enough economic goods to support the other two classes.

Chiefs or kings in some of these societies were treated with great respect and were often exalted and deified. In Dahomey, for instance, extreme acts of deference were shown the king. Even his ministers of state were expected to grovel in the dust in his presence, all the while throwing dirt over their heads and bodies (Lenski, 1966). Also, "no one could appear in his presence with his shoulders covered, or wearing sandals, shoes, or hat. No one could sit on a stool in his presence; if they sat, they were obliged to sit on the ground" (Lenski, 1966:154). Dahomean kings also possessed great wealth, both in the form of property and wives. They were nominally regarded as the owners of all property within the kingdom, were permitted to engage in incestuous marriages, controlled all appointments to public office, and approved the inheritance of property. Such exalted figures also possessed life-and-death power over their subjects, for persons who displeased the king could be (and often were) put to death.

Even though considerable stratification among African horticulturalists did exist, such societies, as is the case among intensive horticulturalists more generally, were characterized by what Lenski (1966) calls a "redistributive ethic." Among the southern Bantu, for example, a chief was expected to be generous and to take the common good into account, and a failure to do so led to a sharp decline in his popularity. As Lenski notes (1966:165):

> Though he is the wealthiest man in his tribe, he cannot use his wealth solely for the satisfaction of personal needs and desires. He is obliged to provide for the support of his ministers and courtiers. He must entertain all those who come to visit him. On great public occasions he is expected to slaughter many of his cattle and provide beer and porridge for all who gather at his village. He lends cattle, supports destitute widows and orphans, sends food to sick people and newly confined mothers, and in time of famine distributes corn from his own granaries or, if this is insufficient, purchases supplies from neighboring groups.

Similar systems of stratified life have also existed among many of the aboriginal societies of Polynesia. Hawaii, before the arrival of the Europeans, provides an excellent example from this region of the world. According to the description given by Sahlins (1958), Hawaii was divided into three main social strata: the "high chiefs" and their families, local stewards, and commoners. A paramount chief managed the use of lands throughout an entire island. He had the right to redistribute all lands upon his accession to office. In addition, he could alienate the land of any person of lower rank and transfer it to someone else. Commoners could be dispossessed from land for such reasons as hoarding surplus production, failing to contribute labor for the construction of irrigation works, and failing to make their household plots adequately productive. High chiefs and local stewards also controlled and supervised access to water used in irrigation.

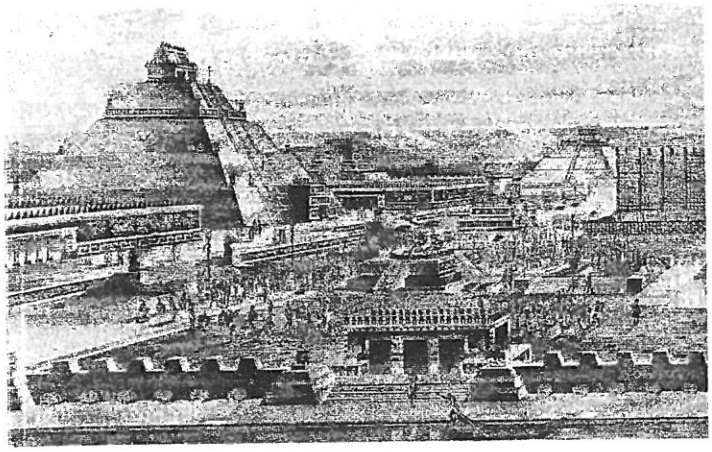
Local stewards directly supervised household economic production, making sure that the land was being cultivated. In general, persons of high status could call on those of lower rank for the performance of various labor services; commoners, of course, were the major source of labor for communal projects. Refusal by a commoner to comply with a demand for labor could result in his death. It is clear that the major responsibilities of labor and economic production were carried out by the commoner class, and high chiefs and their families were freed from direct involvement in subsistence production. In this sense, chiefs constituted a kind of primitive "leisure class," putting others beneath them to work.

Hawaiian society also displayed class differences in consumption patterns. Although the redistributive ethic guaranteed an adequate food supply for all, and commoners have been described as "prosperous," certain choice foods were reserved for high chiefs. Moreover, luxury goods were often restricted to high-status persons and served as insignia of rank. The use of certain luxury items for dress and ornamentation was limited to high chiefs, and the quality of housing was closely associated with rank.

The Hawaiian paramount chief was considered divine. Because of the aura of sanctity that surrounded him, a series of elaborate taboos existed concerning contact with him, violation of which could result in death. For example, it was prohibited to let one's shadow fall on the paramount's house or possessions, to pass through his door ahead of him, or to put on his robe. Commoners were generally prohibited from touching anything used by the chief. In his presence, others were expected to prostrate themselves on the ground in a demonstration of extreme humility. When he traveled, people were warned of his coming so they could properly prepare themselves.

Politics

Politically, intensive horticultural societies have quite often been organized into chiefdoms. In simple horticultural societies, the various villages of a tribe are usually politically autonomous, and politics is limited to the local level. The chiefdom, on the other hand, is marked by the integration of many separate villages into a centrally coordinated complex whole governed from the top down. In aboriginal Polynesia, chiefdoms were common, and the most advanced of these were found on the islands of Tonga, Tahiti, and Hawaii (Sahlins, 1963; Kirch, 1984). Here were sovereignties that included as many as tens of thousands of persons spread over areas as extensive as hundreds of square miles. The classical Polynesian chiefdom was a pyramidal arrangement of higher and lower chiefs. These chiefs were regular and official holders of offices and titles, and they claimed genuine authority over permanently established groups of followers. Authority resided in the office itself, and not merely in the person holding the position. Chiefs gained access to their positions through a line of hereditary succession. Chiefs used their large storehouses of food to support a permanent administrative apparatus created to carry out a variety of political functions. Such administrative officials as supervisors of the stores, talking chiefs, ceremonial attendants, and high priests, as well as specialized warrior corps, were



A reconstruction of Tenochtitlán, the capital city of the Aztecs of ancient Mexico. The Aztecs were a very intensive horticultural society with an elaborate system of stratification and a state system of political organization.

It is clear that a significant evolutionary gulf separates leaders in simple horticultural societies—big men and such—from genuine chiefs. Indeed, the chiefdom marks the beginning of the establishment of **power** and **authority** in social life. The real beginnings of power and authority emerge with the chiefdom because it is there that the necessary administrative machinery needed to compel compliance is created. Polynesian chiefs, for example, could not only issue commands, but could back them up as well. When that is possible, genuine power has become a significant social force.

The authority of chiefs is not without limit, however. Chiefs are still related to the common people through kinship ties, and they are expected to show concern for the common good. Chiefs who fail to meet these expectations frequently find themselves in the midst of a popular, and more than likely successful, revolt. In ancient Polynesia, for instance, many a chief who "ate the powers of government too much"—who made too many demands on the people—was dethroned and put to death (Sahlins, 1963). Thus, although chiefdoms have been able to create genuine power and authority, there are clear restraints on their coercive capacities. Lacking a genuine monopoly of force, primitive chiefs have not been allowed by their subjects to become true tyrants.

FOR FURTHER READING

Richard Lee's *The !Kung San: Men, Women, and Work in a Foraging Society* (1979) is an excellent and highly detailed analysis of the best-known of all contemporary hunter-gatherer societies. Robert Kelly's *The Foraging Spectrum: Diversity in Hunter-Gatherer Lifeways* (1995) is an extremely valuable and unusually comprehensive analysis of the most important dimensions of hunter-gatherer lifeways. Burch and Ellanna (1994) provide a useful collection of essays on various aspects of hunter-gatherer societies, including territoriality, hunter affluence, culture contact, and government intervention. *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses* (1981), edited by Winterhalder and Smith, is a collection of essays applying the approach known as optimal foraging theory to the analysis of hunter-gatherer

subsistence practices. This approach assumes that hunter-gatherers adopt those foraging strategies that yield the highest caloric and nutritional outcomes for the least amount of time and energy invested. More recent works applying this perspective are Hawkes and O'Connell (1985), Winterhalder (1987), Kaplan and Hill (1992), and Kelly (1995).

Allen Johnson and Timothy Earle's *The Evolution of Human Societies: From Foraging Group to Agrarian State* (2000) provides excellent discussions of subsistence practices among the main types of preindustrial societies. Sutton and Anderson's *Introduction to Cultural Ecology* (2004) is a quite valuable discussion of the major types of preindustrial societies. The authors pay close attention to the ecological contexts in which these societies function, and also discuss optimization models of preindustrial subsistence practices, including optimal foraging theory. An article by Minge-Klevana (1980) contains extensive data on the workloads of preindustrial societies at different levels of technological development.

Marvin Harris's *Cows, Pigs, Wars, and Witches: The Riddles of Culture* (1974) and *Cannibals and Kings: The Origins of Cultures* (1977) contain interesting and highly readable accounts of subsistence and economic and political organization in preindustrial societies. Marshall Sahlins's *Stone Age Economics* (1972) is a famous work on precapitalist economic systems written from a perspective different in important respects from that of the present book. The edited collection by Stuart Plattner (1989) explores economic behavior throughout the whole range of preindustrial societies. Richard Wilk's *Economies and Cultures: Foundations of Economic Anthropology* (1996) is a very good discussion of important debates on the economic character of preindustrial societies.

Woodburn (1982) provides a valuable treatment of the most essential features of egalitarian societies. Morton Fried's *The Evolution of Political Society* (1967) is a classic work on preindustrial social evolution, with special emphasis on the emergence of social stratification and the state. A classic work by Gerhard Lenski, *Power and Privilege: A Theory of Social Stratification* (1966), is must reading for anyone seriously interested in the evolution of social inequality and stratification. A classic article by Sahlins (1963) is an old but still very useful and insightful discussion of the contrast between tribes and chiefdoms using Melanesian and Polynesian societies as case studies. Upham (1990) provides valuable essays by specialists on political evolution in its early stages. Timothy Earle's *Chiefdoms: Power, Economy, and Ideology* (1991) is an excellent collection of essays on various aspects of chiefdoms, and his *How Chiefs Come to Power: The Political Economy in Prehistory* (1997) is an important recent work on chiefdoms. Patrick Kirch's *The Evolution of the Polynesian Chiefdoms* (1984) is an extremely thorough archaeological analysis of social and political evolution in Polynesia by a recognized expert. Service (1971) outlines the main stages of preindustrial political evolution.

Peter Bogucki's *The Origins of Human Society* (1999) sketches long-term social evolution from an archaeological perspective. Jared Diamond's *Guns, Germs, and Steel: The Fates of Human Societies* (1997) is a widely acclaimed popularized account of many aspects of human social evolution.