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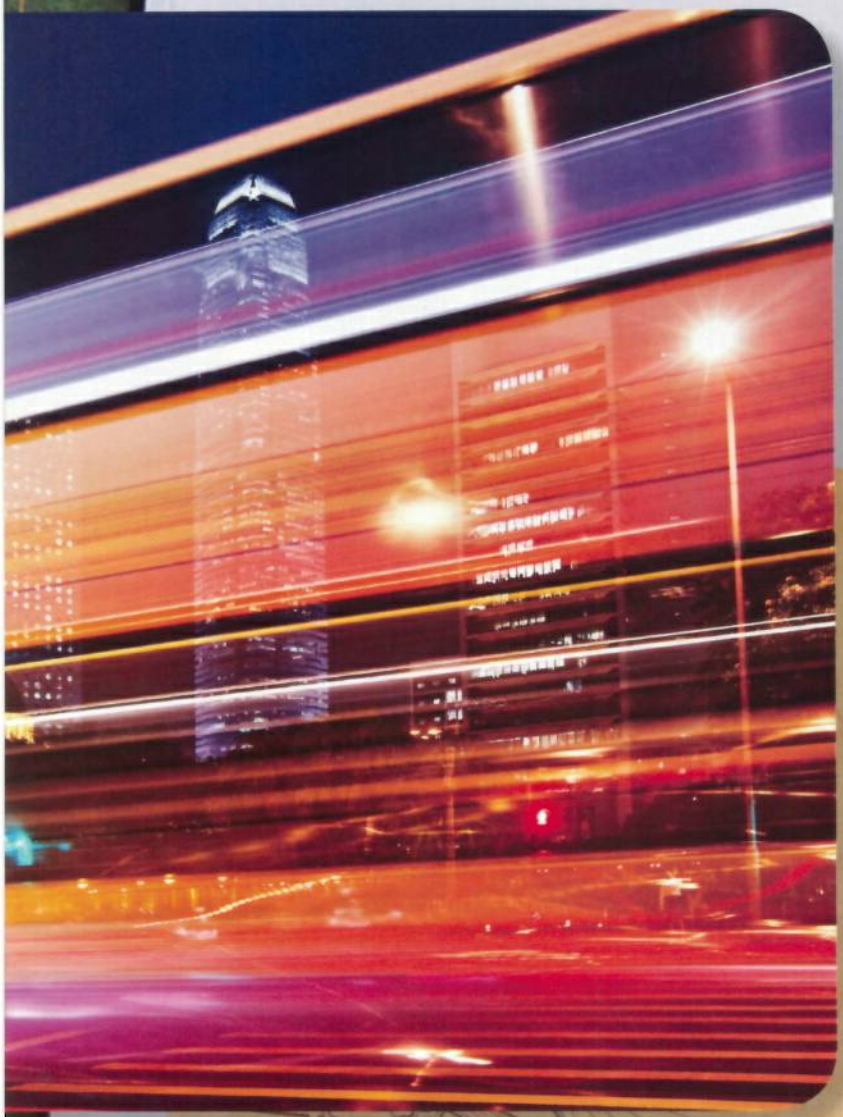
PROBLEM 2 HOW DO WE EXPLAIN THE TRANSFORMATION OF HUMAN SOCIETIES OVER THE PAST 10,000 YEARS FROM SMALL-SCALE, NOMADIC BANDS OF HUNTERS AND GATHERERS TO LARGE-SCALE, URBAN-INDUSTRIAL STATES?

Chapter 2

The Meaning of Progress and Development



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Development fostered a way of conceiving of social life as a technical problem, as a matter of rational decision and management to be entrusted to that group of people—the development professionals—whose specialized knowledge allegedly qualified them for the task. Instead of seeing change as a process rooted in the interpretation of each society's history and cultural tradition . . . these professionals sought to devise mechanisms and procedures to make societies fit a preexisting model that embodied the structures and functions of modernity. Like sorcerers' apprentices, the development professionals awakened once again the dream of reason that, in their hands, as in earlier instances, produced a troubling reality.

Arturo Escobar

* * *

QUESTIONS

In examining this problem, we will consider the following questions:

- **2.1** Why did hunter-gatherer societies switch to sedentary agriculture?
- **2.2** Why are some societies more industrially advanced than others?
- **2.3** Why don't poor countries modernize and develop in the same way as wealthier countries?
- **2.4** How do modern standards of health and medical treatment compare with those of traditional societies?
- **2.5** Why are simpler societies disappearing?

INTRODUCTION

The Death of a Way of Life

Over the past 10,000 years, human society has transformed from hunting and gathering to sedentary dwelling.

We live in an era in which we will witness (if we have not already) the extinction of a way of life that is more than 100,000 years old. Up to 10,000 years ago, virtually all human beings lived in small-scale, nomadic groups of 30 to 100 people, gathering wild vegetables and hunting game as they had for thousands of years. Today virtually no human beings anywhere in the world live by hunting and gathering, although every society in existence is descended from such people.

We have also witnessed the creation of a world with radical differences between the wealthy and poor. Although some enjoy a standard of living that gives them abundant food, comfortable shelters, and a plethora of consumer goods, more than a billion people worldwide suffer from hunger and poverty, live in urban and rural slums, and lack even basic health care.

The gradual extinction of a way of life that flourished for nearly 100,000 years and the creation of a world with considerable income gaps poses both a riddle and a moral predicament. The riddle is why, approximately 10,000 years ago, after thousands of years of living as hunters and gatherers, some of these societies began to abandon their way of life. Why did they begin to domesticate plants and animals and exchange their nomadic existence for **sedentary** dwelling? And how, over the next 10,000 years, did these villages and towns come to be divided into rich and poor nations? The moral predicament involves our perceptions of the few small-scale, tribal societies that exist in the world today and the millions of poor who go hungry each day. Do we assume, as many have and still do, that human beings chose to abandon a nomadic hunting and gathering life because they discovered better ways of living? Do we assume that small-scale tribal societies are remnants of an inferior way of life and that, given the opportunity, they will choose to adopt modern life? Do we assume that the division of wealth is due to **progress**—the idea that human history is the story of a steady advance from a life dependent on the whims of nature to a life of control and domination over natural forces? Or is that concept a fabrication of contemporary societies based on ethnocentric notions of technological superiority?

A thumbnail sketch of what we know about the course of cultural history and evolution will be useful before we examine these

sedentary
a style of living characterized by permanent or semipermanent settlements

progress
the idea that human history is the story of a steady advance from a life dependent on the whims of nature to a life of control and domination over natural forces

culture change the change in meanings that a people ascribe to experience and changes in their way of life

slash-and-burn (swidden) agriculture a form of agriculture in which forests are cleared by burning trees and brush, and crops are planted among the ashes of the cleared ground

state a form of society characterized by a hierarchical ranking of people and centralized political control

irrigation agriculture a form of cultivation in which water is used to deliver nutrients to growing plants

problems. Combining what we have learned about human history from the work of archaeologists and historians with information provided by cultural anthropologists who have worked among hunting-gathering and tribal societies gives us a relatively clear picture of **culture change**. As stated previously, until approximately 10,000 years ago Earth's inhabitants were scattered in small, nomadic bands who lived by gathering wild plants and hunting game. Because the search for food required mobility, it was not unusual for them to move every few days. With groups that were small and mobile, simple economic, social, and political arrangements sufficed; there were no formal leaders and little occupational specialization. If there was a specialist, it was likely to be a person who was believed to have special spiritual powers that could be used to cure or cause illness. Kinship served as the main organizing principle of these societies, and social differences among people were based largely on age and gender. Because there was little occupational specialization and little difference in individual wealth or possessions, relations among people likely were of an egalitarian nature.

At some point in history, some hunter-gatherers began to plant crops and domesticate wild animals. These groups became sedentary, living in permanent or semipermanent settlements of 200 to 2,000 people. They practiced **slash-and-burn**, or **swidden**, **agriculture**; they cleared forests by burning the trees and brush and planted crops among the ashes of the cleared ground. They would cultivate this land from one to three years, then move on to another plot of land. As the groups became larger, they began to form villages consisting of extended family groups and organized themselves into clans—groups of 200 to 500 people who claimed descent from common ancestors. Because larger groups required more formal leadership, certain members assumed the roles of chief or elder, with the authority to make decisions or resolve disputes. Simple occupational roles also developed. As a result, members of some groups were ranked in importance.

Later in history, perhaps because of a need for defense against other groups, settlements combined under common leaders to form **states** consisting of many thousands of people. The development of agriculture intensified, and plow or **irrigation agriculture** replaced slash-and-burn techniques. Leaders organized labor for the purpose of constructing public works—roads, defensive fortifications, irrigation networks, or religious structures. Competition between groups over available resources contributed to the development of standing armies, hereditary leaders emerged, and settlements grew into cities. As technological complexity increased, people

QUESTIONS

2.1 Why did hunter-gatherer societies switch to sedentary agriculture?

2.2 Why are some societies more industrially advanced than others?

2.3 Why don't poor countries modernize and develop in the same way as wealthier countries?

2.4 How do modern standards of health and medical treatment compare with those of traditional societies?

2.5 Why are simpler societies disappearing?

TABLE 2.1

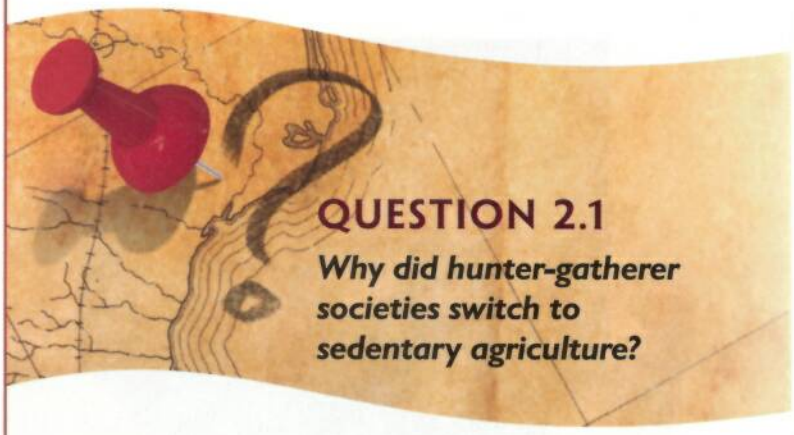
A BRIEF HISTORY OF SOCIETAL DEVELOPMENT

	Hunters and Gatherers	Horticulturalists	State Societies
Population Density	Approximately 1 person per square mile.	Approximately 10 to 15 people per square mile.	Approximately 300 people per square mile.
Subsistence	Hunting, gathering, and fishing.	Slash-and-burn agriculture with mixed livestock herding.	Plow or irrigation agriculture.
Work, Labor, and Production	Very high yield relative to labor expended.	High yield relative to labor expended.	High labor needs relative to yield. High degree of occupational specialization.
Political Organization	Informal political organization. Few, if any, formal leaders. Conflict controlled by limiting group size, mobility, and flexibility of group membership. Little intergroup conflict.	More formalized political organization, often with well-established leaders or chiefs. Increased population density and wealth result in increased potential for conflict. Intergroup warfare, motivated by desire for wealth, prestige, or women, is common.	Highly developed state organization, with a clear hierarchy of authority. Often a two-class society with rulers (landowners) and peasants. Authority of the elite backed by organized use of force (police or army). Warfare for purpose of conquest is common. Well-established mechanisms for resolving conflict (e.g., courts) exist side by side with informal mechanisms.

began to specialize in occupational tasks (such as herders, bakers, butchers, warriors, or potters). Occupational specialization, meanwhile, led to increased trade and the rise of merchants. Some 300 years ago, some of these ranked, state societies began to develop into large-scale, industrialized states, which are now found all over the world. Table 2.1 provides a summary of this brief sketch of human social and cultural history.

One simple explanation for the transformation of societies from nomadic bands to industrial states is that human inventions created better ways of doing things; in other words, human culture progressed. In the past forty years, however, anthropologists have begun to question the idea that the life of hunters and gatherers was harsh and difficult. They propose instead that in many ways this way of life was superior to that of groups maintained by sedentary agriculture.

Some have proposed further that slash-and-burn agriculture was actually more efficient and less wasteful than modern methods of food production. If that is true, what other explanations are there for why groups abandoned hunting and gathering for sedentary agriculture? Moreover, if life in small-scale, tribal societies is not inferior to modern life, why are people in societies without advanced agriculture and industry starving and dying of disease? And why are small-scale, tribal societies disappearing?



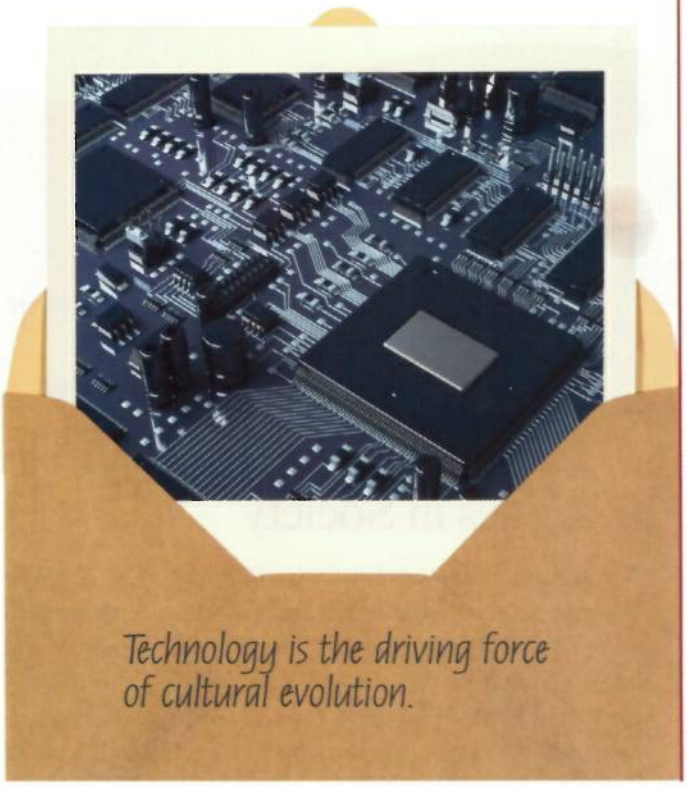
QUESTION 2.1

Why did hunter-gatherer societies switch to sedentary agriculture?

Changes in Society

A common explanation of why hunter-gatherers chose at some point to settle down and domesticate plants and animals is that sedentary agriculture was an easier and more productive way to get food. People who discovered they could plant and harvest crops and domesticate animals rather than having to search for their food began to do so. They had progressed.

The idea that change occurs because of a desire to progress is well entrenched in Western society, and, beginning in the nineteenth century, anthropologists contributed significantly to this view. Lewis Henry Morgan, a Rochester, New York attorney who took great interest in the evolution of culture, offered his own idea of how humankind had progressed. In his book *Ancient Society*, first published in 1877, Morgan postulated a theory of human development in which human societies evolved through three stages: savagery, barbarism, and civilization. He further divided savagery and barbarism into early, middle, and late stages. He noted that some societies, such as the United States, had evolved completely to civilization while others had yet to complete their transformation and remained in the stages of savagery or barbarism. The passage of societies from one stage to the next, Morgan reasoned, required some major technological invention. Thus, the advance from early to middle savagery was marked by the invention of fire; from middle to late savagery by the invention of the bow and arrow; from late savagery to late barbarism by the invention of pottery, agriculture, and animal domestication, and so on, until certain societies had progressed to civilization. Other writers (including many anthropologists) have elaborated on the scheme developed by Morgan, sharing the assumption that humankind was progressing and would continue to do so.



Technology is the driving force of cultural evolution.

In the mid-twentieth century, Leslie White formulated what was then one of the more influential evolutionary schemes to explain the historical development of culture. Like Morgan, White saw technology as the driving force of cultural evolution. From White's perspective, human beings seek to harness energy through technology and to transform that energy into things that are required for survival, such as food, clothing, and shelter. Through technology, energy is put to work. The more efficient a technology is, the more food, clothing or other goods will be produced. Because hunter-gatherers had only their own muscle power to work with, the amount of energy that could be applied to production was limited. Technological advances such as the plow, the waterwheel, and the windmll enabled people to transform more and more energy to their use, enabling them go grow more crops and domesticate more animals. Later, when new forms of energy in the form of coal, oil, and gas were discovered, the amount of energy human beings could harness again increased.

Cultural development, from White's perspective, varies directly with the efficiency of technology. More efficient technology allows human societies to transform more energy to fulfill their needs, and these societies then can produce more food and support larger populations. At some point the increased efficiency in food production allowed a few people to produce enough food for everyone, freeing others to develop other skills, thereby promoting occupational specialization. Specialization then led to the development of commerce. The increase in population, along with the increase in contact between groups, required the development of the state to coordinate group activities and organize armies to protect the growing wealth of its members from other groups.

White's view of technology as the driving force in cultural evolution was highly influential in the development of anthropological theory in the twentieth century. His theory represents the coalescence of a point of view that is prevalent among many people today: that technology is the true measure of progress and the more energy human societies can harness through the development of new power sources, the more social, economic, and political problems they will solve.

The benefits of technological progress remain a popular explanation for the transformation of societies, and many people view the application of technology as the solution to continuing world problems. Nevertheless, the progress theory of cultural transformation began to be seriously questioned by anthropologists during the twentieth century. These questions were raised in part by

studies of hunting and gathering societies that suggested that life as a nomadic hunter and gatherer was not nearly as harsh and dangerous as had been supposed. In fact, some anthropologists suggested that hunting and gathering represented something of a lost paradise.

Life among Hunter-Gatherers: The Hadza and the Ju/wasi

In the 1960s, James Woodburn studied the Hadza, a small group of nomadic hunters and gatherers in Tanzania, eastern Africa. Hunters and gatherers are often depicted as living on the verge of starvation, but Woodburn found the Hadza area rich in food and resources. Wild game such as elephant, giraffe, zebra, and gazelle was plentiful. Plant foods—roots, berries, and fruit—were also abundant for those who knew where to look and constituted about 80 percent of the Hadza diet. The Hadza spent about two hours a day obtaining food.

Hadza women were responsible for almost all the plant food gathered, whereas hunting was exclusively a male activity. The men hunted with bows and poisoned arrows, and, when Woodburn lived among them, used no guns, spears, or traps. Although the Hadza considered only meat as proper food and may have said they were hungry when there was no meat, there was, in fact, plenty of food available. According to Woodburn, it was almost inconceivable for the Hadza to go hungry. Plant food was so plentiful that the Hadza made no attempt to preserve it. Physicians who examined Hadza

children found them in good health by tropical standards, and Woodburn says that from a nutritional point of view, the Hadza were better off than their agricultural neighbors.

The Ju/wasi* (pronounced zhut-wasi) of the Kalahari Desert, in Namibia in southwest Africa, are another hunting and gathering society that has contributed extensively to what anthropologists have learned about small-scale societies. Lorna Marshall, assisted by her children Elizabeth and John, began research among the Ju/wasi in the 1950s. Their work, along with later studies by Richard Lee and others, has provided us with a good description of Ju/wasi hunting and gathering activities.

Ju/wasi groups lived around waterholes, from which they would wander as far as six miles in search of plant and animal foods. Their groups numbered from 30 to 40 people during the rainy season when waterholes were full and plentiful and increased to 100 to 200 during the dry season when only larger holes retained water. Richard Lee found that the food quest was constant among the Ju/wasi. They did little food processing, so they had to get food supplies every third or fourth day. Vegetable foods constituted 60 to 80 percent of the diet, and women gathered most of it, producing two to three times as much as men. Though they had to get food every few days, it did not take the Ju/wasi much time. In a careful study of Ju/wasi work habits, Lee found that they spent less than 20 hours per week gathering food.

Lee reports that the Ju/wasi never exhausted their food supply. The major food source was the mongongo nut, which is far more nourishing than our own breakfast cereals and which provided more than 50 percent of the Ju/wasi caloric intake. Their territory also contained more than 80 other species of edible plants, of which about 20 was regularly consumed. In addition, an occasional giraffe, antelope, or other large game, and the more usual porcupine, hare, or other small game provided meat. Their meat intake was between 175 and 200 pounds per person per year, an amount comparable to the meat consumption in developed countries.

In sum, Lee found that the environment of the Ju/wasi provided ample readily accessible food. Their diet consisted of some 2,300 calories a day, with a proper balance of protein, vitamins, and minerals. If the Ju/wasi diet was deficient in anything, it was in carbohydrates, because they ate no white bread, pasta, rice, or equivalents.

Contrary to the stereotype that hunters and gatherers struggle to obtain food, Lee shows that they in fact do not have to work very hard to make a living. Lee argues that the supposed struggle of hunter/gatherers is only an ethnocentric bias based on the assumption that our own

*The terms that people use to refer to themselves are often different from those assigned by others. Unfortunately, the latter sometimes becomes more widely accepted than the former. The Ju/wasi (also spelled JU/'hoansi), for example, were referred to as Bushmen by early Europeans and as !Kung by anthropologists.

The Mongongo Nut—Nutrition Facts

Serving Size 100 g

Total Fat	57g		
Saturated fat	10g		
Polyunsaturated	14g		
Monounsaturated	10g		
Protein	24g		
Calcium	193mg	Magnesium	527mg
Iron	3.7mg	Copper	2.8mg
Zinc	4mg	Vitamin B1 (Thiamine)	0.3mg
Vitamin B2 (Riboflavin)	0.2mg	Vitamin B3 (Nicotinic Acid)	0.3mg
Vitamin E	565mg		

Ju/wasi women gathering food.

WHAT WOULD YOU DO?

You are the elder of a group of around 80 people. For as long as you can remember, you have lived by gathering plants and hunting game. Your territory, though small, has always been adequate to supply food for your people. But recently, there have been reports that people have had to travel farther and farther to find food. What's worse, your territory now overlaps with other nomadic groups.

Some of the younger members of the group, tired of traveling great distances and fearful of conflict with others, argue for settling down in one spot and taking advantage of wild crops. As with other hunting and gathering groups, yours knows how to plant and harvest, and there is an abundance of wild vegetables and grains that can be easily cultivated.

What will you decide to do? Will you take the advice of the younger generation and settle down? If you say yes, you need to give reasons why this is necessary in order to convince others in the group who are against the move. If you say no, you need to be able to defend your decision to the younger members of the group and explain to them the consequences of settling down.

technologically oriented society represents the pinnacle of development. But if Lee and others are correct about the ease of survival of hunter-gatherers, why did ancient groups abandon hunting and gathering for sedentary life?

The Transition to Agriculture

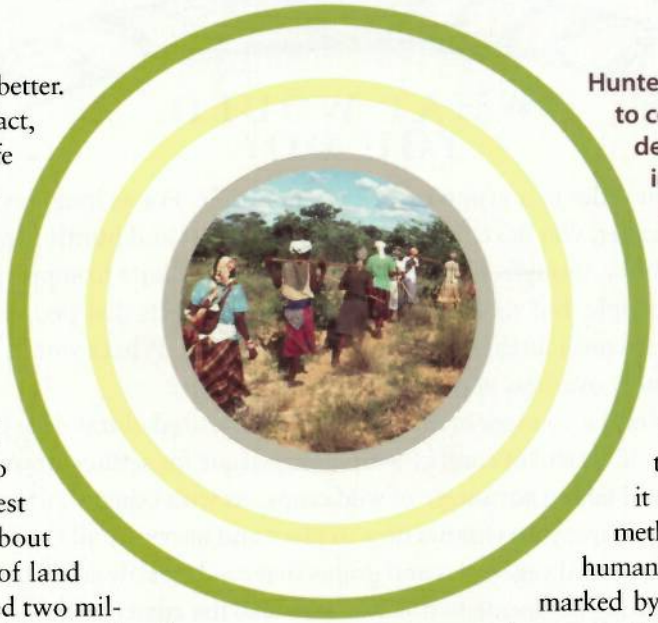
There is a perspective on cultural evolution that views the change from hunting and gathering to modern industrial society as a necessary evil, rather than progress. This perspective emphasizes **population density**, the number of people living in a given area. To understand this point of view, we need to examine the transition from hunting and gathering to agriculture and also explore the reasons for the change from relatively simple slash-and-burn agriculture to more complex labor-intensive irrigation agriculture.

Anthropologist Mark Cohen set out to explain why individuals or groups abandoned hunting and gathering for agriculture and why so many did so in a relatively short period of time. First, he examined the food-gathering strategies of hunting and gathering societies. Hunters and gatherers settle in a given area to collect food, and as food resources decline in one spot, they enlarge the area within which they gather. Imagine this area as a series of concentric circles. Cohen suggests that when population density in a given geographical area reached a point at which different groups began to bump into each other, or when groups found they had to travel farther and farther to get enough food to feed a growing population, they began to cultivate their own crops. According to Cohen, anthropological and archaeological evidence suggests they knew how to farm all along, but chose instead to gather crops until the labor involved in traveling to new food sources surpassed the labor involved in growing their own crops. In other words, the historical transition from hunting and gathering to simple agriculture was a consequence of population growth rather than

population density the number of people in a given geographic area

an invention that made life better. Cohen and others argue, in fact, that agriculture didn't make life better at all, but made it worse.

In most parts of the world, when societies abandoned gathering and hunting, they likely began to utilize slash-and-burn techniques. As a form of growing crops, it is highly efficient and productive. The Kuikuru, who inhabit the tropical rainforest of central Brazil, produce about two million calories per acre of land farmed per year, enough to feed two million people. Moreover, the Kuikuru work only about two hours a day.



Hunter-gatherers settle in one area to collect food. As resources decline, or as population increases, they enlarge the area in which they search for food.

However, swidden agriculture requires large tracts of land because after a plot is farmed for a couple of years, it must lie fallow for 20 to 30 years to allow the brush and trees to grow back so it can be used again. If the population and the amount of land needed to feed it both increase, plots must be used more frequently, perhaps every five or ten years. But when land is cultivated more frequently, the yield per acre declines. Thus, swidden agriculture is efficient only if the population and the amount of land available remain constant.

Farmland may become scarce not only because of increasing population, but also because of environmental changes or the encroachment of other groups. New agricultural techniques must then be developed to increase the yield of available land. The digging stick may be replaced with the plow, or irrigation systems may be devised, and each of these developments requires a great deal of labor. In other words, the more food the group needs to produce, the more complex is the technology needed to produce it; and the more complex the technology, the greater is the amount of work involved.

Relationships among land, labor, population, and methods of agriculture are shown in Tables 2.2 and 2.3. Table 2.2 indicates that the amount of labor required to produce a harvest increases with the complexity of agricultural techniques. For example, it requires up to ten times more labor to produce a harvest with irrigation agriculture than it does to produce one with swidden agriculture.

Then why abandon swidden agriculture? Because there is not enough land to support the population. Table 2.3 lists the amount of land needed to feed 100 families using different agricultural methods. For example, as little as 90 acres of land are required to feed 100 families with irrigation, whereas 3,000 acres are needed with swidden agriculture. If a group has enough land, it might as well keep its farming methods simple. The history of humankind, however, has in fact been marked by an increase in population and an increase in the ratio of people to land.

According to Robert L. Carneiro, an increase in the number of people relative to available land creates two problems. First, if there are more people than there is available land, conflict may arise between people vying for the available resources. Second, if a growing population decides to intensify farming methods, there is a need for greater societal organization. Irrigation agriculture, for example, requires the digging of ditches, the building of water pumps, and the coordination of harvests. Thus, whether a society deals with an increasing ratio between land and people by intensifying efforts to produce more food or it addresses the problem by denying some people access to the necessary resources, the groundwork is laid for the emergence of a stratified society and the need for a state organization.

The views of anthropologists such as Cohen and Carneiro suggest that the evolution of societies from hunting and gathering to more labor-intensive methods of agriculture was not a matter of choice. Slash-and-burn agriculture wasn't easier than hunting and gathering, and plow-and-irrigation agriculture wasn't more efficient than slash-and-burn agriculture. Instead, the changes in farming method represented necessities brought about by an increase in population density. This in turn created the need for more formal and elaborate political and social institutions, both to organize labor and to maintain order among more and more people.

If we conclude (and not all anthropologists do) that the transition from hunting and gathering to complex agriculture does not represent progress, isn't it at least safe to say that modern agricultural techniques are vastly superior to those of small-scale, tribal societies? Those who defend this view point out that in the United States, only 1 calorie of human energy is needed to produce 210

calories of food, whereas hunter-gatherers produce fewer than 10 calories of food for every calorie they expend.

Others argue that these figures are deceptive. While modern farming vastly decreases the amount of human labor required to produce food, it dramatically increases the amount of nonhuman energy needed. From that perspective, we expend 1 calorie of nonhuman energy in the form of nonrenewable fossil fuels (e.g., oil and coal) for every 8 calories of food.

Producing Potato Calories

To illustrate this point, John H. Bodley compares the production of sweet potatoes in New Guinea with potato production in the United States. In New Guinea, people cultivate sweet potatoes by slash-and-burn agriculture; plots of land are burned, cleared, and planted with digging sticks. The people use only 10 percent of the arable land, and there is no danger of resource depletion. With their agricultural techniques, New Guinea farmers can produce about 5 million calories per acre.

American potato farms produce more than twice as many calories, about 12 million, per acre. However, as Bodley points out, in addition to human energy, vast amounts of nonhuman energy are expended. Chemicals must be applied to maintain soil conditions and to control insects and fungus. For example, in the state of Washington in the 1960s, 60 percent of potato acreage was airplane-sprayed five to nine times each season to control insects; another 40 percent was treated for weeds. In 1969, 36,000 tons of fertilizer were applied to 62,500 acres—more than 1,000 pounds per acre. These farms also need energy in the form of fuel for specialized machines.

Americans must also deal with distribution costs, which are minimal in traditional cultures, where most households consume what they produce. In modern industrial socie-ties, where 95 percent of the population is concentrated in or around urban centers, the energy expended in distributing the food now exceeds the energy expended in producing it. Taking the food-producing process as a whole—the manufacture and distribution of farm machinery, trucks, and fertilizer; irrigation projects; food processing; packaging; transportation; manufacturing of trucks;

TABLE 2.2

DAYS OF LABOR PER ACRE PER HARVEST BY TYPE OF AGRICULTURE

Type of Agriculture	Days of Labor per Acre
Advanced swidden	18–25
Plow cultivation	20
Hoe cultivation	58
Irrigation agriculture	90–178

Source: Data from Eric R. Wolf, *Peasants* (Englewood Cliffs, NJ: Prentice Hall, 1966).

TABLE 2.3

LAND NEEDED TO FEED 100 FAMILIES USING DIFFERENT AGRICULTURAL METHODS

Agricultural Method	Number of Acres Needed to Feed 100 Families
Swidden agriculture	3,000*
Swidden with garden plots	1,600*
Irrigation agriculture	90–200

*Includes unworked land that must be allowed to lie fallow to regain fertility.

Source: Data from Eric R. Wolf, *Peasants* (Englewood Cliffs, NJ: Prentice Hall, 1966).

MORE THAN 99 CENTS

John Bodley illustrates the wastefulness and inefficiency of modern agricultural practice by examining the production of potato chips, which the average American eats 4.6 pounds of per year. Roughly half of the potatoes grown in the United States are sold raw; the rest are processed into products such as instant mashed potatoes, frozen french fries, and, of course, potato chips. All potatoes undergo significant processing after harvest. They are mechanically washed, chemically sprayed to inhibit sprouting, colored and waxed to increase consumer appeal, and transported and stored under controlled conditions. Potatoes destined to become chips, meanwhile, are sprayed weeks before harvest in order to kill their stems. Otherwise, the starch buildup would produce unappealing (but perfectly edible) dark chips. These are also chemically treated to prevent darkening after being peeled and sliced, salts and preservatives are added in the cooking process, and, finally, the end product is packaged in special containers and shipped. Manufacturers also incur additional marketing costs to convince consumers to buy the chips. In short, the sum of the human and nonhuman energy required to convert a potato into a potato chip is far greater than the energy expended in New Guinea to produce a more nutritious sweet potato.

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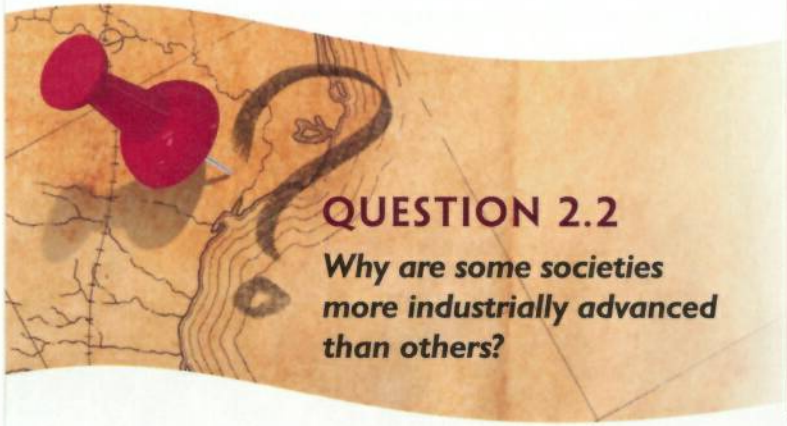
industrial and domestic food preparation; and refrigeration—Americans expend 8 to 12 calories of energy to produce a single calorie of food!



QUESTION 2.2

Why are some societies more industrially advanced than others?

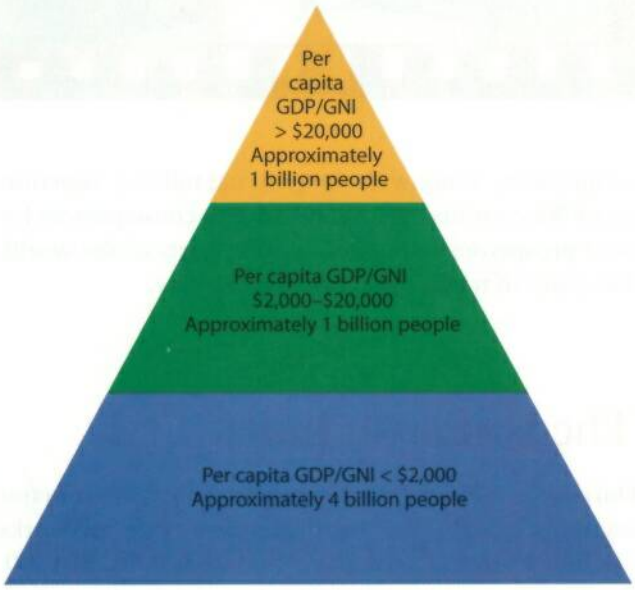
The Rich and the Poor

Even if we agree that hunters and gatherers don't struggle for food and that simpler forms of agriculture are more efficient than modern techniques, we still have not explained the vast divisions in the modern world between rich and poor. The economic disparities in the world economy can be illustrated through a pyramid (see Figure 2.1). The top level consists of roughly 1 billion people who live in developed nations and make more than $20,000 annually. The bottom tier, meanwhile, consists of roughly 4 billion people who make less than $2,000 per year.

If progress is not the reason, why do most people in the industrial world enjoy a standard of living superior to those in underdeveloped countries? Trying to answer

FIGURE 2.1

THE GLOBAL ECONOMIC PYRAMID



Source: C. K. Prahalad and S. Hart, "The fortune at the bottom of the pyramid," *Strategy + Business 26* (2002): 54–67; and S. Hart, *Capitalism at the Crossroads* (Philadelphia: Wharton School Publishing, 2005), 111.

these questions requires a complex discussion of world history during the past 300 years. But we can learn a lot from the story of the expansion of one industry, in one country, during one phase of its development—the textile industry in England in the last half of the eighteenth and first half of the nineteenth century.

Prior to the **Industrial Revolution** in Europe, China was arguably the richest country in the world, as gold and silver taken from the mines of South America by the Spanish and Portuguese were funneled into China to pay for silks, spices, teas, and luxury goods. India was developing a thriving cotton textile industry by selling calicoes in Europe. Wealthy states had developed in western Africa, and Islamic traders thrived from Africa into Southeast Asia. On the other hand, seventeenth-century England was a largely rural and agricultural country. Even by 1700, only 13 percent of the population lived in towns of 5,000 or more people. England, however, had long enjoyed a thriving trade in textile goods, most notably raw wool and inexpensive wool textiles.

Early on, textile production was largely a handicraft industry, and most steps in the production of wool cloth, from cutting and degreasing the wool to dyeing and spinning the thread to weaving the cloth, were in the hands of rural families or small cooperatives. The finished product would be sold at a local market or fair or, more often, sold to urban-based merchants or traders for resale.

Though the trade in home-produced textiles was profitable for all, traders and merchants discovered that they needed more control over the type, quantity, and quality of cloth produced by spinners and weavers. The merchants' first solution to this problem was the **"putting out" system**, in which merchants supplied weavers with materials and required them to produce cloth of the desired type. The merchants delivered the supplies and tools and picked up the finished products, generally paying the producers for each piece.

Beginning in the eighteenth century, English merchants began to transform the putting-out system into a **factory system** by bringing spinners, weavers, and others together into one production facility. For many reasons, merchants were not particularly anxious about investing in factories. Profits from manufacture were not nearly as great as profits from trade, especially long-distance exchange. Moreover, removing people from the home-based family to urban-based factories required new mechanisms of discipline and control, a fact that explains why early factories were modeled on penal workhouses and prisons. Finally, the entrepreneur, who previously could halt putting out when demand slackened, now had to keep the factories busy to pay for the investment in buildings and technology and, consequently, had to create demands for products.

In spite of these problems, investing in manufacturing was attractive because subsidies and laws ensured cheap labor. Peasant farmers, who were forced off their land by laws supporting large farms, represented an accessible labor force. In addition, because there were no laws on minimum wage or child labor, factory owners could make use of the cheap labor of women and children. By 1834 children under 13 represented 13 percent of the British cotton industry, and by 1838 only 23 percent of textile

Industrial Revolution a period of European history, generally identified as occurring in the late eighteenth century, marked by a shift in production from agriculture to industrial goods, urbanization, and the factory system

"putting out" system a means of production, common in the sixteenth and seventeenth centuries and surviving today, in which a manufacturer or merchant supplies the materials and sometimes the tools to workers, who produce the goods in their own homes

factory system a system of production associated with the Industrial Revolution and characterized by the concentration of labor and machines in specific places

Three inventions that revolutionized the textile industry (from left to right)--the flying shuttle, the water frame, and the spinning mule.

factory workers in England were adult men. In addition, government also played a major role in creating and defending overseas markets, as well as sources of raw materials such as cotton.

The growth of the textile industry had numerous effects. For example, it fueled the growth of cities—by 1800 a quarter of the English population lived in towns of 5,000 or more, and Manchester, a center of textile manufacture, grew from 24,000 inhabitants in 1773 to more than 250,000 by 1851. Moreover, factories spurred the development of technology. Mechanization of the textile industry began in earnest in 1733 with John Kay's flying shuttle, which doubled the weavers' output. But because spinners could not keep up with the need for thread for the new looms, bottlenecks developed. To meet this need, James Hargreaves introduced the spinning jenny in 1765. In 1769 Richard Arkwright invented the water frame, and then in 1779 Samuel Crompton developed the spinning mule, which combined features of the water frame and the jenny. Finally, in 1790, steam power was added to the production process. These inventions produced a staggering increase in textile production. A hand spinner in eighteenth century India took more than 50,000 hours to process 100 pounds of cotton into thread; in England, Crompton's mule reduced that to 2,000 hours, and by 1795, power-assisted mules reduced this time still further to 300 hours. By 1825 it took only 135 hours to process 100 pounds of cotton.

The growth of the textile industry obviously produced great wealth and employed millions of workers. It helped transform England into the wealthiest country in the world. But the increase in technology and production created two problems: Where was the market for all these textile products to be found, and where were the raw materials—notably the cotton—to come from?

Some historians point to the large domestic market available to English textile producers in the wake of the growth of the English population from 6 million in 1700 to 9 million in 1800. Moreover, English textile manufacturers were able to sell much of their product in Europe and the growing markets of the Americas. But the competition was fierce, as the Netherlands, France and Spain were also striving for overseas markets. This competition, along with the growing military superiority of Western Europe, often had dire consequences for once prosperous industries in other parts of the world. The story of textiles in India is instructive.

The British in India

During the 15th and 16th centuries, India was a major trading country that had extensive trade networks reaching Europe, the Islamic world and China. In 1690, the British government granted a monopoly in East Asian trade to the British East India Company. A relative latecomer to trade in India, it established a trade center in Bengal, in the city of Calcutta. The British East India Company soon had some 150 posts trading in India for fine silks, cotton, sugar, rice, saltpeter, indigo, and opium.

In the 1750s the British provoked the rulers of Bengal to war, defeating them conclusively in 1757. In the aftermath, the English plundered the state treasury for nearly 5 million pounds and gained control of 10,000 Bengali weavers. By 1765, the British East India Company had become the civil administrator of Bengal. It promptly increased the tax burden on peasants and artisans, leading to major famines in 1770 and 1783. From its base in Bengal, moreover, the company gradually began to extend its control over much of the Indian subcontinent.

Prior to the British military takeover, India produced cloth that was cheaper and better than English textiles. In fact, Indian cotton and calicoes were the craze of Europe. To meet this competitive challenge, the British government prohibited the British East India Company from importing Indian calicoes into England. English manufacturers took advantage by producing copies of popular Indian textiles for sale both in England and abroad. In addition, India was required to admit English manufacturers free of tariffs. These actions effectively destroyed what had been a thriving Indian textile industry.

The British East India Company also had considerable impact on China. The British, and Western European

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A Chinese opium den.

nations in general, had a problem with trade into China. Chinese products, notably tea, were in high demand in Europe, but the Chinese demand for European products was quite low. There was demand in China for opium, however, and by 1773 the British East India Company had a monopoly over opium sales. Though illegal, the Chinese government was incapable of stopping smuggling, an activity that was hugely profitable for British, American, and French merchants. When the Chinese government tried to enforce the ban on opium by seizing British warehouses in Canton, the British responded with military force and effectively coerced the Chinese government into not enforcing the opium laws. Moreover, the British demanded and received additional trading rights into China, further opening a market not only for opium but for textiles as well.

British trade activity in India and China had three results. First, it reversed the flow of money between China and the rest of the world. During the first decade of the nineteenth century, China had a trade surplus of 26 million silver dollars. By the third decade, it had a trade deficit of 34 million dollars. Second, it is estimated that by the end of the nineteenth century one out of every ten people in China was addicted to opium. Finally, exports of cotton textiles from England to India and China increased from 6 percent of total British exports in 1815 to 22 percent in 1840, 31 percent in 1850, and more than 50 percent after 1873.

Cotton, Slavery, and the Cherokee Removal

Cotton and the growth of the textile industry in England figure not only in the story India and China, but also in the story of slavery and the removal of thousands of Native Americans from their homeland. The British were able to sell raw Indian cotton to China, but Indian cotton was not acceptable to European and American markets. Indian cotton produced a shorter fiber, whereas cotton produced elsewhere, notably in Egypt and the American South, produced a longer, more desirable fiber. But cotton production in the Americas was labor intensive and, to be profitable, required slave labor.

Slavery was not created solely by the need for cotton, but rather by the economic expansion and demands of European trade from the 15th to 19th centuries. Spanish silver mines, French sugar mills, and American cotton plantations all had great demand for labor, and this demand was met largely by the slave trade. From 1451 to 1600, some 275,000 slaves were sent from Africa to Europe and America. During the seventeenth century, nearly 1,341,000 slaves were sent, and from 1701 to 1810 more than 6 million people were forcibly exported from Africa.

The production of cotton with slave labor might be said to have fueled the Industrial Revolution in the United States. Between 1815 and 1860, raw cotton constituted half the value of domestic exports from the United States.

Part of the reason for the growth of the American cotton industry was Eli Whitney's cotton gin, an invention that easily separated the seeds from raw cotton fiber. It allowed a person to clean 50 pounds of cotton in the time it had previously taken to clean 1 pound. As a consequence, American cotton production increased enormously, from 3,000 bales in 1790 to 178,000 bales in 1810, 732,000 in 1830, and 4.5 million in 1860. But to be competitive, American cotton production required cheap labor, and slave labor cost half the price of wage labor.

By 1807, half of England's cotton imports came from the United States. While the British demand for American cotton was not the cause of slavery, it ensured

CASE: Doing It Better

When development professionals fail to understand the culture and values of the people they are trying to help, the consequences are disastrous.

The Mackenzie Delta, an area in the western Canadian Arctic, has been the home of Inuit, Metis, and Dene peoples for centuries. After World War II, the Canadian government wanted to develop the area in order to extract oil, gas, and mineral reserves. The government also wanted to prepare indigenous peoples for "modern" life through schooling and wage labor. Planning, however, was top down, with little or no participation from the people themselves.

The centerpiece of the modernization plan was the construction of a large-scale "science-town" called Inuvik that was to house a school, a commercial and service center, and a hospital. The government planners encouraged the establishment of various businesses in the town, including oil companies, hotels, and restaurants.

As Alexander M. Ervin describes it, the town had a profoundly negative impact on the people of the Mackenzie Delta. Of 5,000 inhabitants, only 150 lived off the land. Half the population were "southerners," transient workers from southern Canada who were paid generous salaries and allowances to encourage them to resettle, if only for a short time, in the Arctic. Few of the indigenous people were employed after the initial building phase, and they were overwhelmed by the social and economic advantages of the southerners. Southerners rarely interacted with the natives, and relations became hostile. School curricula, rather than being designed for northern youth, were modeled after programs in southern urban schools. This caused high dropout rates, and the alienation of young people was marked by a dramatic increase in petty crimes and assaults. Native women who had children with transient whites were stigmatized, and conflict arose between families that had a steady income and those dependent on government subsidies. The stress was evident also in high rates of alcohol consumption and crimes such as assault, theft, and wife battering, all associated with alcohol. Clearly the optimism of the government that the new town would better the lives of the native peoples was misplaced.

So what went wrong? There was no consultation with the indigenous people regarding the changes. Everything was planned and implemented by outsiders who had preexisting notions about what would be good for indigenous people. Nobody considered the complex interactions among family structure, cultural values, economics, education, and new residents. No one attempted to integrate local knowledge into the planning process. And no one considered the unintended consequences of the changes.

Contrast this with an agricultural project designed by anthropologist Ronald Nigh in Mexico. Like other Central American nations, Mexico

has lost vast amounts of its rainforest—more than 40,000 square miles since the beginning of the twentieth century. Though much of the deforested land was devoted to animal pastures, more than 50 percent of the population never consumes animal products.

According to Nigh, the destruction of the rainforest is the result of a **factory model** of agriculture, the production of a single product in as short a time as possible. It is technologically intensive and environmentally damaging. In Central America, the factory model of cattle raising has required clearing large tracts of land with fire and herbicides and reseeding with grasses that are not well suited to the environment. The result is degradation of the land by uncontrolled grazing and its eventual abandonment and return to secondary vegetation.

In his work, Nigh uses an **agroecological approach** that incorporates indigenous farming techniques, which are far more productive and less damaging to the environment than factory farming. An agroecological approach produces multiple crops and animals, rather than a single crop as in the factory model. This approach to production creates a system that enhances regeneration of land, flora, and fauna.

As an example, consider how the Maya grow corn in the rainforest. The farmers practice swidden agriculture, clearing a site, growing corn there for five to eight years, and then moving onto another site. At first glance, these sites may look identical to land devastated and abandoned by cattle ranchers, but Mayan farmers do not abandon the sites. They continue to work the land so that native plant and animal life will return, eventually creating a highly productive space. The agroecological model, drawing as it does on indigenous systems developed over centuries, creates an ecologically sustainable system of production modeled after natural systems.

Nigh says that a similar model, emphasizing diversity, should be used to rehabilitate lands damaged from cattle grazing. One area of the land would be used for annual crops, such as corn or squash. Another area can be used for fruit trees and forage. And another can be devoted to intensive grazing using selected animal breeds and grasses. Intensive grazing, according to Nigh, frees up rainforest land that should never have been converted to pasture to begin with. He also maintains that by using organic fertilizers and controlled grazing, it is possible to recover aquatic areas and take advantage of water resources such as fish, mollusks, turtles, and birds.

factory model an energy-intensive, ecologically damaging form of agriculture intended to grow or raise as many crops or livestock as possible in the shortest amount of time

agroecological approach agricultural methods that incorporate indigenous practices of food production that preserve the environment along with contemporary agricultural research

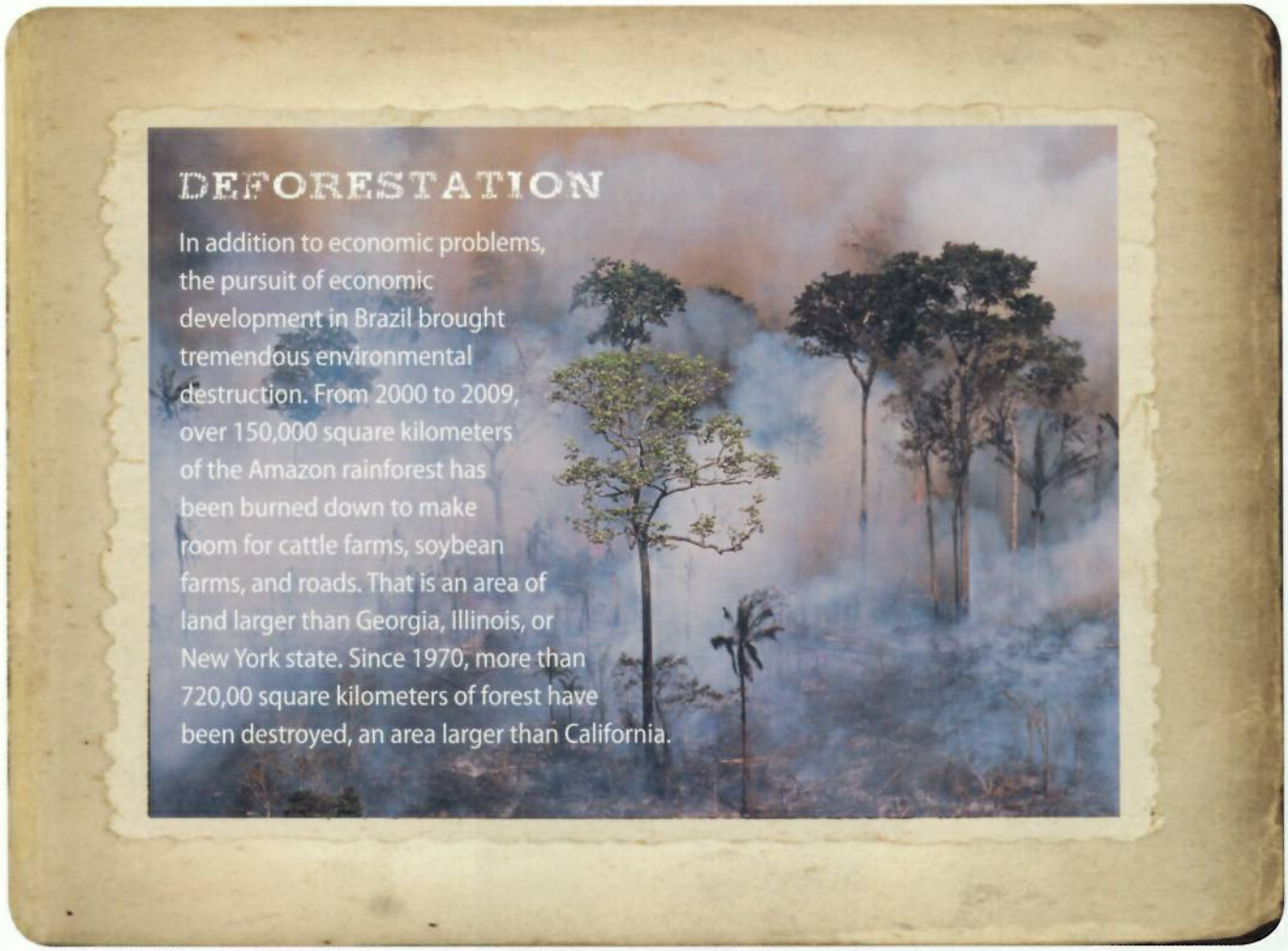
Development projects might begin with good intentions, but they can quickly devolve into ethnocentric, socially-damaging institutions. How, then, can development projects provide benefits to everyone involved? As the examples show, an anthropological perspective that carefully considers the cultures and values of indigenous people will go a long way to ease the potential pains of development.

The World Bank was created in 1944 in Bretton Woods, New Hampshire, at a meeting of the nations allied against the Germans, Japanese, and Italians. Their task was to plan the economic reconstruction of countries devastated by World War II and develop a postwar plan for worldwide economic and monetary stability. Originally known as the International Bank for Reconstruction and Development, the World Bank was to be funded by donations from member nations, largely in the form of loan guarantees. The bank would then lend money to governments for specific projects—highways, dams, power plants, factories, and the like—with requirements for repayment over a set period of time. The bank's charter also specified that loans must be made without any regard for political or noneconomic factors, and that the bank must not interfere in the political affairs of any member or debtor nation.

The World Bank made its first loans in 1946 to European countries rebuilding after World War II. Soon after, the World Bank began making huge loans to countries such as Brazil, India, and Indonesia that were intended to transform their economies, bring wealth, and alleviate poverty. Moreover, once the World Bank approved loans, private banks would often follow. While these loans were intended to bring economic development, many argue that they in fact increased poverty and led to rampant environmental devastation in developing nations. How, in spite of apparently good intentions, could this happen?

The Case of Brazil

Brazil has been a major recipient of World Bank loans. In the 1960s, the government of Brazil made a conscious decision to industrialize. With loans from the World Bank, other lending institutions, and private investors, Brazil built dams, roads, factories, and modernized agriculture, becoming a world leader in the



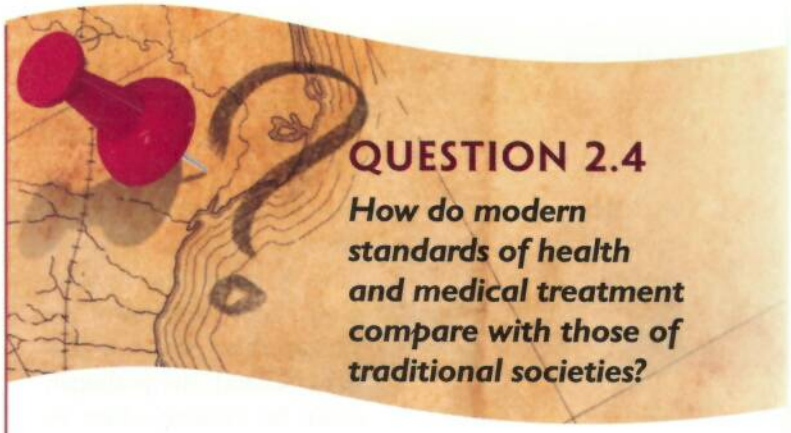
export of crops such as soybeans. The economy surged ahead, and Brazil became a model of modern industrialization. Factories created jobs, and people flocked to the cities for employment as Brazil's cities began to rival those in the West.

But there was a downside: to repay the loans, Brazil needed to earn foreign income. Consequently, landowners were encouraged to expand the production of cash crops that could be sold in the United States and Europe. Because these areas already produced more than enough food, Brazilian farmers turned to soybeans, sisal, sugar, cocoa, and coffee. These products required modern farming techniques and lots of land, forcing small farmers off their land in search for jobs that, for the most part, did not exist. Those who found jobs on large farms were paid so little that they were not able to purchase the food that they had previously grown themselves on their small plots. And while the production of some food items, such as beef, did increase, most of it was exported, since poor Brazilians could not pay as much as relatively wealthy Americans and Europeans could.

To make matters worse, in the mid-1980s Brazil and other debtor countries discovered that they could not keep up their payments and threatened to default on their loans. To help avoid default, the World Bank allowed these countries to renegotiate their loans, but with the condition that they had to make drastic cuts in government spending on public education, welfare, housing, and health. These cutbacks resulted in still greater hardships for the poorest portion of the population.

Through its economic development program, Brazil has increased its total wealth, and some people have become very rich. But it is estimated that more than 40 percent of Brazil's population is living in poverty. And Brazil is not unique, as most of Central and South America, Africa, and Southeast Asia followed the same formula for development and experienced similar increases in poverty and hunger for a majority of their people.

Are the people of the world better off now than they were before the industrial revolution? The answer depends on who you are. If you are fortunate enough to live and work in one of the wealthy countries of the world, you are likely to be materially better off than your counterpart of five centuries ago. If you are a laborer or small farmer in one of the poorer countries, or one of the millions of landless and unemployed, it is hard to see how you are better off than your counterpart of centuries past.



QUESTION 2.4

How do modern standards of health and medical treatment compare with those of traditional societies?

Illness and Inequality

Even if the economic changes of the past two centuries have not improved the lives of many people, can't we at least assume that some technologies, notably medical technologies, have improved the lives of virtually everyone? To answer this question, we need to examine two things. First we have to ask whether or not we have progressed in our ability to treat disease. Second, we have to ask whether or not we fully understand the traditional medical techniques that modern medicine has sought to replace.

One of the supposed triumphs of modern society is the treatment and cure of disease. Life expectancy has more than doubled in the twentieth century—in 1900, world life expectancy was approximately 30 years; in 2000, it was 63 years. Antibiotics save millions each year from death, and modern diagnostic methods and equipment allow medical practitioners to identify the onset of disease more easily. Yet the progress that we often take for granted is not available to all. In fact, the single most important determinant of a country's ability to protect its citizens from disease is the degree of economic equality.

In developing countries, infectious disease is responsible for 42 percent of all deaths, compared to just 1.2 percent in industrial countries. Around the world, 40 percent of all deaths are caused by environmental factors, particularly organic and chemical pollutants. These pollutants are far more deadly in poorer countries where, for example, 1.2 billion people lack clean, safe water. Your income determines your chances of coming into contact with a deadly pollutant. This is true even in the United States, where three out of four hazardous landfills in southern states were located primarily in African American communities, though African Americans represent only 20 percent of the population.

pathogen an infectious agent such as a bacterium or a virus that can cause disease

vector when referring to disease, an organism, such as a mosquito, tick, flea, or snail, that can transmit disease to another animal

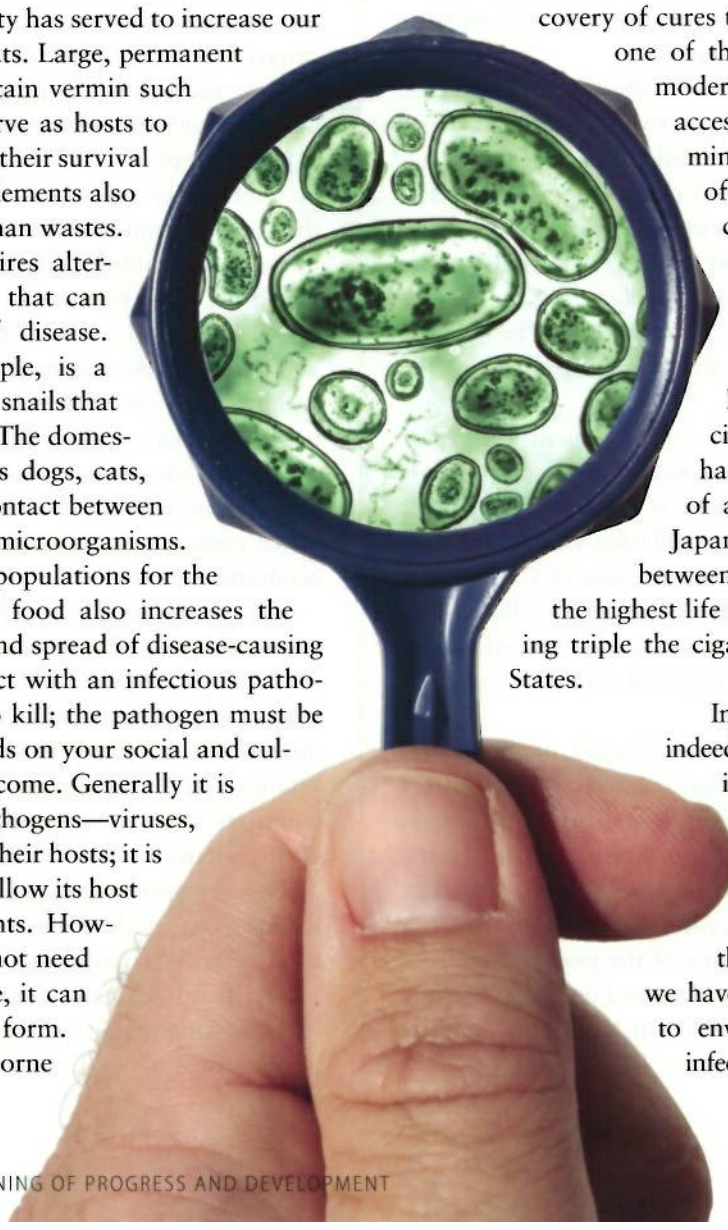
We can perhaps better judge the extent to which we have "progressed" by examining what it takes for us to die of an infectious disease. At least four things have to happen: first, we have to come into contact with some **pathogen** or **vector** that carries a disease. Second, the pathogen must be virulent—that is, it must be able to kill us. Third, if we come into contact with a deadly pathogen, it must evade our body's immune system. Finally, the pathogen must be able to circumvent whatever measures our society has developed to prevent it from doing harm. As we will see, our chances of dying are affected at every step by social and cultural patterns, particularly by the degree of economic and social inequality.

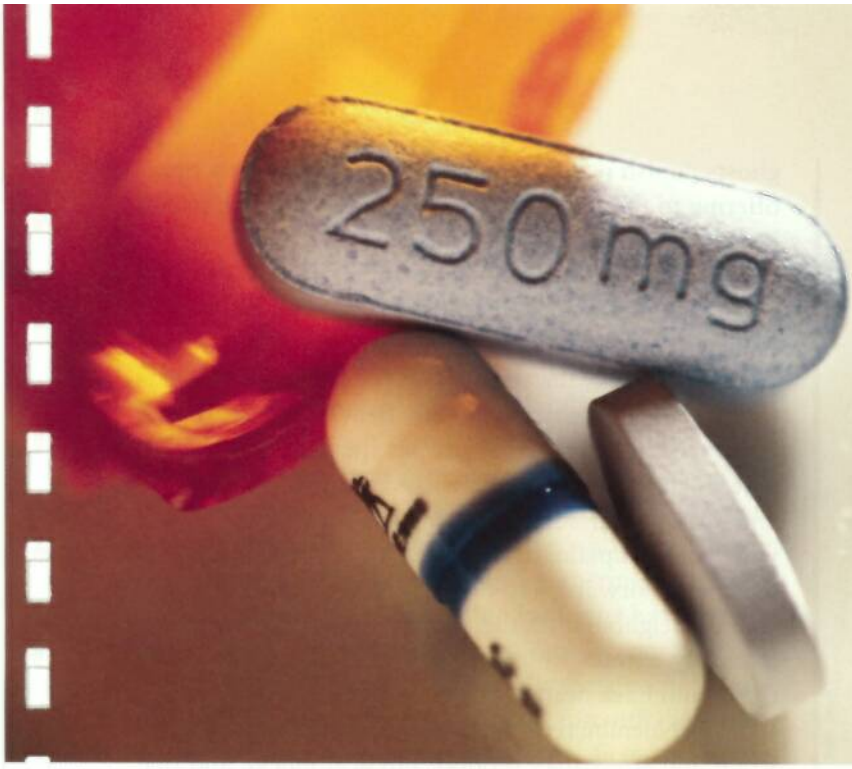
First, cultural complexity has served to increase our exposure to infectious agents. Large, permanent settlements attract and sustain vermin such as rats and fleas, which serve as hosts to microorganisms and ensure their survival and spread. Permanent settlements also result in the buildup of human wastes. Sedentary agriculture requires altering the landscape in ways that can increase the incidence of disease. Schistosomiasis, for example, is a disease caused by worms or snails that thrive in irrigation ditches. The domestication of animals such as dogs, cats, cattle, and pigs increases contact between people and disease-causing microorganisms. The requirements of large populations for the storage and processing of food also increases the likelihood of the survival and spread of disease-causing agents. Coming into contact with an infectious pathogen need not be enough to kill; the pathogen must be deadly. But this also depends on your social and cultural situation and your income. Generally it is not to the advantage of pathogens—viruses, bacteria, parasites—to kill their hosts; it is better for the pathogen to allow its host to live and supply nutrients. However, if the pathogen does not need its host in order to survive, it can evolve into a more deadly form. This is the case with waterborne infections. Pathogens that spread by contaminated water can survive regardless of how sick their host becomes, and by reproducing extensively in their host, they make it more likely that they can contaminate water supplies through the laundry or bodily wastes. Thus, you are far more likely to contact a deadly disease if you do not have access to clean and treated water.

Even if you come into contact with a deadly pathogen, your immune system is designed to prevent it from killing you. However, the potency of your immune system is clearly a function of diet, and diet is largely determined by income level. In this respect, we have not progressed. In 1950, 20 percent of the world's population (500 million people) was malnourished. Today some 50 percent (3 billion) is malnourished. Insufficient food is one of the main factors that increase the likelihood of immune system failure.

Finally, even if our immune system fails to repel an infectious pathogen, societies do develop methods to cure illnesses. And there is little doubt that the discovery of cures to infectious disease marks one of the great success stories of modern culture. Unfortunately, access to these cures is determined largely by the degree of economic inequality in a country, not by its absolute wealth. For example, the United States, the wealthiest country in the world, ranks 38th in the world in life expectancy. Not coincidentally, the United States has the largest income gap of any industrialized country. Japan, which has the lowest gap between rich and poor, also has the highest life expectancy, in spite of having triple the cigarette usage of the United States.

In sum, although we have indeed made dramatic progress in understanding and curing infectious disease, we have made no progress and, in fact, have regressed in our ability to provide access to these cures. At the same time, we have increased global exposure to environmental pollutants and infectious pathogens.





The relationship between economics and access to cures is most evident with HIV/AIDS. According to the United Nations, about 33.4 million people were infected with HIV as of 2009. Of those, nearly 67% live in sub-Saharan Africa. Though there is no vaccine, treatment with a cocktail of drugs, known as Highly Active Antiretroviral Therapy (HAART) has dramatically reduced HIV-related illnesses and death. HAART therapy, however, is expensive—$10,000 to $15,000 per year. When we consider that only three countries in Africa have a per capita GDP higher than $10,000, it is obvious that this potentially life-saving treatment is completely inaccessible to those who need it most.

The Meaning of Illness

Even if we conclude that modern societies are more susceptible to contagious disease, have they not at least improved the techniques for curing illness? To answer this question, it is important to realize that the meanings members of different societies give to illness vary as much as the meanings they give to other aspects of their lives. In American society, illness is viewed as an intrusion by bacteria or viruses. Our curing techniques emphasize the elimination of these agents. Death can occur, we believe, when we have failed to eliminate them.

In many other societies, the interpretation of illness is completely different. It may be attributed to witchcraft, the belief that a witch or sorcerer can use magical power to inflict illness on another person. It may be attributed to soul loss, the belief that that the soul leaves the body. Or it may be attributed to spirit possession, the idea that a foreign spirit enters the patient and causes illness. These explanations are not mutually exclusive; the soul, for example, may flee the body as the result of witchcraft or sorcery.

Those who believe in spiritual or magical causes for illness do not believe that a witch or sorcerer strikes at random, that the soul leaves the body without cause, or that a spirit possesses just anyone. They believe that there must be a social reason for these things to occur. Witchcraft involves relationships between people; the witch voluntarily or involuntarily afflicts someone who has caused offense or breached a rule of conduct. Likewise, the soul leaves the body of a person who is having difficulty with others, or a spirit possesses a person who has not honored social obligations.

The Chewa of Malawi in southeast Africa claim that illness and death are induced by witchcraft when someone fails to observe some social norm. Whereas Americans react to illness or death by seeking the disease or accident responsible, the Chewa ask what wrong the victim has committed, with whom the victim has quarreled, or who is jealous of the victim. The Chewa explicitly recognize the connection between sorcery and social tension.

A Chewa who becomes ill consults a diviner to discover the cause of the illness. During the consultation, the patient and the diviner discuss the social roots of the illness. The diviner needs to know about the patient's relationships with kin and, if ancestral spirits may be responsible, the genealogy of the patient. Thus, Chewa medical theory, although couched in the idiom of sorcery, is a social theory of illness, not simply a supernatural one.

There is a condition in Latin America called *susto* (also known as *pasmo*, *espanto*, *perdida de la somba*) that is believed to occur when the soul has detached itself from the body. Symptoms of *susto* include restlessness, listlessness, loss of appetite, disinterest in dress or bodily appearance, loss of strength, and introversion. The onset of the illness is said to follow a fright brought on by a sudden encounter or accident, and the cure begins with a diagnostic session between the patient and a healer. After deciding what brought on the

Argentine soldiers and sent to mission stations or kept as servants. Those who survived on the island were pushed farther inland, and European hunters systematically depleted the animals on which they depended for food. Having little to eat, they resorted to raiding sheep ranches and were shot by hunters or ranchers who were paid a bounty for every Ona killed. At the turn of the twentieth century, Europeans built lumber camps in the last forests in which the Ona could live without being in contact with Europeans. Finally, in 1974, 100 years after the first European settlement was built on Tierra del Fuego, the last full-blooded Ona died. The extermination of the Ona is not an isolated event, as societies all over the world have systematically exterminated native groups. In areas of Brazil that are now being entered by Europeans, members of the native population, many of whom still live by gathering and hunting or small-scale agriculture, are being hunted and killed much as the Ona were some 100 years ago.

Cultural Devastation and Radical Hope

The experiences of peoples such as the Ona raise an important question: What does it mean to experience cultural devastation? This question is important not only for what it tells us of the experiences of other people, but for how we understand what culture is and what culture change can mean. Clearly all cultures are vulnerable. The way that people view the world, what counts as important, what is valued, and what the good life means are all subject to sudden upheaval.

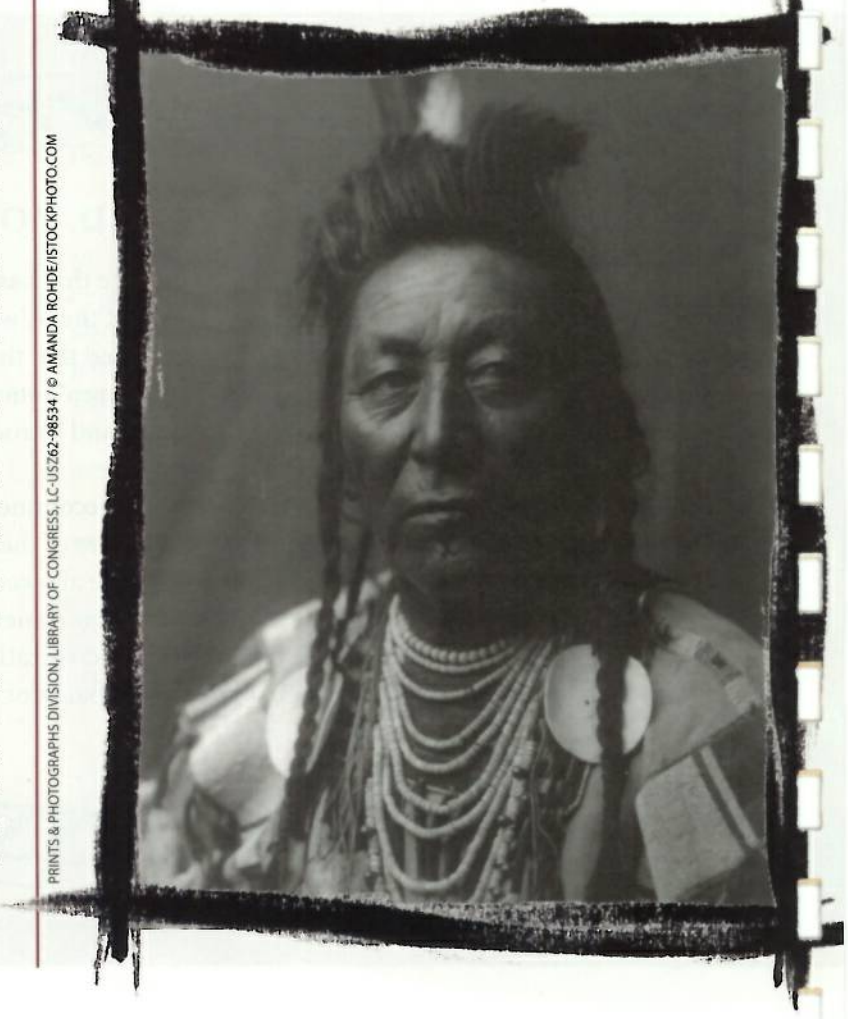
One of the best examples is what happened to indigenous peoples of the United States. When Columbus arrived in the "New World," there were hundreds of thriving societies. These were quickly devastated by European diseases that wiped out nearly 90 percent of the population. The devastation continued well into the nineteenth century as the remnants of these people struggled to adapt to the westward expansion of settlers.

The indigenous peoples of the Plains, such as the Lakota, Blackfeet, Cheyenne, Kiowa, and Crow, had adapted by organizing their societies around the horse and the buffalo, often competing against each other for control of hunting territory. But from roughly 1850 to 1880, these cultures were forced by the United States government onto reservations and became dependent on government rations—which were often undelivered—to replace the buffalo that had been virtually exterminated to make way for cattle ranchers. But what did it mean to go from a culture built on buffalo hunting and horse raiding to one on a government reservation?

In 1930, Plenty Coups, the chief of the Crow, dictated his life story to rancher Frank B. Linderman. Linderman's book, *Plenty-Coup: Chief of the Crows* became an anthropological classic. In the book, Plenty Coups told of his life as a Crow hunter and warrior, but he refused to talk about his life after the buffalo were killed and the Crow were restricted to their reservation. "I have not told you half of what happened when I was young," he told Linderman. "I can think back and tell you much more of war and horse stealing. But when the buffalo went away," he said, "the hearts of my people fell to the ground and they could not lift them up again. *After this, nothing happened.*" (italics added)

Philosopher Jonathan Lear devotes his book on Plenty Coups, *Radical Hope: Ethics in the Face of Cultural Devastation*, to trying to explain what it means to say "After this, nothing happened." In so doing, he

Plenty Coup: Chief of the Crows



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helps us to understand what it means to experience cultural devastation and live through it.

> . . . when the buffalo went away, the hearts of my people fell to the ground and they could not lift them up again. After this, nothing happened.

In the early nineteenth century, the Crow lived by hunting buffalo, raising horses, and raiding rival groups, particularly the Lakota, Blackfeet, and Cheyenne. War and raiding were central to the entire tribe. Girls and boys derived their names from the exploits of warriors. Wives publicly displayed their husbands' war trophies, and a woman grieving the loss of a husband or son was cause for retaliatory raids. Religion was suffused with the symbolism and rituals of war, and visions, dreams, and prayers inspired military undertakings.

Counting coup was the ultimate sign of courage. In battle, counting coup involved planting one's coup stick in the ground and defending it against an enemy until death. As Lear put it, it "marked a boundary across which a non-Crow enemy must not pass" (2006, 13). Plenty Coups described it as follows:

> To count coup a warrior had to strike an armed and fighting enemy with his coup stick, quirt, or bow before otherwise harming him, or take his weapons while he was yet alive, or strike the first enemy falling in battle, no matter who killed him, or strike the enemy's breastworks while under fire, or steal a horse tied to a lodge in an enemy's camp. (Linderman 1962, 55–56)

The value of courage in war was such that a common adage held "old age is a thing of evil, it is well for a young man to die in battle" (Lowie 1983, 218).

The Crow concern for war was built on the need to defend the territory on which they depended for sustenance. The westward advance of Europeans had forced groups such as the Lakota and Crow to struggle for what land remained. These struggles ended only with the cultural devastation that accompanied U.S. military action against indigenous groups and the virtual extermination of the buffalo.

For the Crow, the end began when they signed the Fort Laramie Treaty in 1851, giving the tribe rights to some 33 million acres and $50,000 worth of supplies a year—although these supplies were only delivered once. In 1867 the treaty was renegotiated, giving the Crow 25 percent of the land recognized in the first treaty, and in 1882 the land was further reduced to about 2 million acres. Then disease struck as they moved to a reservation in 1882–1884. In this life imposed on them by the United States, nothing that had meaning to them existed any longer. If things that counted as events, such as planting a coup stick, counting coup, going on a raid, or hunting buffalo, were no longer possible, it would make sense to say that "after that, nothing happened." Their context for living was destroyed. According to Lear, the problem for the Crow "was not simply that they could not pursue happiness in the traditional ways. Rather, their conception of *what happiness is* could no longer be lived" (2006, 56).

How can one survive such devastation? While some tribes fought and others fled, the Crow chose an option that was revealed to Plenty Coups in a dream vision.

When he was 9 years old, Plenty Coups went on a vision quest, a spiritual journey in which young Crow men sought a vision that would reveal their destiny. He went to a mountaintop, cut off one of his fingers to elicit pity from the spirits, and, on the second night, had his dream. He saw a buffalo bull, which turned into a man-person wearing a buffalo robe. He was led to a hole in the ground. Man-person shook his red rattle, and Plenty Coups saw endless numbers of buffalo emerging from the hole and covering the plains. But then they disappeared, and strange spotted animals emerged from the hole to replace them. "Do you understand what I have shown you?" asked Man-person. "No," Plenty Coups replied, "I [am] only 9 years old."

Then Man-person showed Plenty Coups an old man sitting under a tree and asked, "Do you know him, Plenty Coups?" "No," he said. "This old man is yourself," said Man-person. At this point a tremendous storm arose and, as Plenty Coups related it, the Four Winds began a war against the forest, knocking down all the trees but one. Man-person said that that the only tree left standing was the lodge of the chickadee. The chickadee, for the Crow, represented a good listener; nothing escaped his ears, he never missed a chance to learn from others, and he gained success from learning how others succeeded.

When he returned from his vision quest, Plenty Coups related the story to Yellow Bear, a tribal elder considered to be the wisest. He gave this interpretation of the dream: In

Plenty Coups' lifetime, the buffalo would go away forever and in their place would come the bulls and calves of the white man. "I have myself seen these Spotted-Buffalo drawing loads of the white man's goods," said Yellow Bear.

> The dream of Plenty Coups means that the white man will take and hold this country and that their Spotted-buffalo will cover the plains. He was told to think for himself, to listen, to learn to avoid disaster by the experience of others. He was advised to develop his body but not to forget his mind. The meaning of this dream is plain to me. I see its warning. The tribes who have fought the white man have all been beaten, wiped out. By listening as the Chickadee listens we may escape this and keep our lands. (Lear 2006, 72)

Lear imagines Plenty Coups reasoning as follows:

- Traditional life will end.
- The conception of the good intrinsic in a hunting life must end.
- Things will change in unexpected ways.
- There is more to hope for than mere physical survival—a dignified passage "across the abyss."
- My commitment to God and goodness is involved in the idea that something good will emerge, even if I don't know what it could be.
- I am thus committed to the idea that since we Crow must abandon the goods associated with our way of life, we must abandon the conception of the good life that our tribe has worked out over the centuries.
- We shall get the good back, though at the moment we can have no more than a glimmer of what that might mean.

We do not, of course, know the depth of Plenty Coups's thoughts, whether he was simply being practical in the face of overwhelming power, whether he may have had profound insights into history, or whether he was expressing some religious conviction. We may even be disappointed that he didn't face up to the evil inflicted on his people. But, as Lear emphasizes, Plenty Coups responded to the devastation of his culture with *radical hope*. It was radical because there was no understanding of what one is hoping for, only a conviction that some other good will emerge. And it was radical because it avoided despair.

On the basis of his dream, the tribe elected to ally itself with the United States, joining with them to fight the tribe's traditional enemies, the Sioux, Blackfoot, and Cheyenne. Although the United States kept revising its treaties with the Crow, the Crow were never displaced from their land, and they could say that they had never been defeated. They listened, as the chickadee listens. They sent their children to school, built a college, and adopted many traits of white culture. In his old age, Plenty Coups could feel that the dream had been confirmed by his experiences. In fact, he related his story to Linderman sitting under the same tree revealed to him in his dream: "And here I am, an old man, sitting under this tree just where that old man sat 70 years ago when it was a different world." He had, says Lear,

> brought himself to the spot where the dream told him he would be. And the recitation of the dream to Linderman was in its own way the triumphal counting of coup: he was telling the story of how he successfully went to "battle" to protect his land. He was now sitting under the tree that the dream told him he would if he adopted the virtue of the chickadee. (2006, 143)