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The Meaning of Progress and Development

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?

Introduction: The Death of a Way of Life

We live in an era in which we will witness (if we haven't already) the extinction of a way of life that is more than 100,000 years old. We know that 10,000 years ago, virtually all human beings lived in small-scale nomadic groups of 30 to 100 people, gathering wild vegetable foods and hunting large and small 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. Hunters and gatherers are the common ancestors of us all.

We have also witnessed the creation of a world that is radically divided into wealthy nations and poor nations. 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 the basics of health care.

The gradual extinction of a type of society that had flourished for at least 100,000 years and the creation of a world ill divided into the wealthy and the poor pose 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 begin to abandon their way of life. Why did they begin to domesticate plants and animals and exchange their nomadic existence for **sedentary** dwelling in villages and towns? 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 remaining small-scale tribal societies that exist in the world today, along with the hundreds of millions of others 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 the few existing small-scale tribal societies are remnants of an inferior way of life and that, given the opportunity, their members also will choose to adopt modern farming, wage labor, or urban life? Do we assume that we can explain the division of wealth in the world by saying that some nations have progressed, whereas others have not? Or is the concept of **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—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 this problem. 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 creates a relatively clear picture of **culture change**. As stated previously, until approximately 10,000 years ago, Earth's inhabitants were scattered in small-scale nomadic bands of 30 to 100 people who lived by gathering wild plants and hunting small and large game. Because the search for food required mobility, it probably wasn't 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 illness or (if used malevolently) to cause illness or death. 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 persons likely were of an egalitarian nature.

At some point in history, some hunters and 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 and then they would burn and plant another plot of land. Because larger, more sedentary 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 developed. Villages consisted of extended family groups, and people organized themselves into clans—groups of 200 to 500 people who claimed descent from a common ancestor. As a result of the development of leadership roles, 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 persons. 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—such as the pyramids in Mexico or the churches of medieval Europe. Competition between groups over available resources contributed to the development of standing armies; hereditary leaders emerged; settlements grew into cities. As technological complexity increased, people began to develop specific skills and to specialize in occupational tasks (such as herder, baker, butcher, warrior, or potter), and occupational specialization led to increased trade and the evolution of a class of merchants. About 300 years ago, some of these ranked, state societies began to develop into large-scale industrialized states that now are found all over the world—of which the United States is one. 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. By the mid-20th century, however, anthropologists began to question the idea that the life of hunters and

TABLE 2.1

Summary of the Development of Societies From Hunters and Gatherers to Agricultural States

	Hunters and Gatherers	Horticulturalists	State Societies
Population Density	Approximately one 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.

(Continued)

TABLE 2.1 (Continued)

	Hunters and Gatherers	Horticulturalists	State Societies
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.
Social Organization	Small family groups, whose major purpose is economic cooperation. Few status distinctions other than those of sex and age. Marriage for economic partnership and interfamily alliance.	Emphasis on extended family groups. Descent important for the distribution of wealth and property. Status distinctions based on wealth are common, but status mobility is usually possible.	Emphasis on nuclear family. Family is strongly patriarchal, with women holding low status. Strong bonds of intergenerational dependence are built on inheritance needs. Social distinctions between people are emphasized — sometimes based on occupations. Little or no status mobility.

gatherers was harsh and difficult. They proposed instead that, in many ways, this way of life was superior to that of groups maintained by sedentary agriculture.

Some anthropologists have proposed further that slash-and-burn agriculture was 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 and later developed industrialized societies? Moreover, if life in small-scale tribal societies isn't 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?

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 do poor countries not 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?

Case Study in Doing Anthropology #2: **Searching** for the Perfect Diet and Doing Development

Question 2.1 Why Did Hunter-Gatherer Societies Switch to Sedentary Agriculture?

The simplest explanation for why hunters and gatherers chose at some point to settle down and domesticate plants and animals is that sedentary agriculture was an easier, less dangerous, 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 19th 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. Morgan first became fascinated with the Iroquois of New York and later sent out questionnaires to travelers and missionaries all over the world asking them about the family organization and kinship terminology of cultures they visited. In his book *Ancient Society*, Morgan (1964/1877) 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. Some societies, notably our own, had evolved completely to civilization; 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 through late barbarism by the invention of pottery, agriculture, 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, assuming, as Morgan did, that humankind was progressing and would continue to do so.

For example, in the mid-20th century, Leslie White (1949, 1959) formulated what was 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. By means of technology, energy is put to work, and the amount of food, clothing, or other goods produced by the expenditure of energy will be proportional to the efficiency of the technology available. Because hunters and gatherers had only their own muscle power to work with, the amount of energy that could be applied to production was limited. As technological advances such as the plow, the waterwheel, and the windmill enabled people to grow more crops and domesticate animals, they became able to transform more and more energy to their use. Later, when new forms of energy in the form of coal, oil, and gas were harnessed by means of steam engines and internal combustion engines, the amount of energy human beings could harness again leaped forward.

Cultural development, from White's perspective, varies directly with the efficiency of the tools employed. More efficient technology allows human societies to transform more energy to fulfill their needs, and these societies can then 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 and thereby promoting occupational specialization. Specialization then produced widespread trade and 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 20th century. But more relevant for us, his theories represent the coalescence of a point of view that is prevalent among many people today: that technology is the true measure of progress and that the more energy human societies can harness through the development of new power sources, the more social, economic, and political problems they will solve.

Exercise 2.1a

Judging the Value of Ways of Life

Make a list of what you think are the advantages and disadvantages of civilization and the advantages and disadvantages of life 10,000 years ago.

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. But knowledge of our cultural past and what we now know about the life of hunters and gatherers offers a different perspective. John Maynard Keynes, one of the foremost economists of the 20th century, predicted in 1930 that advances in technology would allow us to satisfy our economic needs by working only 15 hours a week, giving us extra time to spend on things such as art, music, and family. In fact, as James Suzman (2017) points out, the American worker could enjoy the standard of living of a worker in 1950 by working only 11 hours a week. Instead, an average worker in the United States today is putting in 44 hours a week. What happened?

The progress theory of cultural transformation began to be seriously questioned by anthropologists during the 20th 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 a paradise lost.

One of the first suppositions about life in hunting and gathering societies to be challenged had to do with the roles of males and females. Contrary to common belief, studies found that the gathering activities of women produced an equal, if not greater share of food in these societies; men hunted, but except in such areas as the arctic and subarctic regions, meat and fish constituted only about one-quarter to one-half of the diet. A second supposition—that hunters and gatherers often went hungry—proved to be unfounded. Apparently, they had plenty of food. And contrary to popular opinion, they didn't have to work very hard to get it.

Life Among Hunter-Gatherers: The Hadza and the Bushman¹

When James Woodburn studied them in the 1960s, the Hadza were a small group of nomadic hunters and gatherers in Tanzania, eastern Africa. Woodburn (1968) described their territory as dry, rocky savanna, characterized by one traveler as

¹The names by which indigenous peoples are known are often not those they call themselves. Members of Khoisan-speaking indigenous hunter-gatherer groups, the first nations of Southern Africa, were known as Bushman, !Kung, San, Ju/Wasi, or Ju/'hoiansi. We'll use the term *Bushman* largely because it is widely known and has been used most recently by anthropologists working in Southern Africa.

“barren land” and “desert.” 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. For those who knew where to look, plant foods—roots, berries, and fruit—were also abundant, constituting 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 bow and poisoned arrows, and when Woodburn lived among them, they 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. For a Hadza to go hungry, said Woodburn, was almost inconceivable. Plant food was so plentiful that the Hadza made no attempt to preserve it. Physicians who examined Hadza children in the 1960s found them in good health by tropical standards, and Woodburn says that from a nutritional viewpoint, the Hadza were better off than their agricultural neighbors. Later studies, as we'll see, found that the Hadza had few of the diseases, such as cardiovascular disorders or obesity, common in modern societies. While life expectancy is lower than that for most modern societies because of the number of infant deaths, many Hadza live into their 60s, 70s, and beyond.

The Bushman or San peoples of the Kalahari Desert, in Namibia in south-western 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 Bushman in the 1950s. Their work, along with later studies by Richard Lee, James Suzman, and others, has provided us with a good description of Bushman hunting and gathering activities.

Bushman 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 the larger holes retained water. Lee (1984) found that the food quest was constant among the Bushman, as it was among the Hadza. 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 food as men.

Lee (1984) reports that the Bushman never exhausted their food supply. The major food source was the mongongo nut, which is far more nourishing than our own breakfast cereals and contains five times the calories and 10 times the protein of cooked cereals. With 1,260 calories and 56 grams of protein in 300 mongongo nuts, they provided more than 50 percent of the Bushman caloric intake. Bushman territory contained more than 80 other species of edible plants—most of which they didn't even use—although they did eat about 20 species of roots, melons, gums, bulbs, and dried fruits. 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 other words, Lee found that the environment of the Bushman 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 Bushman diet was deficient, it was in carbohydrates because there was no equivalent to our white bread, pasta, and rice, although Suzman (2017) notes that some 15 to 20 percent of their calories came from honey.

The Bushman didn't spend much time getting food. Lee (1984) conducted a careful study of their work habits. During the first week in which he recorded the amount of time spent getting food, he found that individuals averaged 2.3 days at this work, with a typical working day of six hours. Overall, the average time spent getting food was 2.4 days, or less than 20 hours of work per week. The most active person Lee observed worked at getting food an average of 32 hours a week. Other time was spent doing housework or mending tools.

Lee concludes that, contrary to the stereotype that hunters and gatherers must struggle with limited technology to obtain the food they need for survival, they don't have to work very hard to make a living. He says that the idea that hunting and gathering societies struggle for existence is an ethnocentric notion that assumes that our own technologically oriented society represents the pinnacle of development. Also, as important as the transition from hunting and gathering to agriculture was, it is important, as Suzman (2017) notes, to remember that more than nine-tenths of human history was shaped by hunting and gathering, and if the measure of sustainability is to be endurance over time, then hunting and gathering represents the most successful way of life in all of human history.

But if that is true—and if Lee, Suzman, and others are correct about the ease of survival of hunters and gatherers and if their lives are not harsh and dangerous—then why did those hunters and gatherers of 10,000 years ago abandon hunting and gathering, begin to domesticate crops and animals, and settle in permanent villages and towns?

The Transition to Agriculture

There is a perspective on cultural evolution that views the change from hunting and gathering to modern industrial society less as development or progress and more as a necessary evil. This perspective emphasizes the influences of population growth and **population density**, which is the number of people living in a given area. To understand this point of view, we need to examine the transition



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PHOTO 2.2 Readily available plant foods, such as the nutrient-rich mongongo nut, were the mainstay of the Bushman diet. Here, Bushman women return to camp after foraging for mongongo nuts to feed their families.

from hunting and gathering to agriculture and also explore the reasons for the eventual change from relatively simple slash-and-burn agriculture to more complex labor-intensive irrigation agriculture.

Anthropologist Mark Cohen (1977) 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 reported 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 travel in search of them. Imagine this area as a series of concentric circles; as the outer circles are approached from the center, the group may decide to move to another area where food is more plentiful in order to reduce the distance members travel. Cohen suggests that when population density in a given geographic 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. Cohen points out that anthropological and archaeological evidence suggests they knew how to do this 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 necessary consequence of population growth rather than a consequence of a discovery or invention that was adopted because it made life better. In a limited way, of course, this transition from gathering to cultivating did make life easier; when people began to harvest crops in a limited area and remained in villages, groups no longer needed to travel as much. However, Cohen and others argue that agriculture didn't make life better at all; in fact, it made life worse. (We explore that claim a little later in this chapter.)

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

Exercise 2.1b

Making the Decision to Farm

Here is the situation: The year is approximately 10,000 B.C.E. You are one of a group of elders of a hunting and gathering group similar to the Bushman. Your band includes some 80 people. For as long as you can remember, you have lived by gathering nuts, roots, fruit, and other foodstuffs and by hunting wild game. Your territory has always been adequate to supply the necessary food for members of the group, but people have noticed recently that they have had to travel

greater distances to collect food or to find game. Moreover, the territory that you consider your own now overlaps with that of other hunting and gathering groups.

As do most hunting and gathering peoples, you know how to plant crops and harvest them and you have come to realize that there is sufficient wild wheat, yams, maize, or other vegetable foodstuffs to support your group as long as you cultivate them (i.e., plant and save seeds for replanting), harvest the plants when they are ripe, store the food, and settle down next to the stored food.

A group of younger members of the band, tired of traveling greater distances in search of food and fearful of conflict with neighboring bands whose territory overlaps yours, advocates settling down and taking advantage of wild crops.

The problem: Should the elders take the advice of the younger members of the group, begin to harvest and store wild foods, and settle down in relatively permanent villages?

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. You must tell them what the consequences of not settling down would be.

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. You also need to tell them the conditions under which you would take their advice.

However, swidden agriculture requires large tracts of available 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 that 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 5 or 10 years. But when land is cultivated more frequently, the yield per acre declines. Thus, swidden agriculture is efficient only as long as 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. Then, new agricultural techniques must be developed to increase the yield on the 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 suggested 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 10 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 isn't 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 if irrigation agriculture is used, whereas 3,000 acres are needed if swidden agriculture is used. If a group

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).

has enough land, it might as well keep its farming methods simple, changing them only if population increases or the supply of land decreases. However, the history of humankind has in fact been marked by an increase in population and an increase in the ratio of people to land.

Robert L. Carneiro (1979) outlines the consequences of population density for cultural development. The increase in the number of people relative to the available land creates two problems. First, if there are more people than there is available land to feed them, conflict may arise between people vying for the available resources. Second, if a growing population decides to intensify methods of growing crops, there is a need for greater societal organization. For example, irrigation agriculture requires the digging of ditches, the building of pumps to bring water to the fields and to drain water from them, and the coordination of one and sometimes two harvests a year. 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 historical change of societies from hunting and gathering to gradually more

labor-intensive methods of agriculture wasn't 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 food production techniques represented necessities brought about by population increase or an increase in population density, and they created the need for more formal, more elaborate political and social institutions—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, along with the associated transformations in social, political, and economic institutions, doesn't represent progress, then isn't it safe to say, at the very least, that Western society—particularly within the United States—has agricultural techniques that are vastly superior to those of small-scale tribal societies? Those who claim that modern food-producing techniques are far more efficient than any other point out that in American society, only one calorie of human energy is needed to produce 210 calories for human consumption, whereas hunter-gatherers produce fewer than 10 calories of food for every calorie they use collecting the food. But others argue that these figures are deceptive. At the same time that we vastly decreased the amount of human labor required to produce food, they say, we vastly increased the amount of non-human energy required for food production. From that perspective, we expend one calorie of nonhuman energy in the form of nonrenewable fossil fuels (e.g., oil and coal) for every eight calories we produce.

Producing Potato Calories

To make this point about energy, John H. Bodley (1985) 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. When the crops are ready, sweet potatoes are cooked in pits and eaten. In one New Guinea community, sweet potatoes account for 21 percent of the diet of 204 people. Some of the sweet potatoes are fed to pigs, thus producing protein and accounting for an even larger proportion of the diet. The people use only 10 percent of the arable land, and there is no danger of resource depletion. With their agricultural techniques, the New Guinea farmers can produce about five million calories per acre.

American potato farms produce more than twice as many calories per acre as New Guinea farmers—about 12 million calories per acre. However, as Bodley points out, in addition to the human energy that goes into American farming, 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. American potato farmers need specialized machines to cut, seed, harvest, dig, and plant. In 1969, 36,000 tons of fertilizer were applied to 62,500 acres—more than 1,000 pounds per acre. Thus, although the American system produced more potatoes, the actual energy costs per calorie were lower in New Guinea. Moreover, the United States incurred all kinds of hidden costs from environmental consequences such as soil erosion and pollution.

Americans must also deal with distribution costs, which are minimal in traditional cultures, where most households consume what they produce. In modern industrial societies, 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; industrial and domestic food preparation; and refrigeration—Americans expend 8 to 12 calories of energy to produce a single calorie of food!

Bodley suggests that the reason Americans expend so much energy to produce food is to make money. He maintains that Western agricultural techniques are wasteful and inefficient. To illustrate his point, consider the potato chip. About half of the potatoes grown in the United States are sold as raw potatoes; the rest are processed into products such as instant mashed potatoes and potato chips. On the average, each American consumes 4.6 pounds of potato chips per year. All potatoes undergo significant processing after being harvested. They are mechanically washed, chemically sprayed to inhibit sprouting, colored and waxed to increase consumer appeal, and transported and stored under controlled conditions. Potatoes sold for potato chips must also be chemically sprayed weeks prior to planting to kill the stems; otherwise, the starch buildup would produce unappealing (but otherwise nutritious) dark potato chips. These potatoes also are chemically treated to prevent darkening after they are peeled and sliced; oils, salts, and preservatives are added in the cooking; and, finally, the end product is packaged in special containers and shipped. Manufacturers expend additional marketing costs and energy to convince consumers to buy the chips.

Thus, the human and nonhuman energy required to convert a potato into potato chips is far greater than the energy expended in New Guinea to produce a more nutritious sweet potato! Moreover, we don't fully appreciate the health risks of our practice of adding some 2,500 substances to our foods to color them, flavor them, or preserve them.

Question 2.2 Why Are Some Societies More Industrially Advanced Than Others?

Even if we agree that hunters and gatherers don't have it that bad and that simpler forms of agriculture are more energy efficient than modern techniques for growing crops and delivering food, we still haven't explained the vast divisions in the modern world between rich nations and poor nations. If progress isn't the reason, why then do most people in the industrial world enjoy a standard of living superior to those in the so-called nonindustrial or underdeveloped countries of the world? Why, in 2020, did more than 700 million people live in absolute poverty, earning the equivalent of less than \$2 a day, while in 2019, according to the charitable organization Oxfam (Coffey et al., 2020), 2,153 people had more wealth than 4.6 billion people.

Trying to answer these questions requires an excursion into world economic history of the past 300 years, but rather than try to pack three centuries of

history into the next few pages, let's see what we can learn 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 18th century and the first half of the 19th century.

Prior to the beginning of the **Industrial Revolution** in Europe, the world was significantly different in its distribution of wealth. China was arguably the richest country in the world during the 16th and 17th centuries, as gold and silver taken from the mines of South America by the Spanish and Portuguese were funneled into China to pay for Chinese silks, spices, teas, and luxury goods; India was developing a thriving cotton textile industry as Indian calicoes flooded into Europe. Wealthy states had developed in western Africa, and Islamic traders thrived from Africa into Southeast Asia. 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. However, England had long enjoyed a thriving trade in textile goods—most notably, raw wool and inexpensive wool textiles.

Early in its development, 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 cloth or wool product might be sold at a local market or fair or, more often, sold to urban-based merchants or traders for resale at fairs or shipment overseas.

But although the trade in home-produced textiles was profitable for all, traders and merchants discovered they needed to better control 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. Some merchants supplied only the wool, cotton, or linen, whereas others supplied everything, including the looms. The merchants delivered the supplies and tools and picked up the finished products, generally paying the producers for each piece produced. Putting out had numerous advantages for textile merchants; it gave them more control over the production process, it provided a source of cheap labor as it brought women and children into the production process, and if demand for their products slackened, the merchant could easily control how much was produced by limiting the materials they put out.

Increasingly, however, beginning in the 18th century, English merchants found it expedient to transform the putting-out system into a **factory system** by bringing the spinners, weavers, and others together in one location to produce the cloth. Factories were neither new nor unique to England. Factories employing more than 15,000 workers existed in France in 1685. Furthermore, merchants were not particularly anxious to invest 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.

Time Life Pictures/Mansell/The LIFE Picture Collection via Getty Images



PHOTO 2.3 This cartoon is one of a series by Robert Cruikshank decrying the exploitation of child labor by British industrialists. Prior to 1833, there were no restrictions on ages or hours worked by children in factory jobs.

The only things that made manufacturing investments attractive were various kinds of government subsidies or laws (e.g., vagrancy laws that required people to have jobs) that ensured the flow of cheap labor. Textile manufacturers were able to draw on workers who had been forced off their land by enclosure legislation that pushed peasant farmers off common land at the behest of landowners wishing to grow crops for sale to the increasing population of England. Because there were no minimum wage laws or laws restricting the use of child labor, factory owners could also make even more use of the cheap labor of women and children; thus, by 1834, children under age 13 represented 13 percent of the British cotton industry, and by 1838, only 23 percent of textile 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 technologies. Mechanization of the textile industry began in earnest with John Kay's flying shuttle in 1733, 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 a spinning mule, which combined features of the water frame and the spinning 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 India in the

18th century took more than 50,000 hours to process 100 pounds of cotton into thread; in England, Crompton's spinning mule reduced that to 2,000 hours, and power-assisted spinning mules around 1795 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. In economic terms, it transformed England into the wealthiest country in the world. And textiles were not, of course, the only industry that expanded; the trade and manufacture of iron and the agricultural production of food commodities further increased the wealth of the growing British Empire. 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 six million in 1700 to nine million in 1800. Moreover, English textile manufacturers were able to sell much of their product to markets in Europe and the growing markets of the Americas. But there was still competition for these markets. England wasn't the only textile producer; Holland, France, and Spain were busy competing (and often fighting each other) for overseas markets as well as sources of raw materials. 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

Mughal India of the 17th century was an empire created by Turks from Turkestan, who made their chief, Babur, the first Mughal emperor in 1527. India was a major trading country, and centuries-old trade networks linked India to the rest of 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 into war, defeating them conclusively in 1757. As an aftermath to their victory in Bengal, the English plundered the state treasury for some five million pounds and gained control of 10,000 Bengali weavers. By 1765, the British East India Company became the civil administration 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, 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—named after the city of Calicut—were the craze of Europe. To meet this challenge, the British government prohibited the British East India Company from importing calicoes into England. To take advantage of the import restriction, English factories began to produce copies of popular Indian textiles for sale 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.

India was still a major producer of raw cotton, although it wasn't a variety favored by English or American manufacturers; instead, it was produced for export to China. However, it was primarily opium that led the trade into China.

The British—and Western European nations in general—had a problem with trade into China; Chinese products—notably tea—were in high demand, but there was little produced in England, or the rest of Europe for that matter, that the Chinese wanted or needed. However, there was a market in China for opium, and by 1773, the British East India Company had a monopoly over opium sales. Opium was illegal in China, but the Chinese state seemed incapable of cutting off supplies, and smuggling opium into China was hugely profitable for British as well as American and French merchants. When the Chinese government tried to enforce the laws against opium sales in 1839 by seizing opium held by British merchants in warehouses in Canton, the British government intervened militarily and effectively forced the Chinese government to stop enforcing opium laws. An analogy today might be the government of Colombia sending troops to the United States to force acceptance of Colombian cocaine shipments. Moreover, the British demanded and received additional trading rights into China, further opening a market not only for opium but also for textiles.

The British-led opium trade from India to 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 19th century, China still took in a surplus of 26 million silver dollars; by the third decade, 34 million dollars left China to pay for opium. Second, it's estimated that by the end of the 19th century, 1 out of every 10 people in China was addicted to opium. Finally, cotton textile exports 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 of the economic decline and British colonization of 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 wasn't 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 by the need for cotton. As an institution, it extends well back into antiquity. Nations at war often used captives as slaves. But the slave trade grew from the 15th century to the 19th century in response to the economic expansion and demands of European trade, including Spanish demand for labor in the silver mines; Spanish, Portuguese, British, and French demands for cane cutters and millers for the sugar plantations of Brazil and the Caribbean; and American demands for workers on the cotton plantations of Georgia, Alabama, Louisiana, Texas, and Mississippi. From 1451 to 1600, some 275,000 slaves were sent from Africa to Europe and America. During the 17th century, some 1,341,000 slaves were sent, and from 1701 to 1810, some six million people were forcibly exported from Africa. Another two million were sold out of Africa between 1810

and 1870—many destined for Cuba.

The production of cotton with slave labor might be said to have fueled the Industrial Revolution in the United States. Although England imported raw cotton from its possessions in the West Indies and from Turkey, by 1807, half was coming from the United States. In fact, 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 the 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. Each plantation required at least 50 to 200 slaves depending on the quality of the soil.

The British demand for American cotton was obviously not the cause of slavery, but it ensured its continuance in the United States into the second half of the 19th century. Between 1790 and 1860, some 835,000 slaves were moved from Maryland, Virginia, and the Carolinas to Alabama, Louisiana, Mississippi, and Texas in one of the greatest forced migrations of all time. But it wasn't the only forced migration instigated by the world demand for and profitability of cotton. It was also a driving force behind the forced removal in the 1830s of 125,000 Native Americans from their homes in Georgia, Alabama, and Mississippi to the Oklahoma territory.

The story of the forced removal of the Cherokees is most instructive in supplying an answer to why some people of the world enjoy higher levels of wealth than others. The Cherokees had always been considered one of the more so-called advanced Native American groups—being counted by early American settlers as one of the “civilized tribes” of North America. They were horticulturists, living in large autonomous villages and, in the aftermath of the American Revolution, occupying large tracts of fertile land from North Carolina into Georgia. In 1802, in order to persuade southeastern states to give up claims to territory in the West, Thomas Jefferson instituted what became known as the Georgia Compact



Behrmann/Contributor/Getty Images

PHOTO 2.4 Reliance on slave labor in the United States was closely tied to the rise of the British textile industry. Here, a slave family picks cotton on a plantation near Savannah, Georgia, during the early 1860s.

of 1802. The compact called for Georgia and the Carolinas to give up claims to western territories in exchange for land held by southeastern tribes, such as the Cherokees. But the tribes fought the removal, embarking on a modernization plan; within decades, the Cherokees had constructed plantations, held slaves, and had their own newspaper, schools, and alphabet. They were also among the soldiers under Andrew Jackson that defeated the British in the War of 1812.

The Cherokees lobbied Congress extensively to repeal the Georgia Compact but to no avail. Andrew Jackson, who had made Indian removal one of the cornerstones of his presidential campaign in 1828, signed the final order, and the Army was sent in to forcibly move the population as land speculators flooded onto what had been prosperous Cherokee farms and plantations. White farmers using Black slaves took over thousands of additional acres of what had been Indian land and converted much of them to cotton production. Thus, White farmers using Native American land and African labor to produce cotton for the English and American textile industries created much of the future wealth of the young American republic.

In sum, the growth of the textile industry in England produced great wealth for some people but in the process destroyed textile manufacturing in India, led to the colonization of India and China, extended slavery in the United States while it drained Africa of productive labor, and enhanced the wealth of the United States while leading to the forced removal of indigenous people from their lands. The mass production of textiles in England and elsewhere in Europe also destroyed textile manufacture by artisans in areas of the world where British textiles were sold. Because women were often the main textile producers in many societies, we might also speculate that the textile trade may have led to the decline of the status of women in these societies.

We must also consider that England was not the only producer of textiles or the only country seeking to open and control overseas markets; France, Germany, Holland, and, later, the United States also had thriving textile industries. We must also remember that textiles represented only one of many industries of Western Europe that required raw materials and new markets. The new demands for sugar, cocoa, palm oil, tobacco, and coffee also led to the conversion of millions of acres of land around the world from subsistence farms to cash crops—further turning self-sufficient peasant farmers into dependent wage laborers or unemployed poor. And, finally, we must remember that we have examined only a brief period of time. In fact, the heyday of European colonial expansion didn't occur until the last quarter of the 19th century and the first decades of the 20th. Looking at the bigger picture, we begin to understand why the problems of the so-called nonindustrial nations are due less to their own shortcomings than to the exploitative activities of others and why peasant farmers in India in 1400 were significantly better off economically than their Indian counterparts in 1960.

Question 2.3 Why Do Poor Countries Not Modernize and Develop in the Same Way as Wealthier Countries?

The Industrial Revolution radically transformed the lives of people in Western Europe and the United States as the vast majority of the population went from being farmers to laborers. In most cases, this wasn't a matter of choice;

people began to sell their labor—not because wage labor offered a better life but because they no longer possessed land on which to secure a livelihood. Moreover, the availability of jobs was subject to the whims of the market and the rise and fall in the demand for products. As long as there was a demand for products, jobs were secure; when demand slackened, people were thrown out of work. Consequently, the development of industry in the 19th century was marked by periodic downturns in economic growth and the occurrence of economic depressions, such as those sparked by the Panics of 1837 and 1873.

Overall, however, the rate of economic growth and technological advancement was astounding, resulting in a dramatic improvement in the standard of living of most people in Western countries, although many in the industrialized world didn't enjoy increased wealth, and people in the Third World often saw their standard of living decline as their countries fell under the influence of European powers.

Regardless, as countries began to gain independence from their colonial dominators, they wished to emulate the lifestyle and standard of living of the industrial powers; the way to do this, they reasoned, was to imitate the colonizer and industrializer. Hence, the push for what became known as **economic development**.

President Harry S. Truman first propounded the idea of economic development in his inaugural address in 1949. The assumption was that nonindustrial countries of the world were backward and needed to develop—*development* being largely a code word for “westernized.” This was going to be done to “improve” people's lives. As one United Nations report (1951) put it:

There is a sense in which rapid economic progress is impossible without painful adjustments. Ancient philosophies have to be scrapped; old social institutions have to disintegrate; bonds of caste, creed and race have to burst; and large numbers of persons who cannot keep up with progress have to have their expectations of comfortable life frustrated. Very few communities are willing to pay the full price of economic progress. (p. 15)

An unprecedented will to know everything about the Third World flourished, and the Third World witnessed a massive landing of experts, each in charge of investigating, measuring, and theorizing about this or that little aspect of Third World societies. In his book *Encountering Development: The Making and Unmaking of the Third World*, Arturo Escobar (1995) suggests that these experts conceived of social life as a technical problem that could be entrusted to development professionals, consisting largely of economists and agricultural experts allegedly qualified for the task.

The idea of economic development that emerged was based on three key assumptions: (1) Economic growth and development are the solution to national as well as global problems; (2) global economic integration will contribute to solving global ecological and social problems; and (3) foreign assistance to undeveloped countries will make things better. Thus, countries that wished to develop sought foreign loans and investments to create an industrial infrastructure: dams for hydroelectric power, coal-fired generators, or nuclear power plants; transportation systems, including ports, roads, and railways; and loans to train and educate workers. The loans would allow undeveloped countries to produce things

that developed countries did not produce themselves—cash crops such as cotton, sugar, palm oil, tobacco, coffee, and cocoa and natural resources such as oil, metal ores, and lumber. This theory of economic development wasn't new to the second half of the 20th century; what was different was the degree of apparent support offered by the wealthy nations of the world themselves. One major Western institution that was to promote economic development was the **World Bank**.

Exercise 2.2

Evaluating Development

It's 1960. You've been hired as a consultant by the World Bank to evaluate a loan application that seeks to help Brazil industrialize. The country is predominantly agricultural, with some 70 percent of the population living in rural areas. Most farms consist of subsistence plots worked by small family groups producing crops such as tomatoes, sweet potatoes, and corn. Per-capita income is very low—equivalent to about \$200 a year in today's currency. Sugar is a major export crop grown largely in the arid northeastern region of the country. Virtually all settlement is along the Atlantic coast, while the vast tropical forests of the Amazon are mainly undeveloped—inhabited largely by indigenous peoples and itinerant rubber tappers.

The country is run by a democratically elected legislature whose members are seeking to make Brazil a modern economic and industrial power. Their loan application proposes the following:

- The building of hydroelectric projects (dams and irrigation facilities) to supply power to attract industry and modernize agriculture
- Building of roads into the Amazon to encourage settlement and population redistribution
- Funds to resettle people into areas in which roads will be built
- Funds to develop new crops for export and expand sugar production

Your task is to evaluate each proposal, consider the impact it will have on the people of Brazil, and recommend whether to fund the proposal. If a proposal is unacceptable, you may propose conditions under which it would be acceptable.

The World Bank was established in 1944 in Bretton Woods, New Hampshire, at a meeting of the representatives of the major industrial nations allied against the Germans, Japanese, and Italians. Their task was to plan for the economic reconstruction of countries devastated by World War II and develop a postwar plan for worldwide economic and monetary stability. Out of that meeting came the plan for the **International Monetary Fund (IMF)** and the International Bank for Reconstruction and Development (the World Bank). Funds for the bank

were to be donated by member nations—largely in the form of loan guarantees. The bank would lend money to governments for specific projects—highways, dams, power plants, factories, and the like—and the governments would agree to pay back the loans over a set period of time. The charter also specified that loans must be made without any regard for political or noneconomic factors, and the bank must not interfere in the political affairs of any member or debtor nation.

The World Bank began operating in 1946, with the initial loans going to European countries to rebuild their economies after World War II. But soon, the World Bank was making huge loans to countries such as Brazil, India, and Indonesia—loans that were supposed to transform their economies, bring wealth, and alleviate poverty. Moreover, once the World Bank approved loans, other banks would often follow. But in spite of the growth of foreign loans to undeveloped countries, many observers argue that they not only increased poverty but also led to rampant environmental devastation. In spite of apparently good intentions, how could this happen?

Debt, SAPs, and Vultures

Debt proved to be the burden that initiated a period of what is called *neocolonialism*. Accepting the idea that economic development was the key to bettering people's lives, poorer countries—often with the encouragement of agencies such as the World Bank—began to borrow heavily to build roads, power facilities, telecommunication systems, industrial infrastructure, and energy-intensive agricultural systems. They were advised to attract investment money with which to grow economically. The rapid rise in the 1970s of energy costs, the decline in the value of raw materials exported by poorer countries, and the rise in interest payments on loans left most emerging economies unable to pay back the loans that they had gotten from the World Bank as well as from private lending agencies and foreign investors. Unable to pay their debts and, consequently, unable to borrow more to meet the needs of their citizens, these countries turned to the IMF (which had been established at Bretton Woods to ensure global financial stability) to somehow restructure their debt to avoid defaulting on their loans. Unlike individuals, countries cannot declare bankruptcy and start all over again. They can default and refuse to repay what they owe (and, historically, many countries have done that) or they can repay only a portion of what they owe (and many countries, including European powers, have done that). The problem with default is that it can prevent future borrowing, raise the interest rates charged for loans, or prompt military confiscation or invasion by more powerful countries seeking to recoup the loans of their citizens.

In the 1980s, the IMF, with the support of member countries, devised agreements, called **structural adjustment programs (SAPs)**, with debtor countries to restructure their economies and their international debts. In exchange, debtor countries agreed to reduce their government workforce (thus throwing thousands out of work), lower remaining government salaries, sell and/or privatize state-owned businesses and services (e.g., utility companies, railroads, health facilities), end government subsidies (e.g., help to farmers, food programs for the poor), reduce taxes on foreign investors, weaken state environmental and labor regulations, and devalue local currency—often cutting its worth by half

and seriously depleting the buying power of citizens. This economic “shock treatment” imposed by the IMF would, economists believe, ultimately return the country to a sound economic footing and help resume economic growth. However, critics claim that the goal of SAPs is less to help poor countries than it is to help investors, businesses, and corporations to profit from the plight of the poor. The IMF and the World Bank have responded with various programs to restructure, lower, or forgive the debt of some countries that can never repay the loans plus the interest on the loans. But even those efforts have sometimes been thwarted by investors—in what have been termed *vulture funds*—who buy up the debt of poor countries from private lending agencies for a fraction of what is owed and then sue the debtor countries for repayment of the full debt plus interest. In effect, money that might go for education, health services, or aid to the poor flows back to rich investors.

The consequences of debt, SAPs, and vulture funds on these countries and their citizens can be devastating and helps explain why so many today still live in poverty, with inadequate diets, slum housing, little or no education, and virtually no medical care.

In Senegal, for example, the government instituted a series of reforms in the 1980s and 1990s as part of an IMF-sponsored structural adjustment program, and while economic growth increased, so did the number of people living in poverty. State-sponsored medical programs were replaced with an initiative that purported to promote individual responsibility for health care; user fees were charged for basic health services, and individuals were charged for drugs. But the changes made it impossible for most rural dwellers to participate, and many didn't have the money or couldn't obtain it from household heads—generally men. And a shift away from subsistence agriculture to commercial agriculture further disenfranchised women and increased their difficulty in paying for medical services. Accordingly, women have suffered disproportionately—a fact made evident globally by the almost 600,000 deaths per year of women in childbirth, 99 percent of which occur in developing countries, most of which have cut government-sponsored maternal services in line with IMF-sponsored SAPs.

Whether the price of progress through industrialization must be increased poverty, hunger, and environmental devastation is, for many, an open question. Many observers argue that the process of economic and industrial development takes time and that countries such as Brazil and India have seen a marked improvement in their economic situation. Some point to the cases of the so-called newly industrialized countries, such as Korea and Taiwan, as examples of what can be done. But the non-Western countries that have succeeded in emulating the West (and Japan is foremost among these) were never colonized by the West, as were the poor countries of Africa and South America. And the country that has emerged as the second-largest economy in the world—China—emerged almost totally independent of Western multilateral institutions.

In sum, then, are the people of the world better off now than they were before the Industrial Revolution? Obviously, the answer depends on who you are. If you're fortunate enough to be a laborer, merchant/businessperson, or professional in one of the wealthy countries of the world, then you're likely to be materially better off than your counterpart of five centuries ago, provided the price

you pay in health risks because of a damaged environment doesn't offset your material gains. If you're a laborer or a small farmer in one of the poor countries of the world, then it's hard to see how you are better off than your peasant counterpart of centuries past. And if you're among the landless, unemployed, or underemployed of the world—almost a billion without enough food—one is hard pressed to see how your life could be an improvement over those of people in centuries past.

Question 2.4 How Do Modern Standards of Health and Medical Treatment Compare With Those of Traditional Societies?

Even if the economic changes of the past two centuries haven't improved the lives of many of Earth's inhabitants, 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 we have progressed in our ability to treat disease; and second, we have to ask whether we have fully understood the traditional medical techniques that modern medicine has sought to replace.

Illness and Inequality

One of the supposed triumphs of modern society is the treatment and cure of disease. Life expectancy has more than doubled in the 20th century: In 1900, world life expectancy was approximately 30 years; in 2000, it was 63 years; and in 2020, it is almost 73 years. Antibiotics save millions each year from death, and modern diagnostic methods and equipment allow medical practitioners to more easily identify the onset of disease. But 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. Worldwide, 32 percent of all deaths are caused by infectious diseases, but in the poorer countries of the world, infectious diseases are responsible for 42 percent of all deaths, compared to 1.2 percent in industrial countries. Another 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 and where industrial wastes are dumped untreated into rivers and lakes. Thus, your income determines your chances of coming into contact with a deadly pollutant. This is true even in the United States, where a study in the 1980s found that three out of four off-site commercial hazardous landfills in southern states were located primarily in African American communities, even though African Americans represented only 20 percent of the population. Industrialized countries already ship 20 million tons of waste annually to the poor countries of the world.

We can perhaps better judge our “progress” on the degree to which we are protected from infectious diseases 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** (that is, an infectious agent such as a bacterium, virus, or parasite) or a **vector** (such as a mosquito, tick, flea, or snail) that carries the pathogen. 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, what actions of human beings increase their likelihood of coming into contact with an infectious pathogen? One feature of cultural history is that cultural complexity has served to increase our exposure to infectious agents. Large permanent settlements attract and sustain such vermin 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. For example, schistosomiasis is a disease caused by worms or snails that thrive in the irrigation ditches constructed to support agriculture. The domestication of animals such as dogs, cats, cattle, and pigs—another characteristic of advanced societies—increases contact between people and disease-causing microorganisms. The requirements of large populations for the storage and processing of food also increase the likelihood of the survival and spread of disease-causing agents. In the modern world, the poorer you are, the more likely you are to be exposed to infectious pathogens.

Coming into contact with an infectious pathogen need not be enough to kill you; the pathogen must be deadly. But this can also depend on your social and cultural situation and your income. In fact, human actions can make a pathogen more or less harmful. Generally, it's not to the advantage of pathogens to kill their hosts; it's better for the pathogen to allow its host to live and supply its nutrients. However, if the pathogen doesn't need its host in order to survive, it can evolve into a more deadly form. This is the case with waterborne infections. For example, diarrheal diseases tend to be more virulent if they're spread by water systems and don't require person-to-person contact. Disease 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 washing of sheets or clothing or through bodily wastes. Thus, you are far more likely to contract a more deadly disease if you don't 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, your immune system's ability to function is clearly a function of your diet, and diet is determined largely by income level. Insufficient food is one of the main factors that increases the likelihood of immune system failure.

Finally, even if your immune system fails to repel an infectious pathogen, societies do develop methods to cure whatever illnesses afflict them. And there is little doubt that the discovery of methods to cure infectious disease marks

one of the great success stories of modern culture. Unfortunately, citizens' access to these cures is determined largely by the degree of economic inequality in their country, not by their country's absolute wealth. For example, the United States—the wealthiest country in the world—ranks 36th in the world (well behind all the other rich countries, and even behind a few poor ones) in life expectancy. Not coincidentally, the United States has the largest income gap of any industrialized country; Japan, with the lowest income gap between rich and poor, has the highest life expectancy, despite having triple the cigarette usage of the United States.

The relationship between wealth and access to cures is most evident with HIV/AIDS. Almost 40 million people in the world are presently infected with HIV, with more than three-quarters living in African countries. Medicines exist to prevent HIV from developing into full-blown AIDS, but they are prohibitively expensive and completely out of reach for victims living in poor countries whose health care systems have been decimated by World Bank and IMF policies.

Finally, our travel patterns subject us to waves of epidemics and even pandemics, such as Covid-19 in 2020, that threaten to overload whatever barriers and treatment regimens we erect to protect ourselves.

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 and continue to regress 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 Meaning of Illness

Even if we conclude that modern societies are more susceptible to contagious disease, haven't they at least improved the techniques for curing illness? To answer this question, it's important to realize that the meanings that 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 most often viewed as an intrusion by microorganisms: germs, bacteria, or viruses. Our curing techniques emphasize the destruction or elimination of these agents. Death can occur, we believe, when we have failed to eliminate the infectious agents. In many other societies, the interpretation of illness is different. Illness may be attributed to witchcraft, sorcery, soul loss, or spirit possession. Belief in witchcraft or sorcery involves a claim that a witch or sorcerer can use mystical or magical power to inflict illness on another person. Belief in soul loss assumes that illness results from the souls leaving the body. Spirit intrusion or possession is based on the idea that a foreign spirit enters the patient and causes illness. These explanations aren't mutually exclusive; for example, the soul may flee the body as the result of witchcraft or sorcery.

Americans sometimes have difficulty appreciating the meanings others place on events, and the meaning of illness is no exception. We fail to recognize that belief in illness or death by witchcraft, sorcery, soul loss, or spirit possession involves an additional belief that illness has social as well as supernatural

Paul Chesley/The Image Bank/Getty Images



PHOTO 2.5 In a healing ceremony designed to restore the patient to his proper place in the world, a traditional Navajo doctor paints an image of the universe with colored sand on an earthen floor.

the witch voluntarily or involuntarily afflicts someone who has offended him or her or who has breached a rule of conduct. Likewise, in cases of soul loss or spirit possession, the soul leaves the body of a person who is having difficulty with others or the spirit possesses a person who has created social problems or who has not honored social obligations.

The Chewa of Malawi in southeastern Africa claim that illness and death are caused by sorcery. Max Marwick (1965) points out that sorcery-induced illness or death doesn't strike randomly; it occurs when there's a conflict over judicial rights and claims or when someone fails to observe some social norm. Whereas we 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; they say that people who have quarreled are likely to practice sorcery against each other.

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. Someone gets ill because of a breach in social relations, not solely because of some magical act.

There is a disease syndrome in Latin America called *susto*. There are other terms for it—*pasmó*, *espanto*, *perdida de la sombra*—but all are based on the belief that 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 disorder, the healer coaxes the soul back into the body. The patient is then sweated, massaged, and rubbed with some object to remove the illness.

causes. Members of societies that believe in spiritual or magical causes for illness don't believe that the witch or sorcerer strikes at random, that the soul leaves the body without cause, or that the spirit possesses just anyone. They believe that there also must be a social reason for the witch to act or the soul to flee. Witchcraft involves relationships between people; the

Anthropologist Arthur Rubel (1964), who analyzed specific cases of *susto*, found that all the cases share two characteristics: *Susto* occurs only when the patient perceives some situation as stressful, and the stress results from difficulties in social relations with specific persons. In one case of *susto*, a father was afflicted when he discovered he could no longer provide for his family, and in another, a mother was stricken when she wasn't able to take proper care of her child. A wife lost her soul as a result of not honoring her obligations to her husband, and a young boy lost his after he refused to act in a way thought to be appropriate by his peers. In every case, according to Rubel, *susto* resulted when a person did not or could not fulfill an expected social obligation. In other words, *susto*, like witchcraft or sorcery, is a statement about social tensions, not simply a description of a magical event.

These traditional theories of illness—soul loss, spirit possession, sorcery, and witchcraft—all have one thing in common. They are all expressions of an **interpersonal theory of disease**. Simply stated, in the interpersonal theory of disease, it is assumed that illness is caused not by microorganisms but by tensions or conflicts in social relations. So-called natural explanations for illness fail to take into account that witches, spirits, and souls are mediating concepts; they are theoretical entities that, like germs, provide a link between a social cause—tension and conflict—and a physical result—illness or death.

If giving meaning to an instance of illness involves the attribution of illness to social causes, then it follows that the cure must also be, at least in part, social. Therefore, a curer attempts not only to remove a spell, return the soul to the body, or remove a spiritual object that is causing the symptoms of illness but also to repair the social problem that initiated the episode of illness. To illustrate, Victor Turner (1967) provides a look at one society: the Ndembu, an agricultural society in northwestern Zambia.

The Ndembu believe that a persistent or severe illness is caused either by the punitive action of some ancestral ghost or the secret malevolence of a sorcerer or witch. The ghosts punish people when they forget to make a ritual offering to their ancestors or because, as the Ndembu put it, “kin are not living well together.” Explicit in Ndembu interpretations of illness is the idea that illness results either from personal failure to fulfill social obligations or from social conflict.

To effect a cure, the Ndembu patient consults a native doctor. The doctor first inquires about the patient's social relations: Has he or she quarreled with anyone? What is the state of the patient's marital relations? Is anyone jealous of the patient? The doctor asks those with whom the patient has quarreled or whom the patient has insulted to participate in the ceremony—a dramatic affair with chanting and drumming that sometimes lasts for hours. People who have complaints about the patient's social behavior may come forward, and the patient may report grudges against neighbors. At the climax, the doctor may dramatically extract from the patient's body some object that could have been causing the illness. In one case Turner followed closely, the doctor did indeed succeed in patching up a patient's social relations, along with his physical complaints.

The Ndembu recognize, at least implicitly, that social strain and stress may produce physical illness, and one way to treat illness is to treat the sources of social strain. Western medical practice has been slow to recognize the impact

of stress on physical health, but there is substantial evidence that certain life events can significantly increase the likelihood of becoming ill. Events such as the death of a spouse, the loss of a job, relocation to a new home, and even holidays such as Christmas can increase the chances of illness. These are the same kinds of events that can trigger the need for ceremonial cures in traditional societies. Thus, rather than viewing the traditional healing practices of traditional societies as somehow inferior, it makes far more sense to recognize that they focus on real causes of illness—social stress—that their curing techniques are well equipped to address.

Exercise 2.3

Contacting Advanced Civilization

In an issue of *Parade* magazine, the “Ask Marilyn” column features a letter from a man who recommends that we stop trying to contact alien worlds. “It is very likely,” he writes, “that any civilization we find will be far more advanced than our own. History has shown that whenever a more advanced civilization comes into contact with a less advanced one, it leads to the destruction of the latter, even if the intent of the former is not hostile.” In her response, Ms. vos Savant says: “In my opinion we should continue the search. . . . While it may be true that less advanced civilizations are absorbed into advanced ones, we usually call this progress, not destruction. Few of us would wish to return to our ancestors’ way of living, unless we’ve romanticized them beyond reality.”

Continue the exchange with Ms. vos Savant. What might you say to her in response?

Furthermore, traditional cures can be not only beneficial but also affordable. One of the consequences of medical advances is our increasing dependence on expensive technology. Consequently, although significant advances have been made in medicine, the cost to the patient of many such advances has made them unavailable to all but a small percentage of the world’s population. Indeed, they are unavailable to many Americans. But in traditional societies, when healing arts are lost or discouraged by Western-educated government officials who consider them backward, members are left with virtually no medical treatment.

Question 2.5 Why Are Simpler Societies Disappearing?

Modern societies have not been kind to traditional groups that have retained or tried to retain a way of life that is thousands of years old. Societies such as the Bushman, the Inuit of Alaska and the Canadian Arctic (the proper term for the

people some call Eskimos), and the people of the New Guinea Highlands have not fared well when contacted by more complex civilizations. Living in small scattered groups with little need for complex political structures or technology, they were no match for the well-armed, organized, acquisitive people and governments who coveted their land or labor. Even hunting and gathering peoples in isolated, seemingly inhospitable locations have proven susceptible to cultural extermination or genocide.

For example, James Suzman (2017) was asked by the European Commission to lead an international research program to examine the condition of southern Africa's indigenous peoples, such as the Bushman. The report detailed how the Bushman were the worst off of any people in the region, that 90 percent of them had been denied access to lands they traditionally occupied. The report documented also how the Bushman were routinely subject to **racism** and prejudice, eked out a living as serfs working for modern or more traditional farmers, and were undernourished and crippled by modern diseases associated with poverty.

The story of the descent of the Bushman into an impoverished and marginal society is one that has been repeated thousands of times, sometimes resulting in the disappearance of an entire people.

For example, the Ona inhabited the island of Tierra del Fuego just off the southern tip of South America, whose climate was described by an early settler as 65 days of unpleasant weather and 300 days of rain and storms. After their first encounters with Europeans in the 1870s and 1880s, the Ona were exposed to deadly European diseases to which they had no resistance, such as syphilis, measles, and tuberculosis; were systematically hunted and killed by European sheepherders and miners; and were captured by Argentine soldiers and sent to mission stations or kept by the soldiers as servants. Those who survived on the island were pushed farther inland, and European hunters systematically depleted the animals on which the Ona depended for food. Having little food on which to survive, they began to raid sheep ranches and were shot by hunters or ranchers who were paid a bounty for every Ona killed. At the turn of the century, Europeans built lumber camps in the last forests in which the Ona could live without being in permanent contact with Europeans. Finally, in 1973, 100 years after the first European settlement was built on Tierra del Fuego, the last full-blooded Ona died.



PHOTO 2.6 Through disease, starvation, and outright killing, European settlers completely exterminated the Ona tribe of Tierra del Fuego, just off the southern tip of South America. The last full-blooded Ona died in 1973.

London Stereoscopic Company/Hulton
Archive/Stringer/Getty Images

Exercise 2.4

Improving the Life of the Bushman

It's the year 1967. You are a member of a task force of the Botswana government that has been asked to evaluate the living conditions of the Bushman. Another group of government officials, distressed over the primitive ways of the Bushman, had recommended that they should begin to enjoy the benefits of civilization. Specifically, the group recommended that the government should settle the Bushman in permanent villages, dig wells to ensure a steady water supply, distribute domesticated animals to ensure a ready food supply, and introduce modern health services. The group also recommended that jobs be found for the Bushman.

You have toured the area and spoken to some of the Bushman. Your specific job is to evaluate the recommendations of the previous government task force and then make your own recommendations to the government on how the lives of the Bushman could be improved. You may agree or disagree with the previous panel, but you must give reasons for your recommendations.

Again, the extermination of the Ona was not an isolated event. Representatives of modern societies all over the world systematically exterminated native groups. For example, the Spanish totally exterminated the natives of the Florida peninsula. The indigenous peoples of the American plains, who lived by gathering and hunting as late as the 1860s, were first decimated by disease and then systematically driven from their land by miners and ranchers. Today, Native American populations that were isolated by government decree on reservations face unemployment rates approaching 90 percent and an infant mortality rate that is five times the national average. In areas of Brazil that are even now first being entered by Europeans, members of the native population—many of whom still live by hunting and gathering or small-scale agriculture—are endangered much as the Ona were some 100 years ago.

Cultural Devastation and Radical Hope

The experiences of peoples such as the Bushman and Ona raise an important question: What does it mean to experience cultural devastation? The 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; that is, 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. Such cultural upheavals are constantly in the news and are relevant, not only when they relate to so-called traditional cultures, but also when they relate to changes that occur in contemporary societies. For example, the devastation experienced by traditional societies such as the Bushman, can be felt during times of economic collapse by those who lose their jobs or

during times of rapid culture change that alter power relations among people. Increases in alcohol and drug use, along with increased suicide rates, in countries such as the United States may be symptomatic of the same sense of devastation and culture loss.

But, clearly, one of the best examples of cultural devastation is what happened to indigenous peoples in the United States. At the time of Columbus's arrival in the New World, hundreds of thriving societies were quickly devastated by disease that wiped out as much as 90 percent of the existing population. The devastation continued well into the 19th century as the remnants of these populations struggled to adapt to the westward expansion of settlers. The indigenous peoples of the Plains, such as the Lakota (Sioux), 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 territory on which to hunt. But from the period of roughly 1850 to 1880, these cultures were forced by the U.S. government onto reservations to depend on government rations—that were often undelivered or inedible—to replace the buffalo that had been virtually exterminated to make way for cattle ranchers supplying beef to satisfy the demand for meat coming largely from Great Britain. 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 (1962). Linderman's book *Plenty-coups: Chief of the Crows* (originally titled *American: The Life Story of a Great Indian*) became an anthropological classic. In the book, Plenty-coups told of his life as a hunter and warrior, but he refused to talk about his life after the buffalo were gone and after 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*" (emphasis added).

Philosopher Jonathan Lear (2006) 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 helps us understand what it means to experience cultural devastation and live through it.

In the early 19th century, the Crow lived, as did many Plains Indian groups, by hunting buffalo, raising horses, and raiding rival groups, particularly the Lakota, Blackfeet, and Cheyenne. War and raiding were a concern not only of



Edward S. Curtis/Library of Congress/Wikimedia Commons

PHOTO 2.7 Plenty-coups, chief of the Crow, told his life story to Frank B. Linderman but ended the story when his people were forced onto a reservation, explaining, "After this, nothing happened."

men but of the whole tribe. Girls as well as boys derived their names from the exploits of warriors; wives publicly displayed their husbands' war trophies, such as scalps and weapons; and a woman grieving the loss of a husband or son was a goad to retaliatory raids. Religion was suffused with the symbolism and rituals of war, and visions, dreams, and prayers inspired military undertakings. Child rearing was training for war, and boys counted coup on animals while girls danced with the hair of a wolf or coyote in place of a scalp.

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 (2006) put it, the coup stick "marked a boundary across which a non-Crow enemy must not pass" (p. 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, pp. 55–56)

Such was the value of courage and daring in war that a common adage was that "old age is a thing of evil, it is well for a young man to die in battle" (Lowie, 1983, p. 218). If we had to compare the Crow pursuit of war honors with an activity of our society, we could probably compare it to the pursuit of money or wealth on which virtually our entire society is built.

The Crow concern for war was built on a real 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 territory 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 delivered only 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 two 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 any longer existed. 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 this, nothing happened."

If money were somehow removed from our lives, what would be the point of life? All our activities—going to school, getting a job, preparing to buy a house—would cease to have any meaning. The context for living would be destroyed, as it was for the Crow. There would no longer be a conception of happiness—the good life. The problem for the Crow, says Lear (2006), "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. The characteristic activities that used to constitute the good life ceased to be intelligible acts" (p. 56).

How can one survive such devastation? One option is to fight to restore the life lost. Many North American tribes did but ultimately were defeated. One can flee, as did the Nez Perce, but after an epic military campaign, they were captured and returned to a reservation. Or one can give in to despair: The Crow chose another option—one that was revealed to Plenty-coups in a dream vision when he was a child.

The Crow believed that dreams provided access to a world beyond anything available to ordinary consciousness. There were different kinds of dreams: Some were “no account” dreams, in which the dreamer merely witnessed some common incident. Then, there were “wish dreams,” in which the dreamer saw some hoped-for outcome. Finally, there were “medicine dreams,” which the Crow believed provided insights into the future.

When he was 10 years old, Plenty-coups went on a vision quest, a spiritual journey in which young Crow men sought a vision that would reveal their future 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 a hole in the ground and covering the plains. But then, they disappeared, and strange spotted animals emerged from the hole to replace them, lying around and eating the grass on the plains. “Do you understand what I have shown you?” asked Man-person. “No,” Plenty-coups replied. “I was only 10 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 sole standing tree 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. Only the lodge of Chickadee-person was left standing by the Four Winds, and Man-person told Plenty-coups: “Develop your body, but do not neglect your mind. . . . It is the mind that leads a man to power, not strength of body” (Lear, 2006, p. 71).

When he returned from his vision quest, Plenty-coups related the story to Yellow Bear, a tribal elder considered the “wisest man in the lodge,” who interpreted the dream as follows: Plenty-coups had been told that in his lifetime, the buffalo would go away forever and that in their place on the plains 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.

And once at a big fort . . . I saw cows and calves of the same tribe as the bulls that drew the loads. 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. (quoted in Lear, 2006, p. 72)

Become a chickadee, then, is the advice of the dream. Lear imagines Plenty-coups's 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 do not 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, although 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 thought—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 did not 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 is radical because there is no understanding of what one is hoping for—only a conviction that some other good will somehow emerge. And it is radical because it avoided despair.

On the basis of Plenty-coups's dream, the tribe elected to ally itself with the United States, joining with them to fight the tribe's traditional enemies: the Lakota, Blackfoot, and Cheyenne. Although the United States nevertheless kept revising its treaties with the Crow, the Crow were never displaced from the land, and they could say that they had never been defeated. They listened, as the chickadee listens, sent their children to school, built a college, and, surviving a period of cultural devastation, adopted many cultural traits of White culture. And Plenty-coups in old age could feel that the dream had been confirmed by his experiences. In fact, he related his story to Linderman sitting in the same spot 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 seventy years ago when it was a different world.” He had, says Lear (2006),

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. (p. 143)

Case Study in Doing Anthropology #2: Searching for the Perfect Diet and Doing Development

What We Eat

We noted earlier how much we can learn about treating illness from other societies, but what about other things, such as how to eat. Americans seem to be constantly searching for some ideal diet—vegan diets; gluten-free diets; the raw food diet; the Mediterranean diet; and even the paleo diet, which recommends that we eat what our prehistoric ancestors did, although, as we'll see, they probably didn't. However, the idea that we should eat the way hunter-gatherers did may not be a bad idea since anthropological and archeological investigations of hunter-gatherer populations find that they are remarkable for their excellent metabolic and cardiovascular health. This makes hunter-gatherers and other small-scale populations attractive models in determining public health policy and answering questions related to the links among diet, lifestyle, and health.

For example, although life expectancy among hunter-gatherers is low—in the 30s to 40s—that is due largely to high infant mortality rates. Adults regularly live into their 60s, 70s, and beyond. The leading cause of death is acute illness, mostly infectious and gastrointestinal disease and trauma, such as accidents and violence. However, death rates from chronic, noncommunicable diseases that are common in developed countries, such as heart disease, metabolic disease, and cancers, are very low, affecting less than 10 percent of the hunter-gatherer population over age 60. As might be expected for populations with high levels of physical activity and little access to processed foods, obesity, metabolic disease, and type II diabetes are rare among hunter-gatherers and subsistence farmers. This contrasts sharply with wealthy countries, such as the United States, where 40 percent of the population is obese and 60 percent have high blood pressure.

One characteristic of hunters and gatherers that may contribute to their health is a high level of physical activity. A typical day for the Hadza of north-central Tanzania begins with groups of men and women setting out to hunt and forage. Women, with infants on their backs, dig up tubers resembling sweet potatoes and collect wild berries while men set out to hunt, mostly small animals, but about once a month kill a zebra or wart hog. Many walk 10 to 15 miles each day. Using heart rate measures, researchers found that Hadza adults spent about 135 minutes a day engaged in moderate or vigorous physical activity and that their activity levels remained steady throughout adulthood. Paradoxically, although they spend more time in moderate or vigorous physical activity, their energy expenditure levels—that is, the number of calories burned while active—are about the same as a typical American office worker. This suggests that the body adjusts to variations in physical activity to maintain total energy expenditure within a narrow physiological range and implies that obesity is on the rise not because people are expending too little energy but because they are eating too much.

Studies of the diets of hunter-gatherers reveal that they vary from area to area. All eat some meat or fish and generally get about half of their calories from

meat and less from starch-heavy carbohydrates. This finding is the basis for the so-called paleo diet that recommends a high-fat, high-protein diet and the avoidance of cereals and sugars as the way to cardiovascular health. The problem is that most studies of hunter-gatherers ignore the consumption of honey, which among the Hadza accounts for 16 to 20 percent of their diet. One study concludes that

meat-heavy, low-carbohydrate diets may have been the norm for some hunter-gatherer populations in the past, but many small-scale societies, including those with excellent metabolic and cardiovascular health, eat diets that are relatively rich in carbohydrates and (via honey) simple sugars. (Pontzer et al., 2018, p. 32).

Regardless, the general conclusion is that the excellent cardiovascular and metabolic health of hunter-gatherers is based on a diet rich in micronutrients and fiber from vegetables and starchy plants that have what nutritionists call a low glycemic index, meaning these foods don't result in rapid spikes in blood sugar. This research suggests that there is no "perfect" diet for humans because we find that people with excellent health eat a wide variety of foods. Most modern, ultraprocessed foods, by contrast, are engineered to optimize flavor using a combination of fat, salt, and sugar, which encourages overconsumption. Furthermore, groups such as the Hadza rely on a small number of foods and avoid the phenomenon of *sensory-specific satiety*, where the greater the variety of food choices, the longer it takes to feel full.

When groups such as the Hadza adopt Western lifestyles and diets, they quickly become victims of the same range of diseases as everyone else. Some of the highest rates of type II diabetes are found in indigenous societies that are forced to adopt—or, less frequently, voluntarily adopt—Western diets.

Finally, there are other features of traditional lifestyles, along with diet and levels of physical activity, that contribute to health and well-being in these populations. As Herman Pontzer and his associates (2018) note, close friendships, family bonds, low levels of economic inequality, and time spent outdoors also play a role in reducing social stress and a range of noncommunicable diseases that characterize modern life.

Women in Development

Anthropologists have given special emphasis to the area of *women in development*. A high proportion of development workers are women (partly because in some areas of the world, women work best with women on development projects). The importance of women in development has to do with the need to involve women in development projects, particularly those having to do with education, health, and child care. Women's growing place in the labor market and their importance in supplementing household budgets in many areas of the world make them central in development planning. And anthropologists bring a special orientation to development projects. For example, a project intended to benefit Indonesian rice farmers was targeted primarily at men; however, as anthropologist Margaret Casey (1993) pointed out, women were involved in agricultural activities and decision making, thus opening extension services to women

and enhancing the project. In Kenya, the Kenya Water for Health Organization (KWAHO) is charged with bringing clean water to rural Kenyans. When communities approach KWAHO for help, they supply anthropological consultants who encourage community representatives to take charge. Thus, when wells are dug and pumps are supplied, a coalition of small women's groups is organized to monitor the pumps.

Large development organizations such as the World Bank have lauded women's participation in water and sanitation development projects. The idea is that women use bathroom facilities more often than men and are frequently in charge of cleaning and maintaining them as well. However, the simple inclusion of women without consideration for other cultural values and power relations can render well-intended development projects ineffective.

For example, from 1994 to 2005, a project in rural Rajasthan, India's largest state, aimed to increase the number of households with latrines from 10 percent to 45 percent. The project involved almost 400 villages. The effort followed a report by India's government that 85 percent of these households had no bathroom facilities or clean drinking water. People generally urinated and defecated on the outskirts of villages instead.

Because these were mostly patriarchal Hindu villages, women were required to follow strict rules concerning their visibility, especially around men. Most women would relieve themselves on the outskirts of their village before dawn and wait until nightfall to relieve themselves again. Some traveled in groups for additional safety and to hide one another from view. Women from richer families remained in seclusion from men, while poorer women were seen out and about. Development professionals involved in the project adopted a participatory approach in which women would play key roles as latrine buyers, users, and marketers. The hope was that additional latrines would relieve some of these hardships, empower women, and confer status to the families upon whose land they were built.

But these goals of empowering women and improving health and hygiene were never realized, even though the latrines were successfully built according to project plans. Many people continued to defecate out in the open while the latrines were used for storing sacks, wood, or boxes, and sometimes to house goats. The problem was that these development professionals kept too much focus on women while neglecting the role of men and local resource priorities.

As anthropologist Kathleen O'Reilly (2010) observed, the inclusion of women was approached as another technical solution to another technical problem. Gendered and local understandings of excretion were not considered in the plan. For example, even though each latrine package was listed in a woman's name, the men of the household decided where to place the latrine. And they usually placed it in front of the house where men and guests were welcome, but where women could not enter and exit privately. In these situations, women who opted to use the latrines continued their practice of excreting under cover of darkness.

Another problem resulted from the experts' assumption that the project would encourage women to leave their houses to market the latrines to other villages. O'Reilly reported that the mere presence of a latrine on one's property conveyed enough of a status symbol for households that the actual use of them was a minor consideration. By increasing the family's status, women practiced increased confinement, in keeping with higher status.

However, a similar water and sanitation project in another hierarchical Hindu area, this time in Nepal, produced much better results. The Nepal Water for Health project, described by Pandey and Moffatt (2005), first involved careful research into local power relations among men, women, and children, as well as between rich and poor. The research results enabled project experts to better ensure that poor women's participation was taken seriously by the rest of the community. For example, including a man to advocate for the otherwise all-women committees helped ensure that committee decisions would not be dismissed outright by other men. Because men refused to sit with the women, special seating arrangements were made for project health training sessions to increase overall attendance. This approach yielded twice the sanitation coverage in poor households compared to when a gendered participatory approach (including both women and men) was not used.

CONCLUSIONS

We began this chapter by noting that in a period of 10,000 years, human societies have abandoned a way of life that had survived for some 100,000 years. How do we explain why societies of hunters and gatherers changed into societies of sedentary agriculturists? The need to progress and develop better ways of living might explain the change. However, studies of hunter-gatherer societies reveal that they live quite comfortably and with a minimum amount of effort. If we reject the idea of progress, how do we explain the transformation of human societies over the past 10,000 years? An increase in population or population density may have fueled the transition of societies from hunting and gathering to swidden agriculture and then to plow or irrigation agriculture. Although the transition to more labor-intensive forms of agriculture may have been the result of population pressure, modern agricultural technology may simply be better and more efficient. However, John Bodley's analysis of the energy expenditures of modern agriculture suggests that it's difficult to conclude that it is in fact simply better.

When we try to understand the gap between the wealthy and poor nations of the world, we find that we must consider the history of the economic expansion of Europe and the military, political, and social exploitation of the countries of Asia, Africa, and the Americas. We find that hunger isn't so much due to a lack of modern agriculture as it is a consequence of poverty and attempts to industrialize. The need to repay bank loans secured for industrialization has led countries to encourage the development of large farms primarily growing cash crops for export. People are dispossessed of their land and left without enough money to buy food. Furthermore, burdened by debt, poor countries are forced to accept financial restructuring by multilateral organizations, such as the IMF, which reduces citizens' access to jobs, food, education, and health facilities and reduces the value of local currencies. Under these conditions, it's hard to see how people in the developing world are better off than their predecessors.

But modern societies may have an advantage in health care and methods of medical treatment. Are Western standards not higher than those of less modern societies? In fact, researchers have concluded that infectious disease is more common in modern societies and that human behaviors associated with industrialization, modernization, and the unequal distribution of wealth often promote the spread and incidence of contagious disease. Moreover, traditional theories of illness and curing ceremonies can be effective in the diagnosis and treatment of illness or disease.

Then, why, in spite of all they have to offer, are simpler societies disappearing? The answer is that most are disappearing not because of the choice of their members but because of the actions of so-called civilized countries. The idea of progress may simply be a convenient rationale for one society to impose its economic and political will on others.

Finally, we examined how an anthropological background or an anthropological perspective can provide a comparative perspective on diet that can inform policymakers and nutritionists about proper diets and how knowledge of local concerns, the use of local knowledge, and the involvement of segments of the population that are sometimes ignored can mean the difference between assisting people or disrupting their lives.

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