

Chapter 6

Hunger, Poverty, and Economic Development



Learning Objectives

- 6.1 Relate the evolution of food production to the increase in poverty and world hunger.
- 6.2 Describe the economic, political, and social conditions that cause famine and endemic hunger.
- 6.3 Explain the limitations of the various solutions to poverty and hunger.
- 6.4 Summarize the relationship between economic development and hunger.

The persistence of widespread hunger is one of the most appalling features of the modern world. The fact that so many people continue to die each year from famines, and that many millions more go on perishing from persistent deprivation on a regular basis, is a calamity to which the world has, somewhat incredibly, got coolly accustomed Indeed, the subject often generates either cynicism ("not a lot can be done about it") or complacent irresponsibility ("don't blame me—it is not a problem for which I am answerable").

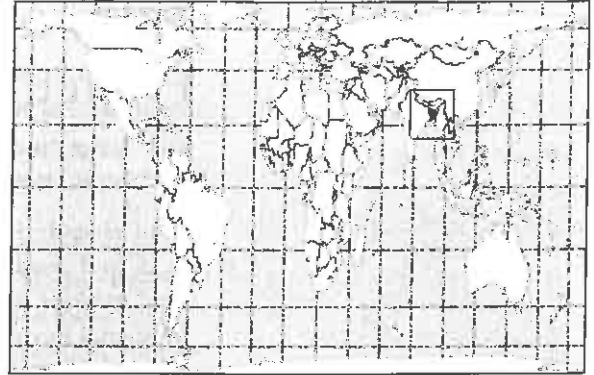
—JEAN DRÉZE AND AMARTYA SEN, *Hunger and Public Action*

Our present global economic order produces a stable pattern of widespread malnutrition and starvation among the poor, with some eighteen million persons dying each year from poverty-related causes, and there are likely to be feasible alternative regimes that will not produce similarly severe deprivations. If this is so, the victims of avoidable deprivations are not merely poor and starving, but impoverished and starved through an institutional order coercively imposed upon them. There is an injustice to this economic order, which it would be wrong for its more affluent participants to perpetuate.

—CARMEN G. GONZALEZ, *World Poverty and Food Insecurity*

At the end of World War II, public officials and scientists from all over the world predicted that with advances in modern technology it would be possible by the end of the twentieth century to end poverty, famine, and endemic hunger in the world. Freed from colonial domination and assisted by new global institutions, such as the United Nations and the World Bank, the impoverished countries of Africa, Asia, and Latin America, people assumed, would follow paths to economic development blazed by the core countries.

Today these optimistic projections have been replaced largely by resignation as over a 1.3 billion people are estimated to still live on less than \$1.25 per day, and almost 3 billion on less than \$2.50 per day. Children are particularly vulnerable; food aid organizations estimate that 3.1 million children die each year from inadequate diets and the diseases that thrive on malnourished bodies. In addition, globally 161 million under-five year olds were thought to be stunted and 99 million were underweight in 2013. As of 2015, global hunger has continued to decline, albeit gradually, to an estimated 795 million undernourished people (FAO 2015).



Of those suffering from hunger, 94 percent live in developing nations. Most are subsistence farmers, landless families, or people working in fishery or forestry. The remainder live in shantytowns on the fringes of urban areas. A quarter of the hungry are children.

Common misunderstandings about world hunger should be quickly dispelled:

- First, world hunger is not the result of insufficient food production. There is enough food in the world to feed 120 percent of the world's population on a vegetarian diet, although probably not enough to feed the world on the diet of the core countries. Even in countries where people are starving, there is either more than enough food for everyone or the capacity to produce it.
- Second, famine is not the most common reason for hunger. Although famines, such as those in recent years in Ethiopia, Sudan, Somalia, and Chad, receive the most press coverage, endemic hunger—daily insufficiencies in food—is far more common.
- Third, famine itself is rarely caused by food insufficiency. When hundreds of thousands starved to death in Bangladesh in 1974, it was not because of lack of food. In fact, there was more food than there had been in the years leading up to the disaster and more food than was produced in the years following. The starvation resulted from massive unemployment brought on by flooded farmland and high food prices brought on by a fear of food shortages. People starved to death because they couldn't afford to buy food and had no land to grow their own.
- Finally, hunger is not caused by overpopulation. Although growing populations may require more food, there is no evidence that the food could not be produced and delivered if people had the means to pay for it. This does not mean population and food availability play no role in world hunger; rather, it indicates that the relationship is far more complex than it appears.



Bangladesh

The questions are, *Why do people continue to starve to death in the midst of plenty?*

- More importantly, *is it still possible to believe that poverty and hunger can be eliminated? If so, how? And if not, how can the poor adapt to their conditions?*

To answer these questions, we need to know about the nature and history of food production and to understand the reasons why people are hungry. There is a prevailing view that hunger is inevitable, but that need not be the case. We examine some possible solutions to world hunger, how specific countries, some rich and some poor, have tried to ensure that people have adequate food, and how people actively seek to cope with poverty.

The Evolution of Food Production: From the Neolithic to the Neocaloric

6.1 Relate the evolution of food production to the increase in poverty and world hunger.

Until recently in world history, virtually everyone lived on farms, grew their own food, and used whatever surplus they produced to pay tribute or taxes, to sell at local markets, and to keep for seed for the following year. Since the beginning of the Industrial Revolution, people have left the land in increasing numbers, converging on cities and living on wages. As late as 1880, half of the U.S. population was engaged in agriculture; this figure decreased to 38 percent by 1900, and to 18 percent by 1940. Today, less than 2 percent of Americans feed the other 98 percent, as well as millions of others around the world who purchase the products of American agriculture (Schusky 1989:101). This shift of the population from farming to other sources of livelihood is intensifying all over the world. *Why do people leave the land on which they produce their own food to seek wage employment, which requires that they buy food from others?*

To answer this question, we need to understand the history of agriculture, why food production has changed, and how economic and agricultural policies have resulted in increased poverty and hunger.

From Gathering and Hunting to the Neolithic

For most of their existence, human beings produced food by gathering wild plants—nuts, roots, berries, and grains—and hunting large and small game. Generally, these people enjoyed a high quality of life. They devoted only about twenty hours per week to work, and archaeological studies and research among contemporary gathering and hunting societies indicate that food was relatively plentiful and nutritious. Life span and health standards seem to have been better than those of later agriculturists. Consequently, a major question for anthropologists has been why human populations that lived by gathering and hunting began to plant and cultivate crops. Before 1960, anthropologists assumed that domesticating plants and animals provided more nourishment and food security than gathering and hunting. But when, in the 1960s, the research of Richard Lee and James Woodburn (see Devore and Lee 1968) revealed that the food supply of gatherers and hunters was relatively secure and that the investment of energy in food production was small, speculation turned to the effects of population increase on food production. Mark Cohen (1977) suggested that increases in population densities may have required people to forage over larger areas in search of food, eventually making it more efficient to domesticate and cultivate their own rather than travel large distances in search of game and wild plants. Even then the shift from gathering and hunting to domestication of plants and animals must have been very gradual, emerging first on a large scale in Mesopotamia about 10,000 years ago during the Neolithic era. From that point until 5,000 years ago, settlements domesticated such plants as wheat, barley, rye, millet, rice, and maize and began to domesticate animals such as sheep, goats, pigs, camels, and cattle. Traditionally, animals have served as a farmer's food reservoir, fed with surplus grains in good times and killed and eaten when grain became scarce. Some, such as sheep, goats, cattle, and camels, eat grasses that human beings cannot eat, thus converting cellulose to protein for human consumption in the form of meat and dairy products.

Slash and burn, or swidden, agriculture is the simplest way of cultivating crops; it is highly efficient when practiced correctly and requires considerable knowledge of local habitats. In swidden agriculture, a plot of land is cleared by cutting down the vegetation, spreading it over the area to be used for planting, and then burned. Seeds are planted, and the plants cultivated and then harvested. After one to three years of use,

the plot is more or less abandoned, and a new area cut, burned, and planted. If there is sufficient land, the original plot lies fallow for ten years or more until bushes and trees reestablish themselves; then it is used again. Of the four major factors in agricultural production—land, water, labor, and energy—swidden agriculture is land intensive only. It uses only natural rainfall and solar energy and requires about twenty-five hours per week of labor. For tools, swidden agriculture requires only an ax or machete and a hoe or digging stick.

Swidden agriculture is still practiced in much of the periphery, but only recently have researchers begun to appreciate its efficiency and sophistication. Burning vegetation, for example, once thought only to add nutrients in the form of ash to the soil, also kills pests, insects, and weeds. When practiced correctly, it is environmentally sound because it re-creates the natural habitat. Swidden agriculturists must choose a site with the proper vegetation and desirable drainage and soil qualities. They must cut and spread the brush properly and evenly to maximize the burn and the heat. Cuttings that dry slowly must be cut earlier than those that dry quickly. Unlike in monoculture—the growing of a single crop—swidden plots are planted with a variety of foodstuffs as well as medicinal plants and other vegetable products. Swidden agriculturists must know when to abandon a plot so that grasses do not invade and prevent regeneration of brush and forest. Furthermore, abandoned plots are rarely truly abandoned, being used to grow tree crops or attract animals that are hunted for food.

Just as there is debate as to why gatherers and hunters began to practice agriculture, there is some question as to why swidden agriculturists began to practice the more labor-intensive irrigation or plow agriculture. These techniques do not necessarily produce a greater yield relative to the labor energy used; however, they do allow use of more land more often by reducing or eliminating the fallow period. Land that in swidden agriculture would lie fallow is put into production. Irrigation agriculture also allows continual production on available land, sometimes allowing harvest of two or three crops in a year. Moreover, it permits the use of land that could not be used for agriculture without irrigation. Ester Boserup (1965) suggested that increasing population density required more frequent use of land, eliminating the possibility of allowing land to lie fallow to regain its fertility. Thus, plow and irrigation agriculture, while requiring greater amounts of work, does produce more food.

The productivity comes at a cost, however. Of the four agricultural essentials—land, water, labor, and energy—irrigation requires more water, labor, and energy than swidden agriculture. In addition, irrigation generally requires a more complex social and political structure, with a highly centralized bureaucracy to direct the construction, maintenance, and oversight of the required canals, dikes, and, in some cases, dams. Furthermore, irrigation can be environmentally destructive, leading to salinization (excess salt buildup) of the soil and silting. For example, it is estimated that 50 percent of the irrigated land in Iraq and 30 percent in Egypt is waterlogged or salinized (Schusky 1989:72). Irrigated sites may also be used to dump sewage and often harbor disease-carrying parasites and insects, resulting in an increase in such diseases as cholera, typhoid, schistosomiasis, and malaria. Irrigated areas also serve as a haven for weeds. Finally, the shift to plow or irrigation agriculture changed the division of labor between men and women (Boserup 1970). Generally, in swidden agriculture, men clear the land and women burn the cuttings and care for the crops. In some areas today, such as sub-Saharan Africa, women do the majority of the agricultural labor. However, in plow or irrigation agriculture, women tend to do less of the labor—their labor shifts to domestic chores, and often the total amount of women's labor increases as their agricultural labor decreases (Ember 1983).

If we surveyed the world of 2,000 years ago, when virtually all of the food crops now in use were domesticated and in use somewhere, we would find centers of irrigation agriculture, in China, Mesopotamia, Egypt, and India, with later developments coming in the Andes and Mesoamerica. Plow agriculture was practiced extensively in

areas of the Middle East and Europe. But where agriculture was necessary, swidden agriculture, if population levels and state demands for tribute permitted it, must have been by far the most common. Moreover, until the twentieth century, there was little change or improvement in agricultural techniques.

Capitalism and Agriculture

The next great revolution in food production was a consequence of the growing importance of world trade in the sixteenth through eighteenth centuries and the gradual increase in the number of people living in cities and not engaged in food production. The expansion of trade and growth of the nonfarming population had at least four profound consequences for agricultural production.

First, food became a commodity that, like any other commodity, such as silk, swords, or household furniture, could be produced, bought, and sold for profit. Second, the growth of trade and the number of people engaged in nonagricultural production created competition for labor between agricultural and industrial sectors of the economy. Third, the growth of the nonagricultural workforce created greater vulnerability on the part of those who depended on others for food. The availability of food no longer depended solely on a farmer's ability to produce it but also on people's wages, food prices, and an infrastructure required for the delivery, storage, and marketing of food products. Finally, the increasing role of food as a capitalist commodity resulted in the increased intervention of the state in food production. For example, food prices needed to be regulated; if they were too high, people might starve and industrial wages would need to increase; if they were too low, agricultural producers might not bring their food to market. Import quotas or tariffs needed to be set to maximize food availability on the one hand and protect domestic food producers on the other. New lands needed to be colonized, not only to produce enough food but also to keep food production profitable. The state might also regulate agricultural wages or, as in the United States, not regulate them. (Although the United States has had a minimum wage for industrial workers since 1937, there is still no minimum wage for farm workers.)

As it turned out, the most important change in food production inspired by the transformation of food into a capitalist commodity was the continual reduction of the amount of human energy and labor involved directly in food production and the increase of the amount in nonhuman energy in the form of new technologies, such as tractors, reapers, and water delivery systems. The results of this trend continue to define the nature of agricultural production in most of the world.

Reducing labor demands in agriculture and increasing technology accomplishes a whole range of things that contribute to trade and profit in both the agricultural and industrial sectors. First, substituting technology for human labor and reducing the number of people involved in agriculture makes agriculture more profitable. Labor costs are reduced and agricultural wealth is concentrated in fewer hands. Increasing technology also creates a need for greater capital investments. As a result, those people with access to capital—that is, the more affluent—are able to profit, forcing the less affluent to give up their farms. This further concentrates agricultural wealth. The increase in the need for capital also creates opportunities for investors (banks, multilateral organizations, and commodity traders) to enter the agricultural sector, influence its operation by supplying and/or withholding capital, and profiting from it.

Second, reducing the number of people in agriculture and concentrating agricultural wealth to ensure profits of those who remain helps keep food prices and, consequently, industrial wages relatively low. This creates a danger of food monopolies and the potential for a rise in prices. For example, cereal production in the United States is controlled by only a few companies, and the prices of processed cereals such as cornflakes and oats are exorbitant as 0.04 cents of corn generates \$3 to

\$4 of cornflakes. Yet, as long as consumers are able to pay, the government is content not to intervene. As it is, food cost as a percentage of the cost of living in the United States is among the lowest in the world.

Third, reducing agricultural labor frees labor to work in industry and creates competition for industrial jobs, which helps keep wages low—that is, the more the number of people who are dependent for their livelihood on jobs, the lower the wages industry needs to pay.

Finally, to keep labor costs down and increase the amount of technology required for the maintenance of food production, the state must subsidize the agricultural sector. In the United States, for example, the government has financed irrigation and land reclamation projects, conducted agricultural research, and subsidized farm prices and/or energy costs. The U.S. government also subsidized agriculture by investing billions of dollars in food aid, buying surplus U.S. farm products, and using them for foreign aid (although this aid often created a dependence on U.S. farm products while forcing local producers in targeted countries out of business).

In sum, the results for the capitalist economy of the reduction of agricultural labor and the subsequent increase in technology are:

- a capital-intensive agricultural system dependent on the use of subsidized energy
- the exploitation of domestic farm labor and of foreign land and labor to keep food prices low and agricultural and industrial profits high
- a large labor pool from which industry can draw workers, whose wages are kept down by competition for scarce jobs and the availability of cheap food

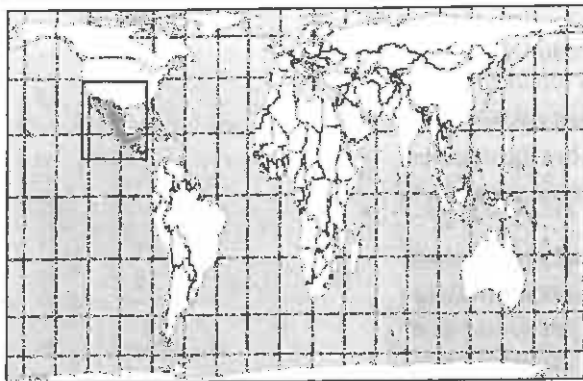
It is important to note that until the 1950s, the technological intensification of agriculture did not substantially increase yield—that is, though an American corn farmer needed only 100 hours of labor to produce one hectare (2.41 acres) of corn, the amount of corn produced was no greater than that produced by a Mexican swidden farmer, working ten times as many hours using only a machete and hoe. In other words, although mechanization made the American farm more economical by reducing labor energy and costs, it did not produce more food per hectare (Schusky 1989:115). One question we need to ask is, *What happens when we export the American agricultural system to developing countries?*

The Neocaloric and the Green Revolution

The culmination of the development of capitalist agriculture, a system that is technologically intensive and substitutes nonhuman energy for human energy, was dubbed the *neocaloric revolution* by Ernest Schusky. For Schusky, the major characteristic of the neocaloric revolution has been the vast increase in nonhuman energy devoted to food production in the form of fertilizers, pesticides, herbicides, and machinery.

David Pimentel and Marcia Pimentel (1979) provided a unique perspective on the neocaloric. Their idea was to measure the number of kilocalories¹ produced per crop per hectare of land and compare it to the amount of both human and nonhuman energy expended in kilocalories to produce the crop. Their work dramatized both the efficiency of traditional forms of agriculture and the energy use required of modern capitalist agriculture.

¹A calorie or gram calorie is the amount of heat needed to raise the temperature of one gram of water from one degree Celsius to fifteen degrees Celsius. The kilocalorie (kcal) or kilogram calorie is 1,000 gram calories or the amount of heat needed to raise the temperature of one kilogram of water from one degree Celsius to fifteen degrees Celsius. It can also be conceptualized as follows: One horsepower of energy is the same as 641 kilocalories; one gallon contains 31,000 kilocalories; if used in a mechanical engine that works at 20 percent efficiency, one gallon of gasoline is equal to 62,000 kilocalories of work, or one horse working at capacity for a ten-hour day, or a person working eight hours per day, five days per week, for 2.5 weeks.



Mexico

For example, to produce a crop of corn, a traditional Mexican swidden farmer clears land with an ax and machete to prepare it for burning and uses a hoe to plant and weed. Pimentel and Pimentel (1979:63) figured that crop care takes 143 days and the worker exerts about 4,120 kilocalories per day. Thus, labor for one hectare amounts to 589,160 kilocalories. Energy expended for ax, hoe, and seed is estimated at 53,178 kilocalories, for a total of 642,338 kilocalories. The corn crop produced yields about 6 million kilocalories, for an input-output ratio of one to eleven—that is, for every kilocalorie expended, eleven are produced, a ratio that is about average for peasant farmers. Nonhuman energy used is minimal, consisting only in the fossil fuel (wood, coal, or oil) used in producing the hoe, ax, and machete.

Now let's examine plow agriculture with the use of an ox. One hour of ox time is equal to four hours of human time, so labor input for one hectare drops to 197,245 kilocalories from 589,160 kilocalories. But the ox requires 495,000 kilocalories to maintain. Moreover, the steel plow requires more energy in its manufacture, so fossil fuel energy used rises to 41,400, with energy for seeds remaining at 36,608, for a total of 573,008. However, the corn yield drops significantly to half, so the input-output ratio drops to 1:4.3. The reason for the drop is likely the lowering of soil fertility. If leaves, compost, or manure is added to the soil, yields might increase, but so would the energy required to gather and spread the fertilizer.

Finally, if we consider a modern corn farmer in the United States, we find that, using modern farming machinery, herbicides, insecticides, fertilizers, transport, and irrigation, the farmer produces about 7,000 kilograms of corn per hectare, almost seven times that produced by the Mexican swidden farmer but at a cost of almost 25 million kilocalories. Consequently, the input-output ratio is 1:3.5, far below the ratios of most "primitive" swidden farmers. In fact, in the United States, the ratio of kilocalories used in crop production to kilocalories produced declined from 3.7:1 in 1945 to 2.8:1 in 1970. The question is, *Why has modern agriculture become so energy intensive?*

The intensification of the use of technology in agriculture is largely the result of what has been called the *green revolution*. The green revolution began with research conducted in Mexico by American scientists in the 1940s and 1950s sponsored by the Rockefeller Foundation. Their goal was to develop higher-yielding hybrid strains of corn and wheat suitable for Mexican agriculture. Soon the research produced dramatic results all over the world as farmers began using specially produced strains of crops such as wheat, corn, and rice, called *high-yielding varieties* (HYVs). The productivity of the new seeds lay largely in their increased capacity for using fertilizer and water. Whereas increased use of fertilizer and water did not increase the yields of old varieties (in fact, it might harm them), it vastly increased the yields of the new varieties. Consequently, more and more farmers around the world adopted them. Use of these new varieties was encouraged by the petrochemical industry and fertilizer production plants, which sought to expand their markets. Thus, research efforts to develop HYV plants were expanded in India, the Philippines, and Taiwan, encouraged by the U.S. Agency for International Development (USAID) and the Rockefeller Foundation.

But the green revolution soon ran into some problems. First, the new plants required greater inputs of fertilizer and water. Because of the added energy costs, farmers often skimped on fertilizer and water use, resulting in yields similar to those prior to the adoption of the new crops. Consequently, farmers returned to their previous crops and methods. Second, the Organization of Petroleum Exporting Countries (OPEC) oil embargo in 1973 raised oil prices, and because fertilizers, irrigation, and other tools of the green revolution were dependent on oil, costs rose even higher. Some people began to refer to HYV as *energy-intensive varieties* (EIVs).

The expense was increased further by the amount of water needed for fertilizers. Early adaptations of the new technology tended to be in areas rich in water sources; in fact, most of the early research on HYV was done in areas where irrigation was available. When the techniques were applied to areas without the required water resources, the results were not nearly as dramatic. It also became apparent that the energy required for irrigation was as great in some cases as the energy required for fertilizer.

In addition, the green revolution requires much greater use of chemical pesticides. If farmers plant only a single crop or single variety of a crop, it is more susceptible to the rapid spread of disease, which, because of the added expense, could create catastrophic financial losses. Consequently, pesticide use to control disease becomes crucial. Furthermore, because the crop is subject to threats from insect and animal pests at all stages of production—in the fields, storage, transportation, and processing—pesticide costs rise even further.

Finally, the new fertilizers and irrigation favor the growth of weeds; therefore, herbicides must be applied, further increasing energy expenditure.

One result of the change from subsistence farming, in which the major investment was land, to a form of agriculture that is highly land, water, and energy intensive is, as Ernest Schusky (1989:133) noted, to put the small farmer at a major disadvantage because of the difficulty in raising the capital to finance the modern technological complex. The result in the United States and elsewhere is the concentration of agricultural wealth in fewer hands and a constant reduction in the number of small family farms. In 1950, for example, there were over five million farms in the United States, the vast majority, over four and a half million, of less than 60 acres (Ross 1980). By 2016, there were 2.06 million with an average acreage of 442 acres (USDA 2017).

It is in livestock production, however, that the neocaloric revolution really comes into focus. One innovation of the past hundred years in beef production was feeding grain to cattle. By 1975, the United States produced about 1,300 kilograms of grain for every person in the country. But 1,200 kilograms of that was fed to livestock. Dairy cows are relatively productive compared to beef cattle; it takes about 190 kilograms of protein to produce sixty kilograms of milk or about thirty-six kilocalories of fossil energy to produce one kilocalorie of milk protein. Beef get about 40 percent of their protein from grazing and 60 percent from grain. If we calculate the energy that goes into grain production and the operation of feedlots, the productive ratio is as low as one kilocalorie produced for every seventy-eight kilocalories expended.

If we factor in processing, packaging, and delivery of food, the energy expenditure is even higher. David Pimentel estimated that the American grain farmer, using modern machinery, fertilizer, and pesticides, uses eight calories of energy for every one calorie produced. Transportation, storage, and processing consume another eight fossil calories to produce one calorie (see Schusky 1989:102).

As Schusky said, in a world short on energy, such production makes no sense, but in a world of cheap energy, particularly oil, especially if it is subsidized by the nation-state, it is highly profitable. The real problem comes when agricultural production that substitutes fossil fuel energy for human energy is exported to developing countries. To begin with, there is simply not enough fossil energy to maintain this type of production for any length of time. One research project estimated that if the rest of the world used energy at the rate it is used in the United States, the world's petroleum resources would be exhausted on the food supply alone in the next ten to twelve years (Schusky 1989:119).

Furthermore, in countries with large rural populations, the substitution of energy-intensive agriculture for labor-intensive agriculture will throw thousands off the land or out of work, resulting in more people fleeing to the cities in search of employment. And because modern agriculture is capital intensive, the only farmers who can afford to remain will be those who are relatively wealthy, consequently leading to increasing income gaps in rural as well as urban areas. Where the green

revolution has been successful, small-farm owners have been driven off the land to become day laborers or have fled to cities in search of jobs, as commercial investors bought up and continue to buy up agricultural land. Or more wealthy farmers have bought their neighbors' farms because only they had the capital to invest in fertilizers and irrigation.

Then there is the potential for *green revolution II*, the application of genetic engineering to agricultural production. Genetically engineered crops are controversial, largely because of claims that they have not been rigorously tested and because we do not know yet what effects the crops may have on the environment or on the people who eat them. Clearly, claims by agribusiness concerns, such as Monsanto Corporation, that such crops will help us feed the hungry are, as we shall see, disingenuous at best. Furthermore, in some cases, genetically engineered crops simply try to correct the damage done by capitalist agriculture. For example, there is the much touted "golden rice," a genetically engineered variety with vitamin A that is a cure for blindness that afflicts some 300,000 people a year. Yet, as Vandana Shiva (2000) notes, nature ordinarily provides abundant and diverse sources of vitamin A; rice that is not polished provides vitamin A, as do herbs such as bathua, amaranth, and mustard leaves, which would grow in wheat fields if they were not sprayed with herbicides.

Overall it is clear that we have developed a system of food production that is capital intensive, favors large, state-subsidized agribusiness, minimizes the use of labor, and subsequently makes more people dependent on wage labor with which to obtain food. In the culture of capitalism, access to food is determined almost entirely by the ability to pay, not by the need to eat.

The Economics and Politics of Hunger

6.2 Describe the economic, political, and social conditions that cause famine and endemic hunger.

The obvious consequence of the reduction of labor needed for food production and the concentration of food production in fewer hands is that the world's population is more dependent on wage labor for access to food. Consequently, people are more vulnerable to hunger if opportunities for employment decrease, if wages fall, or if food prices rise, they can starve even in the midst of food availability. This is not to say that lack of food is never a factor in hunger, but it is rare for people to have economic resources and not be able to acquire food.

The role of food in a capitalist economy has other important consequences. For example, food production is not determined necessarily by the global need for food; it is determined by the market for food—that is, how many people have the means to pay for it. That is why world food production is rarely at its maximum and why it is difficult to estimate how much food could be produced if the market demand existed. The problem is that there are not enough people with sufficient income to pay for all the food that could be produced, and so-called overproduction would result in lower prices and decreased profitability. For that reason, in many countries, food production is discouraged. Furthermore, land that could be used to grow food crops is generally dedicated to nonfood crops (e.g., tobacco, cotton, and sisal) or marginally nutritious crops (e.g., sugar, coffee, and tea) for which there is a market. Finally, the kind of food that is produced is determined by the demands of those who have the money to pay for it. For example, meat is notoriously inefficient as a food source, but as long as people in wealthy countries demand it, it will be produced in spite of the fact that the grain, land, and water required to produce it would feed far more people if devoted to vegetable crops.

Thus, people in Mexico go hungry because land is devoted to the production of beef, which few Mexicans can afford, but which brings high prices in the United States.

In addition, debt, as it does in so many things, plays an important role in poverty and food insecurity. We need to go back to our discussion of the Bretton Woods agreements, the establishment of the World Bank, the IMF and the Global Agreement on Trade and Tariffs, and, ultimately the World Trade Organization. Developing countries, most just emerging from colonial rule, borrowed heavily to promote economic development, although a large share of that money was siphoned off by corruption or simply reinvested in wealthy countries (see Boyce and Ndikumana 2011). One consequence was that it left many developing countries with debt levels impossible to pay and, as a consequence, growing food insecurity and a Debt/Insecurity Cycle (see Figure 6.1).

Until the so-called Third World Debt Crisis, developing countries were able to insulate their farmers from competition from the highly subsidized agriculture of the United States and Europe by imposing tariffs on their products. But, in order to secure relief from their debts, they had to agree to loan conditions imposed by the World Bank and IMF. These conditions, or structural adjustment programs, consisted of a package of neoliberal reforms that included lowering tariffs, eliminating non-tariff import barriers, and slashing government subsidies to the agricultural sector that included input subsidies (e.g., fertilizers, pesticides), marketing assistance, social safety nets, and agricultural research and education (Gonzalez 2015). However U.S. and European agricultural producers still received substantial subsidies, including lower fuel prices and lower interest rates on loans.

As a consequence of these imposed trade rules, resource-poor local farmers came into direct competition with subsidized agricultural producers in the United States and Europe and the influx of cheap, imported foods devastated local food production pushing more and more farmers into urban slums. In addition, IMF monitored programs promoted agricultural exports to service foreign debts. This diverted local land from food crop to cash crop production greatly reducing food self-sufficiency and increasing dependence on food imports.

To make matters worse, foreign speculators began to buy up more and more land in developing countries to meet a demand for more biofuels, or simply to speculate on land values. Some middle-income countries, such as Saudi Arabia, Qatar, China, India, and South Korea invested in land to protect their access to food supplies or because of domestic shortages of arable land and irrigation water (Gonzalez 2015:71). The rise in land prices further contributed to pricing local farmers out of the market, and forcing more into urban areas.

Finally, the cost of repaying debts to banks and investors required countries to remove support for other food and health related programs.

In sum, we need to understand the economic, political, and social relations that connect people to food. Economist Amartya Sen (1990:374) suggested that people command food through entitlements—that is, their socially defined rights to food resources. Entitlement might consist of the inheritance or purchase of land on which to grow food, employment to obtain wages with which to buy food, sociopolitical rights such as the religious or moral obligation of some to see that others have food, or state-run welfare or social security programs that guarantee adequate food to all. Not all of these kinds of entitlements exist in all societies, but some exist in all. From this perspective, hunger is a failure of entitlement. The failure of entitlement may come from land dispossession, unemployment, high food prices, or lack, suspension or collapse of state-run food security programs, but the results are that people may starve to death in the midst of a food surplus.

Figure 6.1 The Debt/Food Insecurity Cycle



Viewing hunger as a failure of entitlements also corrects ideological biases in the culture of capitalism, the tendency to overemphasize fast growth and production, the neglect of the problem of distribution, and hostility to government intervention in food distribution. Thus, rather than seeing hunger or famine as a failure of production (which it seems not to be), we can focus on a failure of distribution (see Vaughn 1987:158). Furthermore, we are able to appreciate the range of possible solutions to hunger. The goal is simply to establish, reestablish, or protect entitlements, the legitimate claim to food. Seeing hunger as a failure of entitlement also focuses on the kinds of public actions that are possible. For example, access to education and health care are seen in most core countries as basic entitlements that should be supplied by the state, not by a person's ability to pay. And most core countries see basic nutrition as a state-guaranteed entitlement, in spite of recent attempts in countries such as the United States to cut back on these entitlements. Thus, by speaking of entitlements, we can focus on the importance of public action in dealing with world hunger.

To understand the range of solutions to hunger, we also need to distinguish between the more publicized instances of famine, generally caused by war, government miscalculations, civil conflict, or climatic disruptions; food poverty, in which a particular household cannot obtain sufficient food to meet the dietary requirements of its members; and food deprivation, in which individuals within the household do not get adequate dietary intake (Sen 1990:374).

To illustrate, let's take a look at two situations of hunger: first, the more publicized instance of famine and then the less widely publicized endemic hunger.

The Anatomy of Famine

Famines have long been a part of history. As early as the fourth century B.C., administrators in India wrote of measures to avert famines, and the people of India have been subject to massive famines throughout its history. China has also suffered major famines. The latest occurred in 1958–1961, when 15 million to 30 million people starved to death.

Many historic famines were caused by crop failures, climatic disruptions, and war. Archaeologists have speculated that widespread climatic changes reduced the

An image that emerged from the famine in Somalia in 1992.

SOURCE: Bernard Blisson/Sygma/Getty Images



yields of Mayan agriculturists and resulted in the destruction of Mayan civilization. Yet it is clear that, even historically, famines resulted from entitlement failures rather than insufficient food (Newman 1990). Even during the Irish potato famine of 1846–1847, when one-eighth of the population starved to death, shiploads of food, often protected from starving Irish by armed guards, sailed down the Shannon River, bound for English ports and consumers who could pay for it.

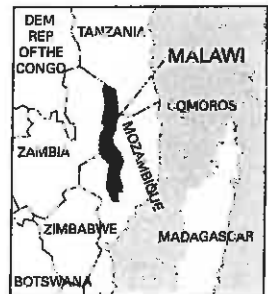
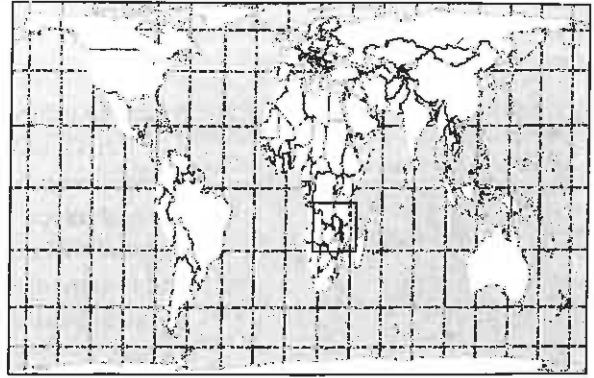
We can better appreciate the dynamics of famine and the importance of entitlements by examining a famine crisis in the African country of Malawi in 1949. It was by no means the most serious famine in Africa in the past sixty years, but Megan Vaughn (1987), in her analysis of it, provides answers to the key questions, *Who starves and why?*

The famine began with a drought. The lack of rain was first noticed after Christmas 1948 and drew serious attention when in January, normally the wettest month of the year, there was no rain at all; it remained dry until some rain fell in March. In some areas the first and second plantings of maize, the main food crop, failed completely, and wild pigs, baboons, and hippos devastated the remaining crops. Old people who remembered the last famine in 1922 said there were signs of a major crisis, and within a few months it was apparent that people were starving. The British colonial government began to organize relief efforts, sending agricultural representatives into the countryside to organize the planting of root crops, replanting of crops that failed, and opening food distribution camps. By the time the rains came in October, there were reports of real malnutrition and of hundreds of children and adults starving to death. Many died, ironically, at the beginning of 1950 as the maize crop was being harvested, many from eating the crop before it ripened (Vaughn 1987:48).

According to Vaughn, women suffered most from the famine. The question is, *What happened to women's food entitlements that resulted in their being the most severely affected?* To answer this question, we need to know a little about food production, the role of kinship in Malawi life, and the changing role of women in African economies.

Malawi at the time was under British control; agriculture was divided between cash crop agriculture—tobacco was the most important crop—and subsistence agriculture, the growing of such crops as maize, sorghum, and a few root vegetables. In addition, many people worked at wage labor, either in the formal employment sector, for European or Indian farmers or merchants, or the government, or in the informal employment sector, working on farms owned or worked by Africans. Cash could also be earned through migrant labor, almost exclusively a male domain, although women could earn money producing and selling beer or liquor.

The predominant form of kinship structure was matrilineal—that is, people traced relations in the female line. The most important kin tie was between brother and sister, and the basic social unit was a group of sisters headed by a brother. Under this system, rights to land were passed through women, men gaining rights to land only through marriage. Traditionally, women would work their land with their husbands, who lived with them and their children. In this system, a woman's entitlement to food could come from various sources: her control of land and the food grown on it, sharing of food with matrilineal kin, wages she might earn selling beer or liquor or working occasionally for African farmers, or wages her husband or children might earn. In addition, during the famine, the government established an emergency food distribution system from which women could theoretically obtain food. *What happened to those entitlements when the crops failed?*



Malawi

Changes in the agricultural economy and the introduction of wage labor under European colonial rule had already undermined women's entitlements (Boserup 1970). The British colonial government was under pressure, as it was in other parts of Africa, to produce revenue to pay the cost of maintaining the colonies. Consequently, they introduced cash crops such as coffee, tea, cotton, and tobacco. The latter proved to be the most profitable in Malawi and was the major cash crop when the famine struck. But cash cropping was generally a male prerogative and provided wages for African men only when they worked for Europeans or Indians. Cash cropping by Europeans and Indians also took land that might have been used for food crops, contributing to a growing land shortage for Africans. Thus, in addition to providing new ways for men to gain economic power, European practices led to the decrease of women's power in the agricultural sector. This combination of changes in access to land, decreasing amounts of land available for Africans, and the growing importance of wage labor for men made women more dependent on men for their food entitlements when the famine struck.

When the famine became evident to the British authorities, they took measures that further reduced women's entitlements. First, partly to conserve grain and partly because of a fear of social disorder, they forbade the production and sale of beer, removing a major source of income for women. Next, they assumed the family unit consisted of a husband, wife, and children, presided over by the husband, and, consequently, refused to distribute food relief to married women, assuming they would obtain food from their husbands. However, many husbands were traveling to seek work elsewhere to buy food, and they might or might not send food or money home. Next, the government food distributions gave preference to those, mostly urban people, who were employed in the formal economy by Europeans, Indians, or the government, neglecting those in the rural economy such as part-time women laborers. Furthermore, Europeans and Indians, who had ample food supplies during the famine, often shared with their workers who, again, were mostly men. Many of these men, of course, were conscientious husbands, fathers, brothers, and uncles and shared the food they received. But some did not, either keeping it for themselves or selling it at high prices on the black market.

To make matters worse, as the famine wore on, social units began to fragment. This is a common feature of famines. Raymond Firth (1959) reported that during the early phases of a famine on the island of Tikopia, families recognized extended kin ties in the sharing of food, but as the famine wore on, food was shared only within individual households. In Malawi, the situation was even worse; at the beginning of the famine, there seems to have been sharing within the main matrilineal kin group, but as it wore on, the sharing unit became smaller and smaller until people ate secretly. Because one of a woman's entitlements consisted of food received from relatives, this would have further reduced the amount of food she received. Finally, divorce rates apparently increased significantly, particularly in families where the husband was a migrant laborer, further isolating women and reducing their food entitlements.

In sum, then, the most vulnerable portions of the population included women without male support but for whom the colonial authorities took no responsibility, married women whose husbands had abandoned them, and wives of long-term migrants who did not remit money (Vaughn 1987:147). In addition, of course, the children of these women suffered and died disproportionately.

The lesson of the Malawi famine is that starvation can be very selectively experienced within a population because of the distribution of food entitlements. Given the amount of food already available in the areas most affected by the famine and the food available through relief efforts, it is unlikely that anyone had to starve. But many did.

The Anatomy of Endemic Hunger

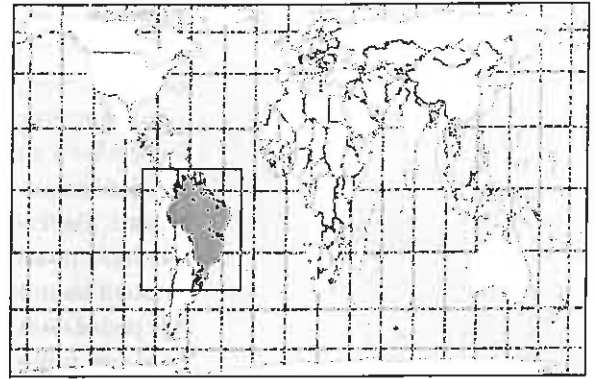
Although famine as a cause of hunger has decreased, endemic hunger caused by poverty has increased. One problem with endemic hunger is that it goes largely unnoticed or ignored, particularly by the press who prefer to cover the more spectacular instances of famine and by governments whose economic and social policies might be held responsible for the hunger. Yet endemic hunger is a far more serious problem. India, for example, which has done an excellent job of famine prevention, has done poorly in solving the problem of endemic hunger. Consequently, every six months, more Indians die as a result of hunger than Sudanese died in the famine of 1998. Yet the deaths in India do not receive nearly the public attention that is given to famine. One of the questions we need to ask is, *How and why is endemic hunger ignored, unrecognized, and sometimes denied by state agencies, as well as by the hungry themselves?*

Governments often refuse to recognize hunger because it marks an admission of failure to provide adequately for its citizens. And hunger sometimes goes unrecognized because it is assumed to be a medical problem, rather than a problem of food entitlements. Doing anthropological fieldwork in Mali, Katherine A. Dettwyler (1994:71–73) encountered a little girl with swelling of the face, hands, feet, and abdomen, classic symptoms of *kwashiorkor*, a disease that results from a diet that is sufficient in calories but deficient in protein. The girl's mother said she had *funubana*, "swelling sickness," and asked Dettwyler for medicine for her daughter, failing to recognize that what her daughter needed was extra meat or milk. When Dettwyler suggested just that, the mother responded by saying the little girl wasn't hungry and that she needed medicine. For the mother it continued to be a medical problem, not a food problem.

The denial of hunger prevents the development of programs to alleviate it. More insidiously, when hunger goes unrecognized or unacknowledged, problems that are a consequence of hunger, such as poor work performance, poor academic achievement, and stunted growth, are attributed to other factors, such as lack of motivation, cultural background or parental neglect.

To illustrate how social, economic, and cultural factors converge to produce hunger in the midst of plenty, as well as the complexity of identifying hunger and even admitting it exists, let's examine the case of starvation in Brazil in the 1980s. Brazil was not and is not a poor country; in fact, it is presently among the top ten economies in the world ranking with India and China as a growing economic power. During the period of great optimism following World War II, Brazil was one of the first of the so-called underdeveloped countries to embark on a concerted policy of economic and industrial development. A large number of Brazilians have become very wealthy, although almost 10 percent of its population lives in poverty, and, until recently, it had one of the highest rates of infant mortality in Latin America. Exploring why this happened will help us understand the dynamics of world hunger.

Brazil set out to develop economically by imitating the pattern followed by core countries such as England, France, and the United States. The strategy was to build industry, export cash crops, and create jobs, with the idea that the wealth created would "trickle down" to others in society. However, that didn't happen. Instead, peasants once able to secure a reasonable subsistence through simple agriculture were deprived of land, through either expropriation of land or privatization of communal land, and forced to work as wage laborers on the surviving farms or to flee to cities to seek work, often ending up in the shantytowns that surround the cities. Their wages were insufficient to buy food, and structural adjustment policies imposed by international lending institutions forced the reduction of social support programs. One thing stands out: The vast majority of the population becomes dependent on others for food,



Brazil

food they must buy and which must be affordable. Unfortunately, in many cases, they do not have the means to buy food, or prices keep it out of reach. The problem of hunger and poverty was, in the 1980s, particularly severe in northeastern Brazil.

Sugar dominated the economy of northeastern Brazil for more than 400 years. Fueled by a growing European demand for sugar, Portuguese colonists established plantations in the sixteenth century and imported slaves to grow and process sugarcane. The colonization of Brazil and the nature of the economic relations created by sugar production created a pattern of class relations that remained largely intact through the mid-twentieth century. A plantation-owning elite ruled over a large peasant population that cut sugarcane for wages, using unused land to grow their own food crops. A few others worked for wages in the sugar mills and refineries. However, as the sugar industry expanded and as technological improvements were made in the 1950s and 1960s because of government policies to expand production for export, many peasants were evicted from the land, fleeing to the cities in search of jobs. Poverty was widespread, and even people with jobs did not earn enough to meet family expenses. For example, in northeastern Brazil in 1989, the legal minimum monthly income was forty dollars, whereas food expenses alone for a family of four were four times that amount.

To make matters worse, in the mid-1980s, Brazil and other countries could not keep up their payments to the World Bank and other Western financial institutions from which they had borrowed to industrialize and, consequently, threatened to default on their loans. To help these countries avoid default, the World Bank allowed them to renegotiate their loans. These countries had to agree to change their economies by, among other things, reducing government spending on

such things as public education, welfare, housing, and health, entitlement cutbacks that resulted in still greater hardships for the poorest portion of the population.

In 1982, Nancy Scheper-Hughes returned to the shantytown Alto do Cruzeiro, located in the city of Bom Jesus da Mata, where she had worked as a Peace Corps volunteer in 1965. The shantytown consisted of 5,000 rural workers, one-third of whom lived in straw huts. The vast majority of residents had no electricity, and water was collected by the women twice a day from a single spigot located in the center of the community. Most men and boys worked as sugarcane cutters during the harvest season. A few men and some women worked in the local slaughterhouse. Other than this part-time work, there was little employment. Many women found jobs as domestics among the middle- and upper-class families or sold what they could in the market. Many women and children worked in the cane fields as unregistered workers at less than minimum pay.

The economics of hunger in the shantytowns was simple—there was not enough money to buy food. Because of the economic situation in Brazil, Scheper-Hughes reported that in 1987–1988, groceries cost twice what they did in 1982. Furthermore, a basic subsistence costs one and a half times minimum wage. Many of the residents did not make minimum wage and were unemployed from February to September when there was no cane to cut. Furthermore, fresh vegetables that some used to grow or that were available from relatives in the countryside were no longer available because so many have been forced off the land by the sugarcane growers. In the 1960s, brown beans cooked with slices of native squash, pumpkin, and onions were a staple; now the beans are cooked with only a little salt and flavoring. Dried

A homeless mother and child trying to survive on the streets.

SOURCE: Sean Sprague



beef was once available but is now prohibitively expensive and has been replaced by salted fish caught in the polluted river that passes through town. Even dried beans have become prohibitively expensive, and dried cornmeal had taken its place.

With jobs scarce, available wages inadequate, land unavailable to grow food, and government assistance inadequate or nonexistent, residents of the shantytown scrambled as best they could to acquire food. In fact, according to Scheper-Hughes, slow starvation was a primary motivating force in the social life of the shantytowns. People ate every day, but the diet was so meager that they were left hungry. Women begged while their children wait for food, and children's growth was stunted by hunger and malnutrition. Children of one and two years of age couldn't sit unaided and couldn't or didn't speak. Breastbones and ribs protruded from taut skin, flesh hangs in folds from arms, legs, and buttocks, and sunken eyes stared vacantly. The plight of the worker and his or her family was, according to Scheper-Hughes (1992:146), "the slow starvation of a population trapped ... in a veritable concentration camp for more than thirty million people."

Perhaps the most tragic result of hunger is the death of infants. Approximately 1 million children younger than five years of age died each year in Brazil. Northeastern Brazil, which accounted for 25 percent of child deaths, had an infant mortality rate of 116 of every 1,000 live births, one of the highest in the world at the time. And not all deaths were reported. Scheper-Hughes estimates that in northeastern Brazil, two-thirds of infants who died do so without a medical diagnosis.

Scheper-Hughes found that reliable statistics on infant mortality in the shantytowns were difficult to acquire. She finally obtained statistics for selected years in the 1970s, all of which indicated an infant mortality rate of 36 percent to 41 percent. From information she collected by combing public records, Scheper-Hughes found the following infant mortality rates for Bom Jesus da Mata: 49.3 percent in 1965; 40.9 percent in 1977; 17.4 percent in 1985; and 21.1 percent in 1987.

Although the infant mortality rate in northeastern Brazil had generally declined, the decline, said Scheper-Hughes (1992:280), was misleading. Instead of a decline in infant mortality, there is a "modernization of child mortality," characterized by containing child death to the poorest families and by a change in the major reported causes of child death from the "old killers" (diseases now controlled by immunization) to "new killers," especially infant malnutrition and dehydration caused by diarrhea.

News reports and government studies about poverty in Brazil did mention the problem of infant mortality, but they generally attributed it to malnutrition and disease. But Scheper-Hughes's study revealed a more basic problem: People, especially infants and children, were not only malnourished, a term that implies simply a poor diet, but were starving to death. Yet even medical authorities rarely mentioned starvation. When Scheper-Hughes examined medical records of children and infants who died, she found that in 34.8 percent of cases, the cause of death was cessation of heart-beat and respiration; in 22.2 percent it was listed as dehydration. Only 3.4 percent were attributed to malnutrition and only 1.7 percent to diarrhea. One wonders, wrote Scheper-Hughes (1992:303),

amid the sea of froth and brine that carried away the infants and babies of the Alto do Cruzeiro, what kind of professional prudery it was that "failed to see" what every mother of the Alto do Cruzeiro knew without ever being told. "They die," said one woman going to the heart of the matter, "because their bodies turn to water."

One way to mask the evidence of starvation, as Scheper-Hughes discovered in Brazil, is to turn it into a medical problem; people interpret the symptoms of starvation, even in children, as conditions that require medical treatment rather than food.

One of the things anthropology teaches about the human capacity for culture is that people place experiences in systems of meaning that allow them to make sense of their experiences. Illness and disease are no exception; different people define differently what constitutes illness as opposed to something that is not illness. Moreover, people will define what constitutes a medical problem (e.g., infant diarrhea) as opposed to, say, a social problem (e.g., hunger). In northeastern Brazil, hunger, a social problem, has been redefined as a medical problem. How and why this has been done reveals much about how human beings construct their own world of experience and how people construct systems of meaning that best enhance their social or political interests.

One of the major traditional illness syndromes in Brazil, and indeed in much of Latin America, is *nervos*, assumed to be a wasting sickness that leaves the victim weak, shaky, dizzy, tired, depressed, and disoriented. When people are suffering from these symptoms, they say they are sick with *nervos*. People believe *nervos* is the result of an innately weak and nervous body. In years past when people thought they suffered an attack of *nervos*, they drew on their traditional store of herbal medicines and the practical knowledge of elderly women in the household. Today they seek medical help from one of the local clinics; now *nervos*, a traditional disease category, is thought to be treatable by modern medicine.

But there was another more insidious change in how people defined their physical condition: Symptoms associated with hunger began to be talked about as *nervos*—that is, hunger and *nervos* became synonymous. This was not always the case. Starvation and famine have long been a feature of life in northeastern Brazil; people frequently complained of *fome* (hunger) and its terrifying end, *delirio de fome*, the madness that signaled the end of life from starvation. But hunger is rarely mentioned today. If a person is weak, tired, or dizzy, he or she will not complain of hunger and seek food but instead complain of *nervos* and seek medicine to cure it. In other words, people who may be suffering from hunger and who twenty years ago would have defined themselves as suffering from *fome* now define themselves as suffering from *nervos*, an illness separate from hunger that simply happens or is the result of innate weakness. Moreover, if weakness, fatigue, dizziness, and other symptoms that may be related to slow starvation simply happen, then no one is at fault and social causes of the problem can be ignored.

Nancy Scheper-Hughes (1992:174) said a hungry body represents a potent critique of the nation-state in which it exists, but a sick body implicates no one and conveys no blame, guilt, or responsibility. Sickness simply happens. The sick person and the sick social system are let off the hook. A population suffering from starvation, however, represents a threat to the state that requires economic and social solutions—social programs, jobs, or land redistribution. *Nervos*, a sickness, is a personal and “psychological” problem that requires only medical intervention and faults no one, except perhaps the person suffering from it. Sickness requires little state action, other than supplying the occasional prescription of tranquilizers, vitamins, or sleeping pills. Instead of the responsible use of state power to relieve starvation and hunger, there is a misuse of medical knowledge to deny that there is a social problem at all.

Scheper-Hughes (1992:207) related the story of a young single mother who brought her nine-month-old child to the clinic, explaining that the baby suffered from *nervoso infantil*. She complained that the small, listless, and anemic child was irritable and fussy and disturbed the sleep of family members, especially the grandmother, who was the family’s economic mainstay. Herbal teas did not work, and the grandmother threatened to throw them out if the child did not sleep. The doctor refused to give her sleeping pills for the child and instead wrote a prescription for vitamins. The doctor failed to acknowledge the mother’s real distress, as well as the child’s state of malnutrition, and the vitamins served virtually no purpose other than to redefine the infant’s condition from starvation to sickness or malnutrition.

On other occasions, children would be brought to doctors with severe diarrhea, a classic symptom of starvation. Simple rehydration therapy, feeding the child special fluids, will usually cure the diarrhea for a time. But if the child is returned to an environment where there is a lack of food, the problem is likely to recur until after being "saved" perhaps a dozen times the child finally dies of hunger.

The question, said Scheper-Hughes, is *how do people come to see themselves as primarily nervous and only secondarily hungry? How do they come to see themselves as weak, rather than exploited? How does overwork and exploitation come to be redefined as a sickness for which the appropriate cure is a tonic, vitamin A, a sugar injection? Why do chronically hungry people "eat" medicines and go without food?*

One reason is that since hungry people truly suffer from headaches, tremors, weakness, irritability, and other symptoms of nervous hunger, they look to doctors, healers, political leaders, and pharmacologists to "cure" them. They look for strong-acting medicines, so they line up at clinics and drugstores until they get them. One cannot, said Scheper-Hughes, underestimate the attractiveness of drugs to people who cannot read warning labels and who have a long tradition of "magical medicines."

Furthermore, she said, health is a political symbol subject to manipulation. Slogans such as "health for all by the year 2000," or "community health," filtered down to poor, exploited communities where they served as a cover for neglect and violence. There is power and domination to be obtained by defining a population as sick or nervous and in need of the power of politicians and doctors:

The medicalization of hunger and childhood malnutrition in the clinics, pharmacies, and political chambers of Bom Jesus da Mata represents a macabre performance of distorted institutional and political relations. Gradually the people of Bom Jesus da Mata have come to believe that they desperately need what is readily given to them, and they have forgotten that what they need most is what is cleverly denied. (Scheper-Hughes 1992:169–170)

Conspiracy by medical workers is not necessary to effect this transformation. Doctors and clinic workers themselves accept the magical efficacy of cures; either that or they are demoralized to the extent that they prescribe drugs as the only solution they have to ills they are ill-prepared to solve but called on to treat. As one doctor (cited Scheper-Hughes 1992:204) said:

They come in with headaches, no appetite, tiredness, and they hurt all over. They present a whole body in pain or in crisis, with an ailment that attacks them everywhere! That's impossible! How am I to treat that? I'm a surgeon, not a magician! They say they are weak, that they are nervous. They say their head pounds, their heart is racing in their chest, their legs are shaking. It's a litany of complaints from head to toe. Yes, they all have worms, they all have amoebas, they all have parasites. But parasites can't explain everything. How am I supposed to make a diagnosis?

• Solutions and Adaptations to Poverty and Hunger

6.3 Explain the limitations of the various solutions to poverty and hunger.

What solutions are there to the problem of world hunger and the poverty that ultimately causes it? Is it best to focus on economic development or, as some call it, growth-mediated security systems, assuming so-called market mechanisms will improve people's lives? Or are famine and endemic hunger best addressed by public support systems in the form of state-financed food and nutrition programs, state-financed employment, or cash distribution programs? And, more importantly, in the absence of any effective solution, how do the poor adapt to their plight?

The answers to these questions are not easy. Some argue, for example, that state-run programs take money needed for economic development and divert it to programs that may in the short run alleviate poverty and hunger but in the long run will simply aggravate the problem by undercutting the growth of private enterprise. This is the position generally taken by multilateral organizations, such as the World Bank and the International Monetary Fund (IMF), which insist, as we've seen, on limitations or cutbacks in state spending as conditions for loans or structural adjustment programs to assist countries in debt. Others respond that state-run antipoverty programs represent an investment in the human capital necessary for economic development—that a population that is hungry, undernourished, and subject to disease is less productive. To answer these questions, we first examine the role of economic development in reducing poverty and hunger, then examine what has been termed the *informal economy* and how people adapt and sometimes take advantage of economic activities outside the purview of the nation-state.

Economic Development

The concept of “economic development” can be traced to U.S. president Harry S. Truman’s inaugural address before Congress in 1949 in which he referred to the conditions in “poorer” nations and described them as “underdeveloped areas.” At that point, multilateral institutions, such as the World Bank and the IMF, were mobilized to further development goals, often recommending massive economic and social changes and a total reorganization of societies deemed to be “undeveloped.” For example, the 1949 World Bank report sent back from Colombia (and similar to that of hundreds to be issued in subsequent years) advised that

piecemeal and sporadic efforts are apt to make little impression on the general picture. Only through a generalized attack throughout the whole economy on education, health, housing, food, and productivity can the vicious circle of poverty, ignorance, ill health, and low productivity be decisively broken. (International Bank for Reconstruction and Development [IBRD]1950:xv)

Proponents of economic development point to successes in raising life expectancy rates worldwide, lowering infant mortality rates, and raising literacy rates. They can point to the development of successful national economies in South Korea, Malaysia, and Brazil, among others.

Critics, however, paint a different picture. They argue that the goal of economic development to raise the living standards of people in the periphery, seventy years after its inception, has largely failed. A higher percentage of the world’s population, they say, is hungrier today than in 1950. Studies by the very institutions at the forefront of development, such as the World Bank and IMF, conclude that the goals of development have not been met. Although poverty rates had declined somewhat in East Asia and the Middle East, elsewhere they have remained the same or increased. Nearly half of the world’s population—more than 3 billion people—live on less than \$2.50 a day. More than 1.3 billion live in extreme poverty—less than \$1.25 a day.²

²The figures of \$1.25 and \$2.00 a day used by the World Bank, the United Nations, and other international agencies to measure poverty may also be misleading. In the United States, for example, poverty is measured, not by an arbitrary dollar amount, but by the costs of necessities such as food, clothing, shelter, and education. The poverty standard used by the United Nations Development Program (UNDP) reports a lower poverty rate in Mexico than the United States, and a lower rate for Jamaica than Canada (see, e.g., Chossudovsky 1997, n.d.). Furthermore, most declines in global poverty rates are due largely to China where the number in poverty has been reported reduced by almost 400,000 people since 1981. The problem is that by shifting from a largely socialist to a market economy, people with little or no income, but who nevertheless received food, housing, and other benefits, now had to earn money to acquire necessities. Therefore they may or may not be better off.

Furthermore, the projects that were to promote "development" have notably decreased people's quality of life. Hundreds of millions of people have been displaced from their communities and homes or thrown off their land by World Bank hydroelectric and agricultural megaprojects. Instead of lifting the standard of living of peripheral countries, there has been a doubling of the degree of economic inequality between rich and poor countries in the past forty years. As one study concludes,

there is no region in the world that the [World] Bank or [International Monetary] Fund can point to as having succeeded through adopting the policies that they promote—or, in many cases, impose—in borrowing countries. (Weisbrot, Naiman, and Kim 2000:3)

In addition, the economic crash of 2007 threatens to negate any economic gains of the past ten to twenty years. As we noted earlier, worldwide unemployment could rise by at least 30 million people, and possibly as much as 50 million people, while more than 200 million people, mostly in developing economies, will fall into poverty (see Blankenburg and Palma 2009).

The question, then, is, *Why, up to this point, has the economic development initiative largely failed?*

There are three features of the economic development program that we need to examine. The first is the tendency to define the goals of development and an acceptable standard of living in the very limited terms of *income* and *gross national product* (GNP). Income and the level of production have become the measures of the worth of a society.

Second, economic development embodies an ideology that assumes that the culture and way of life of the core is universally desirable and should be exported (or imposed, if necessary) on the rest of the people of the world. As Wolfgang Sachs (1999:5) notes, "development meant nothing less than projecting the American model of society on the rest of the world."

Third, the concept of development greatly increased the power of core governments over the emerging nation-states of the periphery. If development was to be the goal, then "undeveloped" or "underdeveloped" countries must look to the expertise of the core for financial aid, technological aid, and political help. Furthermore, by embracing development as a goal, leaders of peripheral states gain military assistance and support that permit many of them to assume dictatorial powers over the rest of the population.

In his book *Seeing Like a State: How Human Schemes to Improve the Human Condition Have Failed* (1998), James C. Scott examines a series of failed development projects. Among these, says Scott, are the design and building of cities such as Brasilia, the Soviet collectivization of agriculture, the Russian revolution itself, and compulsory villagization in Tanzania. All were characterized, he says, by the same basic features, as previously mentioned, of economic development programs.

First, all these projects engaged in a form of economic reductionism; social reality was reduced to almost solely economic elements, ignoring institutions and behaviors essential to the maintenance of societies and environments. Reductionism of this sort is attractive to nation-states because it makes populations and environments more "legible" and, consequently, amenable to state manipulation and control. The guiding parable for understanding this reductive tendency is, for Scott, that of the "scientifically" managed forest.

Scientific forestry emerged in Prussia and Saxony in the last half of the eighteenth century. It viewed the forest almost solely as a source of revenue for the timber that might be annually extracted. Missing in this view was the foliage that might be fed to animals, game that might be hunted by farmers, or social interactions for which the forest served as a backdrop. Consequently, the first scientifically planted forests were set only with "productive" trees; anything that was thought to interfere with timber production was eliminated. Underbrush was cut, flora and fauna eliminated, and so

on. The result in the first generation of trees was impressive; however, forestry officials soon found that the new forest was living off the capital of rich soil created by the disordered forest, and by the second and third generations, timber production had declined dramatically and the soil itself lost the capacity to produce. Thus, without all of the "worthless" elements of the forest, the forest itself collapsed.

The language of capitalism, says Scott, constantly betrays its tendency to reduce the world to only those items that are economically productive. Nature, for example, becomes "natural resources," identifying only those things that are commodifiable. Plants that are valued become "crops"; those that compete with them are stigmatized as "weeds." Insects that ingest crops are called "pests." Valuable trees are "timber," whereas species that compete with them are "trash" trees or "underbrush." Valued animals are "game," or "livestock," whereas competitors are "predators" or "vermin" (Scott 1998:13). In the language of economic development, the focus is on GNP, income, employment rates, kilowatts of electricity produced, miles of roads, labor units, productive acreage, and so on. Absent in this language are items that are not easily measured or that are noneconomic (e.g., quality of social relations and environmental aesthetics).

The second ingredient in failed projects, says Scott, is what he refers to as "high modern ideology." This ideology is characterized by a supreme (or, as Scott refers to it, a "muscle-bound") version of self-confidence in scientific and technical progress in satisfying human needs, mastering the environment, and designing the social order to realize these objectives. This ideology emerged as a by-product of unprecedented progress in the core and was attributed to science and technology. High modern ideology does not correspond to political ideologies and can be found equally on the left and the right. Generally, however, it entails using state power to bring about huge, utopian changes to people's lives.

The idea of economic development is a product of high modern ideology. It represents an uncritical acceptance of the idea of scientific and technological progress, and an unrestrained faith in the wisdom of core economic, scientific, and technological principles. The green revolution and the attempt to widely apply the technology of genetic engineering discussed earlier are but two other products of high modern ideology.

Scott is careful not to reject outright the application of high modern ideology. In some cases it can and has led to significant improvements in peoples' lives. Thus, economic reductionism and high modern ideology are not, in themselves, sufficient to contribute to a failed project. For failure to occur, there is a third ingredient—an authoritarian state. When high modern ideology and the nation-state's tendency to reduce the world to legible, manipulative units is combined with an authoritarian state willing, and able to use the full weight of its coercive power, to bring these high modernist designs into being, along with a civil society that is unable to resist its manipulations, the stage is set for a development disaster. As Scott says,

the legibility of a society provides the capacity for large-scale engineering, high-modernist ideology provides the desire, the authoritarian state provides the determination to act on that desire, and an incapacitated civil society provides the leveled social terrain on which to build. (1998:5)

To illustrate how the goals of economic development and modernization can lead to disruption, Scott describes the *ujamaa* village campaign in Tanzania from 1973 to 1976. It represented a massive attempt to permanently settle most of the country's population in villages planned, partly or wholly, by officials of the central government (Scott 1998:221).

Clearly, the village scheme emerged from a desire of the Tanzanian state to make its population more legible and manipulable. At the beginning of the development scheme, there were some 11 million to 12 million rural Tanzanians living in scattered

settlements, growing crops and herding animals, using techniques developed over generations. As the natural forest contained elements to sustain it, so these settlements sustained themselves with local knowledge and practice built up over the years. From the viewpoint of the state, however, these populations were economically unproductive, disordered, and, somehow, primitive. The project, which succeeded in moving more than 13 million people into 7,684 villages (Scott 1998:245), was to transform the citizenry into producers of exportable crops, strung out along paved roads where state services could be easily delivered and where the population could be easily monitored. Furthermore, the success of the villagization program could be easily tracked by counting the number of people moved, the number of villages built, and so on.

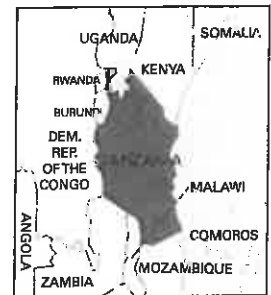
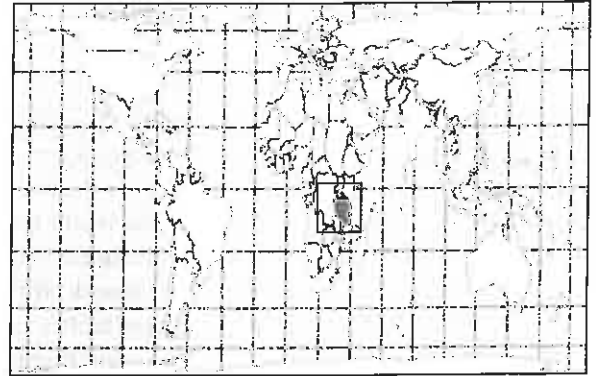
Clearly, the project was driven by a high modern ideology imported from the West that assumed that "modern" settlement patterns, agricultural techniques, and modes of communication were clearly superior to those practiced by the indigenous population. In fact, notes Scott (1998:241), these premises were holdovers from the colonial era. Project designers and supporters assumed that African cultivators and pastoralists were backward, unscientific, and inefficient. They assumed that only through the supervision or, if necessary, coercion by specialists in scientific agriculture could they contribute to a modern Tanzania.

Finally, as with most development schemes, there had to be an authoritarian state to impose the program and to suppress resistance to it. From the beginning, Tanzanians were skeptical about villagization. Whereas they had knowledge of the areas in which they lived, the new, selected sites were chosen without consideration of water or fuel resources, and they feared that being in villages would result in overcrowding for people and domestic animals. To meet this resistance, the state moved its machinery into place to force compliance. It was, said officials, for the people's own good. "We cannot tolerate," said Tanzanian president Julius Nyerere, "seeing our people live a 'life of death'" (Scott 1998:230). All of this was keeping with World Bank reports, such as one in 1964 that said,

How to overcome the destructive conservatism of the people and generate the drastic agrarian reform which must be effected if the country is to survive is one of the most difficult problems political leaders of Tanzania have to face. (Scott 1998:241)

Given the situation, violence was inevitable. The police and militia were given authority to move people, first threatening that they would not be eligible for famine relief if they did not move, later forcing them to tear down and load houses and belongings onto trucks. In some cases, houses were burned or run over with trucks. When people realized that resistance was futile, they saved what they could move and fled the new villages at the first opportunity (Scott 1998:235–236).

As might be expected, the villagization project was a disaster. Huge imports of food were necessary from 1973 to 1975 because of the immediate decline of agricultural production, the cost of which would have bought a cow for every Tanzanian family. Some 60 percent of the new villages were built on semiarid land that required long walks to reach farm plots. Peasants were moved from fertile farmlands to poor lands or land on which the soil was unsuitable for the crops the government demanded farmers grow. Villages were located at a distance from crops, which left the crops open to theft and pests. The concentration of people and livestock resulted in cholera and livestock epidemics, while herding cattle in concentrated areas devastated both rangeland and livelihoods (Scott 1998:247). Instead of achieving legitimacy, the villagization campaign created an alienated and uncooperative peasantry for which Tanzania would pay a huge financial and political price.



Tanzania

Of course, the scheme was not totally Tanzanian. It resembled hundreds of colonial schemes, built on the supposed promise of modern science and technology, as well as projects still supported by the World Bank, the USAID, and other development agencies. That it was a disaster should come, in retrospect, as no surprise, in spite of the conviction of virtually everyone involved that it would vastly improve the life of the subjects. More disturbing yet is that the Tanzanian government, at the urging of the World Bank and the U.S. government, continues to relocate indigenous peoples with similar negative results (see, e.g., Fratkin 1997a; 1997b).

Based on his examination of failed projects, Scott (1998:348) concludes that the major fault is that the project planners thought they were smarter than they really were and that they regarded the subjects of their plans as far more stupid and incompetent than they really were. By trying to impose a vision of modernization and progress built largely on economic criteria and a vision of life that emerged in the West, high modern ideologues fostered the social and cultural equivalent of unsustainable, impoverished, monocropped, and "scientifically managed" forests, environments devoid of the social stuff that enable people in communities to form cooperative units and work together to achieve common goals.

The Nature and Growth of the Informal Economy

Having a job in a market economy is essential. Employment is, for the vast proportion of the world's population, the major means of entitlement to necessary goods and services. But what happens when there are not enough jobs? Presently there are at least 201 million people unemployed in the world and that number is expected to increase. Unemployment most affects people aged 15 to 24 (some 71 million of them), representing 14 percent of total unemployed (International Labor Organization 2017). There are various reasons for unemployment other than the obvious fact that there are not enough jobs or money to create them. Many of the unemployed are recent migrants fleeing economically depressed rural areas and moving to cities in search of jobs. In 2007, for the first time, more than half of the world's population lived in cities, a percentage that is expected to climb to two-thirds by 2030. *But what happens in areas where people go in search of employment, but there are no jobs? More to the point, what steps do people take independent of the nation-state to escape poverty?*

Economic policymakers, as well as the media, often convey the impression that the poor passively accept their economic circumstances or are in poverty because they somehow lack initiative. Missing from these conceptions is the consideration of how the poor and unemployed adapt by tapping into the informal or underground economy and surviving on income that never appears in any government accounts. The informal economy consists of economic activities that are illegible to the state, which is one reason why it is difficult to track the income earned from these sources. These activities range from babysitting, to auto repair, to begging, to the sale of children and women, to the incredibly complex and global enterprise of illegal drug sales. In the United States, activities forming part of the underground economy might include a plumber taking cash for a repair, a gang member selling cocaine, a pawnbroker fencing stolen goods, farmers employing illegal immigrants, textile manufacturers running a sweatshop, border dwellers smuggling cigarettes, or people selling fake Rolexes or pirating CDs (Schlosser 2003:4). The informal economy is often the residue of nation-state attempts to regulate a commodity or activity by banning or taxing it or by controlling its distribution. Such attempts provide spaces for the informal economy by providing people the opportunity to either sell a banned commodity (e.g., illegal drugs) or provide the commodity or activity at lower costs (e.g., smuggled cigarettes).

Anthropologist Keith Hart (2000) was one of the first to name and draw attention to the informal economy. During his research in the city of Accra in Ghana, he noted

that the masses of surplus laborers were not “unemployed” but rather worked for erratic and low returns. The streets of Accra, Hart said, were

teeming with life, a constantly shifting crowd of hawkers, porters, taxi-drivers, beggars, pimps, pickpockets, hustlers—all of them doing their best to get by without the benefit of a real job of the sort found in national economic statistics. (2000:149–150)

Participants in this informal economy were not limited to the poor, although they, particularly women (see Carr and Chen 2001), depended on it for their survival more than anyone else; virtually everyone, even those who were part of the formal economy, took part. Informal opportunities included everything from market gardening and brewing to gambling, theft, and political corruption. Hart (2000:151–154) describes the case of Atinga who, getting out of the army, invested his last salary payment to divide his living quarters in two by setting up a partition and opening a bar in which he sold gin. He would buy a barrel of gin for about four or five pounds and sell it by the drink or bottle. Profits were minimal because many of his clients could only pay on credit, if at all, but he managed to make a little while looking for a more permanent job. He finally got a job as a night watchman, turning the bar over to his wife to run. However, business declined and his wife drank most of the gin. Occasionally his income would rise when he was able to purchase a stray dog for meat and soup sold at the bar, but ultimately he left with his family while his landlord's wife took over the enterprise.

While activities such as these might seem a minor feature of an economy, in total, they represent a significant part of the global GDP and have a major impact on other aspects of the economy. While there is no agreement on the size of the informal economy, most acknowledge that it is vast and growing. The International Monetary Fund estimates that illicit funds amount to between US\$590 billion and US\$1.5 trillion, or 1 percent to 5 percent of the world GDP. And that is probably a significant underestimate. In the United States alone, it is estimated to be some 9.4 percent of the total economy, or some \$650 billion. In other countries it is even larger, ranging from 12.5 percent of the GDP in Great Britain; 27 percent in Italy; 40 percent in Brazil; 45 percent in Russia; and 51 percent in the Ukraine (Schlosser 2003:5–6). The informal economy in Asia is estimated to range from 45 percent to 85 percent of the nonagricultural GDP and 80 percent of the nonagricultural GDP of Africa (Carr and Chen 2001). The UN estimates that the money generated by organized and unorganized crime alone—illicit gambling, illegal arms trade, human smuggling, traffic in body organs, car theft, prostitution and racketeering, and, most of all, drug sales—is about US\$1 trillion. Furthermore, the money-laundering activities that accompany illegal enterprises have a significant impact in the global economy, even being implicated in the financial crises that hit Mexico in 1994–1995 and Thailand in 1997 (Fabre 2002).

Anthropologist Christian Geffray's (2002) courageous work examining illegal drug networks in the Amazon provides us with an excellent case study of how informal economies develop, how they intersect with the formal economy, and how they impact local and regional economies. In the 1970s, the World Bank financed construction of the BR 364 highway in Brazil, through the rain forests of the state of Rondônia. Prior to the road construction, the forests were occupied only by indigenous groups and *caboclos*, local populations that lived along the rivers and worked for entrepreneurs (e.g., rubber merchants) who lived in the towns. But the roads brought in hundreds of thousands of mostly poor people who wanted to try out their luck on the frontier. The first phase of the emergence of an informal economy comprised the activities of Bolivian cocaine traffickers who set up laboratories on the Bolivian side of the Mamoré River and began smuggling supplies (e.g., ether, kerosene, and acetone) for coca processing from Rondônia in exchange for processed cocaine. Among those involved in the smuggling were gold prospectors (*garimpeiro*)

working on the river. The *garimpeiro* worked on balsa rafts pumping alluvial deposits from the riverbed and processing it on the surface. As Geffray (2002:34) put it, the cocaine producers and dealers and “thousands of often penniless Brazilian gold prospectors, isolated in the forest and abandoned by society, faced each other on either side of the river.”

The divers were under severe mental and physical stress and often relieved their tension of working underwater for hours at a time by crossing the river and getting coca paste to smoke. These workers would occasionally trade gold for cocaine and spread it among the poor and working-class populations of the area. Gradually the cocaine made its way to Brazilian cities where the unemployed and working-class population could engage in small-scale dealing. Meanwhile, in Rondônia, the drug traffic led to a lively trade in stolen goods (vehicles, aircraft, farm machinery, electronic equipment, cattle, etc.) exchanged for cocaine. Larger traffickers in drugs or stolen goods then began to invest their money in legal enterprises as a means of laundering the money earned in the informal economy. (Money laundering is a process in which funds that are obtained illegally are made to appear as though they originated from a legitimate source [e.g., see Steel 2006]. For example, drug traffickers laundered money by investing in balsa rafts used by gold prospectors so they could claim that the money they earned in the drug trade came from gold prospecting.)

Thus, the money brought in through the informal economy began to feed the formal economy. The process by which formal and informal economies intersect is illustrated in Rondônia by the career of Jabes Rabelo. His family owned coffee warehouses, and Jabes Rabelo began to use money he earned as a drug trafficker to purchase coffee from local producers. Since his goal was not to make money in the coffee trade but to exchange his illegal drug money into legal coffee money, he paid coffee producers well above the market value of their coffee and sold the coffee to processors at prices below what others were selling it at. This had a number of side effects: First, it drove legitimate coffee dealers (those not using drug money) out of business because they couldn't pay the high prices that drug traffickers were willing to pay, and it artificially raised the profits of the coffee producers. In effect, coffee production was being subsidized by cocaine money. It also ingratiated the drug traffickers with local coffee producers and others in the population who benefited directly or indirectly from the illegal trafficking in drugs and other goods. Finally, it provided those who succeeded in the informal economy with money with which to either bribe government officials (another feature of the informal economy) or to run for elected office themselves. Thus, Jabes Rabelo invested his dirty money into rural trade that allowed him to take control of the whole coffee market and, in the process, establish a network of alliances within the elites. His role in subsidizing the coffee business led the elites to elevate him to a “Citizen of Honour,” bragging that one of its citizens was the state's biggest buyer and exporter of coffee. Rabelo's control and subsidization of the producers enabled him to build broad support and become the *de facto* benefactor of thousands of people in rural areas; consequently, he had little difficulty being elected a federal deputy. Each year at Christmas and Easter he would send out trucks full of toys, chocolate eggs, and other gifts to children of the poor and provide drinks at charity events. The arrest in 1991 of his brother, who possessed 540 kilos of cocaine, did nothing to affect Rabelo's popularity (Geffray 2002:39).

Geffray's description of the evolution of the informal economy of Rondônia—one he characterizes as a “society ruled by drug trafficking” (2002:45)—illustrates how an informal economy emerges, the extent to which thousands of people come to depend on it, and how it can dominate a local economy. It also illustrates how the informal economy can allow the emergence of new elites who, financed by their profits from the informal economy, gain power through patronage and election to public office.

The Nature and Scope of the Informal Economy of Drugs

Illegal drugs are clearly one of the most important commodities produced, distributed, and sold in the global informal economy. Drugs, in general, have been a mainstay of the global economy for well over 300 years. Tobacco is a good example. It originated in the Americas and was first observed by Europeans during Columbus's first voyage when sailors saw Taino Indians smoking leaves rolled into large cigars. It was brought back to Europe, but for most of the sixteenth century, it was largely a novelty item until its cultivation became global and the increased supply annually drove down the price. By 1670, the Dutch were using on average 1.5 pounds per person, and the English over a pound. Its use spread rapidly, particularly as prices decreased, and was fashionable in Europe in the nineteenth century; by 1925, the French were using about three pounds per person. By 1950, American men and women were purchasing 15,000 cigarettes a second, and by the mid-1990s, there were 1.1 billion smokers in the world, about one-third of the population over fifteen, smoking 5.5 trillion cigarettes a year, or a pack a week for every person on the planet (Courtwright 2001). But tobacco, as with other widely traded addictive substances such as coffee and tea, has never been deemed illegal. It has, however, been widely taxed and regulated, its addictive quality guaranteeing nation-states a steady income. The state's attempt at extracting income from tobacco's sales also cemented its status in the informal economy as people sought to evade the taxes and fees associated with its use.

Three other widely traded addictive substances—opium, cannabis, and coca, which were widely used in products such as cough syrups, soft drinks, and various tonics—were ultimately declared illegal, first in the United States in 1914. However, by making opium, cannabis, and coca illegal, the state created a group of commodities that became the pillars of the informal economy.

It is difficult to calculate the place of illegal drugs in the global economy. The United Nations Office on Drugs and Crime (UNODC 2006:17) estimates that the global drug trade generates \$320 billion a year in revenue, or some 0.9 percent of the world's GDP, equal to the GDP of all but 12 percent of the countries in the world. Put another way, the sale of drugs is equal to 12 percent of the global export of chemicals (US\$794 billion), 14 percent of global agricultural exports (US\$674 billion), and exceeded the global exports of ore and minerals (US\$79 billion). Cannabis is the most widely grown and used drug (some 162 million people), followed by amphetamine-type stimulants (some 35 million people), and ecstasy (almost 10 million people). Opiate users number some 16 million, of which 11 million use heroin and 1.3 million cocaine (United Nations 2005:9). In all, some 200 million people, or some 5 percent of the global population, used an illegal drug at least once. Practically speaking, if the legal suppression of the drug trade actually succeeded, much of the world economy from Bolivia to Afghanistan to Northern California could collapse (Henson 2005).

In many ways, the informal economy in drugs is simply another economic sector that works like any other. There are the producers, generally small farmers in Afghanistan, Colombia, or the United States, doing what they have to do to make a living; there are the buyers and processors, often organized into large gangs or cartels; and there are the large-scale distributors and the small retailers, whose profits are small and risks great.

To understand the importance of drugs in the informal economy, especially for the poor, let's examine the role they played in two different places and eras: London in the early eighteenth century and New York in the late twentieth century.

London may have provided the first "drug craze." The drug involved was gin. Distilled beverages had been available to the English working classes since the late sixteenth century but were too expensive to be used for other than medical purposes among the poor. But when grain production in England increased, cheap gin produced from the grain became available and the amount of it consumed increased annually from about a third of a gallon per person in the early 1700s to about 2.2 gallons per person in 1743. Seeking to raise revenue, the government placed an excise tax on drinks

and required licenses for those who sold gin, thus providing an opportunity for small sellers to hawk drinks at cheaper prices.

Taking advantage of the opening created by the government's attempt to tax gin were the thousands of new immigrants arriving in the city without employment or housing, driven off the land by enclosure movements. Gin was appealing first as a source of solace and second as a source of employment. These immigrants were mostly young and poor with few ties to family, employers, or the larger community, and, as such, were a worry to the elite. But the increased use of and thriving informal economy in gin led to the passage of a series of legislative acts attempting to further control both the sale of gin and the people who could use it. Most of the early gin acts were rarely enforced (London had no formal police force in the eighteenth century), but the Gin Act of 1736, which required sellers to purchase a license for fifty pounds, also offered a fee of five pounds for information leading to a conviction of someone selling gin without a license. This created an army of informers made up of essentially the same strata of society from which the gin sellers came.

But the informal economy in gin continued to thrive. For many, the selling of gin made the difference between poverty and destitution. They sold gin in hovels; "gin shops"; or out of wheelbarrows, baskets, and even boats. And women were among the major peddlers. As Jessica Warner describes it in her book *Craze: Gin and Debauchery in an Age of Reason*, selling gin appealed to women because it required little or no capital, it did not require membership in professional organizations, and it was one of the few occupations that women were not excluded. It was, as Warner (2002:51) put it, a means of economic survival. But women were also at greater risk; while they accounted for only about 20 percent of the known gin retailers in London, they accounted for 70 percent of the people charged under the Gin Act of 1736.



The different attitudes of the British toward gin and beer, and people who used each, are depicted in these eighteenth-century prints by William Hogarth, *Gin Lane* (left) and *Beer Street* (right).

SOURCE: (Left) *Gin Lane* is a print issued in 1751 by William Hogarth (1697–1764) an English painter, printmaker, in support of what would become the Gin Act. It depicts the evils of the consumption of gin/Universal History Archive/UiG/Bridgeman Art Library. (Right) William Hogarth (1697–1764), *Beer Street in London*, engraving, 1751/De Agostini Picture Library/A. Dagli Orti/Bridgeman Art Library

With so many dependent on the informal economy for gin and the addictive quality of the commodity feeding its sales, the London elite and the government became more concerned about its consumption. However, they had to contend with not only the informal sellers and consumers, but also with those among the elite who profited from gin sales. These included the grain growers and sellers whose product was converted into gin. It also included the state, which used the money from gin taxes to finance England's war with France. But those arguing for increased regulation of gin generally prevailed. They reasoned that drunkenness was a direct cause of such things as robberies, assaults, and even murders, their claims given credence by the occasional deaths, injuries, and fights attributed to gin consumption reported widely in newspapers and pamphlets. They also felt that the poor's consumption of distilled beverages was above their station in life. They argued that by reducing drunkenness, they could reduce lawlessness and increase the respect of the working poor for their employers. Hard work and low wages, they thought, would keep down the cost of British exports and keep the poor in their place (Warner 2002:112). Ironically, there was never any attempt to regulate beer consumption in spite of the fact that the average Londoner consumed some thirty gallons a year. The conflicting attitudes toward gin and beer are evident in two prints by William Hogarth—*Gin Lane* and *Beer Street*. The former depicts lives of misery and destitution, while the latter a street filled with productive enterprise (see illustration).

But the attempts to control gin by unleashing an army of informers turned neighbor against neighbor, creating attitudes of mistrust and provoking riots and protest. In other words, the attempts at regulation created, in many ways, a worse situation than the offense it was supposed to stop (Warner 2002:159–160).

The protests and riots that ensued after the passage of the Gin Act of 1736 led to the gradual nonenforcement of the regulation and a gradual increase in gin consumption to about two and a half gallons a year per person. Then public concern led to the passage of the Gin Act of 1751, which raised excise tax on gin to 4.5 pence a gallon, barred distillers from selling gin, and banned it in prisons, workhouses, and poorhouses. It enacted stricter standards for eligibility to obtain a license. Consumption dropped, as it had in 1736, but began to rise again in 1756 until the government banned altogether the manufacture of spirits from domestic grains because of crop failures.

There are a number of lessons to be learned from the gin craze in eighteenth-century London, such as the role of drugs in the informal economy and attitudes toward and attempts to regulate addictive drugs. But before we examine those, let's go to New York City of the 1980s and Philippe Bourgois's study of the drug economy of East Harlem, or *el Barrio*. Like London of the early eighteenth century, East Harlem was the destination for hundreds of thousands of immigrants, largely from Puerto Rico. Like most of the migrants to London, many had been semisubsistence peasants on private plots or haciendas or were workers on sugar plantations or assembly plants. And like the arrivals in London, many found it difficult to get jobs in the formal economy (the area had a 40 percent unemployment rate), turning instead to the informal sector to survive.

For women, activities in the informal economy included babysitting, working "off the books" as seamstresses, tending bar at social clubs, taking in boarders, or engaging in prostitution. Men's jobs tended to be more visible: street-corner car repairs, working for unlicensed contractors, selling "numbers," or selling drugs. Drugs were the multibillion-dollar foundation of the underground economy in *el Barrio*. Cocaine, crack, and heroin were the most prevalent drugs and were easily accessible, says Bourgois:

The street in front of my tenement was not atypical, and within a two block radius I could ... obtain heroin, crack, powder cocaine, hypodermic needles, methadone, Valium, angel dust, marijuana, bootleg alcohol, and tobacco. Within one hundred yards of my stoop there were three competing crack houses selling vials at two, three, and five dollars. Just a few blocks farther

north down, in one of the local "pill mills," a doctor wrote \$3.9 million worth of Medicaid prescriptions in only one year, receiving nearly \$1 million for his services. Ninety-four percent of his "medicines" were on the Department of Social Services' list of frequently abused prescription drugs. (1995:3-4)

The 1980s drug scene in the United States was dominated by the use of crack cocaine, a combination of cocaine and baking soda that could be smoked and that delivered an almost instantaneous high. As London had the "gin shop," East Harlem had the "crack house." These were run by dealers who would hire managers and look-outs for a share of the income, often bringing in hundreds of dollars a night, although, as Bourgois (1995:91) points out, most street-level dealers remained penniless because of their need to spend lavishly. In addition, working in the informal drug economy was dangerous. Bourgois indicates that when you calculate the risks (getting beat up or killed), the off-time (jail or crack house closings by police), the poor working conditions, the conditions of the clientele, and legal costs, employment in the crack economy is generally much worse than legal employment. Thus, many of the drug dealers that Bourgois worked with sought jobs or business opportunities in the formal economy, generally with little success.

As in London, women were a significant part of the drug underground economy of *el Barrio*. Women, says Bourgois, were forced into a balancing act between the two state agencies that dominated their lives—the penal system and the welfare system. Given the attack on welfare and state-spending in general of the 1980s launched by the Reagan administration, it was virtually impossible to maintain a family on welfare alone. Consequently, women had to supplement their income with off-the-books jobs, maintain two or more Social Security cards, or sell drugs. Those who became drug users themselves often turned to prostitution to maintain their habit. Welfare was complicated by the city practice of requiring recipients to requalify every six months and cutting off benefits if they couldn't supply accurate documentation. As a result, some 10 percent to 15 percent of New York City recipients were being terminated each year.

Thus, the poor of East Harlem were hit by a double economic plague: Because of global trade liberalization, manufacturing jobs for which the new migrants were most qualified were being sent overseas, some 800,000 of them from the 1960s through the early 1990 in New York City alone. At the same time, the government was reducing its support for the poor. These conditions created a situation where desired commodities (crack and other drugs), easy (although restricted) availability, and a surplus supply of laborers created a thriving informal economy.

But participation in the informal economy carried a stigma and, at the same time, provided the state with an opportunity to blame the victims and diminish its responsibility for poverty and hunger. In the cases of both gin and crack, a drug and those associated with it were blamed for societal problems for which the drugs were symptoms rather than causes. For example, children were prominent in both the gin and crack debates; in Hogarth's *Gin Lane*, a baby is plunging to its death as its mother drinks, while another sits uncared for by the coffin of its mother. In the late 1980s, critics started claiming that our children were being taken from us by crack. Politicians joined with journalists to condemn the mothers of babies addicted to crack cocaine. The *San Jose Mercury News* noted that "the image of bad women destroying their babies in the womb fits perfectly with the politics of demonizing drugs and regulating pregnancy" (Warner 2002:210). Rather than demonizing an ethnic group or social class, the crack epidemic of the late 1980s and 1990s, says Warner (2002:278-279), assaulted women, the family, and motherhood. Inner-city women who smoked crack were accused of having lost the "mother-nurture instinct." One reason for this was the fact that for the first time in U.S. history, women comprised half the addicts on the streets, and because they were often the only family providers, they brought toddlers and newborns with them to the crack houses.

In commenting on Hogarth's print *Gin Lane*, Warner says,

It is a remarkable print—easily Hogarth's best—and it succeeds as propaganda because it identifies cause and effect in terms that are as stark as they are seemingly irrefutable. Gin is cause and poverty its effect. It is a very appealing equation: take away gin and away goes poverty and in comes the jolly prosperity of *Beer Street*. The converse is a little trickier, for it forces us to do something about it. This approach was, of course, even less popular in eighteenth century England than it is today. Poverty and gin were inextricably linked, but which came first? Most of London's working poor led lives of unspeakable misery before the advent of gin; moreover, their lives, as measured by real wages, were even more wretched after its demise. It was not gin that made people poor; it was poverty that made them drink. (2002:213)

The problem, says Warner (2002:212), is assuming that any drug such as gin or crack cocaine is the cause of the poor health and behavior of users. Such an assumption removes the nation-state from any responsibility for the environments that make drugs attractive as commodities. It is, to some extent, the equivalent of "medicalizing" hunger. If it is the weakness and criminality of the poor that is responsible for their condition, then the nation-state and those who control it are absolved of responsibility.

But the criminalization of certain commodities and activities has another insidious consequence. The history of drugs is characterized by the association of certain commodities or activities with marginalized groups of people. In eighteenth-century London, gin was associated with the poor, while beer and other distilled beverages were associated with the elite or the working class. Likewise, in the United States, specific drugs have been selectively associated with marginalized groups: Opium at the turn of the century was associated with Chinese immigrants, marijuana with Mexican immigrants, and cocaine with African Americans, while other drugs, alcohol, coffee, and tobacco were associated with mainstream populations and considered acceptable.

But by criminalizing only those drugs associated with marginalized populations, the nation-state may bring judicial authorities to bear on those groups; they become objects of legitimate suspicion, surveillance, and control. Thus, to the extent that marginalized populations engage in activities that are criminalized, it permits the state to selectively deprive them of many rights held by other members of society. The case of marijuana is illustrative. It was perfectly legal until the 1920s when it became associated with Mexican immigrants. In the 1930s, when Mexican immigrants were competing for scarce jobs, marijuana was demonized as the "evil weed" and criminalized in the Marijuana Tax Act. The 1936 film *Reefer Madness* tells the story of high school students who are lured into trying marijuana, which results in a hit-and-run accident, a suicide, a rape, and a descent into madness. Then in the 1960s and 1970s, marijuana began to be associated with the white middle-class student counterculture. Consequently, marijuana laws were relaxed, and government commissions removed marijuana from the list of dangerous drugs. In the 1980s, conservative parent groups convinced the government to criminalize marijuana once again, although the black arrest rate for marijuana offences are 2.5 times the rate for whites, probably reflecting the degree of discretion that allowed the police in making arrests (NORML 2000).

As a consequence of the criminalization of drugs, the United States has the largest prison population in the world—over 2.2 million people, or 1 of every 136 people. In 2005 in the United States, 1,846,351 people were arrested for drug violations; of those, 786,545 were marijuana related, and 696,074 (37 percent of all drug arrests) were for possession alone (Office of National Drug Control Policy 2007).

Conclusion

6.4 Summarize the relationship between economic development and hunger.

It is apparent that hunger is not caused by a lack of food, but rather by some people's lack of ability to purchase food, lack of access to land, or the failure of state assistance programs. It is also apparent that the poverty that causes hunger is a consequence of global economic forces, such as the financial debt that peripheral countries accumulated in the 1970s. Other instances of hunger and famine are generally a consequence of political unrest. Even in relatively wealthy countries, such as Brazil, the growing gap between rich and poor that has seemingly resulted from growing integration into the world economy results in thousands dying of starvation.

We have seen, furthermore, that economic policies of the wealthy countries are not designed to help the poor countries but to further the interests of corporate and political agendas. As we have seen, economic development programs have, by and large, done very little to help their intended beneficiaries, and in many cases have created enormous suffering, economic hardships, and environmental devastation.

However, we examined the types of adaptations the poor sometimes make to their condition, engaging the informal economy and the financial opportunities it offers, as well as the price they sometimes pay in government surveillance and prosecution.