THIRD EDITION

Sociology

Pop Culture to Social Structure

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Population, Urbanization, and the Environment

(R) io de Janeiro, Brazil, is one of the world's most beautiful cities. Flawless beaches lie along the warm, blue waters of its bays, guarded by four- and five-star hotels and pricey shops. Rising behind them are mountains, partly populated, partly covered by tropical forest. The climate is balanced between spring and summer. The inner city of Rio is a place of great wealth and beauty, devoted to commerce and the pursuit of leisure.

Rio is also a large city. With a metropolitan population of more than 12 million people in 2007, it is the 23rd biggest metropolitan area in the world, larger than Chicago, Paris, and London (Brinkhoff, 2011). Not all of its 12.5 million inhabitants are well off, however. Brazil is characterized by more inequality of wealth than almost any other country in the world. Slums started climbing up the hillsides of Rio about a century ago. Fed by a high birthrate and the migration of people from the surrounding countryside in search of a better life, slums are now home to about 20 percent of the city's inhabitants (Jones, 2003).

Some of Rio's slums began as government housing projects designed to segregate the poor from the rich. One such slum, as famous in its own way as the beaches of Copacabana and Ipanema, is Cidade de Deus (the "City of God"). Founded in the 1960s, it became one of the most lawless and dangerous parts of Rio by the 1980s. It is a place where some families of four live on $50 a month in houses made of discarded scraps of wood and tin, a place where roofs leak and rats run freely. For many inhabitants, crime is survival. Drug traffickers wage a daily battle for control of territory, and children as young as 6 perch in key locations with walkie-talkies to feed information to their bosses on the comings and goings of passersby.

Cidade de Deus is a depressing reminder that the closely related problems of population growth and urbanization are more serious now than ever. Brazil's 41 million people in 1940 grew to 201 million in 2010. The country is now more urbanized than the United States is, with more than three-quarters of its population living in urban areas (Lahmeyer, 2003; Ministério de Ciência e Tecnologia Brasil, 2002).

Rapid urbanization and industrialization come with a steep price. In Brazil's case, the steepest price of all is being paid by the country's rain forests, the biggest in the world. The rain forests are sometimes called the world's lungs because they produce so much oxygen and remove so much carbon dioxide from the atmosphere. They are the source of unique species of plants from which many of the world's wonder drugs are derived. The ancient way of life of many aboriginal peoples depends on the rain forests. Yet, ranchers, loggers, miners, hydroelectric projects, and the spread of cities are rapidly destroying the rain forests. As their means of existence disappear, the aboriginal peoples of Brazil have become among the most suicide-prone people in the world (Hamlin and Brym, 2006).

One of Rio de Janeiro's biggest slums.

This chapter tackles the closely connected problems of population growth, urbanization, and the environment. We first show that population growth is a process governed less by natural laws than by social forces. We argue that these social forces are not related exclusively to industrialization, as social scientists commonly believed just a few decades ago. Social inequality also plays a major role in shaping population growth.

Today, population growth is typically accompanied by the increasing concentration of the world's people in urban centers, so we next turn to the problem of urbanization. As recently as 40 years ago, sociologists typically believed that cities were alienating and anomic (or normless). Now, most sociologists recognize that this view is an oversimplification. We also outline the social roots of the city's physical and cultural evolution from preindustrial to postindustrial times.

Environmental degradation typically accompanies population growth and urbanization. Accordingly, our final task in this chapter is to outline the main forms of environmental degradation, show how people sometimes turn environmental issues into social problems, analyze how different classes, races, and countries experience such problems, and assess the two major approaches to solving the environmental crisis.

Population

The Population "Explosion"

Twelve thousand years ago, only about 6 million people inhabited the earth. By mid-2011, there were more than 7 billion people, and in 2100 there will probably be about 9 or 10 billion, 85 percent of them in the developing countries of South America, Asia, and Africa (see Figure 15.1).

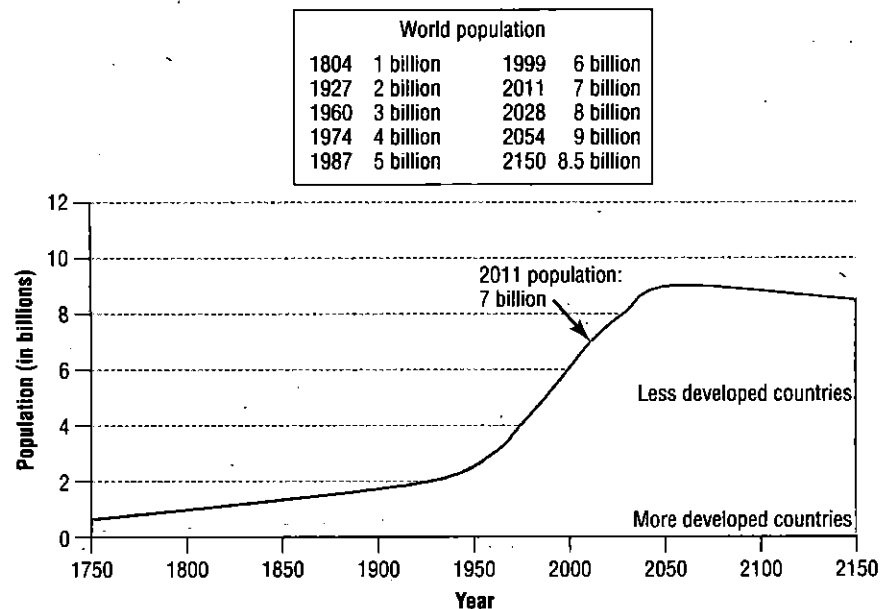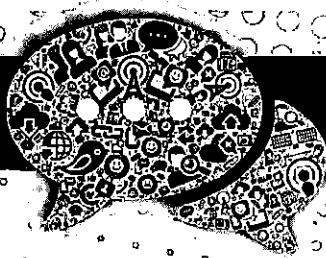| World population			
1804	1 billion	1999	6 billion
1927	2 billion	2011	7 billion
1960	3 billion	2028	8 billion
1974	4 billion	2054	9 billion
1987	5 billion	2150	8.5 billion

FIGURE 15.1 World Population, 1750–2150 (in billions, projected)
Sources: Livi-Bacci (1992: 31); Population Reference Bureau (2003; 2011).

SOCIAL POLICY *what do you think?*

How Can We Find 169 Million Missing Women?

Two main factors are causing the rate of world population growth to fall: economic development and the emancipation of women. Agricultural societies need many children to help farm, but industrial societies require fewer children. Because many countries in the so-called third world are industrializing, the rate of world population growth is falling apace. The second main factor responsible for the declining growth rate is the improving economic status and education of women. Once women become literate and enter the nonagricultural paid labor force, they quickly recognize the advantages of having few children. The birthrate plummets. In many third world countries, that is just what is happening. In other third world countries, the position of women is less satisfactory. We can see this by examining the *ratio of women to men*, or the **sex ratio** ("Total Population …," 2011).

In the United States in 2000, the sex ratio was about 1.03; there were 103 women for every 100 men. This is about average for a highly developed country. The surplus of women reflects the fact that men are more likely than women to be employed in occupations that jeopardize their health, *consume a lot of cigarettes* and alcohol, and engage in riskier and more violent behavior, whereas women are the hardier sex, biologically speaking.

In the world as a whole, the picture is reversed. There were just 98 women for every 100 men in 2009. In China, there were only 93 women for every 100 men, and in India, 94. Apart from Asia, North Africa is the region that suffers most from a deficit of women.

What accounts for variation in the sex ratio? According to Amartya Sen (1990, 2001), the sex ratio is low where women have less access to health services, medicine, and adequate nutrition than do men. These factors are associated with high female mortality. Another factor is significant in China and India. In those countries, some parents so strongly prefer sons over daughters that they are inclined to abort female fetuses. In contrast, in highly developed countries, women and men have approximately equal access to health services, medicine, and adequate nutrition, and sex-selective abortion is rare. Therefore, there are more women than men. By this standard, the world as a whole was "missing" about 5 women for every 100 men in 2009 (because 103 − 98 = 5). This *works out to about 169 million missing women.*

We can "find" many of the missing women by eliminating gender inequalities in access to health services, medicine, and adequate nutrition. Increased female literacy and employment in the paid labor force are the most effective paths to eliminating such gender inequalities. That is because literate women who work in the *paid labor force are in a stronger position to demand equal rights.*

The question of how to eliminate sex-selective abortion is more difficult. Economic factors do not account for variations in sex-selective abortion. In some parts of Asia with high levels of female education and economic participation, sex-selective abortion is relatively common. In other parts of Asia with low levels of female education and economic participation, sex-selective abortion is relatively rare. The best explanation for variations in sex-selective abortion seems to be that preference for sons is a strong *cultural* tradition in some parts of Asia. In India, for example, it may not be coincidental that sex-selective abortion is most widespread in the north and the west, where the nationalist and fundamentalist-Hindu BJP (Bharatiya Janata party) is most popular. Hindu nationalism and religious fundamentalism may feed into a strong preference for sons over daughters.

Critical Thinking

1. Bearing in mind that cultural and religious traditions do not easily give way to economic forces, can reformers inside and outside the region rectify the situation? If so, how?

After about 2054, world population will probably level off. Women in North America and Europe are already having fewer babies than are needed to replace the aging populations of those continents, and women in China, Brazil, and other industrializing countries are in the same position (Population Reference Bureau, 2011: 10; see also Box 15.1). However, given the numbers cited previously, is it any wonder that some population

Sex ratio: The ratio of women to men in a geographical area.

FIGURE 15.2 How Demographers Analyze Population Change and Composition. The main purpose of demography is to figure out why the size, geographical distribution, and social composition of human populations change over time. The basic equation of population change is $P2 = P1 + B - D + I - E$, where P2 is population size at a given time, P1 is population size at an earlier time, B is the number of births in the interval, D is the number of deaths in the interval, I is the number of immigrants arriving in the interval, and E is the number of emigrants leaving in the interval. One basic tool for analyzing the composition of a population is the "age-sex pyramid," which shows the number of males and females in each age cohort of the population at a given time. Age-sex pyramids for the United States and Mexico are shown here, projected by the U.S. Census Bureau for 2014. Why do you think they look so different? Compare your answer to that of the theory of the demographic transition, discussed in the text.
Source: U.S. Census Bureau (2011c).

United States: 2014 (projected)

Male   Female

Population (in millions)

Mexico: 2014 (projected)

Male   Female

Population (in millions)

Demographers: Social-scientific analysts of human population.

Malthusian trap: A cycle of population growth followed by an outbreak of war, pestilence, or famine that keeps population growth in check.
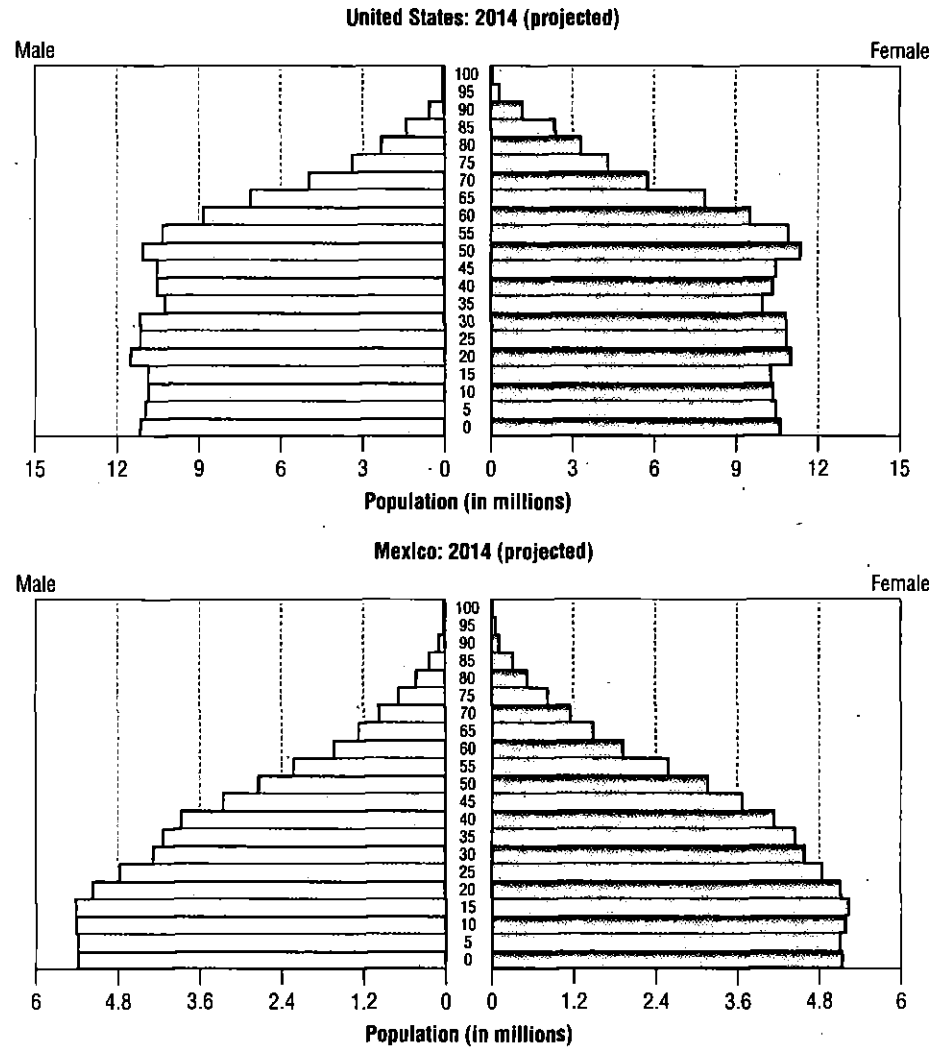
analysts say we're now in the midst of a population "explosion" (Ehrlich, 1968; Ehrlich and Ehrlich, 1990)? **Demographers** are social scientists who study population (see Figure 15.2). Some demographers are frightened enough to refer to overpopulation as catastrophic. They link it to recurrent famine, brutal ethnic warfare, and other massive and seemingly intractable problems.

If this imagery makes you feel that the world's rich countries must do something about overpopulation, you're not alone. Concern about the population "bomb" is as old as the social sciences. In 1798, Thomas Robert Malthus, an Anglican minister in Britain, proposed a highly influential theory of human population (Malthus, 1966 [1798]). As you will soon see, contemporary sociologists have criticized, qualified, and in part rejected his theory. But because much of the sociological study of population is, in effect, a debate with Malthus's ghost, we must confront the man's ideas squarely.

Theories of Population Growth

The Malthusian Trap Malthus's theory rests on two undeniable facts and a questionable assumption. The facts: People must eat, and they are driven by a strong sexual urge. The assumption: Whereas food supply increases slowly and arithmetically

(1, 2, 3, 4, and so on), population size grows quickly and geometrically (1, 2, 4, 8, and so on). Based on these ideas, Malthus concluded that "the superior power of population cannot be checked without producing misery or vice" (Malthus, 1966 [1798]: 217–18). Specifically, only two forces can hold population growth in check. First are "preventive" measures, such as abortion, infanticide, and pr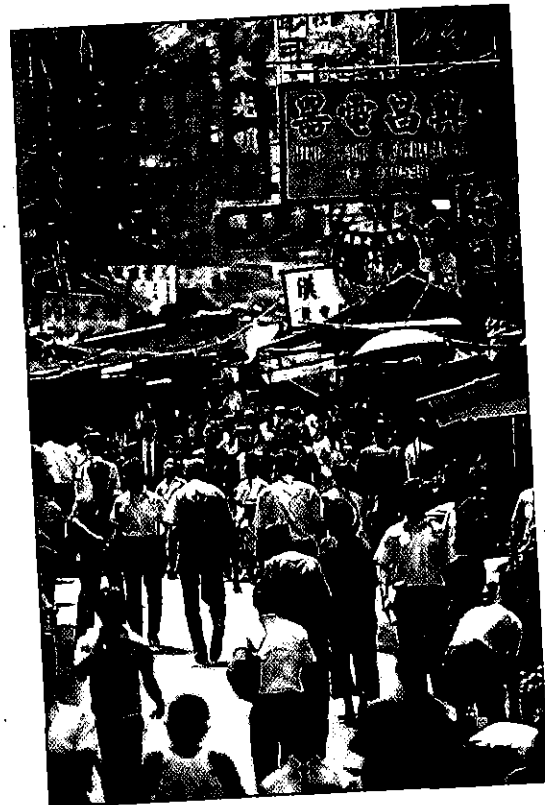ostitution. Malthus called these "vices" because he morally opposed them and thought everyone else should too. Second are "positive checks" such as war, pestilence, and famine. Malthus recognized that positive checks create much suffering. Yet he felt that they are the only forces that can be allowed to control population growth. Here, then, is the so-called **Malthusian trap**: a cycle of population growth followed by an outbreak of war, pestilence, or famine that keeps population growth in check. Population size might fluctuate, said Malthus, but it has a natural upper limit that he believed western Europe had reached.

Although many people supported Malthus's theory, others saw him as a misguided prophet of doom and gloom (Winch, 1987). For example, people who wished to help the poor disagreed with Malthus. He felt that such aid was counterproductive. Welfare, he said, would enable the poor to buy more food. With more food, they would have more children. And having more children would only make them poorer than they already were. Better leave them alone, said Malthus, thus keeping the sum of human suffering in the world as low as possible.

A Critique of Malthus Events have cast doubt on several of Malthus's ideas:

A "population explosion"? Hong Kong is one of the most densely populated places on Earth.

- Since Malthus, technological advances have allowed rapid growth in how much food is produced for each person on the planet. This is the opposite of the slow growth Malthus predicted. Moreover, except for Africa south of the Sahara desert, the largest increases in the food supply are taking place in the developing countries (Sen, 1994).
- If, as Malthus claimed, there is a natural upper limit to population growth, it is unclear what that limit is. Malthus thought that the population couldn't grow much larger in late 18th-century western Europe without positive checks coming into play. Yet the western European population is now 2.7 times larger than it was in Malthus's day. The western European case suggests that population growth has an upper limit far higher than that envisaged by Malthus.
- Population growth does not always produce misery. Despite its rapid population increase over the past 200 years, western Europe is one of the most prosperous regions in the world.
- Helping the poor does not generally result in the poor having more children. In western Europe, social welfare policies (unemployment insurance, state-funded medical care, paid maternity leave, pensions, and so on) are the most generous on the planet. Yet the size of the population is stable. In fact, as you will learn, some forms of social welfare produce rapid and large decreases in population growth, especially in poor, developing countries.
- Although the human sexual urge is as strong as Malthus thought, people have developed contraceptive devices and techniques to control the consequences of their sexual activity (Szreter, 1996). There is no necessary connection between sexual activity and childbirth.

Albrecht Dürer, *The Four Horsemen of the Apocalypse* (woodcut, 1498). According to Malthus, only war, pestilence, and famine can keep population growth in check.

These developments point to one conclusion. Malthus's pessimism was overstated. Human ingenuity seems to have enabled us to wriggle free of the Malthusian trap, at least for the time being.
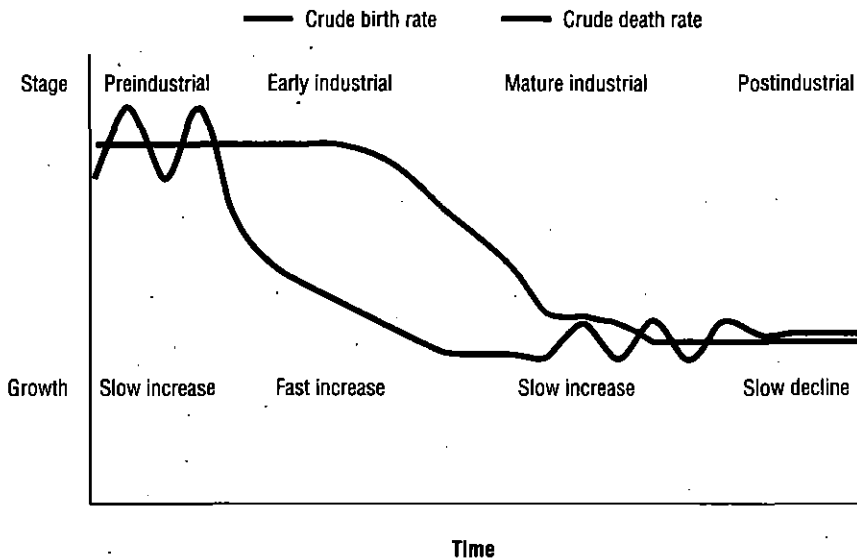
FIGURE 15.3 Demographic Transition Theory
Source: Robert Brym. © Cengage Learning 2010

We are not home free. Today, industrialization and population growth are putting severe strains on the planet's resources. It is encouraging to learn that the limits to growth are as much social as natural, and therefore avoidable rather than inevitable. However, as you will see, the environmental issues we face are so serious that our ability to avoid the Malthusian trap in the 21st century will require all the ingenuity and self-sacrifice we can muster.

Demographic Transition Theory

The second main theory of population growth is **demographic transition theory,** according to which the main factors underlying population dynamics are industrialization and the growth of modern cultural values (Chesnais, 1992 [1986]; Coale, 1974) (see Figure 15.3). The theory is based on the observation that the European population developed in four distinct stages.

The Preindustrial Period In the first, preindustrial stage of growth, women had many babies but a large proportion of the population died every year due to inadequate nutrition, poor hygiene, and uncontrollable disease. The **crude death rate** is the annual number of deaths (or *mortality*) per 1,000 people in a population. The **crude birthrate** is the annual number of live births per 1,000 people in a population. Both rates were high in preindustrial times. People wanted many children because they were a valuable source of agricultural labor and a form of old-age security in a society consisting largely of peasants and lacking anything resembling a modern welfare state. Besides, relatively few babies survived until adulthood, so many had to be conceived to meet demand.

The Early Industrial Period The second stage of European population growth was the early industrial, or transition, period. At this stage, the crude death rate dropped. People's life expectancy, or average life span, increased because economic growth led to improved nutrition and hygiene. However, the crude birthrate remained high. With people living longer and women having nearly as many babies as in the preindustrial era, the population grew rapidly. Malthus lived during this period of rapid population growth, and that accounts in part for his alarm.

Demographic transition theory: Explains how changes in fertility and mortality have affected population growth from preindustrial to postindustrial times.

Crude death rate: The annual number of deaths per 1,000 people in a population.

Crude birthrate: The annual number of live births per 1,000 women in a population.

The Mature Industrial Period The third stage was the mature industrial period. The crude death rate continued falling. The crude birthrate fell even more dramatically because economic growth eventually changed people's traditional beliefs about the value of having many children. Having lots of children made sense in an agricultural society, as we saw. In contrast, children were an economic burden in an industrial society because breadwinners worked outside the home for money and children contributed little if anything to the economic welfare of the family.

Values usually change more slowly than technologies do, so the crude birthrate took longer to decline than the crude death rate did. Eventually, however, the technologies

and outlooks that accompany modernity led people to postpone getting married and to use contraceptives and other birth-control methods. Consequently, population stabilized in the mature industrial period. As demographers say, economic development is the most effective contraceptive.

The Postindustrial Period The **total fertility rate** is the average number of children that would be born to a woman over her lifetime if she had the same number of children as women in each age cohort in a given year. In the last decades of the 20th century, the total fertility rate continued to fall. In fact, it fell below the replacement level in some countries. The **replacement level** is the number of children each woman must have on average for population size to remain stable. Ignoring any inflow of settlers from other countries (**immigration**, or **in-migration**) and any outflow to other countries (**emigration**, or **out-migration**), the replacement level is 2.1. This means that, on average, each woman must give birth to slightly more than the two children needed to replace her and her mate. Slightly more than two children are required because some children die before they reach reproductive age.

By the 1990s, some Europeans were worrying about declining fertility and its possible effects on population size. Nearly half the world's population now lives in countries with fertility rates below the replacement level. The United States is among them, with a fertility rate of 2.0 in 2010. Because of the proliferation of low-fertility societies, some countries have now entered a fourth, postindustrial stage of population development. In this fourth stage of the demographic transition, the number of deaths per year exceeds the number of births (Van de Kaa, 1987).

A Critique of Demographic Transition Theory Research has revealed a number of inconsistencies in demographic transition theory, most of them due to its overemphasis on industrialization as the main cause of population growth (Coale and Watkins, 1986). For example, demographers have found that reductions in fertility sometimes occur when standards of living stagnate or decline, not just when they improve due to industrialization. Thus, in Russia and some developing countries today, growing inequality and declining living standards led to a deterioration in general health and a subsequent decline in fertility in the 1990s and 2000s. Because of such findings, many scholars have concluded that an adequate theory of population growth must pay more attention to social factors other than industrialization, and in particular to the role of social inequality.

Population and Social Inequality

Karl Marx

One of Malthus's toughest intellectual opponents was Karl Marx, who argued that the problem of overpopulation is specific to capitalism (Meek, 1971). In his view, overpopulation is not a problem of too many people. Instead, it is a problem of too much poverty. If a society is rich enough to eliminate poverty, then by definition its population is not too large. Eliminate poverty, and you solve the overpopulation problem, Marx argued.

Marx's analysis makes it seem that capitalism can never generate enough prosperity to solve the overpopulation problem. He was evidently wrong. Overpopulation is not a serious problem in the United States, Japan, or Germany.[1] It *is* a problem in most of

Total fertility rate: The average number of children that would be born to a woman over her lifetime if she had the same average number of children as women in each age cohort in a given year.

Replacement level: The number of children that each woman must have on average for population size to remain stable. Ignoring any inflow of population from other countries and any outflow to other countries, the replacement level is 2.1.

Immigration: Or **in-migration;** the inflow of people into one country from one or more other countries and their settlement in the destination country.

Emigration: Or **out-migration;** the outflow of people from one country and their settlement in one or more other countries.

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[1] However, because Americans in particular consume so much energy and other resources, we have a substantial negative impact on the global environment. (Americans comprise about 4 percent of the world's population and consume nearly a quarter of its natural resources.)

Africa, where capitalism is weakly developed and the level of social inequality is much higher than in the postindustrial societies. Still, a core idea in Marx's analysis of the overpopulation problem rings true. As some contemporary demographers argue, social inequality is a main cause of overpopulation. In the following, we illustrate this argument by first considering how gender inequality influences population growth. Then we discuss the effects of class inequality on population growth.

Gender Inequality and Overpopulation

The effect of gender inequality on population growth is well illustrated by the case of Kerala (pronounced "CARE-a-la"), a state in India with 32 million people. Kerala had a total fertility rate of 1.8 in 1991, half of India's national rate and less than the replacement level of 2.1. How did Kerala achieve this remarkable feat? Is it a highly industrialized oasis in the midst of a semi-industrialized country, as one might expect given the arguments of demographic transition theory? To the contrary, it is among the poorer Indian states, with a per capita income less than the national average. Has the government of Kerala enforced a state childbirth policy similar to China's? The Chinese government penalizes families that have more than one child—second children are not allowed to attend university, for example—and it allows abortion when a woman is 8½ months pregnant (Wordsworth, 2000). As a result, China had a total fertility rate of just 2.0 in 1992 and 1.5 in 2010. In Kerala, however, the government keeps out of its citizens' bedrooms. The decision to have children remains a strictly private affair.

The women of Kerala achieved a low total fertility rate because their government purposely and systematically raised their status over a period of decades (Franke and Chasin, 1992; Sen, 1994). The government helped to create a realistic alternative to a life of continuous childbearing and child rearing and helped women understand that they could achieve that alternative if they wanted to. In particular, it organized successful campaigns and programs to educate women, increase their participation in the paid labor force, and make family planning widely available. Keralan women soon enjoyed the highest literacy rate, labor force participation rate, and political participation rate in India. Given their desire for education, work, and political involvement, most Keralan women want small families, so they use contraception to prevent unwanted births. Thus, by lowering the level of gender inequality, the government of Kerala solved its overpopulation problem. The relationship between relatively high gender inequality and overpopulation holds everywhere (Riley, 1997).

Class Inequality and Overpopulation

Unraveling the Keralan mystery establishes that population growth depends not just on a society's level of industrialization but also on its level of gender inequality. *Class* inequality influences population growth too. We turn to South Korea to illustrate this point.

South Korea's total fertility rate of 6.0 in 1960 fell to just 1.6 in 1989 and 1.2 in 2010. Why? The first chapter in this story involves land reform, not industrialization. The government took land from big landowners and gave it to small farmers. Consequently, the standard of living of small farmers improved. This eliminated a major reason for high fertility. Once economic uncertainty decreased, so did the need for child labor and support of elderly parents by adult offspring. Soon, the total fertility rate began to fall. Subsequent declines in the South Korean total fertility rate were due to industrialization, urbanization, and the high educational attainment of the population. However, declining class inequality in the countryside first set the process in motion (Lie, 1998).

The reverse is also true. Increasing social inequality can lead to overpopulation, war, and famine. For instance, in the 1960s, the governments of El Salvador and Honduras

encouraged the expansion of commercial agriculture and the acquisition of large farms by wealthy landowners. The landowners drove peasants off the land and into the cities, where they hoped to find employment and a better life. Instead, they often found squalor, unemployment, and disease. Suddenly, two countries with a combined population of less than 5 million people had a big "overpopulation" problem. Competition for land increased and contributed to rising tensions, eventually leading to the outbreak of war between El Salvador and Honduras in 1969 (Durham, 1979).

Summing Up A new generation of demographers has begun to explore how class and gender inequality affect population growth (Seccombe, 1992; Szreter, 1996). Their studies drive home the point that population growth and its negative consequences do not stem from natural causes (as Malthus held), nor are they responses only to industrialization and modernization (as demographic transition theory suggests). Instead, population growth is influenced by a variety of social causes, social inequality chief among them.

Some undoubtedly well-intentioned Western analysts continue to insist that people in the developing countries should be forced to stop multiplying at all costs. Some observers even suggest diverting scarce resources from education, health, and industrialization into various forms of birth control, including, if necessary, forced sterilization (Riedmann, 1993). They regard the presumed alternatives—poverty, famine, war, ethnic violence, and the growth of huge, filthy cities—as too horrible to contemplate. However, they fail to see how measures that lower social inequality help to control overpopulation and its consequences. Along with industrialization, lower levels of social inequality cause total fertility rates to fall.

Urbanization

We have seen that overpopulation remains a troubling problem due to lack of industrialization and too much gender and class inequality in much of the world. We may now add that overpopulation is in substantial measure an *urban* problem. Driven by lack of economic opportunity and political unrest in the countryside, many millions of people flock to big cities in the world's poor countries every year. Thus, most of the fastest-growing
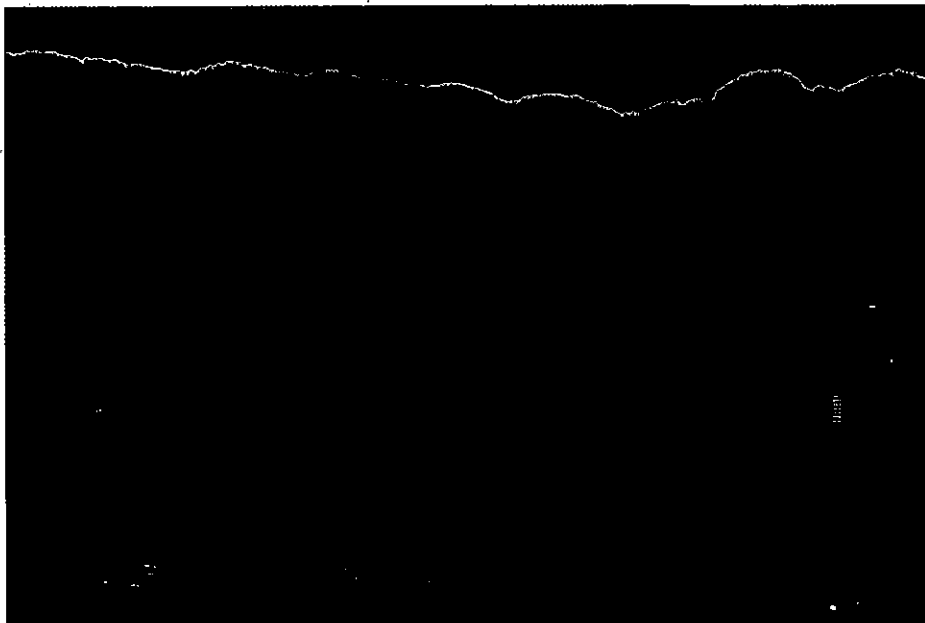
Mexico City during one of its frequent smog alerts.

| TABLE 15.1 • World's 10 Largest Metropolitan Areas, 1900 and 2025, Projected (in millions)			
1900		**2025**	
London, England	6.5	Tokyo, Japan	37.1
New York, USA	4.2	Delhi, India	28.6
Paris, France	3.3	Mumbai, India	25.8
Berlin, Germany	2.4	São Paulo, Brazil	21.7
Chicago, USA	1.7	Dhaka, Bangladesh	20.9
Vienna, Austria	1.7	Mexico City, Mexico	20.7
Tokyo, Japan	1.5	New York/Newark, USA	20.6
Saint Petersburg, Russia	1.4	Kolkata, India	20.1
Manchester, England	1.4	Shanghai, China	20.0
Philadelphia, USA	1.4	Karachi, Pakistan	18.7

Sources: "Top 10 . . . " (2011); Datu (2010).
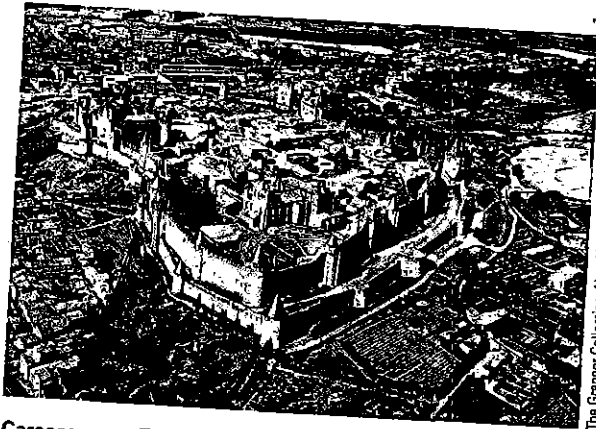
Carcassonne, France, a medieval walled city.

Chicago school: A group of researchers in the first decades of the 20th century who founded urban sociology in the United States. Its members distinguished themselves by their vivid and detailed descriptions and analyses of urban life and their development of the theory of human ecology.

Human ecology: A theoretical approach to urban sociology that borrows ideas from biology and ecology to highlight the links between the physical and social dimensions of cities and identify the dynamics and patterns of urban growth.

cities in the world today are in semi-industrialized countries where the factory system is not highly developed. As Table 15.1 shows, in 1900, 9 of the 10 biggest cities in the world were in industrialized Europe and the United States. By 2025, 7 of the world's 10 biggest cities will be in Asia and 2 will be in Latin America. Only 2 of the 10 biggest cities—Tokyo and New York/Newark—will be in a rich, highly industrialized country. Clearly, the developing countries are urbanizing at a faster rate than are the rich, highly industrialized countries.

From the Preindustrial to the Industrial City

To a degree, urbanization results from industrialization. Many great cities of the world grew up along with the modern factory, which drew hundreds of millions of people out of the countryside and transformed them into urban, industrial workers. That, however, is not the whole story. Some of the world's biggest cities are not in highly industrialized countries. Moreover, cities first emerged in Syria, Mesopotamia, and Egypt 5,000 or 6,000 years ago, long before the growth of the modern factory. These early cities served as centers of religious worship and political administration. Similarly, it was not industry but international trade in spices, gold, cloth, and other precious goods that stimulated the growth of cities in preindustrial Europe and the Middle East. The correlation between urbanization and industrialization is far from perfect (Bairoch, 1988 [1985]; Mumford, 1961).

Preindustrial cities differed from those that developed in the industrial era in several ways. Preindustrial cities were typically smaller, less densely populated, built within protective walls, and organized around a central square and places of worship. The industrial cities that began to emerge at the end of the 18th century were more dynamic and complex social systems requiring new means of mass communication. A host of social problems, including poverty, pollution, and crime, also accompanied the growth of the industrial city. The complexity, dynamism, and social problems of the new city were all evident in Chicago at the turn of the 20th century. It was at the University of Chicago that American urban sociology was born.

The Chicago School and the Industrial City

From the first decade of the 20th century to the 1930s, the members of the **Chicago school** of sociology distinguished themselves by their vividly detailed descriptions and analyses of urban life, backed up by careful in-depth interviews, surveys, and maps showing the distribution of various features of the social landscape, all expressed in plain yet evocative language (Lindner, 1996 [1990]). Three of its leading members, Robert Park, Ernest Burgess, and Roderick McKenzie, proposed a theory of **human ecology** to illuminate the process of urbanization (Park, Burgess, and McKenzie, 1967 [1925]). Borrowing from biology and ecology, the theory highlights the links between the physical and social dimensions of cities and identifies the dynamics and patterns of urban growth.

The Concentric Zone Model The theory of human ecology, as applied to urban settings, holds that cities grow in ever-expanding concentric circles. It is sometimes called the "concentric zone model" of the city. Three social processes animate growth (Hawley, 1950). **Differentiation** is the process by which urban populations and their activities become more complex and heterogeneous over time. For instance, a small

FIGURE 15.4 The Concentric Zone Model of Chicago, about 1920
Source: From "The Growth of the City: An Introduction to a Research Project," Ernest W. Burgess, pp. 47–62 in *The City* by Robert E. Park et al. Copyright © 1967 University of Chicago Press. Used with permission.

town may have a diner, a pizza parlor, and a Chinese restaurant. But if it grows into a city, it will likely boast a variety of ethnic restaurants reflecting its more heterogeneous population. Moreover, in a city, members of different ethnic and racial groups and socioeconomic classes may enter into **competition** with one another for dominance in particular areas. For instance, businesses may try to push residents out of certain areas to establish commercial zones. Finally, **ecological succession** takes place when a distinct group of people moves from one area to another and another group moves into the old area to replace the first group. For example, a recurrent pattern of ecological succession involves members of the middle class moving to the suburbs, with working-class and poor immigrants moving into the inner city from the countryside, other regions, or abroad. In Chicago in the 1920s, differentiation, competition, and ecological succession resulted in the zonal pattern illustrated by Figure 15.4.

Urbanism: A Way of Life For members of the Chicago school, the city was more than just a collection of socially segregated buildings, places, and people. It also involved a way of life they called **urbanism**. They defined urbanism as "a state of mind, a body of customs[,] ... traditions, ... attitudes and sentiments" specifically linked to city dwelling (Park, Burgess, and McKenzie, 1967 [1925]: 1). Louis Wirth (1938) developed this theme, building on the work of 19th-century German sociologist Ferdinand Tönnies (1988 [1887]). Tönnies had distinguished community from society (in German;

Differentiation: In human-ecology theory, the process by which urban populations and their activities become more complex and heterogeneous over time.

Competition: In human-ecology theory, the struggle by different groups for optimal locations in which to reside and set up their businesses.

Ecological succession: In human-ecology theory, the process by which a distinct urban group moves from one area to another and a second group comes in to replace the group that has moved out.

Urbanism: A way of life that, according to Wirth, involves increased tolerance but also emotional withdrawal and specialized, impersonal, and self-interested interaction.

BOX 15.2   E-Society

The Mass Media and the Establishment of Community

Since their origins, the mass media have been used to help turn individuals into communities—first urban, then national, and most recently, virtual.

As societies urbanized, the number of institutions, roles, and people increased. Face-to-face interaction became less viable as a means of communication. New ways of coordinating the operation of the various parts of society were required. People in Maine must have at least a general sense of what is happening in California and they need to share certain basic values with Californians if they are going to feel that they are citizens of the same country. The nationwide distribution of newspapers, magazines, movies, and TV shows binds together the large, socially diverse, and geographically dispersed population of the United States. Fundamentally, the nation is an imagined community, and the mass media make it possible for us to imagine it (Anderson, 1990).

The Internet lifted community out of its geographical context, allowing the formation of various types of associations—chat rooms, discussion groups, multiple-user dimensions, and so forth—on the basis of interest rather than physical proximity. New forms of community have thus been layered on top of old ones as the mass media have conquered space and time.

Critical Thinking

1. How are traditional communities the same as, and different from, virtual communities on the Internet?
2. In light of these similarities and differences, do you think it is fair to say that, overall, Americans' involvement in community life has weakened over time? Why or why not?

Gemeinschaft and Gesselschaft, respectively). In his view, communities are bound together by emotionally rich, intimate social ties, whereas societies are bound together mainly by self-interest. Similarly, Wirth held that rural community life involves frequent face-to-face interaction among few people. Most of these people are familiar with each other, share common values and a collective identity, and respect traditional ways of doing things. Urban life, in contrast, involves the absence of community and close personal relationships. Extensive exposure to many socially different people leads city dwellers to become more tolerant than rural folk are, said Wirth. However, urban dwellers also withdraw emotionally and reduce the intensity of their social interaction with others. In Wirth's view, interaction in cities is therefore superficial, impersonal, and focused on specific goals. People become more individualistic. Weak social control leads to a high incidence of deviance and crime.

After Chicago: A Critique The Chicago school dominated American urban sociology for decades. It still inspires much interesting research (Anderson, 1991). However, three major criticisms of this approach to understanding city growth gained credibility over the years.

One criticism focuses on Wirth's characterization of the "urban way of life." Research shows that social isolation, emotional withdrawal, stress, and other problems may be just as common in rural as in urban areas (Crothers, 1979; Webb and Collette, 1977, 1979). After all, in a small community, a person may not be able to find anyone with whom to share a particular interest or passion. Moreover, farmwork can be every bit as stressful as work on an assembly line.

Research also shows that urban life is less impersonal, anomic, and devoid of community than the Chicago sociologists made it appear. True, newcomers may find city life bewildering, if not frightening. Neighborliness and friendliness to strangers are less common in cities than in small communities (Fischer, 1981). However, even in the largest cities, most residents create social networks and subcultures that serve functions similar to those performed by the small community. Friendship, kinship, ethnic, and racial ties, as well as work and leisure relations, form the bases of these urban networks and subcultures (Fischer, 1984 [1976]; Wellman, 1979). Cities, it turns out, are clusters of many different communities. Little Italies, Chinatowns, Koreatowns, gay communities, and so on, help to make the residents of cities "urban villagers" (Gans, 1962; see also Box 15.2).

The second criticism of the Chicago school concerns the concentric zone model. The zones discovered by the Chicago sociologists are most applicable to American industrial cities in the first quarter of the 20th century. After the automobile became a major means of transportation, some American cities expanded not in concentric circles but in wedge-shaped sectors along natural boundaries and transportation routes (Hoyt, 1939). Others grew up around not one but many nuclei, each attracting similar kinds of activities and groups (Harris and Ullman, 1945). Recent models

of urban growth emphasize the expansion of services from the city core to the city periphery, aided by the construction of radial highways (Harris, 1997; see Figure 15.5).

The third criticism of the human ecology approach is that it presents urban growth as an almost natural process, neglecting its historical, political, and economic foundations in capitalist industrialization. In particular, the Chicago sociologists' discussion of differentiation and ecological succession made the growth of cities seem almost like a force of nature rather than a process rooted in *power relations and the urge to profit.*

The Conflict View of the New Urban Sociology

The so-called **new urban sociology**, heavily influenced by conflict theory, sought to correct this problem (Gottdiener and Hutchison, 2000 [1994]; Zukin, 1980). For new urban sociologists, urban space is not just an arena for the unfolding of social processes like differentiation, competition, and ecological succession. Instead, they see urban space as a set of *commodified* social relations. That is, urban space, like all commodities, can be bought and sold for profit. As a result, political interests and conflicts shape the growth pattern of cities. John Logan and Harvey Molotch (1987) portray cities as machines fueled by a "growth coalition" comprising investors, politicians, businesses, property owners, real estate developers, urban planners, the mass media, professional sports teams, cultural institutions, labor unions, and universities. All these parties try to obtain government subsidies and tax breaks to attract investment dollars. Reversing the pattern identified by the Chicago sociologists, such investment has been used to redevelop decaying downtown areas in many American cities since the 1950s. Baltimore's Inner Harbor and nearby Camden Yards (home of the Baltimore Orioles and the Baltimore Ravens) represent perhaps the best-known example of such redevelopment.

According to Logan and Molotch, members of the growth coalition present redevelopment as a public good that benefits everyone. This view tends to silence critics, prevent discussions of alternative ideas and plans, and veil the question of who benefits from redevelopment and who does not. In reality, the benefits of redevelopment are often unevenly distributed. Most redevelopments are "pockets of revitalization surrounded by areas of extreme poverty" (Hannigan, 1998a: 53). Local residents often enjoy few if any direct benefits from redevelopment. Indirectly, they may suffer when budgets for public schooling, public transportation, and other amenities are cut to help pay for development subsidies and tax breaks. Redevelopments cost a lot of public money, but the consensus in the literature is that, because they are so expensive, the economic return on the investment is usually low to negative (Chapin, 2004).

The Corporate City

As a result of the efforts of the growth coalition, the North American industrial city, typified by Chicago in the 1920s, gave way after World War II to the **corporate city**. Sociologist John Hannigan defines the corporate city as "a vehicle for capital accumulation—that is, ... a money-making machine" (Hannigan, 1998b [1995]: 345). New York became *the* corporate city.
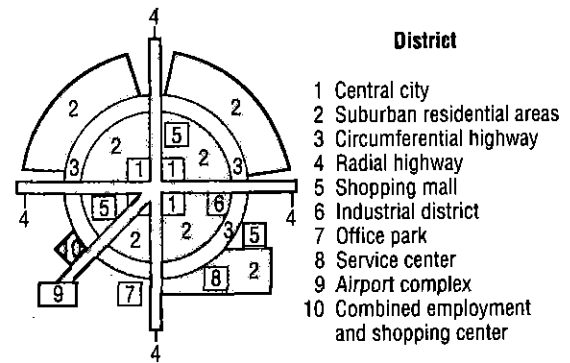
FIGURE 15.5 The Peripheral Model of Cities
Source: Harris, Chauncy D. 1997. "The Nature of Cities and Urban Geography in the Last Half Century." Urban Geography 18: 15–35.Copyright © 1997 by Bellwether Publishing. All rights reserved. Reproduced by permission.

District

1 Central city
2 Suburban residential areas
3 Circumferential highway
4 Radial highway
5 Shopping mall
6 Industrial district
7 Office park
8 Service center
9 Airport complex
10 Combined employment and shopping center

New urban sociology: Emerged in the 1970s and stresses that city growth is a process rooted in power relations and the urge to profit.

Corporate city: The growing post–World War II perception and organization of the North American city as a vehicle for capital accumulation.
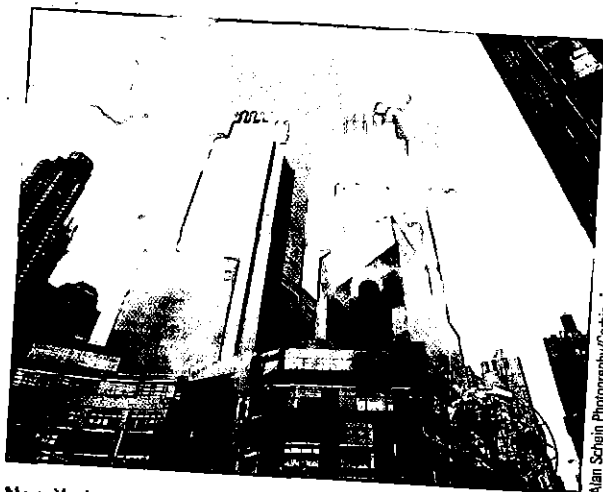
New York: *the* corporate city.

The Growth of Suburbs Developers built millions of single-family detached homes for the corporate middle class in the suburbs—urbanized areas outside city cores. These homes boasted large backyards and a car or two in every garage. A new way of life developed, which sociologists dubbed **suburbanism**. Suburbanism organized life mainly around the needs of children. It also involved higher levels of conformity and sociability than did life in the central city (Fava, 1956). Suburbanism became fully entrenched as developers built shopping malls to serve the needs of the suburbanites, reducing the need to travel to the central city for consumer goods.

The suburbs were at first restricted to the well-to-do. However, following World War II, brisk economic growth and government assistance to veterans put the suburban lifestyle within the reach of middle-class Americans. The lack of housing in city cores, extensive road-building programs, the falling price of automobiles, and the baby boom that began in 1946 also stimulated suburban growth. By 1970, more Americans lived in suburbs than in urban core areas. That remains the case today.

Gated Communities, Exurbs, and Edge Cities Owing to the expansion of the suburbs, urban sociologists today often focus their attention not on cities but on entire **metropolitan areas**. Metropolitan areas include downtown city cores and their surrounding suburbs (see Table 15.2). They also include three recent developments, the growth of which indicates the continued decentralization of urban America: **gated communities**, in which upper-middle-class residents pay high taxes to keep the community patrolled by security guards and walled off from the outside world; **exurbs**, or rural residential areas within commuting distance of the city; and **edge cities**, or exurban clusters of malls, offices, and entertainment complexes that arise at the convergence points of major highways (Garrau, 1991).

The spread of gated communities is motivated above all by fear of urban crime. The growth of exurban residential areas and edge cities is motivated mainly by the mounting costs of operating businesses in city cores and the growth of new telecommunication technologies that allow businesses to operate in the exurbs. Home offices, mobile employees, and decentralized business locations are all made possible by these technologies. Some sociologists, urban and regional planners, and others lump all these developments together as indicators of **urban sprawl**, the spread of cities into ever larger expanses of the surrounding countryside.

City cores continued to decline as the middle class fled, pulled by the promise of suburban and exurban lifestyles and pushed by racial animosity and crime. Many middle-class people went farther afield, abandoning the snowbelt cities in America's traditional industrial heartland and migrating to the cities of the American sunbelt in the South and the West. Especially in northeastern and Midwestern cities, tax revenues in the city core fell, even as more money was needed to sustain social welfare programs for the poor.

Urban Renewal In a spate of urban renewal in the 1950s and 1960s, many homes in low-income and minority-group areas were torn down and replaced by high-rise apartment buildings and office towers in the city core. In the 1970s and 1980s, some middle-class people moved into rundown areas and restored them in a process called **gentrification**. Still, large residential sections of downtown Detroit, Baltimore, Cleveland, and other cities remained in a state of decay. The number of Americans living in high-poverty neighborhoods doubled as recessions and economic restructuring closed factories in

Suburbanism: A way of life outside city centers that is organized mainly around the needs of children and involves higher levels of conformity and sociability than did life in the central city.

Metropolitan areas: Downtown city cores and their surrounding suburbs.

Gated communities: Expensive, upper middle-class residential developments patrolled by security guards and walled off from the outside world.

Exurbs: Rural residential areas within commuting distance of a city.

Edge cities: Exurban clusters of malls, offices, and entertainment complexes that arise at the convergence point of major highways.

Urban sprawl: The spread of cities into ever-larger expanses of the surrounding countryside.

Gentrification: The process of middle-class people moving into rundown areas of the inner city and restoring them.

TABLE 15.2 • The 20 Largest Metropolitan Areas in the United States, 2009	
Metropolitan Area[1]	**Population**
New York-Northern New Jersey-Long Island, NY-NJ-PA	19,069,796
Los Angeles-Long Beach-Santa Ana, CA	12,874,797
Chicago-Naperville-Joliet, IL-IN-WI	9,580,567
Dallas-Fort Worth-Arlington, TX	6,447,615
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,968,252
Houston-Sugar Land-Baytown, TX	5,867,489
Miami-Fort Lauderdale-Pompano Beach, FL	5,547,051
Washington-Arlington-Alexandria, DC-VA-MD-WV	5,476,241
Atlanta-Sandy Springs-Marietta, GA	5,475,213
Boston-Cambridge-Quincy, MA-NH	4,588,680
Detroit-Warren-Livonia, MI	4,403,437
Phoenix-Mesa-Scottsdale, AZ	4,364,094
San Francisco-Oakland-Fremont, CA	4,317,853
Riverside-San Bernardino-Ontario, CA	4,143,113
Seattle-Tacoma-Bellevue, WA	3,407,848
Minneapolis-St. Paul-Bloomington, MN-WI	3,269,814
San Diego-Carlsbad-San Marcos, CA	3,053,793
St. Louis, MO-IL	2,828,990
Tampa-St. Petersburg-Clearwater, FL	2,747,272
Baltimore-Towson, MD	2,690,886

[1] Some metropolitan areas extend into two or more states.
Source: U.S. Census Bureau (2011f).

inner cities. The situation of the inner cities improved during the economic boom of the 1990s, but it is unclear whether the improvement will last in the wake of the most recent recession.

The Postmodern City

Many of the conditions that plagued the industrial city—poverty, inadequate housing, structural employment—are still evident in cities today. However, a new urban phenomenon has now emerged alongside the legacy of old urban forms: the **postmodern city** (Hannigan, 1995a). The postmodern city has three main features:

1. The postmodern city is more *privatized* than the corporate city because access to formerly public spaces is increasingly limited to those who can afford to pay. Privatization is evident in the construction of closed-off gated communities in the suburbs. In downtown cores, gleaming office towers and shopping areas are built beside slums. Yet the two areas are separated by the organization of space and access. For instance, a series of billion-dollar, block-square structures have been built around Bunker Hill in Los Angeles. Nearly all pedestrian linkages to the surrounding poor immigrant neighborhoods have been removed. Barrel-shaped, "bumproof" bus benches prevent homeless people from sleeping on them. Trash cans are designed to be "bag-lady proof." Overhead sprinklers in Skid Row Park discourage

Postmodern city: A new urban form that is more privatized, socially and culturally fragmented, and globalized than is the corporate city.

overnight sleeping. Public toilets and washrooms have been removed in areas frequented by vagrants (Davis, 1990).

2. The postmodern city is also more *fragmented* than the corporate city is. It lacks a single way of life, such as urbanism or suburbanism. Instead, a great variety of lifestyles and subcultures proliferate in the postmodern city. They are based on race, ethnicity, immigrant status, class, and sexual orientation.

3. The third characteristic of the postmodern city is that it is more *globalized* than the corporate city. According to Saskia Sassen (1991), New York, London, and Tokyo epitomize the global city. They are world centers of economic and financial decision making. They are also sites of innovation, where new products and fashions originate. They have become the command posts of the globalized economy and its culture.

The Walt Disney Concert Hall in Bunker Hill, Los Angeles.

Privatization, fragmentation, and globalization are evident in the way the postmodern city has come to reflect the priorities of the global entertainment industry. The postmodern city gets its distinctive flavor from its theme parks, restaurants and night clubs, waterfront developments, refurbished casinos, giant malls, megaplex cinemas, IMAX theaters, virtual-reality arcades, ride simulators, sports complexes, book and CD megastores, aquariums, and hands-on science "museums." In the postmodern city, nearly everything becomes entertainment or, more accurately, combines entertainment with standard consumer activities. This produces hybrid activities like "shoppertainment," "eatertainment," and "edutainment."

John Hannigan has shown how the new venues of high-tech urban entertainment manage to provide excitement—but all within a thoroughly clean, controlled, predictable, and safe environment (Hannigan, 1998a). For example, entertainment developments often enforce dress codes, teenager curfews, and rules banning striking workers and groups promoting social or political causes from their premises. However, the most effective barriers to potentially disruptive elements are affordability and access. User surveys show that the new forms of urban entertainment tend to attract middle- and upper-middle-class patrons, especially whites. That is because they are pricey, and many of them are in places that lack public transit and are too expensive for most people to reach by taxi.

Referring to the major role played by the Disney corporation in developing the new urban entertainment complexes, an architect once said that our downtowns would be "saved by a mouse" (quoted in Hannigan, 1998a: 193). But do the new forms of entertainment that dot the urban landscape increase the economic well-being of the communities in which they are established? Not much beyond creating some low-level, dead-end jobs (security guard, waiter, janitor). Do they provide ways of meeting new people, seeing old friends and neighbors, and in general improving urban sociability? Not really. You visit a theme park with family or friends, but you generally stick close to your group and rarely have chance encounters with other patrons or bump into acquaintances. Does the high-tech world of globalized urban entertainment enable cities and neighborhoods to retain and enhance their distinct traditions, architectural styles, and ambience? It would be hard to destroy the distinctiveness of New York, San Francisco, or Vancouver, but many large North American cities are becoming homogenized as they provide the same entertainment services—and the same global brands—as Tokyo, Paris, and Sydney. If

the mouse is saving our cities, perhaps he is also gnawing away at something valuable in the process.

The Environment

Environmental Degradation

One of the consequences of massive population growth in urban areas is widespread environmental damage. Environmental degradation takes three main forms: global warming, industrial pollution, and the decline of biodiversity. We now consider each of these problems in turn.

Global Warming Since the Industrial Revolution, humans have been burning increasing quantities of fossil fuels (coal, oil, gasoline, natural gas, and so on) to drive their cars, furnaces, and factories. Burning these fuels releases carbon dioxide into the atmosphere. The accumulation of carbon dioxide allows more solar radiation to enter the atmosphere and less heat to escape.

This is the so-called **greenhouse effect**. Most climate scientists believe that the greenhouse effect contributes to **global warming**, a gradual increase in the world's average surface temperature (Bray and Storch, 2005; Oreskes, 2004). Figure 15.6 graphs the world's annual average surface air temperature and the concentration of carbon dioxide in the atmosphere from 1866 to 2009. It shows a warming trend that mirrors the increased concentration of carbon dioxide in the atmosphere. It also shows that the warming trend picked up pace in the last third of the 20th century.

Many scientists believe that global warming is already producing serious climate change, for as temperatures rise, more water evaporates, causing more rainfall and bigger storms, which lead to more flooding and soil erosion. People suffer and die all along the causal chain. This was tragically evident in 2005, when Hurricanes Katrina and Rita delivered knockout punches to coastal Louisiana, Alabama, Mississippi, and Texas,
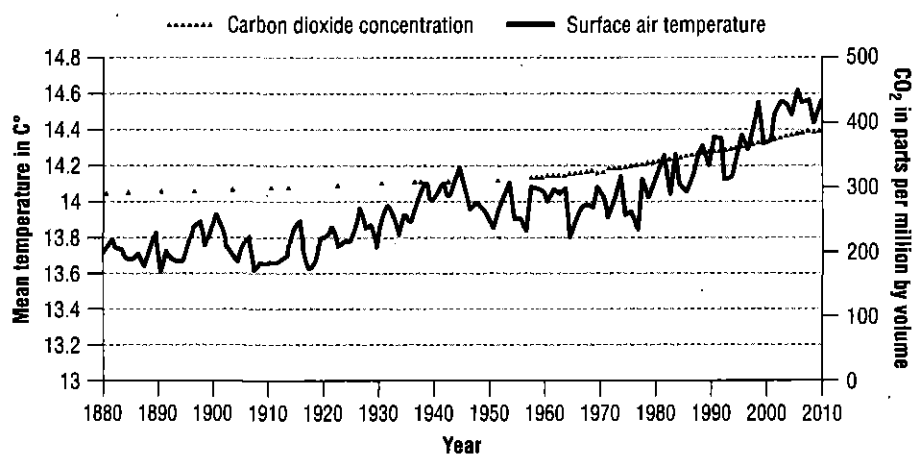
FIGURE 15.6 Annual Mean Global Surface Air Temperature and Atmospheric Carbon Dioxide Concentration, 1880–2010

Note: Pre-1959 carbon dioxide concentration estimates come from intermittent Antarctic ice core measurements. Post-1958 carbon dioxide concentration estimates are based on continuous atmospheric measurements from the Mauna Loa Observatory in Hawaii.
Sources: Carbon Dioxide Information Analysis Center (1998); Goddard Institute for Space Studies (2010); National Oceanic and Atmospheric Administration (2010).

Greenhouse effect: The accumulation of carbon dioxide in the atmosphere that allows more solar radiation to enter the atmosphere and less solar radiation to escape.

Global warming: The gradual worldwide increase in average surface temperature.

FIGURE 15.7 Worldwide Insured Losses Due to Natural and Human Catastrophes, 1970–2009 (in 2005 $US billions)
Sources: Swiss Re (2003: 8; 2004: 7; 2005: 5; 2007: 7; 2008: 18; 2009: 18; 2010: 15); U.S. Department of Labor, Bureau of Labor Statistics (2011).

killing an estimated 2,300 people and causing many billions of dollars of damage (Brym, 2009: 53–81).

Figure 15.7 graphs the worldwide dollar cost of damage due to natural and human catastrophes from 1970 to 2009. (Recall that an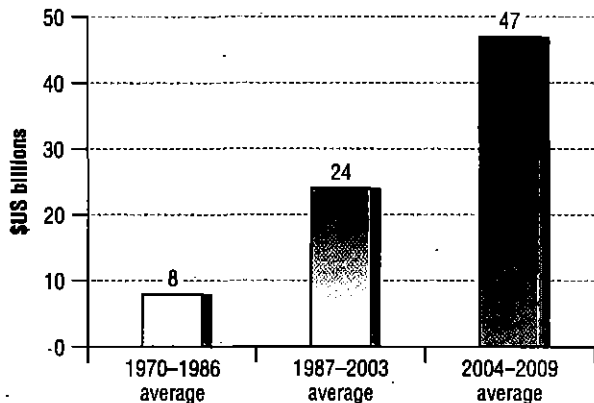 increasingly large number of meteorological events deemed "natural" are rendered extreme by human action.) Clearly, the damage caused by extraordinary meteorological events is on the upswing. This, however, may be only the beginning. It seems that global warming is causing the oceans to rise, partly because warmer water expands, partly because the partial melting of the polar ice caps puts more water in the oceans. In the 21st century, this may result in the flooding of heavily populated coastal regions throughout the world.

Industrial Pollution Industrial pollution is the emission of various impurities into the air, water, and soil due to industrial processes. It is the second major form of environmental degradation. Every day, we release a witch's brew into the environment, the more common ingredients of which include household trash, scrap automobiles, residue from processed ores, agricultural runoff containing dangerous chemicals, lead, carbon monoxide, carbon dioxide, sulfur dioxide, ozone, nitrogen oxide, various volatile organic compounds, and various solids mixed with liquid droplets floating in the air. Most pollutants are especially highly concentrated in the U.S. Northeast and around the Great Lakes. These densely populated areas contain old, heavy, dirty industries such as steel production (U.S. Environmental Protection Agency, 2000).

Pollutants seep into our drinking water and the air we breathe, causing a variety of ailments, particularly among the young, the elderly, and the ill (see Box 15.3). A dramatic natural experiment demonstrating the direct effect of air pollution on health occurred during the 1996 Atlanta Olympics. For the 17 days of the Olympics, asthma attacks among children in the Atlanta area plummeted 42 percent. When the athletes went home, the rate of asthma attacks among children immediately bounced back to "normal" levels. Researchers soon figured out why. During the Olympics, Atlanta closed the downtown to cars and operated public transit around the clock. Vehicle exhaust fell, with an immediate benefit to children's health. Children's health deteriorated as soon as normal traffic resumed (Mittelstaedt, 2001).

The Decline of Biodiversity The third main form of environmental degradation is the decline in **biodiversity**, the enormous variety of plant and animal species inhabiting the Earth. As part of the normal evolutionary process, new species emerge and old species die off because they cannot adapt to their environment. However, in recent decades, the environment has become so inhospitable to so many species that the rate of extinction has greatly accelerated.

The extinction of species is impoverishing in itself, but it also has practical consequences for humans. For example, each species of animal and plant has unique properties. When scientists discover that a certain property has a medically useful effect, they synthesize it in the laboratory. Treatments for everything from headaches to cancer have been found in this way. Indeed, about a quarter of all drugs prescribed in the United States today (including many of the top drugs in sales) include compounds first found in wild organisms. The single richest source of genetic material with pharmaceutical value is found in the world's rain forests, particularly in Brazil, where more than 30 million species of life exist. However, the rain forests are being rapidly destroyed by strip mining, the construction of huge pulp and paper mills and hydroelectric projects, and the deforestation of land by farmers and, especially, cattle grazers.

Biodiversity: The enormous variety of plant and animal species inhabiting the Earth.

SOCIOLOGY AT THE MOVIES

Food, Inc. (2009)

From November 1, 2010, through February 9, 2011, 140 individuals infected with ... Salmonella ... were reported from 26 states and the District of Columbia. Results of the investigation indicated a link to eating Tiny Greens Alfalfa Sprouts or Spicy Sprouts at Jimmy John's restaurant outlets.

> —Centers for Disease Control and Prevention (2011a)

Government inquiries into the causes of food and water contamination focus on the inadequacies of inspection agencies and procedures. However, that is only part of the story. Highly profitable technologies for mass-producing food allow toxic bacteria to enter the food and water supply in the first place. *Food, Inc.*, a 2009 Oscar nominee for best documentary, shows in sickening detail how the industrialization of food processing over the past few decades has allowed animal feces to get mixed in with meat in processing plants and enter water supplies through farm runoff.

Food, Inc. also documents the cruel treatment to which high-tech agriculture subjects cattle, hogs, and chickens before they are slaughtered. For instance, the handful of big corporations that control chicken processing have figured out how farmers can raise chickens 40 percent faster and twice as big as the free-range variety. Unfortunately, the drugs required to accomplish this feat make the birds' bones so weak they can barely stand. Extreme crowding and total darkness in gigantic chicken coops containing scores of thousands of birds make it impossible for them to move around much anyway.

Meanwhile, much of the highly processed food produced by high-tech industry lacks nutritive value and contributes to a range of diseases. Highly processed food (fast food, snack food, luncheon meats, and so on) contains levels of salt, animal fat, and sugar that cause heart disease, diabetes, and cancer. Fruits and vegetables contain significantly fewer vitamins than they did a few decades ago.

Food, Inc. holds out some hope. Although exceptions exist, locally produced, organic food is typically more nutritious, less laden with chemicals, and produced with less cruelty to animals than is the technologically juiced variety. That is why a growing number of people are turning to the low-tech alternative. Some people claim that locally produced, organic food is too expensive for most Americans, but that depends on how you calculate cost. If you take the health and environmental costs of high-tech food into account, it is uncertain which kind of food is more expensive. The great virtue of *Food, Inc.* is that it places food in social context,
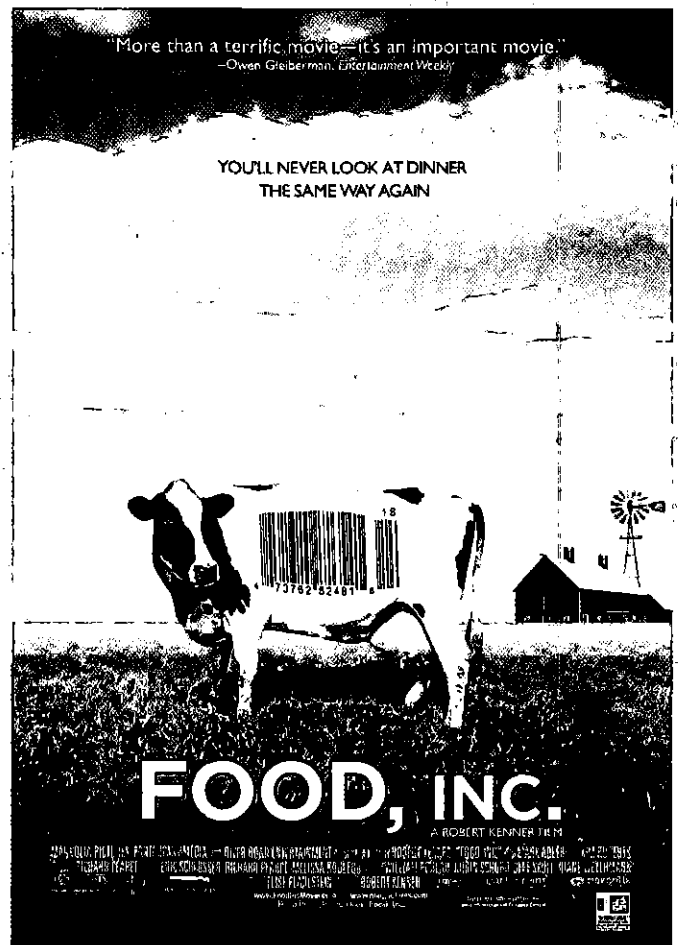
enabling us to see who profits and who suffers from the application of industrial technologies to the production of high-tech food.

Critical Thinking

1. The government gives many farmers and agricultural companies substantial cash subsidies to produce food on an industrial basis. If these subsidies were instead directed to the production of locally produced, organic food, what would be the costs and the benefits for the American population?
2. Who would object and who would favor the redirection of funds. Why?

Similarly, fleets of trawlers belonging to the highly industrialized countries are now equipped with sonar to help them find large concentrations of·fish. Some use fine-mesh nets to increase their catch. The trawlers have depleted fish stocks in many areas. In North America, for example, the depletion of cod, salmon, bluefin tuna, and shark stocks has devastated fishing communities and endangered one of the world's most important sources of protein. All told, 11 of the world's 15 main fishing grounds and 69 percent of the world's main fish species are in decline (McGinn, 1998: 60; Myers and Worm, 2003).

Global warming, industrial pollution, and the decline of biodiversity threaten everyone. However, as you will now see, the degree to which they are perceived as threatening depends on certain social conditions being met. Moreover, the threats are not evenly distributed in society.

The Social Construction of Environmental Problems: A Symbolic-Interactionist Approach

Environmental problems do not become social issues spontaneously. Before they can enter the public consciousness, policy-oriented scientists, the environmental movement, the mass media, and respected organizations must discover and promote them. People also have to connect real-life events to the information learned from these groups. Moreover, because some scientists, industrial interests, and politicians dispute the existence of environmental threats, the public can begin to question whether environmental issues are, in fact, social problems that require human intervention. We must not, then, think that environmental issues will inevitably be perceived as problematic. Rather, they are contested phenomena. They can be socially constructed by proponents, and they can be socially undermined by opponents, as symbolic interactionists emphasize (Hannigan, 1995b). The controversy over global warming is a good example of how people create and contest definitions of environmental problems (Gelbspan, 1999; Ungar, 1992, 1999).

The theory of global warming was first proposed about a century ago, but an elite group of scientists began serious research on the subject only in the late 1950s. They attracted no public attention until the 1970s, when the environmental movement emerged and gave new legitimacy and momentum to the scientific research and helped secure public funds for it. Respected and influential scientists now began to promote the issue of global warming.

The mass media, always thirsting for sensational stories, were receptive to these efforts. Newspaper and television reports about the problem began to appear in the late 1970s and spread widely in the 1980s, especially when the summer of 1988 brought the worst drought in half a century to North America. Respected organizations outside the scientific community, the mass media, and the environmental movement now began expressing concern over global warming. By the early 1990s, public opinion polls showed that most North Americans with an opinion on the subject thought that using coal, oil, and gas contributes to global warming.

However, some industrialists, politicians, and scientists began to question whether global warming was, in fact, taking place. This group included Western coal and oil companies, the member states of the Organization of the Petroleum Exporting Countries (OPEC), other coal- and oil-exporting nations, and right-wing think tanks, some of which are subsidized by major oil companies. Largely as a result of this onslaught, public concern about global warming began to falter.

Yet the evidence that global warming was substantial, dangerous, and caused by human activity continued to accumulate. In 2007, a large blue-ribbon panel of international climate experts, the Intergovernmental Panel on Climate Change (IPCC), issued a definitive report showing that global warming was real, dangerous, and stoppable through human intervention (Intergovernmental Panel on Climate Change, 2007). In 2009, the IPCC report was shown to contain a couple of errors, while scientists responsible for one of its data sets stupidly kept the data from public scrutiny. Again a furor erupted, although it was soon shown that the report's conclusions were accurate ("U.K. Panel . . . ," 2010). The ongoing debate demonstrates that environmental issues become social problems only when social, political, and scientific circumstances allow them to be defined as such.

As you will now see, in addition to being socially defined, environmental problems are socially distributed. That is, environmental risks are greater for some groups than for others.

The Social Distribution of Environmental Risk: A Conflict Approach

You may have noticed that after a minor twister touches down on some unlucky community in Texas or Kansas, TV reporters rush to interview the surviving residents of trailer parks. The survivors stand amid the rubble that was their lives. They heroically remark on the generosity of their neighbors, their good fortune in still having their family intact, and our inability to fight nature's destructive forces. Why trailer parks? Small twisters aren't particularly attracted to them, but reporters are. That is because trailers are flimsy in the face of even a small tornado. They often suffer a lot of damage from twisters. They therefore make a more sensational story than the minor damage typically inflicted on upper-middle-class homes with firmly shingled roofs and solid foundations. This is a general pattern. As conflict theorists emphasize, whenever disaster strikes—from the sinking of the *Titanic* to the fury of Hurricane Katrina—economically and politically disadvantaged people almost always suffer most. That is because their circumstances render them most vulnerable.

Environmental Racism

In fact, the advantaged often consciously put the disadvantaged in harm's way to avoid risk themselves. For example, toxic dumps, garbage incinerators, and other environmentally dangerous installations are more likely to be built in poor communities with a high percentage of African Americans or Hispanic Americans than in more affluent, mainly white communities. That is because disadvantaged people are often too politically weak to oppose such facilities, and some may even value the jobs they create (Stretesky and Hogan, 1998; Szasz and Meuser, 1997: 100). Similarly, the 75-mile strip along the lower Mississippi River between New Orleans and Baton Rouge has been nicknamed "Cancer Alley" because the largely black population of the region suffers from unusually high rates of lung, stomach, pancreatic, and other cancers. The main reason? This small area is the source of fully one-quarter of the petrochemicals produced in the country, containing more than 100 oil refineries and chemical plants (Bullard, 1994 [1990]). Here again we see the recurrent pattern of **environmental racism**, the tendency to heap environmental dangers on the disadvantaged, especially disadvantaged racial minorities (Bullard, 1994 [1990]).

Hurricane Katrina One of the biggest disasters of recent years was Hurricane Katrina, which hit the American Gulf Coast on August 29, 2005. Its effect was especially devastating in New Orleans, where environmental racism transformed the face of the city (Brym, 2009: 53–81).

Environmental racism: The tendency to heap environmental dangers on the disadvantaged, especially disadvantaged racial minorities.

A makeshift grave near New Orleans following Hurricane Katrina in 2005.

Before Katrina hit, New Orleans was two-thirds African American and one-quarter non-Hispanic white. Black–white income inequality was substantially greater than in the United States as a whole. The U.S. Department of Education deemed two-thirds of the public schools to be "academically unacceptable," and the city's homicide rate was among the highest of any city in the United States. New Orleans was poor, black, segregated, unequal, violent—and exposed.

New Orleans sits below sea level, and five years before Katrina made landfall, *Time* magazine published an article about the flood dangers facing the city. It included a computer-generated map showing how deep the waters would rise if a category 5 hurricane came barreling out of the Gulf of Mexico and headed straight toward the city. The analysis proved accurate. Katrina was no surprise.

Scientists knew not only *what* would happen if a Katrina-like hurricane struck. They knew *why* it would happen. First, the levee system along the Mississippi River eliminated the city's first line of defense against storm surge. Without levees along the Mississippi, silt from the river's floodwaters would stabilize land along the riverside and stop or at least slow down the sinking of coastal wetlands into the Gulf of Mexico. With the levees, silt is diverted into the Gulf, so the wetlands, which protect New Orleans from storm surge, are disappearing at an alarming rate. Second, levees along Lake Pontchartrain, to the north of the city, were last reinforced with higher walls in 1965, when they were built to withstand a category 3 storm. It was only a matter of time before a more severe storm would cause water to break through. Third, some climate scientists believe that, in recent years, hurricanes had become more severe, partly because global warming due to the excessive burning of fossil fuels has put more moisture into the atmosphere. Thus, Hurricane Katrina was in part a social disaster caused by deep racial inequality, poor planning, neglect, and careless disregard for the human impact on nature.

A hundred thousand people failed to evacuate New Orleans. They were predominantly poor, black, elderly, and disabled. Most of them didn't own cars or have access to other means of transportation. Many of them had little or no money; all they owned was in their homes. Thus, for sociological reasons, they were trapped as the waters began to rise and people began scrambling to their attics. Others reached the Louisiana Superdome and the New Orleans Convention Center, where survivors remained for days without food, water, or sanitation. Poor planning by inefficient government bureaucracies slowed the relief and recovery effort. About 2,300 people died in Hurricane Katrina.

Most of the predominantly white, well-off districts of New Orleans are on high ground. They escaped the worst of the flooding. Most of the predominantly African American, poor districts are on low ground. There, flooding was most severe. Today, many of the poor districts are substantially depopulated or deserted. New Orleans is now smaller, richer, and whiter, partly due to environmental racism (Mildenberg, 2011).

Environmental Risk and the Less Developed Countries What is true for disadvantaged classes and racial groups in the United States also holds for the world's less developed countries. The underprivileged face more environmental dangers than the privileged do (Kennedy, 1993: 95–121). In North America, western Europe, and Japan, population growth is low and falling. Industry and government are eliminating some of the worst excesses of industrialization. In contrast, world population grew to 7 billion in 2011, and nearly all of that growth was in the less developed countries. Moreover, Mexico, Brazil, China, India, and other countries are industrializing rapidly, putting tremendous strain on their natural resources. Rising demand for water, electricity, fossil fuels, and consumer products is creating more polluted rivers, dead lakes, and industrial waste sites. At a quickening pace, rain forests, grazing land, cropland, and wetlands are giving way to factories, roads, airports, and housing complexes. Smog-blanketed megacities continue to sprawl.

Deforestation on the Haiti/Dominican Republic border. Haiti (on the left) is so poor that, for fuel, residents have stripped the land of trees, causing devastating mud slides when heavy rains fall. The Dominican Republic (on the right), although still a poor country, has a per capita GNP that is more than five *times* higher than Haiti's.

Given the picture just sketched, it should come as no surprise that, on average, people in less developed countries are more concerned about the environment than people in rich countries are (Brechin and Kempton, 1994). However, the developing countries cannot afford much in the way of pollution control, so antipollution regulations are lax by North American, western European, and Japanese standards. This situation presents an incentive for some multinational corporations to place some of their most environmentally unfriendly operations in less developed countries (Clapp, 1998). It is also the reason the industrialization of the less developed countries is proving so punishing to the environment.

For the time being, however, the rich countries do most of the world's environmental damage. That is because their inhabitants earn and consume more than the inhabitants of less developed countries do. How much more? The United States has only 4.4 percent of the world's population, but it uses about 25 percent of the Earth's resources. It also produces more than 20 percent of global emissions of carbon dioxide, the pollutant responsible for about one-half of global warming. Thus, the inhabitants of the developed countries cause a disproportionately large share of the world's environmental problems, enjoy a disproportionate share of the benefits of technology, and live with fewer environmental risks than do people in the less developed countries.

Saving the Environment

The Market and High-Tech Solutions

Some people believe the environmental crisis will resolve itself. More precisely, they think we already have two weapons that will work together to end the crisis: the market
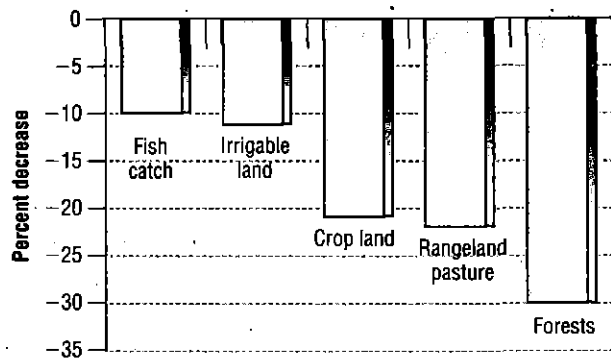
FIGURE 15.8 Renewable Resources, World, Percent Change, 1990–2010
Source: Postel (1994:11); Worldwatch Institute, State of the World, 1994, Copyright 1994. www.worldwatch.org

and high technology. The case of oil illustrates how these weapons can presumably combine forces. If oil reserves drop or producers withhold oil from the market for political reasons, the price of oil goes up. This makes it worthwhile for oil exploration companies to develop new technologies to discover and recover more oil. When they bring more oil to market, prices fall back to where they were. Generalizing these experiences and projecting them into the future, optimists believe that we will deal similarly with global warming, industrial pollution, and other forms of environmental degradation. In their view, human inventiveness and the profit motive will combine to create the new technologies we need to survive and prosper in the 21st century.

Some evidence supports this optimistic scenario. For example, following the sharp jump in oil prices in 1973 and then again in 1979, new discoveries were made and new efficiencies implemented, so oil reserves grew and prices fell. Similarly, in recent years, we have responded to rising demand for new technologies that combat environmental degradation. For example, we have replaced brain-damaging leaded gas with unleaded gas. Efficient windmills and solar panels are now common. More factories are equipped with high-tech pollution control devices, preventing dangerous chemicals from seeping into the air and water. We have introduced cost-effective ways to recycle metal, plastic, paper, and glass. Hybrid cars are everywhere, and electric cars are entering the market.

Although it is true that market forces are helping to bring environmentally friendly technologies online, four factors suggest that they cannot solve environmental problems on their own:

1. *Imperfect price signals.* The price of many commodities does not reflect their actual cost to society. In the United States, gasoline costs an average of $3.43 a gallon at the time of this writing, but the social cost, including the cost of repairing the environmental damage caused by burning the gas, may be three or four times that. Due to this and other price distortions, the market often fails to send signals that might result in the speedy adoption of technological and policy fixes.

2. *The slow pace of change.* So far, our efforts to deal with the environmental consequences of rapid technological change are just not good enough. For example, global warming continues to accelerate, partly because automobile use is increasing quickly worldwide. The world's renewable resources continue to decline (see Figure 15.8).

3. *The importance of political pressure.* Political pressure exerted by environmental activists, community groups, and public opinion is often necessary to motivate corporate and government action on environmental issues. For instance, organizations like Greenpeace have successfully challenged the practices of logging companies, whalers, the nuclear industry, and other groups engaged in environmentally dangerous practices. Without the efforts of such organizations, it is doubtful that corporations and governments would define many environmental issues as social problems.

4. *The resistance of powerful interest groups.* The oil and coal industries benefit from things staying the way they are and have acted as a brake on change. So has the automobile industry, at least until recently. For instance, the movement to improve fuel efficiency gained force after the 1973 oil crisis, but it petered out when the government allowed sport utility vehicles (SUVs) to be classified as small trucks and thereby avoid stringent fuel-economy regulation.

The Cooperative Alternative

The alternative to the market and high-tech approach involves increased cooperation among citizens, governments, and corporations aimed at the following goals (Livernash and Rodenburg, 1998):

- Reducing wasteful consumption;
- Increasing environmentally related research and development;
- Investing more in energy-saving technologies;
- Cleaning up the environment more effectively and quickly;
- Giving more aid to the developing countries for environmentally friendly industrialization;
- Placing caps on carbon emissions; and
- Introducing new taxes (or at least eliminating tax cuts to the wealthy such as those that were implemented during the Bush era) in order to fund environmental cleanup, aid, and research and development.

Cooperation on these issues would require renewed commitment to voluntary efforts and willingness to pass new laws and create new enforcement bodies.

Is the solution realistic? Not in the short term. It would be political suicide for anyone in the United States to propose quick implementation of the measures just listed. For example, few American drivers would be happy paying $10 a gallon for gas tomorrow. For the solution to be politically acceptable, the broad public in North America, western · Europe, and Japan must be aware of the gravity of the environmental problem and be willing to make substantial sacrifices to get the job done.

Data from the General Social Survey and other polls suggest that nearly all Americans are aware of environmental problems. The great majority of people believe that the government and individuals can and should do more to solve them. However, fewer than half of Americans are willing to pay much higher prices to protect the environment, and only about a third are willing to pay much higher taxes or cut back on their driving (GSS . . . , 2011). A "climate protection index" calculated by German researchers in 2011 placed the United States in 54th place out of 60 countries (see Table 15.3).

Sociologist Sheldon Ungar shows in his analysis of the global warming issue that only when a big scare occurs are more people prepared to make large sacrifices to deal

TABLE 15.3 • Climate Protection Performance of Countries, 2011	
Top Ten Performers	**Bottom Ten Performers**
1	51 Luxembourg
2	52 Iran
3	53 Malaysia
4 Brazil	54 United States
5 Sweden	55 Poland
6 Norway	56 China
7 Germany	57 Canada
8 United Kingdom	58 Australia
9 France	59 Kazakhstan
10 India	60 Saudi Arabia

Note: The top three positions have been left blank to signify that no country is doing enough to limit global warming to 1.5 degrees Celsius.
Source: Germanwatch (2011: 6–7); Climate Change Performance Index 2011, Germanwatch 2011. http://www.germanwatch.org/klima/ccpi11.pdf

with the perceived problem. That is, people have to be able to connect real-life events, such as long droughts, catastrophic storms, scorching summers, and mild winters, with what they hear in the mass media about the environmental crisis before taking the problem more seriously and making the necessary commitment to help save the planet (Ungar, 1992, 1995, 1998, 1999). It follows that more and bigger environmental catastrophes may have to occur before more people are willing to take remedial action. The good news is that there is still time to change our culture of environmental degradation.

Two Evolutionary Strategies

For many thousands of years, humans have done well on this planet. That is because we have created cultural practices, including technologies that allowed us to adapt to and thrive in our environment. Nonetheless, there have been some failures along the way. Many tribes and civilizations are extinct. And our success to date as a species is no warrant for the future. If we persist in using technologies that create an inhospitable environment, nature will deal with us in the same way it always deals with species that cannot adapt.

Broadly speaking, we have two survival strategies to cope with the challenges that lie ahead: competition and cooperation. Charles Darwin wrote famously about competition in *The Origin of Species* (1859). He observed that members of each species struggle against each other and against other species in their struggle to survive. Most of the quickest, the strongest, the best camouflaged, and the smartest live long enough to bear offspring. Most of the rest are killed off. Thus, the traits passed on to offspring are those most valuable for survival. Competition, it turns out, is a key survival strategy of all species, including humans.

In *The Descent of Man,* Darwin mentioned our second important survival strategy: cooperation. In some species, mutual assistance is common. The species members that flourish are those that best learn to help each other (Darwin, 1871:163). Russian geographer and naturalist Petr Kropotkin (1902) elaborated this idea. After spending five years studying animal life in Siberia, he concluded that "mutual aid" is at least as important a survival strategy as competition. Competition takes place when members of the same species compete for limited resources, said Kropotkin. Cooperation occurs when species members struggle against adverse environmental circumstances. According to Kropotkin, survival in the face of environmental threat is best assured if species members help one another. Many evolutionary biologists now accept Kropotkin's ideas (Gould 1988; Nowak, May, and Sigmund 1995:81).

Calvin and **Hobbes**   by Bill Watterson
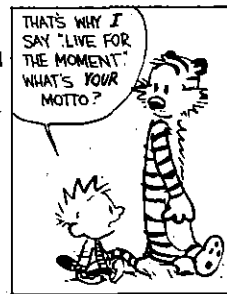
As we have seen, a strictly competitive approach to dealing with the environmental crisis—relying on the market alone to solve our problems—now seems inadequate. Instead, it appears we require more cooperation and self-sacrifice. Previously, we outlined some grave consequences of relying too little on a cooperative survival strategy at this historical juncture. But which strategy you emphasize in your own life is, of course, your choice.

Similarly, throughout this book—when we discussed families, gender inequality, crime, race, population, and other topics—we raised social issues lying at the intersection of history, social structure, and biography. We often set out alternative courses of action and outlined their consequences. We thus followed our disciplinary mandate: helping people make informed choices based on sound sociological knowledge. In the context of the present chapter, however, we can make an even bolder claim for the discipline. Conceived at its broadest, sociology promises to help in the rational and equitable evolution of humankind.

Chapter Summary

1. **What is the Malthusian theory of population growth? Does it apply today?**

   Robert Malthus argued that although food supplies increase slowly, populations grow quickly. Because of these presumed natural laws, only war, pestilence, and famine can keep human population growth in check. Several developments have cast doubt on Malthus's theory. Food production has increased rapidly. The limits to population size are higher than Malthus expected. Some populations are large yet prosperous. Some countries provide generous social welfare and still maintain low population growth rates. The use of contraception is widespread.

2. **What is demographic transition theory?**

   Demographic transition theory holds that the main factors underlying population dynamics are industrialization and the growth of modern cultural values. In the preindustrial era, crude birthrates and crude death rates were high, and population growth was therefore slow. In the first stages of industrialization, crude death rates fell, so population growth was rapid. As industrialization progressed and people's values about having children changed, the crude birthrate fell, resulting in slow growth again. Finally, in the postindustrial era, the crude death rate has risen above the crude birthrate in many societies. As a result, their populations shrink unless in-migration augments their numbers.

3. **What factors aside from the level of industrialization affect population growth?**

   The level of social inequality between women and men and between classes affects population dynamics, with lower levels of social inequality typically resulting in lower crude birthrates and therefore lower population growth rates.

4. **Is urbanization a function of industrialization?**

   Much urbanization is associated with the growth of factories. However, religious, political, and commercial need gave rise to cities in the preindustrial era. Moreover, the fastest-growing cities in the world today are in semi-industrialized countries.

5. **What did members of the Chicago school contribute to our understanding of the growth of cities?**

   The members of the Chicago school described and explained the spatial and social dimensions of the industrial city. They developed a theory of human ecology that

explained urban growth as the outcome of differentiation, competition, and ecological succession. They described the spatial arrangement of the industrial city as a series of expanding concentric circles. The main business/entertainment/shopping area stood in the center, with the class position of residents increasing as one moved from inner to outer rings.

6. **What are the main weaknesses of the Chicago school's analysis of cities?**

Subsequent research has shown that the city is not as anomic as the Chicago sociologists made it appear. Moreover, the concentric zone pattern applies best to the American industrial city in the first quarter of the 20th century. The new urban sociology criticized the Chicago school for making city growth seem like an almost natural process, playing down the power conflicts and profit motives that prompted the evolution of cities.

7. **What are corporate and postmodern cities?**

The corporate city that emerged after World War II was a vehicle for capital accumulation that stimulated the growth of the suburbs and resulted in the decline of inner cities. The postmodern city that took shape in the last decades of the 20th century is characterized by the increased globalization of culture, fragmentation of lifestyles, and privatization of space.

8. **What are some of the other major changes that have taken place in city life in recent decades?**

Cities have become suburbanized and exurbanized as they sprawl into the surrounding countryside.

9. **What are the major forms of environmental degradation and who is most exposed to the risks associated with them?**

The major forms of environmental degradation include global warming, industrial pollution, and the destruction of biodiversity. The people most exposed to the risks associated with the various forms of environmental degradation include members of racial minorities, lower classes, and less developed societies.

10. **How is symbolic interactionism applied to the study of environmental problems?**

Symbolic interactionism emphasizes that social problems do not emerge spontaneously. Instead, they are contested phenomena whose prominence depends on the ability of supporters and detractors to make the public aware of them.

11. **Are market and high-tech solutions capable of dealing with the problem of environmental degradation?**

Market and high-tech solutions can help solve many environmental problems. However, four issues suggest that they are insufficient by themselves. First, price signals do not always mirror market conditions. Second, political pressure is often needed to motivate governments and corporations to take action on environmental issues. Third, the pace of change is too slow. Fourth, some interest groups oppose change.

12. **What needs to be done to solve the problem of environmental degradation?**

Increased cooperation among citizens, governments, and corporations is required to solve the environmental crisis. This strategy involves renewed commitment to voluntary efforts, new laws and enforcement bodies to ensure compliance, increased investment in energy-saving research and development by industry and government, more environmentally directed foreign aid, and new taxes to help pay for some if it. Many Americans are unwilling to undergo the personal sacrifices and changes in lifestyle required to deal with the problem of environmental degradation, and some interest groups with a deep stake in things as they are also resist change. However, repeated environmental catastrophes could change the context of U.S. politics in a way that would make the cooperative strategy more popular in this country.

Questions to Consider

1. Do you think rapid global population growth is cause for alarm? If not, why not? If so, what aspects of global population growth are especially worrisome? What should be done about them?

2. Do you think of the city mainly as a place of innovation and tolerance or mainly as a site of crime, prejudice, and anomie? Where does your image of the city come from? Your own experience? The mass media? Your sociological reading?

3. What are the main environmental problems in your community? How are they connected to global environmental issues?

4. Take an inventory of your environmentally friendly and environmentally dangerous habits. In what ways can you act in a more environmentally friendly way?

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CourseMate

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