CHAPTER 15

Social Change

Ellen McKnight/Alamy

How Societies Change

Social institutions do not stand still. Often, things change without our knowing how or why. Immediately after the terrorist attacks of September 11, 2001, thousands of Europeans held candlelight vigils to express their solidarity with the United States. These days, Europeans are far more often found demonstrating against the continued U.S. presence in Iraq. Meanwhile, nations in Eastern Europe, Africa, and Latin America lurch toward new economic and political forms, while the fortunes of all nations increasingly depend upon an international political and economic system.

What is going on? Many Americans shake their heads in confusion. The last decade has brought great changes, such as new drugs to treat cancer, ever-smaller laptop and notebook computers, and the election of our first African American president. Balanced against these positive changes, however, are civil war and malnutrition in many developing nations, the destruction of the Amazon rainforest, and an epidemic of repetitive stress disorders linked to computer use.

All of these changes—both positive and negative—are referred to by sociologists as social change. **Social change** is defined as any significant modification or transformation of social structures or institutions over time. The rapid pace of social change and the complexity of twenty-first-century problems lead many individuals to feel a sense of both urgency and helplessness. In this chapter, we describe three potential sources of social change: *collective behavior*, *social movements*, and *technology*.

Collective Behavior

- After the film *Twilight* opened, teenage girls around the country gathered in large numbers to scream, hug, and cry wherever the film's stars appeared in public.
- In March 2009, hundreds of Bolivians wielding sticks and whips looted the house and attacked the family of an unpopular politician.

Despite the differences between these actions, both are examples of collective behavior. **Collective behavior** is spontaneous action by groups in situations where cultural rules for behavior are vague, inadequate, or contested (Marx & McAdam 1994). It includes such diverse actions as mob violence and spontaneous candlelight vigils to protest mob violence, as well as the behavior of crowds surging into Wal-Mart for a sale or carousing in the streets during Mardi Gras. These are unplanned, more or less spur-of-the-moment actions, where individuals and groups improvise a joint response to an unusual or problematic situation. Collective behavior differs from social movements (discussed below) in that it is usually short-lived, at least in part because participants lack a clearly defined social agenda and the resources needed to affect public policy. (Some sociologists include social movements as collective behavior, but others, including this textbook's authors, prefer to separate these topics.)

As noted, collective behavior occurs when cultural rules are (1) vague, (2) inadequate, or (3) contested. Cultural rules are *vague* in many areas: Should a woman tattoo her whole arm? Should someone take a year off between high school and college? Cultural rules are often *inadequate* during crises or periods of rapid social change: Who should be rescued first during a disaster? What is appropriate—or safe—to post on a Facebook page? Cultural rules are *contested* when some social groups feel that the normal rules of the society work against them and decide to subvert or protest those rules.

Social change is any significant modification or transformation of social structures and sociocultural processes over time.

Collective behavior is spontaneous action by groups in situations where cultural rules for behavior are unclear.

Collective behavior, such as mosh pits and crowd surfing at rock concerts, differs from social movement in being more spontaneous and relatively unplanned.

Collective behavior can occur anywhere there is a group, from sidewalks, to prisons, to corporations (Marx & McAdam 1994). A rumor can lead illegal street vendors to quickly pack up their goods, and a prison may erupt in violence over squalid conditions. Within a corporation, a particular Windows desktop wallpaper may suddenly become popular on a floor, employees might help each other escape a disaster (as when the World Trade Center was attacked), or they might begin an informal work slowdown as a silent protest against low pay.

Even when collective behavior is not designed as protest, however, it can have the effect of challenging the status quo. For example, if enough college students post descriptions of drinking binges or wild sexual activity on Facebook or MySpace, then that behavior will likely come to seem more acceptable. The difference between collective behavior and social movements, however, is that social movements are organized, relatively broad based, long term, and intended to foster social change.

Social Movements

Social movements are individuals, groups, and organizations united by a common desire to change social institutions, attitudes, or ways of life (Tilly 2004). Examples include the immigrant rights and environmental movements, as well as the grassroots struggle against drunk driving. A social movement is extraordinarily complex. It may include sit-ins, demonstrations, and even riots, but it also includes meetings, fundraisers, legislative lobbying, and letter-writing campaigns.

A **social movement** is an ongoing, goal-directed effort to fundamentally challenge social institutions, attitudes, or ways of life.

Both collective behavior and social movements challenge the status quo. As a result, they are related in at least two ways. First, social movements need and encourage some instances of collective behavior simply to keep issues in the public eye (Marx & McAdam 1994). There is nothing like a riot or police breaking up an illegal demonstration to get people's attention. Second, even though collective behavior is usually

concept summary

Theories of Social Movements

Theory	Major Assumption	Causes of Social Movements
Structural-Functional Theory: Relative Deprivation	Social movements are an abnormal part of society	Social change produces disorganization and discontent
Conflict Theory: Resource Mobilization	Social movements are the normal outgrowth of competition between groups	Competition between organized groups
Symbolic Interaction Theory: Political Process	People join social movements because they have developed an "insurgent consciousness"	Political opportunities combine with an individual sense that change is needed and possible

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Sooner or later, most people experience relative deprivation. Any time you have felt unhappy because someone you knew had a bigger allowance, nicer clothes, or a newer car than you did, you experienced relative deprivation. This is true even if most observers would consider both of you to be poor or consider both of you to be wealthy.

limited to a particular place and time, it can be a repeated mass response to problematic conditions. When this happens, collective behavior at a grassroots level may be a driving force in mobilizing social movements (Tilly 2004).

As we documented in Chapter 13, most people in the United States have relatively little interest in politics. Why, then, do some people shake off this lethargy and try to change the system? And under what circumstances do social movements succeed or fail?

Theoretical Perspectives on Social Movements

Three major theories explain the circumstances in which social movements arise: *relative-deprivation theory*, *resource mobilization theory*, and *political process theory*. All three theories suggest that social movements arise out of inequalities and cleavages in society, but they offer somewhat different assessments of the meaning, sources, and tactics of social movements. These differences are described in the Concept Summary on Theories of Social Movements.

Structural-Functional Theory: Relative Deprivation

Poverty and injustice are universal phenomena. Why is it that they so seldom lead to social movements? According to **relative-deprivation theory**, social movements arise when we *believe* we should have more than we *actually* have—especially if we feel this deprivation is a result of unfair treatment (Walker & Smith 2002). Our expectations, in turn, are usually determined by comparing ourselves with others or with past situations. Because the theory refers to deprivation relative to other groups or times rather than to absolute deprivation, it is called *relative-deprivation theory*.

Figure 15.1 diagrams three conditions for which relative-deprivation theory would predict the development of a social movement. In Condition A, disaster or taxation suddenly reduces the standard of living (or "rewards") for everyone. Unless people's expectations also drop, they will resent their new deprivation. In Conditions B and C, the standard of living has risen, but expectations have risen even further. Consequently, people feel deprived relative to what they had anticipated. Relative-deprivation theory has the merit of providing a plausible explanation for many social movements occurring in times when objective conditions are either improving (Condition C) or at least are better than in the past (Condition B).

Relative-deprivation theory argues that social movements arise when people experience an intolerable gap between their expectations and the rewards they actually receive.

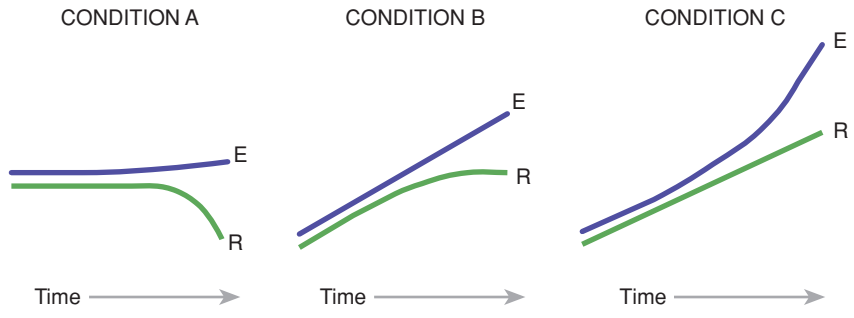

FIGURE 15.1 Expectations, Rewards, and Relative Deprivation Relative-deprivation theory suggests that relative deprivation exists whenever there is a gap between expectations (E) and rewards (R). It may occur when the rewards available to individuals decline (Condition A), when the rewards level off (Condition B), or even when rewards steadily increase (Condition C).

Relative-deprivation theory is a structural-functional theory. Like other structural-functional theories, it assumes that in normal circumstances society functions smoothly. According to this theory, then, social movements arise only when social change occurs unevenly across social or cultural institutions or when the pace of change is simply too rapid.

There are two major criticisms of relative-deprivation theory. First, empirical evidence does not bear out the prediction that those who are most deprived, absolutely or relatively, will be the ones most likely to participate in social movements. Often, social movement participants are the best off in their groups rather than the worst off. For example, almost all of the 19 terrorists who destroyed the World Trade Center and attacked the Pentagon, as well as Osama bin Laden, were well educated and middle class or wealthy. In many other situations, individuals participate in and lead social movements on behalf of groups to which they do not belong, such as South African whites who fought against apartheid and people who fight for animal rights. Second, the theory fails to specify the conditions under which relative deprivation will lead to social movements. Why do some relatively deprived groups form social movements and others don't? Relative deprivation can play a role, but by itself it is not a good predictor of the development of social movements (Gurney & Tierney 1982).

Conflict Theory: Resource Mobilization

While structural functionalists assume that society generally works harmoniously, conflict theorists assume that conflict, competition, and, as a result, deprivation are common. If deprivation were all it took to spark a social movement, we would have active social movements all the time. Yet social movements only arise sporadically. Consequently, conflict theorists argue, relative deprivation by itself cannot explain why social movements emerge when they do. Rather, they argue, social movements emerge when individuals who experience deprivation can garner the resources they need to mobilize effectively for action. This theory is known as **resource mobilization theory**, and it is the most commonly used theory among American sociologists (McAdam & Snow 1997).

According to resource mobilization theory, then, the spark for turning deprivation into a movement is not anger and resentment but rather organization and resources. As a result, social movements will be more common in affluent societies than in poorer ones, since in affluent societies even the least well-off may have access to the minimum resources needed for protest. Similarly, the building blocks of social movements are organized groups whose leaders are relatively well provided with resources, rather than discontented individuals from the lower classes.

Resource mobilization theory suggests that social movements develop when individuals who experience deprivation can garner the resources they need to mobilize for action.

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The "immigrants' rights" movement in the United States reflects "insurgent consciousness"—the belief that change in the system is both needed and possible—among both immigrants and their supporters.

At the same time, the rise of information technologies has made resource mobilization easier and faster for people around the globe. For example, Barack Obama's 2008 campaign for the Presidency effectively used YouTube videos, Facebook, e-mail, blogs, and other Internet resources to spread his message, raise funds, and attract people to campaign events. Similarly, in April 2009, anti-government activists in the eastern European nation of Moldova used cell phones, e-mail, Facebook, and Twitter to draw more than 10,000 young people to a political protest on short notice.

Symbolic Interaction Theory: Political Process

Resource mobilization theory remains very important within sociology, but it has been criticized for two reasons. First, it downplays the importance of grievances and spontaneity as triggers for social movements (Klandermas 1984; Morris & Mueller 1992). Second, it overlooks the crucial process through which vague individual grievances lead to new collective identities and organized political agendas (Jasper & Poulsen 1995; Williams 1995). **Political process theory** has arisen to fill this gap. According to political process theory, a social movement needs two things: political opportunities and an "insurgent consciousness." **Political opportunities** include preexisting organizations that can provide the new movement with leaders, members, phone lines, copying machines, and other resources. Whether or not political opportunities will exist depends on a number of factors, including the level of industrialization in a society, whether a war is going on, and whether other cultural changes are underway (Meyer 2004).

Insurgent consciousness is the individual sense that change is both needed and possible. In the same way that symbolic interactionism argues that individuals develop their identities and understanding of the social world through interactions with significant others, political process theory argues that individuals develop their sense of identity and of the possibility of change through interaction with others. For example, until the 1970s, newspapers regularly listed job ads in separate columns for men and for women, top universities refused to admit women as students, and some ministers told battered wives that they must have done something to cause their husbands to

Political process theory suggests that social movements develop when political opportunities are available and when individuals have developed a sense that change is both needed and possible.

Political opportunities are resources that allow a social movement to grow; they include preexisting organizations that can provide the new movement with leaders, members, phone lines, copying machines, and other resources.

Insurgent consciousness is the individual sense that change is both needed and possible.

TABLE 15.1 Social Movement Outcomes
According to William Gamson, the outcomes of social movements take four possible forms. These outcomes depend on whether the movement achieves its goals and whether it gains acceptance from society at large.

	Level of Social Acceptance	
Level of Goal Achievement	**Considerable social acceptance**	**Little social acceptance**
Many goals achieved	*Outcome*: Success *Example*: The U.S. abolitionist movement. After the Civil War, slavery was abolished. Eventually, most Americans supported this change.	*Outcome*: Preemption *Example*: Feminism Most Americans now agree that women deserve equal rights but still equate feminism with man-hating.
Few goals achieved	*Outcome*: Cooptation *Example*: The "green housing" movement. Most Americans agree we should use less energy at home. Builders now use the "green" label to sell huge, energy-sucking homes with a few "green" details like insulated windows.	*Outcome*: Collapse *Example*: The U.S. movement to legalize prostitution. Earned little social acceptance, achieved no goals (except in a few counties in Nevada), and essentially disappeared.

beat them. The growth of the women's movement depended upon convincing women that these were not merely personal problems but rather were problems they shared with other women *simply because they were women*. This point is neatly summed up in the feminist slogan "The personal is political."

Why Movements Succeed or Fail

Why do some movements succeed while others disappear? Based on a historical review of 53 diverse social movement organizations (SMOs), sociologist William Gamson (1990) identified four possible outcomes of social movement activities. A fully successful SMO is one that both *achieves its goals* and *wins acceptance* as a legitimate, reputable organization. Nelson Mandela's African National Congress, for example, now controls the government of the Republic of South Africa and has improved the situation of South Africa's black population enormously. Other SMOs, however, have not been as successful. Some SMOs are *co-opted* when their rhetoric and ideology gain nominal public approval, but the real social changes they had advocated have not occurred. Other SMOs are *preempted* when those in power adopt their goals and programs but continue to denigrate the organization and its ideology; many politicians, for example, now support the idea of equal pay for equal work but continue to belittle the feminists who brought the issue to public attention. Still other SMOs have little lasting effect on society. Table 15.1 outlines the four movement outcomes discussed by Gamson.

Empirical analysis of social movements in the United States and around the world suggests that a number of factors are important for movement success. Movements are most likely to succeed if they contain diverse organizations using diverse tactics, if

they can garner sufficient resources, and if they can frame their goals and ideology in a way that attracts and keeps members.

Diverse Organizations and Tactics

A social movement is the product of the activities of dozens and even hundreds of groups and organizations, all pursuing, in their own way, the same general goals. For example, there are probably dozens of different SMOs within the environmental movement, ranging from the relatively conventional Audubon Society and Sierra Club to the radical Greenpeace organization and the ecoterrorists of the Earth Liberation Front (ELF). The organizations within a movement may be highly divergent and may compete with each other for participants and supporters. Because this assortment of organizations provides avenues of participation for people with a variety of goals and styles, however, the existence of diverse SMOs is functional for the social movement.

SMOs can be organized in one of two basic ways: as professional or as volunteer organizations. On the one hand, we have organizations such as the American Civil Liberties Union or the National Rifle Association, which have offices in Washington, D.C., and a relatively large paid staff, some of whom are professional fund-raisers or lobbyists who develop an interest in an issue only after being hired. At the other extreme is the SMO staffed on a volunteer basis by people who are personally involved—for example, neighbors who organize in the church basement to prevent a nuclear power plant from being built in their neighborhood. These two types of SMO are referred to, respectively, as the *professional* SMO and the *indigenous* SMO.

Evidence suggests that the existence of both types of organizations facilitates a social movement. The professional SMO is usually more effective at soliciting resources from foundations, corporations, and government agencies. It appeals to individuals who are ideologically or morally committed to the group's cause. On the other hand, because employees of professional SMOs are not themselves underprivileged and because they work daily with the establishment, professional SMOs sometimes lose the sense of grievance that is necessary to motivate continued, imaginative efforts for change. As a result, a social movement also requires sustained indigenous organizations (Jenkins & Eckert 1986). Indigenous organizations perform two vital functions. First, by keeping the aggrieved group actively supportive of the social movement, they help to maintain the sense of urgency necessary for sustained effort. Second, their anger and grievance propel them to more direct-action tactics (sit-ins, demonstrations, and the like) that publicize the cause and keep it on the national agenda.

The feminist movement is an excellent example of a social movement that combines both professional and indigenous SMOs. Informal networks continue to keep the discussion of equal rights and equal opportunities alive, even in periods when professional SMOs are nonexistent or marginalized. The most successful periods of feminist activism have been when professional SMOs, such as the National Organization for Women (NOW), worked in close cooperation with indigenous SMOs made up of informal networks and passionate individuals (Buechler 1993). In the absence of direct actions—candlelight vigils for victims of wife abuse, boycotts of pornography stores, or equal rights rallies—pressure from both professional and indigenous SMOs can produce only modest results, at best.

Mobilizing Resources

Mobilization is the process by which a social movement gains control of new resources.

Mobilization is the process through which a social movement gains needed resources, of many types. These resources may be weapons, technologies, goods, money, or members. The resources available to a social movement depend on two factors: the amount of personal resources controlled by movement members and

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For a social movement to succeed, it needs to mobilize many resources—sometimes including weapons.

the proportion of those resources that members will contribute to the movement. Thus, mobilization can proceed by increasing the size of the membership, increasing the proportion of assets that members are willing to give to the group, or recruiting richer members. Mobilization can also mean getting other organizations to work with a social movement. For example, the civil rights movement relied on aid from African American churches, and the anti-pornography movement has garnered support from both fundamentalist churches and feminist organizations.

Organizational factors also affect the odds that an SMO will succeed. Most importantly, SMOs must be able to mobilize sufficient resources to achieve their ends. Those resources can take many forms. During the spring of 2006, tens of thousands of high school students across the country walked out of their schools in protest against proposed anti-immigration legislation. These students were mobilized virtually overnight through text messaging and cell phone calls—movement resources that Karl Marx never envisioned. In addition, SMOs are more likely to be successful when individuals must actively participate in the movement to derive any of the benefits from its victories. SMOs are also more likely to succeed if they have a centralized, bureaucratic structure; are able to avoid infighting; and cultivate alliances with other organizations (Gamson 1990).

Frame Alignment

Political process theory has pointed to the importance of frame alignment for attracting and mobilizing new members. **Frame alignment** is the process that movements use to convince individuals that their interests, values, and beliefs are complementary to those of the SMO (Benford & Snow 2000; Snow et al. 1986). The Sierra Club, for example, might mail pamphlets to members of the Audubon Society in hopes of convincing them to join. It also might hold public meetings in a town plagued by pollution in hopes of convincing parents that their children's illnesses are caused by pollution, not by bad luck or bad genes. Other organizations, like cults and extremist

Frame alignment is the process used by a social movement to convince individuals that their personal interests, values, and beliefs are complementary to those of the movement.

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If a missionary has ever tried to convince you to save your soul by joining his religion, that missionary was engaging in frame alignment: trying to convince you that your interests and those of his movement overlapped. The same is true whenever someone running for student government or someone hoping you will join Greenpeace tries to convince you that their movement's interests, values, and beliefs mesh well with yours.

groups, try to gain new members by convincing individuals that the way they have seen things is entirely wrong.

Who is most likely to be recruited through frame alignment? Studies of social movement activists show that, although ideology and grievances are important in bringing in new participants, the key factor is personal ties and networks. No matter how deeply committed individuals might be to a movement's ideology, they are not likely to become active members unless they belong to a network of like-minded others. Conversely, they also are unlikely to become active if their friends, relatives, and acquaintances oppose the movement (McAdam 1986; McAdam & Paulsen 1993).

Countermovements

Countermovements are social movements that seek to reverse or resist changes advocated by an opposing movement (Lo 1982; Meyer & Staggenborg 1996). Countermovements can arise in response to any movement and can be either left-wing or right-wing.

Countermovements are most likely to develop if three conditions are met (Meyer & Staggenborg 1996). First, the original movement must have achieved moderate success. If the movement appears unsuccessful, then few will feel it worth their while to oppose it. Conversely, if the movement appears totally successful, then opposition will seem futile. Most tobacco smokers, for example, simply accepted new restrictions on smoking in the workplace rather than trying to resist them. On the other hand, when cities passed laws banning smoking in restaurants and bars, smokers realized that they had new allies: bar and restaurant owners who feared loss of customers. As a result, a countermovement has appeared to fight these laws.

Second, countermovements only arise when individuals feel that their status, power, or social values are threatened. This is most likely to happen if the original movement frames its goals broadly. The nineteenth-century temperance movement, which opposed all alcohol use, generated a strong countermovement. In contrast, the current movement against drunk driving, which identifies individual drunk drivers as the problem rather than alcohol consumption per se, has met almost no opposition.

Third, countermovements emerge when individuals who feel threatened by a new movement can find powerful allies. Those allies can come from within political parties, unions, churches, or any other important social group. Again, the alliance between smokers and bar owners is an example.

The conflict over abortion provides an excellent example of the interrelationship between movements and countermovements. The abortion rights movement of the 1960s was a quiet campaign, largely run by political elites—doctors, lawyers, and women active in mainstream political groups. For this reason, perhaps, it received little media coverage (Luker 1985). Its victory in the 1973 *Roe v. Wade* Supreme Court decision caught the country by surprise and galvanized the antiabortion movement (Meyer & Staggenborg 1996). That countermovement drew its supporters from women and men who believed that the legalization of abortion threatened religion, the stability of the family, and traditional ideas regarding women's nature and role. The antiabortion movement gained further support through highly visible, "newsworthy" actions that won media coverage for its views. In the years since *Roe v. Wade*, both the movement and the countermovement have sought political allies—the pro-choice movement primarily within the Democratic Party and the antiabortion movement primarily within the Republican Party. Neither group, however, has yet achieved a decisive legal victory.

A **countermovement** seeks to reverse or resist change advocated by an opposing social movement.

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As these antiabortion and pro-choice protesters illustrate, whenever a social movement succeeds in creating social change, a countermovement is likely to develop.

Case Study: How the Environmental Movement Works

Being in favor of protecting the environment sounds like an innocuous position to take. After all, who is in favor of polluted air, dirty water, and disappearing species? Yet by default, nearly all of us are.

Our modern lifestyle depends on ruining the environment. The average American produces 35 pounds of garbage each week but recycles only a tiny fraction of this. Environmental protection, on the other hand, carries significant costs that few care to bear: higher-priced goods, more bother over recycling, more regulation, fewer consumer goods, and the loss of some jobs. Despite this apparent ill fit between environmentalism and modern life, the environmental movement continues to fight for its cause.

The Battle over Environmental Policy

This battle is being fought on many fronts—nuclear power, oil exploration in protected areas, hazardous wastes, forests, and suburban sprawl. Sometimes the battle takes extreme forms. "Mink liberators" in Utah have released animals from fur farms, bombed the fur breeder's cooperative that provides most of the food for the state's $20-million-a-year mink industry, and even set fire to a leather store. The Earth Liberation Front (ELF) announced that it firebombed and destroyed a $12-million mountaintop restaurant and ski-lift facility in 1998 to protect the last, best lynx habitat in Colorado (Glick 2001). Elsewhere, groups protesting suburban sprawl have set fire to sport utility vehicles and luxury home construction sites. Although many environmentalists disagree with this illegal sabotage, the spokesperson for one ELF cell says, "We know that the real 'ecoterrorists' are the white male industrial and corporate elite. They must be stopped" (Murr & Morganthau 2001).

Although militants do much to publicize and galvanize the environmental movement, they cannot succeed on their own. Arson, freeing animals, and bombing may

AP Images

Ecoterrorists who oppose suburban sprawl and the sale of gas-guzzling vehicles have taken actions such as spray-painting sport-utility vehicles and burning dealerships where SUVs are sold.

buy time, but permanent victory in protecting forests, wildlife, and the rest of the environment involves court orders, legal battles, and other strategies. Thus, both professional and indigenous, conservative and radical SMOs help to push the movement forward.

The professional SMOs of the environmental movement—the Sierra Club, the Environmental Defense Fund, the National Audubon Society, and others—write letters to congressional representatives to urge support for clean-air laws or to lobby against dam projects or unrestrained suburban growth. They pay a battery of lawyers to get court injunctions when needed and to push for change in government policies. And, increasingly, they work with corporations to develop corporate policies that will protect the environment without hurting those corporations' bottom lines. For example, the Environmental Defense Fund prodded FedEx to use delivery trucks with hybrid fuel systems. This shift reduced air pollution, gasoline consumption, and FedEx's costs while burnishing the company's public image (Deutsch 2006; FedEx 2006).

The Environmental Movement Assessed

One reason corporations and federal agencies have adopted more environmentally friendly policies is that concern for the environment has increased markedly over the last two decades; most Americans now say they are willing to pay more taxes to clean up the environment.

Reflecting this growing public support, the environmental movement has had some notable successes. These include the rise in recycling, the establishment of new wilderness areas, and the passage of the Endangered Species Act. However, since the 1980s, increased anti-government, anti-tax, and pro-business sentiment has dramatically limited economic and political support for environmental protection. Moreover, as the economy has faltered, Americans have become less willing to sacrifice economic growth for environmental benefits: In 2009, for the first time in 25 years, Americans surveyed by Gallup Poll researchers rated protecting the economy as more important than protecting the environment (Figure 15.2). Similarly, another large, random poll conducted in 2009 found that 85 percent of Americans rated the economy a top priority, but only 41 percent rated the environment a top priority (Pew Research Center for the People and the Press 2009). If Americans continue to believe that environmental protectionism threatens their livelihoods, then the environment and the environmental movement are likely to suffer.

Technology

In social movements, individuals consciously aim to change their society. In other cases, people's intentions are more modest but may lead to great social change nonetheless. Such is the case with technology.

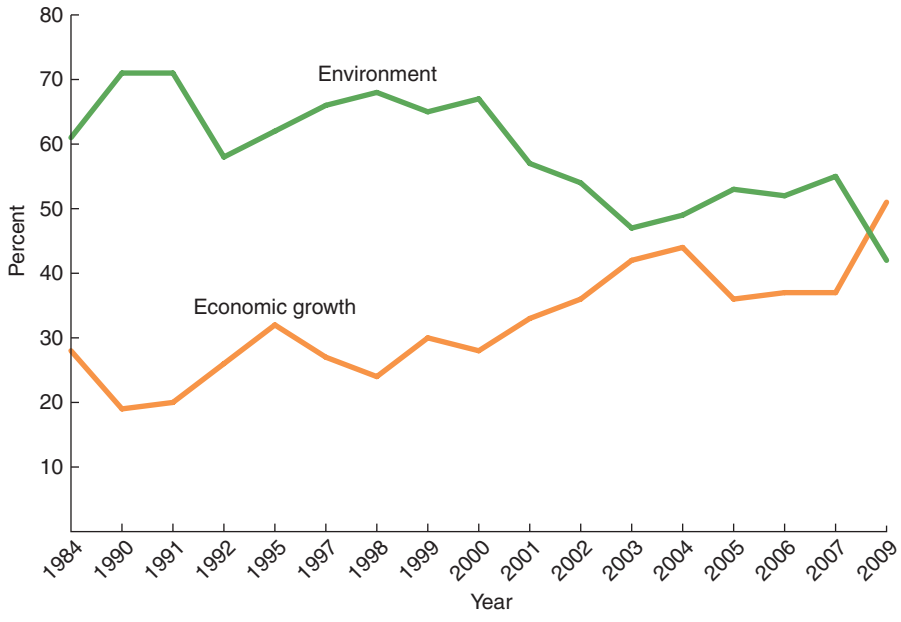

FIGURE 15.2 Environmental versus Economic Concerns
In 2009, for the first time in 25 years, Americans surveyed by Gallup Poll researchers rated protecting the economy as more important than protecting the environment.
SOURCE: Gallup.com (2009).

Technology is more pervasive than ever in our daily lives. Perhaps you woke up to an alarm this morning to find coffee already brewed in your preset electric coffeemaker, checked your cell phone for messages, and listened to MP3 files on your laptop, all before you made it to your first class. Technology is also more powerful and dangerous than ever before: The lethal power of a car or nuclear bomb is far greater than that of a horse-drawn cart or sword. It is vitally important, then, that we think about the social changes that technology can bring.

Technology is defined as the human application of knowledge to the making of tools and to the use of natural resources. It is important to note that the term *technology* refers not only to the tools themselves (material culture) but also to our beliefs, values, and attitudes toward them (nonmaterial culture). While we may be inclined to think of technology in terms of today's high-tech advances, it also includes relatively simple tools such as pottery and woven baskets. Thus, technology has been a component of culture from the beginning of human society.

Because technology defines the limits of what a society can do, technological innovation is a major impetus to social change. As we saw in Chapter 4, technology helped to transform hunting, fishing, and gathering societies to horticultural, then agricultural, and then industrial societies. Currently, new technologies are developing to meet new needs created by a changing culture and society. The result is a never-ending cycle in which social change both causes and results from new technology. In this section, we briefly review two theories of technologically induced social change and present a case study of how information technology may change society. We then discuss the benefits and costs of two new technologies: information technology and reproductive technology.

Theoretical Perspectives on Technology and Social Change

Technology involves the human application of knowledge to the making of tools and to the use of natural resources.

Since the nineteenth century, sociologists have been interested in the link between technology and social change; as we saw in Chapter 1, many early scholars entered

sociology because of their interest in the sources and consequences of the Industrial Revolution, an event that triggered dramatic social change. This section explores how structural functionalism and conflict theory explain the connections between technology and social change.

Structural-Functional Theory: Technology and Evolutionary Social Change

While structural-functional theory primarily asks how social organization is maintained in an orderly way, the theory does not ignore the fact that societies and cultures change. As pointed out in Chapter 1, according to the structural-functional perspective, change occurs through evolution: Social structures adapt to new needs and demands in an orderly way, while outdated patterns, ideas, and values gradually disappear. Often, the new needs and demands that prompt this evolution are technological advances.

But even if change is evolutionary, it does not always occur smoothly. One reason for this is that changes in one aspect of a culture invariably affect other aspects. Structural-functionalists believe that typically cultures will adapt to these changes, but recognize that adaptation may take a while. As a result, societies can experience a "cultural lag" during which some aspects of a culture haven't kept up with changes in other aspects. For example, the rise of factories led to skyrocketing rates of industrial accidents beginning in the 1870s, but laws providing compensation to injured workers were not passed until the 1920s—a cultural lag of about 50 years. Cultural lag is the temporary period of maladjustment during which the social structure adapts to new technologies.

Conflict Theory: Technology, Power, and Social Change

While structural functionalism sees social change as orderly and generally consensual, conflict theorists contend that change—including the adoption of new technologies—results from conflict between competing interests. Furthermore, conflict theorists assert that those with greater power can direct technological and social change to their own advantage. In a process characterized by conflict and disruption, social structure changes (or does not change) as powerful groups act either to alter or to maintain the status quo.

According to Thorstein Veblen (1919), those for whom the status quo is profitable are said to have a vested interest in maintaining it. **Vested interests** represent stakes in either maintaining or transforming the status quo; people or groups who would suffer from social change have a vested interest in maintaining the status quo, while those who would profit from social change have a vested interest in transforming it. Electric companies have a vested interest in promoting electric cars; gas companies have a vested interest in impeding this. College students have a vested interest in downloading textbooks for free from the Internet; publishers have a vested interest in preventing this.

Just as the benefits of a particular technology are unevenly distributed, so also are the costs. Conflict theorists argue that costs tend to go to the less powerful. Pollution-producing factories, which can earn great profits for corporations, are typically located in poor neighborhoods and never located in places like Beverly Hills or Scarsdale.

Like evolutionary theories, the conflict perspective on social change makes intuitive sense to many, and there is empirical evidence to support it. A general assumption of the conflict perspective is that those with a disproportionate share of society's wealth, status, and power have a vested interest in preserving the status quo. In today's

Vested interests are stakes in either maintaining or transforming the status quo.

rapidly changing society, this may no longer be the case, as powerful factions may be just as likely to support as to oppose technological innovations. Microsoft, for example, is fully in favor of developing new technologies that it can profit from, like Windows Vista, even while it works to impede innovations that others control, like Linux and Apple software and computers. Furthermore, some scholars have argued that technology is virtually "autonomous." That is, once the necessary supporting knowledge is developed, a particular invention—like the personal computer or the atomic bomb—will be created by someone. And once created, it will be used. In other words, technological changes may be put in motion by social forces beyond our effective control.

The Costs and Benefits of New Technologies

Almost all of us are glad that personal computers now exist: Their benefits are obvious, and the problems they create seem small by comparison. Far fewer of us are happy that the atomic bomb exists, although most Americans were happy that our government was able to use it during World War II.

As these examples suggest, new technologies always offer both benefits and costs, many of which are not immediately obvious. Focus on a Global Perspective: India Meets the Cell Phone on the next page explores the many ways that cell phones are affecting Indian society.

In the following paragraphs, we discuss two examples of new technologies: *new reproductive technologies* and *information technology*. We then explore two general problems that can arise along with any new technologies : the *technological imperative* and *normal accidents*.

New Reproductive Technologies

New reproductive technologies—some simple, some complex—have substantially expanded the options of women and men who want children who are genetically related to them. Men whose wives are infertile can have their sperm inseminated into another woman who agrees to serve as a "surrogate mother" (usually for a fee). Women whose husbands are infertile can be inseminated with another man's sperm. Women who cannot conceive can have their eggs surgically removed, fertilized by sperm in a test tube, and then surgically implanted in their uteruses. The same technology enables women who lack viable eggs (including post-menopausal women) to bear children using another woman's eggs. These technologies are available not only to childless couples but also to single men and women and to gay and lesbian couples. Currently, about 50,000 babies are born each year as a result of these technologies (U.S. Bureau of the Census 2009a). An unknown additional number of babies were born when women were inseminated vaginally after taking prescription hormones or undergoing surgical procedures to restore their fertility

Although these reproductive technologies have increased childbearing options, some sociologists have raised concerns about their health, social, and ethical implications (Rothman 2000). The potential health problems are numerous. Women who take prescription hormones to increase their chances of conceiving risk breast cancer or ovarian cancer in the future. Other women face long, difficult, and potentially life-threatening pregnancies when these hormones leave them carrying twins, triplets … or even septuplets. The children they give birth to are disproportionately likely to be born prematurely, and as a result to have greater risks of a wide variety of lifelong cognitive and health problems. Finally, women who undergo surgical procedures for infertility face all the dangers inherent in any surgery.

focus on  A GLOBAL PERSPECTIVE

India Meets the Cell Phone

For people in the United States, having a cell phone makes life more convenient. For people in India, a cell phone can change everything.

Cell phone usage is growing more rapidly in India than anywhere else in the world, with about one-third of all Indians now owning one (Giridharadas 2009). Moreover, cell phone ownership has grown among the poor as well as the wealthy and in small towns and villages as well as in cities.

Cell phones have proven so popular because they serve so many different needs (Giridharadas 2009). Until recently, few Indians could afford or obtain land-line telephones. Meanwhile, those who did have land-line telephones could rarely use them with any privacy, since phones typically were placed in central locations for easy sharing by all members of the family. Other electronic equipment, such as cameras, DVD players, and stereos, also remain relatively rare, while even the small percentage who own computers or laptops rarely have Internet connections.

In this context, the cell phone has proven revolutionary. As in the United States, Indians now use their cell phones as flashlights and as a means of connecting to the Internet, keeping a daily calendar, taking photos, and so on. The difference is that in India, most have no other tools available for these tasks.

The cell phone has also dramatically increased access to privacy for Indians—especially young people. In a society in which arranged marriages remain the norm and social contact between unmarried men and women is viewed with suspicion, Indian young people happily use their cell phones to surreptitiously text or call members of the opposite sex. As a result, cell phones are changing ideas about both privacy and romance.

Finally, cell phones are changing political life in India. Activist groups now use cell phones to broadcast information about political candidates, journalists use them to poll viewers on current events and politics, and citizens use them to send political comments to television stations that run these comments as an on-screen "crawl." These actions have already had an impact on some local elections and court cases (Giridharadas 2009).

In other ways, however, the cell phone has become a new way of reinforcing old cultural and social divisions in India. As one observer wrote, cell phones

> announc[e] who outranks whom. Small people have small phones, and big people have big ones. Small people have numerical-soup numbers, and big people have numbers that end in 77777 or something equally important-sounding or easy to remember. Small people have one phone, and big people have two. Small people set their phones merely to ring, and big people make Bollywood songs play when you call them. (Giridharadas 2009, WK3)

It seems, then, that like other technologies in other cultures, cell phone usage in India both reflects the existing culture and has considerable power to change that culture.

The social and ethical problems implicit in new reproductive technologies are more subtle. Perhaps most important, some of these techniques have low success rates, especially with older women. Even those who eventually give birth typically have to endure several cycles of treatment costing around $12,000 each before they have a baby. Yet the constant development of new techniques makes it difficult for childless individuals and couples to decide to adopt or to accept their childlessness. Finally, these technologies raise the question of whether we are turning children into commodities available to the highest bidder; they also may encourage a narrow definition of parenthood as having genetic ties to a child rather than a broader definition of parenthood as loving and raising a child.

Information Technology

Consider the college student in 1970 who is assigned the task of writing a term paper on the consequences of parental divorce. She goes to the library and walks through the periodicals section until she stumbles on the *Journal of Marriage and the Family*, in which she eventually finds five articles—the number her professor requires—on her topic. She takes notes on three-by-five-inch cards (there are no photocopying machines) and goes home to draft her paper on her new electric typewriter. She cuts

Because today's computers are better and cheaper than those of even 10 years ago, a very large portion of all college students bring their own to campus with them. In fact, some colleges now require students to have their own notebook computer.

and tapes together her draft copy, moving sections around until it looks good, checks words of dubious spelling in her dictionary, and then retypes a final copy. She uses carbon paper to make a copy for herself. (Ask your mom or dad to explain this to you.) When she makes a mistake, she erases it carefully and tries to type the correction in the original space.

Now consider a student today. This student starts her paper by logging onto *Sociological Abstracts*, an online bibliography of more than 100,000 sociology articles. When she enters the keywords *divorce* and *parental*, the program responds with full citations and summaries for 41 articles. After identifying and downloading the 5 articles she wants, the student drafts a report on her laptop, edits it to her satisfaction, runs it through her spelling checker, and adjusts the vocabulary a bit by using her laptop's built-in thesaurus. She also runs the report through her grammar checker, which will catch errors in punctuation, capitalization, and so forth. Finally, she sends the whole thing to her mother (who lives 2,000 miles away) by e-mail and asks her to read it for logic and organization. She receives the edited version from her mother in an hour, prints two copies, and hands in the report. Or she may send the paper to her instructor via e-mail.

Information technology—computers and telecommunication tools for storing, using, and sending information—has changed many aspects of our daily lives. Over the past few decades, the United States has become an "information society." More and more people work in information acquisition, processing, and communication. Aside from enabling us to write term papers more easily, how will information technology change our lives in the future? Will it reduce or increase social-class inequality? Will it make life safer and better? Or will it make life more stressful and isolated?

The answer is likely to be some of each. As shown in Map 15.1, access to the Internet has spread rapidly—if unevenly—around the world. This means we can link via computer to distant family and friends, to doctors and medical information, to libraries and databanks, and to world events. For example, U.S. soldiers in Iraq can stay in touch with their families via e-mail and web cams, and U.S. residents can follow the

Information technology comprises computers and telecommunication tools for storing, using, and sending information.

MAP 15.1: Percent of Residents with Internet Access

SOURCE: International Telecommunications Union. World Telecommunication/ICT Indicators 2008. http://www.itu.int/ITU-D/ict/statistics. Accessed June 2009.

situation in Iraq on Internet chat rooms, blogs, RSS feeds, and tweets. Both soldiers and citizens also can follow events on 24-hour satellite and cable news stations (some broadcast from Europe or the Arab world). Iraqi citizens, meanwhile, can use their computers to find out both where the most recent bombs exploded and who won the Academy Awards. Similarly, during the highly contested 2009 presidential election in Iran, Iranian citizens used Twitter, Facebook, blogs, and other Internet sites to obtain and share information that countered that available via government-controlled newspapers and television

Information technology also allows us to participate more fully in the political process by making it possible to communicate more effectively and directly with our elected officials. By linking us to distant work sites, computers and e-mail allow us to work from home, reducing the time spent commuting to work and increasing the time we have for friends and families.

On the downside, advances in information technology have introduced new forms of crime (hacking and electronic theft), new defense worries (breaches of defense data systems and faulty software programs that may inadvertently launch World War III), new health problems (eyestrain and repetitive stress injuries), and new inefficiencies ("I'm sorry, the system is down"). They also have introduced new forms of social control. Information technology has given corporations, the police, lawyers, and government bureaucrats, among others, greater ability to build databases about you, combining information on the cars you buy, the websites you visit, and the type of music you like with whether or not you have recently married, moved, had a child, or received a speeding ticket. Similarly, others now can obtain access to your computer

files, deleted e-mail messages, and phone logs. One survey of 1,000 major corporations showed that almost two-thirds of these corporations engage in some form of "electronic surveillance" of their employees (Rosen 2000). Finally, new technologies have lengthened the number of working hours in a day, as notebook computers, e-mail, faxes, BlackBerries, and cell phones increasingly invade our homes and even vacations.

The long-term effect of information technology on society will depend as much on social institutions as it does on the technological capacities of computers and telecommunications. Information technology offers us more freedom of residence and more input into local and federal legislative bodies, but we simultaneously lose some privacy and autonomy. Whether the blessings or costs will predominate will depend on how these technologies are implemented in schools, workplaces, and government bureaucracies. To the extent that they affect relationships among work, class, neighborhood, and family, the new technologies are of vital interest to those concerned with social institutions.

Making the best use of advancing technology and helping to ensure that advances prompt desirable social changes require social planning—the conscious and deliberate process of investigating, discussing, and coming to agreement about desirable actions based on common values.

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At home and even on vacation, new communication technologies keep us connected to our offices and the world of work.

The Technological Imperative

As we've already noted, once the knowledge needed to devise a certain technology is available, that new technology is likely to appear and to gain adherents. But we can make an even stronger statement: Once that technology is available, it becomes more and more difficult for anyone to decide against using it.

Consider the automobile. In 1925, any city dweller who had enough money could choose to commute to work by car. But if he chose not to do so, he could rely on a broad network of trolleys running on a frequent schedule to get him to his destination. He almost certainly lived fairly close to where he worked and could also choose to enjoy the walk instead. These days, the automobile has become completely enmeshed in our way of life. Billions of dollars in public subsidies pay for road building and parking lots and keep down the price of oil and gas for consumers. Meanwhile, public transportation has been cut to the bone. In many cities, walking or bicycling is dangerous or unpleasant because of high-speed traffic or freeways that divide neighborhoods.

This situation is an example of the **technological imperative**: the idea that once a technology is available, it becomes difficult to avoid using it. Think how annoyed people sometimes feel when their friends don't use cell phones, e-mail, or instant messaging and the pressures on holdouts to get these technologies.

Normal Accidents

As our lives come increasingly to depend on highly complex and interconnected technologies, our vulnerability to technological problems increases exponentially. In the nineteenth century, most people got water from wells and used candles for lighting. If a well dried up or a house burned down, the disaster was limited to no more than a few households. Now we get our water from municipal water systems and our electricity from electric companies. When things go wrong, they go wrong big time.

The blackout of August 2003 provides a perfect example of this vulnerability. Electricity is provided to American households by a network of cooperating utility

Technological imperative refers to the idea that once a technology becomes available, it becomes difficult to avoid using it.

Ellen McKnight/Alamy

Air travel is exceedingly safe. But because both the jets themselves and the air traffic system are so complex, tragedies are bound to happen sooner or later. Such tragedies are known as *normal accidents*.

companies sharing a vast grid of electric cables. This grid depends on complex computerized technologies, designed to spread the demand over a broad region and reduce the chance of overloading the system in any one region. But because of its complexity and interconnectedness, a small problem can quickly mushroom to a huge problem for a huge area. In 2003, for example, overloaded circuits in the Midwest caused 50 million people in the Midwest, Northeast, and Canada to lose electric power for as much as several hours.

The 2003 blackout highlighted how dependent we have become on technology, and how vulnerable we are when that technology fails. Because the system for distributing water to consumers runs on electricity, the blackout left thousands without water. Flashlight batteries ran down, leaving people with only candles for lighting. Many found themselves with no way of communicating with friends and relatives. Laptops and PDAs quickly ran out of power, while cell phone networks either lost power or became overloaded, so people could neither phone nor e-mail. Even those who had working phones could not telephone others if they kept their phone directories on computers.

This process is an example of a *normal accident*. **Normal accidents** are accidents that can be expected to happen sooner or later, no matter how many safeguards are built into a system, simply because the system is so complex (Perrow 1984). Normal accidents such as space shuttle crashes, accidental releases of radiation from nuclear power plants, and electrical blackouts are the price we pay for modern technology.

Normal accidents are accidents that can be expected to happen sooner or later, no matter how many safeguards are built into a system, simply because the system is so complex.

Where This Leaves Us

Whether it originates in a social movement or in a new technology, any social change will have opponents. Every winner potentially produces a loser. This means that change creates a situation of competition and conflict.

In Chapter 1, we discussed the appropriate role of sociologists in studying social issues. Should they be value free, or should they take a stand? Issues of social change

and conflict bring this question into sharp focus. Although most sociologists restrict their work to teaching and research, a vocal minority argue that sociologists should take a more active role in monitoring and even creating social change. They believe that sociologists should be actively involved in helping individuals understand and resolve the conflicts that arise from competition, inequality, and social change.

What can sociologists contribute to ensure that social changes enhance social justice? Three particularly useful things sociologists can do are:

- *Study conflict resolution.* A growing number of universities have special courses or programs on conflict resolution. These courses are concerned with the development of techniques for handling disputes and negotiating peaceful settlements that can lead to positive social changes. Sociological research on topics such as small-group decision making and organizational culture are relevant here.
- *Develop social justice perspectives.* At its core, sociology is concerned with the interaction of social groups and the role that power plays in those interactions. In their research and teaching, sociologists can explore how individuals, groups, and nations obtain and use power and how that power can be distributed and used more equitably.
- *Model social change strategies.* Sociological research may lead to the development of more effective programs for improving the well-being of individuals and social groups, from Head Start programs to transnational investments.

The involvement of sociologists in issues of conflict resolution, social justice, and social change is not likely to be the crucial factor that creates a better world. We can be sure, however, that scholarly neglect of these issues is both shortsighted and immoral. To the extent that developing knowledge of the principles of human behavior will help us reduce social conflict, we have an obligation—as scholars, students, and citizens—to seek out knowledge and to apply it. Our future depends on this.

Summary

1. Collective behavior and social movements, although related, are distinct activities. Collective behavior is spontaneous and unplanned; a social movement is organized, goal oriented, and long term.
2. According to relative-deprivation theory, social movements arise when individuals experience an unacceptable gap between what they have and what they expect to have. Expectations are derived from comparisons with other groups and other points in time.
3. Resource mobilization theory argues that social movements emerge when individuals are able to bring together the resources needed to create social change.
4. Political process theory builds on resource mobilization theory by recognizing that in addition to access to political opportunities and resources, successful movements must build a sense among participants that change is both needed and possible.
5. A successful movement needs a diverse range of organizations to accomplish different goals. It also must be able to mobilize needed resources of all sorts. To get new members, it must frame its ideology in ways that convince individuals that a problem is serious, that taking action on a problem is both proper and effective, and that individuals' interests, values, and beliefs mesh well with those of the movement. Regardless of ideology, however, individuals are most likely to be recruited when they have social ties to movement members and lack ties to movement opponents. Finally, successful movements need innovative tactics that will garner media attention.
6. Countermovements are social movements that seek to resist or reverse changes advocated by other social movements. A countermovement is most likely to develop if the original movement achieves modest success, if some individuals feel that their social position or values are

threatened by changes achieved by the original movement, and if potential countermovement participants believe that they will have powerful allies.

7. In its effort to affect public policy, the environmental movement uses a variety of tactics, ranging from courtroom battles to sabotage. Among the reasons for the movement's growing successes are the wide variety of SMOs within the movement.
8. Technology is the human application of knowledge to the making of tools and hence to humans' use of natural resources. The term refers not only to the tools themselves (aspects of material culture) but also to people's beliefs, values, and attitudes regarding those tools (aspects of nonmaterial culture).
9. Social change is any significant modification or transformation of social structures or institutions over time. Technology is one important type and cause of social change.
10. Structural-functional theory primarily asks how technology contributes to orderly and positive social change. Cultural lag can be a serious problem when a technology enters a society too quickly for the culture to adapt to the changes it brings.
11. Conflict theorists contend that technological change results from and reflects conflict between competing interests. People or groups who would either suffer or profit from social change have vested interests—stakes in either maintaining or transforming the status quo.
12. Information technology has changed many aspects of our daily lives. It links us to people and information but has also created new defense worries, new inefficiencies, new forms of social control, and new illnesses and injuries. Similarly, new reproductive technologies have expanded the options of those who want children genetically related to them. At the same time, they have raised serious health, social, and ethical questions, such as whether we are turning children into commodities available to the highest bidder.

Thinking Critically

1. What social structural conditions in the larger society do you think helped spark the environmental movement? What countermovements do you know of that may impact the movement's success?
2. Suppose you were interested in mobilizing public opinion against the death penalty. What kind of activity or event would you try to use to get the media's attention?
3. How would you analyze the current debate over affirmative action policies and programs in terms of various groups' vested interests?
4. Europeans have opposed genetically modified plants and food much more vigorously than have Americans. How would you explain this difference based on your understanding of the factors that make societies more or less likely to adopt new technologies and attitudes (see Chapter 2) and on your understanding of how social movements are able to successfully mobilize?
5. If you were to run for office, how would you use e-mail in your campaign? Which groups of your constituents would you be more likely to hear from via the Internet? How would you know whether they were actually U.S. citizens with the legal right to vote—or would it matter? How might you make sure that other voices, those without high-speed data ports and modems, were heard as well?

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