The correct answer for questions 1 and 2 is D. The more television you watch, the more likely it is that you overestimated both the amount of violent crime in the United States and the probability that you personally will be a victim of violent crime. The theories we'll consider in this chapter should help you understand the relationships among media, our views of the world, and our attitudes, beliefs, opinions, and actions.

In this chapter we turn our attention to theories of mass communication. In our technological world, mass communication is a major source of information, companionship, and entertainment. Along with the news and the story line, mass media present views of human beings, cultural events, and social life. Mass communication is aimed at large audiences. Mass media include books, film, television, radio, computer programs and games, magazines, and other forms of visual and print communication. Mass communication does not include personal kinds of mediated interaction, such as communication with others on the Internet or participation in electronic bulletin boards and discussion groups.

In this chapter we'll consider two prominent theories of mass communication. We'll explore what they say about media's effects on our thinking and behavior and on our understanding of social life. Later, in Chapter 13, we'll discuss postmodern perspectives, which also have much to say about mass communication's impact on individual and collective life.

### Technological Determinism

A Canadian academic trained in literary criticism seems an unlikely candidate to be a popular cultural guru. Marshall McLuhan, however, defied the odds to become a celebrity in the 1960s. Dubbed the "Oracle of the Electronic Age" and the "Prophet of the Media," McLuhan attracted a sizable following of laypeople and professionals in media industries. The causes of his popularity were both his bold proclamations about the media and his dynamic style of presenting ideas. No doubt McLuhan would be pleased that both style and substance gave rise to his stardom, since he coined the phrase "The medium is the message."

The theory Marshall McLuhan advanced has been called [technological determinism](#). As with any deterministic theory, the basic claim is that some single cause or phenomenon determines other aspects of life. Biological determinism states that biology controls human life (remember Freud's dictum "Anatomy is destiny"), and Marxist theory asserts that economics is the central social dynamic that determines all aspects of life.

McLuhan saw media as the critical force that determined other things. The theory of technological determinism states that technology—
specifically, media—decisively shapes how individuals think, feel, and act and how societies organize themselves and operate.

**Media History of Human Civilization**

McLuhan claimed that the dominant media at any given time in a society determine the basis of social organization and collective life. To explain his ideas, McLuhan traced the history of human societies by identifying media that have emerged and dominated in particular eras. According to McLuhan (1962, 1964; McLuhan & Fiori, 1967), history can be divided into four distinct media epochs (see Figure 11.1).

**The Tribal Epoch** During the *tribal epoch*, the oral tradition reigned. Communication consisted of face-to-face interactions. Oral cultures were knitted together by stories that passed along the history and traditions of a culture, by the oral communication of information, and by oral rituals, performances, and forms of entertainment. Reliance on the spoken word for information and recreation made oral cultures highly cohesive communities. The tribal epoch’s emphasis on morality made *hearing* a dominant sense (McLuhan, 1969).

Although most societies have moved beyond the tribal epoch, some largely preliterate groups remain. For example, the oral tradition thrives among the Hmong of Laos. Without books, the Hmong rely on face-to-face interaction. Within their culture, storytelling predominates, even in interpersonal interaction (Shuter, 1994). As McLuhan’s theory states, the Hmong’s reliance on the oral tradition makes them a highly interdependent and cohesive community.

**The Literate Epoch** Invention of the phonetic alphabet ushered in the *literate epoch*, in which common symbols allowed people to communicate without face-to-face interaction. The emergence of writing made it possible for individuals to gain information privately, isolated from others in their communities. Because written communication can be reread, this medium requires less memory than oral communication.

The alphabet also fostered ascendance of *sight* as a primary sense. For those who could read and write, sight replaced hearing as a dominant sense.
sense. Written forms of communication also established a linear form for communication. In writing, letter follows letter, word follows word, sentence follows sentence. According to McLuhan, the continuous, sequential order of written communication cultivated linear thinking and with that the development of disciplines such as mathematics that are based on linear logic. Diminished in prominence was the more fluid, weblike communication form typical of storytelling.

The Print Epoch Although invention of the alphabet made written communication possible, print did not immediately gain prominence as the preferred medium of communication in society. When the alphabet was first developed, monks and scribes laboriously copied individual books and other written materials. There was no way to mass-produce the written word. Thus, both reading and access to print media were restricted to the elite classes of society. The print epoch began when Johann Gutenberg invented the printing press. The printing press made it possible to print thousands of copies of a single book at a moderate cost. Thus, the printed word was no longer restricted to people with status and money; instead, it was increasingly accessible to all types and socioeconomic classes, making print a mainstream medium.

As with other evolutions in media, the printing press changed human life. Reliance on the visual sense was no longer restricted to the elite who had access to individually copied books and print matter. The capability to mass-produce printed material made visual perception dominant. In addition, mass-produced writing cultivated a homogeneity among people, as the same message could be delivered to many people. At the same time, widely available printed material further fostered fragmentation of communities, as people no longer needed to be together to share information and tell stories. Each woman and man could read a book, newspaper, or magazine in isolation from others. No longer was face-to-face contact necessary for gaining information (McLuhan & Fiori, 1967).

Reflection

What are the personal and social implications of media that allow people to separate from one another?

The Electronic Epoch The dominance of print as a medium and the eye as a primary sense organ diminished with the invention of the telegraph, which was the forerunner of the electronic epoch in human history. According to McLuhan (1969), electronic media revived the oral tradition and the preeminence of hearing and touch. The telegraph made it possible for people to communicate in individual, personal ways across great distances.

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Reflection

Do you agree with McLuhan's contention that electronic media bring people together into a "global village," or do you think electronic communication isolates people from each other?

The telegraph was only the first of a long line of electronic media that McLuhan believed resurrected community among people. We watch television and gain insight into what is happening in Rwanda or Afghanistan; we see a newscast and know what our president said and how he looked; we use modems to "talk" with people in other places, sometimes thousands of miles away. No longer are people separated from one another by distance. Instead, claimed McLuhan, the electronic epoch creates a "global village" (McLuhan & Fiori, 1967). McLuhan's media history of human civilization was the basis of his theory that the dominant media of an era determine the dominant human senses and the ways that humans organize their societies.

The Medium Is the Message/Massage

McLuhan's best-known idea is that "the medium is the message" (McLuhan & Fiori, 1967). For him, this phrase had multiple meanings. It implied, first, that the medium, or channel of communication, determines the substance of communication. In other words, although the content of communication is not irrelevant, it is less important than the form, or medium, of communication. For example, McLuhan argued that the act of watching television shapes how we think, regardless of what we watch on television (McLuhan & Fiori, 1967).

"The medium is the message" also had other meanings for McLuhan. By changing only one letter, the phrase is transformed into "The medium is the massage." This metaphor implies that media manipulate how we perceive ourselves, others, society, and the world. The media massage our consciousness and transform our perceptions. Finally, McLuhan sometimes made a play on the phrase by saying, "The medium is the mass-age," by which he meant that the dominant medium has become mass communication in our age.

To understand McLuhan's point, reflect on the changes brought about with the emergence of new media in each of the epochs we've just discussed. Humans adapt to their environments by developing sensory abilities that enhance their ability to survive and function. When listening and speaking were the only ways to convey information and survive, we developed keen oral and aural senses and prodigious memories. Once people could rely on printed matter for information and entertainment, sight supplanted hearing and speaking as the dominant sense, and memory became less important.

McLuhan died in 1980. Yet others (Levinson, 1999) have followed McLuhan's theory in thinking about how new technologies of communi-
cation are changing our ways of interacting and thinking. Jack Lule (1998), who teaches in the Department of Journalism and Communication at Lehigh University, predicts that "hypertext will encourage nonlinear narrative—blocks of text that readers pursue in the order they choose" (p. 88). Thus, the linear thinking that the print epoch introduced may not be the rule in an epoch of new technologies.

Lule is particularly wary of the expectation of immediacy that new technologies encourage. He notes that users of online news expect immediate, up-to-the-minute reporting, which jeopardizes the careful checking of facts and background information that affect accuracy. A dramatic example of exactly the danger that concerns Lule occurred on June 7, 1998, when CNN reported that the U.S. military had used a lethal nerve gas in Laos. *Time* magazine quickly repeated the report both in print and online. Shortly thereafter both *Time* and CNN had to retract the story because, when they had the time to check evidence, they found no support for the story. When reporters face deadlines every minute instead of every day, the probability of getting the facts right—or even getting them at all—is at risk.

TRY IT OUT

Call to mind a recent experience in your life. Describe that experience using a pen and a sheet of paper. Next, share the experience with another person by talking face-to-face. Third, recount the experience to an acquaintance in an electronic mail message. How does the message change as you change the medium of conveying it? How does your sense of the message vary with the different media of transmission?

New technologies also promote multitasking, which is engaging in multiple tasks simultaneously or in overlapping and interactive ways. The Windows-based technology was designed to enable a user to do multiple tasks at once. As I type this chapter, the Office Assistant pops up occasionally to offer me formatting options; my email program lets me know when new messages have arrived; and my program alerts me when a diskette is full and asks me to stop what I'm doing and put in a new diskette or remove files from the present one. Joseph Urgo argues that, in the information-saturated, technological environment of today, human consciousness "becomes multicentered, chronically distracted to the point that distraction is its chief characteristic" (2000, p. 49).

Research on the impact of computer use on children's minds suggests that one effect is diminished capacity for sustained attention to any single topic or activity (Healy, 1990). It appears that the continuously shifting images and messages on computer games and other programs shape neural

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maps so that we expect new images or stimulation frequently—so we learn to pay attention for only short spans of time.

A second way that computer use affects attention is through unequal stimulation of the two brain lobes. The right lobe of the brain is specialized in artistic activity, parallel processing, and visual and spatial tasks. The left lobe is specialized in sequential thought, abstraction, and analytic thinking. Because computers, especially computer games, are highly visual, they stimulate the right side of the brain (so does television). Highly visual and spatially oriented media such as computers powerfully stimulate the right side of the brain, encouraging it to develop. Conversely, because computers do not particularly stimulate the left side of the brain, its development is not encouraged. Because the left side of the brain is specialized in sequential activities such as reading and math, children who use computers heavily may have difficulty with some academic subjects (Gross, 1996; Healy, 1990).

Multitasking extends beyond computers. People interrupt conversations or other activities to answer cell phones and check pagers. Drivers talk while navigating traffic. Students bring laptops to class, and, when not taking notes, they check email or work on other tasks. Families watch television during mealtimes. The buzz of call waiting prompts a person to suspend the present telephone conversation. Multitasking and interruptability seem to be emblematic of our era.

Hot and Cool Media

McLuhan drew a basic distinction between “hot” and “cool” media. Hot media are those that include relatively complete sensory data. Thus, a person doesn’t need to fill in a lot of information to understand the message. For example, radio, printed material, photographs, and films are hot media because they require limited effort to interpret.

Cool media, on the other hand, demand involvement from individuals. A telephone conversation requires our participation, as do interactive computer games and face-to-face interactions. Lectures are hot, class discussions are cool; pop music is hot, rapping is cool; newspapers are hot, crossword puzzles are cool.

Hot and cool not only describe qualities of media but also correspond to different kinds of thinking. McLuhan believed that hot media encourage individuals to be passive. By supplying everything necessary for understanding, hot media allow us to be uninvolved in learning and thinking. Cool media, in contrast, require participation, involvement, and mental activity on our part. Cool media require imagination, effort, and emotional involvement, all of which McLuhan thought are healthy for individuals and society.