

Mehrabian (1976) argued that we react emotionally to our surroundings. These emotional reactions can be accounted for in terms of (1) how *aroused* the environment makes us feel, (2) how *pleasurable* we feel, and (3) how *dominant* we feel. *Arousal* refers to how active, stimulated, frenzied, or alert we are. *Dominance* refers to feelings of being in control, importance, and freedom to act in a variety of ways. *Pleasure* refers to feelings of joy, satisfaction, and happiness.

Novel, surprising, and complex environments probably produce higher arousal. Those people less able to screen out unwanted information from the environment inevitably have to respond to more stimuli and, in turn, become more aroused. Although we all probably respond as "screeners" and "nonscreeners" on occasion, some people tend to respond habitually as one or the other. *Nonscreeners* are less selective in what they respond to in any environment. They see, hear, smell, and otherwise sense more stimuli. *Screeners*, in contrast, are selective in what they respond to. They impose a hierarchy of importance on various components in a complex situation. *Nonscreeners* not only become more aroused than screeners in novel, changing, and sudden situations, they remain aroused longer—even after leaving the arousing environment. That is why nonscreeners are most attracted to environments that are both arousing and pleasurable.

### PERCEPTIONS OF TIME

Time is also a part of the communicative environment. At first, it may seem strange to include something as seemingly intangible as time in the same environmental package as chairs, walls, noise, or even weather conditions. However, people in the United States do treat time as something tangible, a commodity that can be divided up, saved, spent, and made. Furthermore, we often project temporal qualities onto objects within our environment; for example, a chair that looks like it has been there "forever" or an elevator that "never seems to be on time."

Time is important to us. It governs when we eat and sleep, it often determines how much we get paid at work, and it sets limits on how much material students can learn in a given class period. Time plays a key role in social interaction as well. It influences our perceptions of people; for example, responsible people are "on time," boring people talk "too long," or a good romantic partner gives us some "time to ourself" (Leonard, 1978; Werner & Baxter, 1994). A course in time management is a staple for anyone expecting to climb the corporate ladder in U.S. organizations. Time plays such an important role in our lives that we often carry the date and time around with us on our wrist or on our cell phones. Most cars have clocks, and some of them even have devices for computing the time it will take to drive from one location to another. We are very much aware of the stress time can create in our lives. We think of a vacation as a retreat to a place where time matters less. Ironically, vacations are usually thought of as a set period of time. Ballard and Seibold (2000) succinctly capture the reciprocal relationship between communication and time when they say, "Communication creates persons' views and understanding of time, yet our sense of time enables and constrains communication in important ways" (p. 219).

Time is perceived very differently in other cultures (Hall, 1959). These varying orientations to time are often a central factor in misunderstandings among members

of different cultures. Psychology professor Robert Levine gives this account of his teaching experience in Brazil:

As I left home for my first day of class, I asked someone the time. It was 9:05 a.m., which allowed me time to relax and look around the campus before my 10 o'clock lecture. After what I judged to be half an hour, I glanced at the clock I was passing. It said 10:20! In a panic, I broke for the classroom, followed by gentle calls of "Hola, professor" and "Tudo bem, professor?" from unhurried students, many of whom, I later realized, were my own. I arrived breathless to find an empty room. Frantically, I asked a passerby the time. "Nine forty-five" was the answer. No, that couldn't be. I asked someone else. "Nine fifty-five." Another said: "Exactly 9:43." The clock in a nearby office read 3:15. I had learned my first lesson about Brazilians: Their timepieces are consistently inaccurate. And nobody minds. My class was scheduled from 10 until noon. Many students came late, some very late . . . none seemed terribly concerned about lateness . . . The real surprise came at noon . . . only a few students left immediately. Others drifted out during the next fifteen minutes, and some continued asking me questions long after that. (Levine & Wolff, 1985, p. 30)

To understand cultural variations in perceiving time, we must first understand our own culture. We know that our responses are influenced by our experiences with time at several different levels (Cottle, 1976; Friedman, 1990; Hall, 1983; McGrath & Kelly, 1986). Biologically, our bodies seem to be programmed so that "internal clocks" regulate our physical, emotional, and intellectual functioning (Luce, 1971). We also know that people have differing psychological orientations to time. There are important differences among people within this culture regarding their orientations to the past, present, and future. These orientations may represent a long-term style or may be subject to change; for example, a person who "lives for the moment" at one point in his or her life might later adapt to a future-oriented style that involves evaluating today's "moments" in terms of the long-range picture (Gonzalez & Zimbardo, 1985). Different orientations toward time not only affect the way people interact in specific encounters, but they are also used to evaluate more enduring qualities. For example, some people think that being punctual and meeting deadlines are signs not only of successful people but of "good" people.

As we understand more about the environmental stimuli and conditions that trigger time perceptions, we can use this knowledge to construct environments that give off the temporal messages we desire. In social encounters, the following perceptions of time are fundamental:

1. As the location of events
2. As the duration of events
3. As the interval between events
4. As the patterning of intervals

### TIME AS LOCATION

Some of our perceptions of time have to do with when something happens, or the timing of an event. The onset of some events is evaluated as well timed; for example, "You hugged me at the exact moment I needed it most." Some are viewed as ill timed; for example, "I don't like eating dinner at 10 p.m." Sometimes our

perceptions of when something happens are precise, and sometimes they represent a general time frame. For some, the time to eat lunch is precisely noon; for others it can be anytime between 11 A.M. and 2 P.M. Just as we attribute many different meanings to the timing of events in our lives, we also can communicate multiple meanings as we set deadlines for the occurrence of events in the future. For example, if something is due much sooner than expected, it may mean it is a form of punishment, a reward, very important, or very unimportant.

#### TIME AS DURATION

Our temporal perceptions also include how long an event lasts. We develop expectations for the proper and improper length of events, but perceptions of duration are not always a reflection of actual duration. An environment with little activity can be perceived as so boring that we feel we have been there "forever." But "time flies when we are having fun."

#### TIME AS INTERVALS

The periods between events also constitute a way of perceiving time. The rate at which something happens is really a perception of the time since it last occurred. The perceived tempo of our lives is likely to be a reflection of how much or how little time separates each of our activities. We learn to expect certain intervals with certain activities. The phrase "It's been too long since I've seen you" suggests a contact-interval norm associated with close relationships that has been exceeded for this person. Similarly, we may not object to a person's using obscene language, but we may object to the brevity of the intervals between usage.

#### TIME AS PATTERNS OF INTERVALS

As we observe recurrent sequences of intervals, we begin to sense social rhythms—the regularity-irregularity and order-disorder that make up the cycles of our behavior and routines. Of all our time-bound perceptions, the pattern of intervals is the most complex and the most difficult to articulate to others. Understanding the patterning of intervals is, however, crucial to understanding ourselves as well as understanding our interactions with another person. When we feel in tune with another person, we are focusing on a pleasing perception of interactional synchrony, and when we feel awkward with someone, it may be because their patterning of non-verbal gestures or pauses is very different from ours. The understanding of patterns of intervals in our environment, whether it is a talk-silence pattern or a sunny-cloudy atmospheric pattern, is fundamental to making daily predictions about our lives.

We devote the remainder of this chapter to the characteristics of environments that form the bases of the perceptions just outlined: perceptions of our surroundings and perceptions of time. Each environment has three major components:

1. The natural environment—geography, location, atmospheric conditions
2. The presence or absence of other people
3. Architectural and design features, including movable objects

## THE NATURAL ENVIRONMENT

Some of us live in densely populated urban areas, some in smaller towns, some in suburban areas on the outskirts of these cities and towns, and others in rural areas. Within these broad areas, we find other environmental features that affect the nature of human interaction; for example, apartment complexes, neighborhoods, high-rise buildings, and so on. The places we live, play, and work are bound to have an impact on our behavior. The number of people we communicate with can influence our interaction style, but perhaps more important is the number of different people for whom we have to adapt our messages. Some environments are very homogeneous and provide inhabitants with fewer experiences and fewer examples of diverse styles, behavior, and values. The pace of life and the time devoted to developing social and personal relationships may also vary as a function of where we live. In slums or ghettos in urban areas, we often find a social climate that encourages or fosters unconventional and deviant behavior or at least tolerates it. Thus slum areas show a high incidence of juvenile delinquency, prostitution, alcohol and drug addiction, physical and mental disability, and crimes of violence (Krupat, 1985).

Behavioral scientists have also been interested in the effects of barometric pressure. For example, high or rising barometric pressure has been associated with feelings of good health; low or falling barometric pressure is more likely to be linked to feelings of pain or depression. Optimum student behavior and performance have been observed when the barometer was high or rising and on cool days with little wind and precipitation. Increase in positive air ions also seems to increase people's irritability and tension.

The changing seasons seem to have an impact on behavior, too. Even in areas of the United States with minimal seasonal variations in temperature, national routines associated with changing seasons are still followed; for example, taking summer vacations and starting school in the fall. Some of the ways in which our behavior varies with the seasons include the following:

1. Suicide rates and admissions to public mental hospitals rise dramatically in the spring and peak in the summer.
2. College students tend to break up with their dating partners at the beginnings and endings of semesters (May/June, August/September, or December/January).
3. During the summer, people tend to see their friends more often.
4. During the summer, crimes of assault and rape increase.
5. From July to November, people tend to report less happiness but more activity and less boredom.

Temperature and the way it affects human responses is the climatic factor that has received the most scientific attention—specifically, the extent to which hot temperatures increase aggressive motivation and aggressive behavior.

Lengthy periods of extreme heat are often associated with discomfort, irritability, reduced work output, and unfavorable evaluations of strangers. Hot temperatures increased aggressive horn honking for drivers without air conditioning (Kenrick & MacFarlane, 1984). Vrij, van der Steen, and Koppelaar (1994) studied the reactions of police officers to a simulated burglary in which the temperature varied from comfortably cool to hot. When the temperature was hot, officers