

# Module 42

## Expressed Emotion

### Module Learning Objectives

- 42-1** Describe our ability to communicate nonverbally, and discuss gender differences in this capacity.
- 42-2** Discuss the culture-specific and culturally universal aspects of nonverbal expressions of emotion.
- 42-3** Describe how facial expressions influence our feelings.



Deann/Corbis

**E**xpressive behavior implies emotion. Dolphins, with smiles seemingly plastered on their faces, appear happy. To decipher people's emotions we read their bodies, listen to their voice tones, and study their faces. Does nonverbal language vary with culture—or is it universal? And do our expressions influence our experienced emotions?

"Your face, my thane, is a book where men may read strange matters." -LADY MACBETH TO HER HUSBAND, IN WILLIAM SHAKESPEARE'S *MACBETH*

### Detecting Emotion in Others

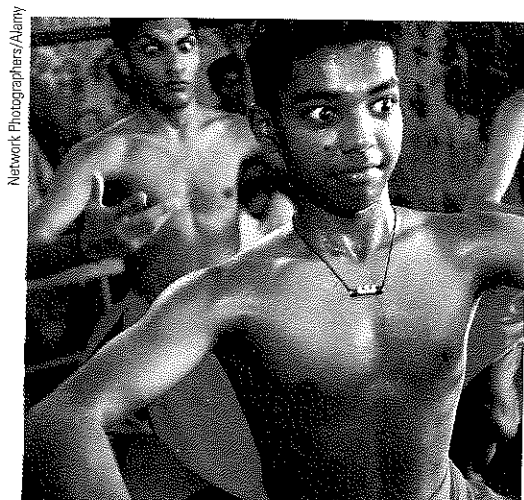
- 42-3** How do we communicate nonverbally? How do the genders differ in this capacity?

To Westerners, a firm handshake conveys an outgoing, expressive personality (Chaplin et al., 2000). A gaze, an averted glance, or a stare communicate intimacy, submission, or dominance (Kleinke, 1986). When two people are passionately in love, they typically spend time—quite a bit of time—gazing into each other's eyes (Rubin, 1970). Would such gazes stir these feelings between strangers? To find out, researchers asked unacquainted male-female

pairs to gaze intently for two minutes either at each other's hands or into each other's eyes. After separating, the eye gazers reported feeling a tingle of attraction and affection (Kellerman et al., 1989).

Most of us read nonverbal cues well. Shown 10 seconds of video from the end of a speed-dating interaction, people can often detect whether one person is attracted to another (Place et al., 2009). We are especially good at detecting nonverbal threats. In a series of subliminally flashed words, we more often sense the presence of negative ones, such as *snake* or *bomb* (Dijksterhuis & Aarts, 2003). In a crowd of faces, a single angry face "pops out" faster than a single happy one (Hansen & Hansen, 1988; Pinkham et al., 2010). And even when hearing another language, most of us readily detect anger (Scherer et al., 2001).

**FYI**  
To learn more about our experienced emotions of anger and happiness, see Module 83.



Network Photographers/Alamy

**A silent language of emotion** Hindu classic dance uses the face and body to effectively convey 10 different emotions (Hejmadi et al., 2000).



Pollak, S.D., and Kistler, D.J. (2002). *Proceedings of the National Academy of Sciences USA*, 99: 13, 9072–9076.



Figure 42.1

**Experience influences how we perceive emotions**

Viewing the morphed middle face, evenly mixing fear with anger, physically abused children were more likely than nonabused children to perceive the face as angry (Pollak & Kistler, 2002; Pollak & Tolley-Scheil, 2003).

Experience can sensitize us to particular emotions, as shown by experiments using a series of faces (like those in **FIGURE 42.1**) that morph from fear (or sadness) to anger. Viewing such faces, physically abused children are much quicker than other children to spot the signals of anger. Shown a face that is 60 percent fear and 40 percent anger, they are as likely to perceive anger as fear. Their perceptions become sensitively attuned to glimmers of danger that nonabused children miss.

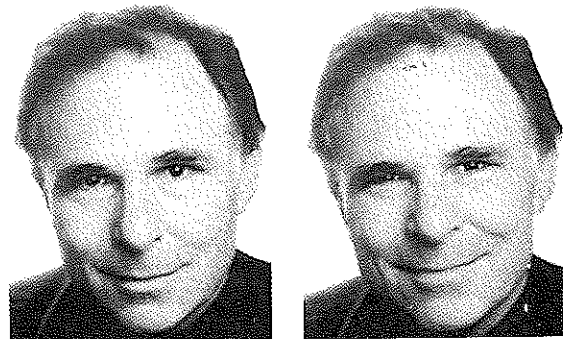
Hard-to-control facial muscles reveal signs of emotions you may be trying to conceal. Lifting just the inner part of your eyebrows, which few people do consciously, reveals distress or worry. Eyebrows raised and pulled together signal fear. Activated muscles under the eyes and raised cheeks suggest a natural smile, called a *Duchenne smile* in honor of the French physician who described it. A feigned smile, such as one we make for a photographer, often is frozen in place for several seconds, then suddenly switched off. Authentic smiles tend to be briefer and to fade less abruptly (Bugental, 1986).

Our brains are rather amazing detectors of subtle expressions. Just *how* amazing was clear when researchers filmed teachers talking to unseen schoolchildren (Babad et al., 1991). A mere 10-second clip of either the teacher's voice or face provided enough clues for both young and old viewers to determine whether the teacher liked and admired a child. In other experiments, even glimpsing a face for one-tenth of a second enabled people to judge people's attractiveness or trustworthiness or to rate politicians' competence and predict their voter support (Willis & Todorov, 2006). "First impressions . . . occur with astonishing speed," note Christopher Olivola and Alexander Todorov (2010).

Despite our brain's emotion-detecting skill, we find it difficult to detect deceiving expressions (Porter & ten Brinke, 2008). In one digest of 206 studies of discerning truth from lies, people were just 54 percent accurate—barely better than a coin toss (Bond & DePaulo, 2006). Moreover, contrary to claims that some experts can spot lies, the available research indicates that virtually no one—save perhaps police professionals in high-stakes situations—beats chance by much (Bond & DePaulo, 2008; O'Sullivan et al., 2009). The behavioral differences between liars and truth-tellers are too minute for most people to detect (Hartwig & Bond, 2011).

Some of us are, however, more sensitive than others to physical cues. In one study, hundreds of people were asked to name the emotion in brief film clips they watched. The clips showed portions of a person's emotionally expressive face or body, sometimes accompanied by a garbled voice (Rosenthal et al., 1979). For example, after a 2-second scene revealing only the face of an upset woman, the researchers would ask whether the woman was criticizing someone for being late or was talking about her divorce. Given such "thin slices," some people were much better emotion detectors than others. Introverts tend to excel at reading others' emotions, while extraverts are generally easier to read (Ambady et al., 1995).

Gestures, facial expressions, and voice tones, which are absent in written communication, convey important information. Those who listen to 30 seconds of people describing their marital separation can better predict their current and future adjustment than can those who read a script of the recording (Mason et al., 2010). Electronic communications provide impoverished nonverbal cues. To partly remedy that, we sometimes accompany our text messages, e-mails, and online posts with emotion cues (ROFL!). The absence of expressive e-motion



Paul Ekman

Which of researcher Paul Ekman's smiles is feigned, which natural? The smile on the right engages the facial muscles of a natural smile.

can make for ambiguous emotion. Without the vocal nuances that signal whether a statement is serious, kidding, or sarcastic, we are in danger of communicating our own egocentrism, as people misinterpret our “just kidding” message (Kruger et al., 2005).



**Obvious emotions** Graphic novel authors use facial expressions and other design elements to express emotion, reducing the need to explain how the characters are feeling.

## Gender, Emotion, and Nonverbal Behavior

Is women’s intuition, as so many believe, superior to men’s? After analyzing 125 studies of sensitivity to nonverbal cues, Judith Hall (1984, 1987) concluded that women generally do surpass men at reading people’s emotional cues when given “thin slices” of behavior. Women have also surpassed men in other assessments of emotional cues, such as deciding whether a male-female couple is a genuine romantic couple or a posed phony couple, and in discerning which of two people in a photo is the other’s supervisor (Barnes & Sternberg, 1989).

Women’s nonverbal sensitivity helps explain their greater emotional literacy. Invited by Lisa Feldman Barrett and her colleagues (2000) to describe how they would feel in certain situations, men described simpler emotional reactions. You might like to try this yourself: Ask some people how they might feel when saying good-bye to friends after graduation. Barrett’s work suggests you are more likely to hear young men say, simply, “I’ll feel bad,” and to hear young women express more complex emotions: “It will be bittersweet; I’ll feel both happy and sad.”

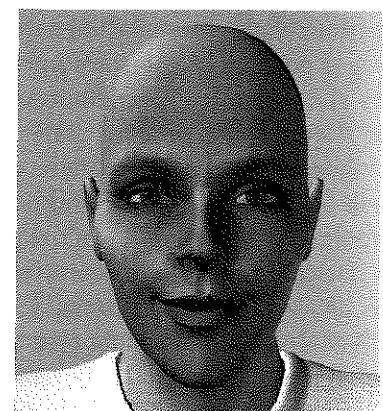
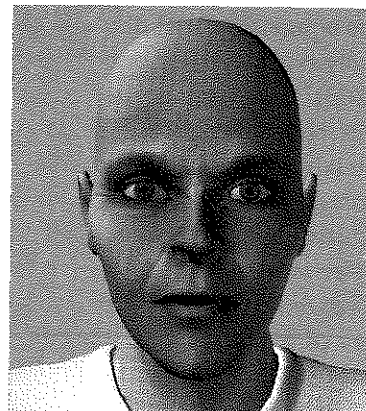
Women’s skill at decoding others’ emotions may also contribute to their greater emotional responsiveness (Vigil, 2009). In studies of 23,000 people from 26 cultures around the world, women more than men reported themselves open to feelings (Costa et al., 2001). That helps explain the extremely strong perception that emotionality is “more true of women”—a perception expressed by nearly 100 percent of 18- to 29-year-old Americans (Newport, 2001). But the perception of women’s emotionality also feeds—and is fed by—people’s attributing women’s emotionality to their disposition and men’s to their circumstances: “She’s emotional. He’s having a bad day” (Barrett & Bliss-Moreau, 2009).

One exception: Anger strikes most people as a more masculine emotion. Quickly: Imagine an angry face. What gender is the person? If you’re like 3 in 4 Arizona State University students, you imagined a male (Becker et al., 2007). The researchers also found that when a gender-neutral face was made to look angry, most people perceived it as male. If the face was smiling, they were more likely to perceive it as female (**FIGURE 42.2**).

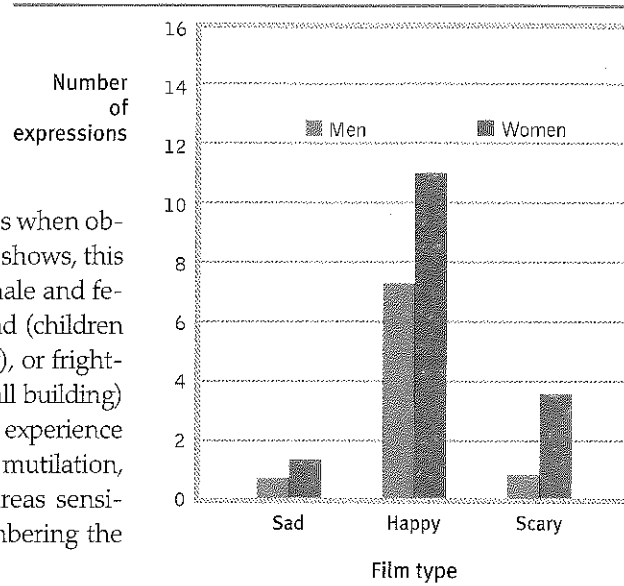
When surveyed, women are also far more likely than men to describe themselves as empathic. If you have *empathy*, you identify with others and imagine what it must be like to walk in their shoes. You rejoice with those who rejoice and weep with those who weep. Children and adults who skillfully infer others’ thoughts and feelings tend to enjoy positive peer relationships (Gleason et al., 2009).

**Figure 42.2**

**Male or female?** Researchers manipulated a gender-neutral face. People were more likely to see it as a male when it wore an angry expression, and as a female when it wore a smile (Becker et al., 2007).



Physiological measures of empathy, such as one's heart rate while seeing another's distress, confirm a gender gap, though a smaller one than is indicated in survey self-reports (Eisenberg & Lennon, 1983; Rueckert et al., 2010). Females are also more likely to *express* empathy—to cry and to report distress when observing someone in distress. As **FIGURE 42.3** shows, this gender difference was clear in videotapes of male and female students watching film clips that were sad (children with a dying parent), happy (slapstick comedy), or frightening (a man nearly falling off the ledge of a tall building) (Kring & Gordon, 1998). Women also tend to experience emotional events, such as viewing pictures of mutilation, more deeply, with more brain activation in areas sensitive to emotion. And they are better at remembering the scenes three weeks later (Canli et al., 2002).



**Figure 42.3**

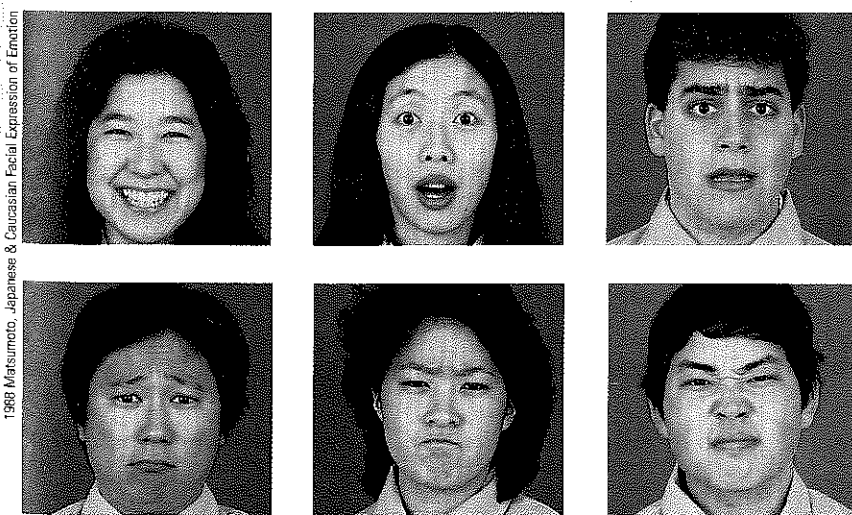
**Gender and expressiveness**  
Male and female film viewers did not differ dramatically in self-reported emotions or physiological responses. But the women's faces *showed* much more emotion. (From Kring & Gordon, 1998.)

## Culture and Emotional Expression

### 42.2 How are nonverbal expressions of emotion understood within and across cultures?

The meaning of *gestures* varies with the culture. Former U.S. President Richard Nixon learned this while traveling in Brazil; he made the North American "A-OK" sign, not realizing it was a crude insult to Brazilians. The importance of cultural definitions of gestures and other body language was again demonstrated in 1968, when North Korea publicized photos of supposedly happy officers from a captured U.S. Navy spy ship. In the photo, three men had raised their middle finger, telling their captors it was a "Hawaiian good luck sign" (Fleming & Scott, 1991).

Do facial expressions also have different meanings in different cultures? To find out, two investigative teams showed photographs of various facial expressions to people in different parts of the world and asked them to guess the emotion (Ekman et al., 1975, 1987, 1994; Izard, 1977, 1994). You can try this matching task yourself by pairing the six emotions with the six faces of **FIGURE 42.4**.



**Figure 42.4**

**Culture-specific or culturally universal expressions?**

As people of differing cultures and races, do our faces speak differing languages? Which face expresses disgust? Anger? Fear? Happiness? Sadness? Surprise? (From Matsumoto & Ekman, 1989.) See inverted answers below.

From left to right, top to bottom:  
happiness, surprise, fear, sadness,  
anger, disgust.

Regardless of your cultural background, you probably did pretty well. A smile's a smile the world around. Ditto for anger, and to a lesser extent the other basic expressions (Elfenbein & Ambady, 1999). (There is no culture where people frown when they are happy.)

Facial expressions do convey some nonverbal accents that provide clues to one's culture (Marsh et al., 2003). Thus data from 182 studies show slightly enhanced accuracy when people judge emotions from their own culture (Elfenbein & Ambady, 2002, 2003a,b). Still, the telltale signs of emotion generally cross cultures. The world over, children cry when distressed, shake their heads when defiant, and smile when they are happy. So, too, with blind children who have never seen a face (Eibl-Eibesfeldt, 1971). People blind from birth spontaneously exhibit the common facial expressions associated with such emotions as joy, sadness, fear, and anger (Galati et al., 1997).

"For news of the heart, ask the face." -GUINEAN PROVERB

Musical expressions also cross cultures. Happy and sad music feels happy and sad around the world. Whether you live in an African village or a European city, fast-paced music seems happy, and slow-paced music seems sadder (Fritz et al., 2009).

Do these shared emotional categories reflect shared cultural experiences, such as movies and TV broadcasts seen around the world? Apparently not. Paul Ekman and his team asked isolated people in New Guinea to respond to such statements as, "Pretend your child has died." When North American collegians viewed the taped responses, they easily read the New Guineans' facial reactions.

So we can say that facial muscles speak a universal language. This discovery would not have surprised Charles Darwin (1809–1882) who argued that in prehistoric times, before our ancestors communicated in words, they communicated threats, greetings, and submission with facial expressions. Their shared expressions helped them survive (Hess & Thibault, 2009). A sneer, for example, retains elements of an animal baring its teeth in a snarl. Emotional expressions may enhance our survival in other ways, too. Surprise raises the eyebrows and widens the eyes, enabling us to take in more information. Disgust wrinkles the nose, closing it from foul odors.

Smiles are social as well as emotional events. Bowlers seldom smile when they score a strike; they smile when they turn to face their companions (Jones et al., 1991; Kraut & Johnston, 1979). Euphoric Olympic gold-medal winners typically don't smile when they are awaiting their ceremony. But they wear broad grins when interacting with officials and facing the crowd and cameras (Fernández-Dols & Ruiz-Belda, 1995). Thus, a glimpse at competitors' spontaneous expressions following an Olympic judo competition gives a very good clue to who won, no matter their country (Matsumoto et al., 2006). Even natively blind athletes, who have never observed smiles, display the same social smiles in such situations (Matsumoto & Willingham, 2009).

Although we share a universal facial language, it has been adaptive for us to interpret faces in particular contexts (**FIGURE 42.5**). People judge an angry face set in a frightening situation as afraid. They judge a fearful face set in a painful situation as pained (Carroll & Russell, 1996). Movie directors harness this phenomenon by creating contexts and soundtracks that amplify our perceptions of particular emotions.

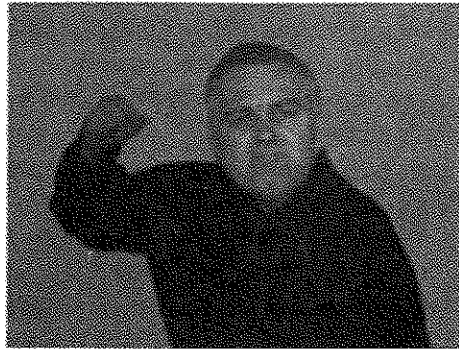
Although cultures share a universal facial language for basic emotions, they differ in how *much* emotion they express. Those that encourage individuality, as in Western Europe, Australia, New Zealand, and North America, display mostly visible emotions (van Hemert et al., 2007). Those that encourage people to adjust to others, as in China, tend to have less visible displays of personal emotions (Matsumoto et al., 2009; Tsai et al., 2007). In Japan, people infer emotion more from the surrounding context. Moreover, the mouth, which is so expressive in North Americans, conveys less emotion than do the telltale eyes (Masuda et al., 2008; Yuki et al., 2007).

Cultural differences also exist *within* nations. The Irish and their Irish-American descendants tend to be more expressive than Scandinavians and their Scandinavian-

### FYI

While weightless, astronauts' internal bodily fluids move toward their upper body and their faces become puffy. This makes nonverbal communication more difficult, especially among multinational crews (Gelman, 1989).

Angry, Disgusted, or Afraid? Studies on the Malleability of Emotional Perception: Hillel Aviezer, Ran H. Hassin, Jennifer Ryan, Cheryl Grady, Josh Susskind, Adam Anderson, Morris Moscovitch, Shlomo Bentin



B.R. Provine, Emotional tears and NGF: A biographical appreciation and research beginning. *Archives Italiennes de Biologie*, 149, 271–276.



**Figure 42.5**

**We read faces in context**

Whether we perceive the man in the top row as disgusted or angry depends on which body his face appears on (Aviezer et al., 2008). In the second row, tears on a face make its expression seem sadder (Provine et al., 2009).

American descendants (Tsai & Chentsova-Dutton, 2003). And that reminds us of a familiar lesson: Like most psychological events, emotion is best understood not only as a biological and cognitive phenomenon, but also as a social-cultural phenomenon.

## The Effects of Facial Expressions

### 42-3 How do our facial expressions influence our feelings?

As William James (1890) struggled with feelings of depression and grief, he came to believe that we can control emotions by going “through the outward movements” of any emotion we want to experience. “To feel cheerful,” he advised, “sit up cheerfully, look around cheerfully, and act as if cheerfulness were already there.”

Studies of the emotional effects of facial expressions reveal precisely what James might have predicted. Expressions not only communicate emotion, they also amplify and regulate it. In *The Expression of the Emotions in Man and Animals*, Charles Darwin (1872) contended that “the free expression by outward signs of an emotion intensifies it. . . . He who gives way to violent gestures will increase his rage.”

Was Darwin right? You can test his hypothesis: Fake a big grin. Now scowl. Can you feel the “smile therapy” difference? Participants in dozens of experiments have felt a difference. For example, James Laird and his colleagues (1974, 1984, 1989) subtly induced students to make a frowning expression by asking them to “contract these muscles” and “pull your brows together” (supposedly to help the researchers attach facial electrodes). The results? The students reported feeling a little angry. So, too, for other basic emotions. For example, people reported feeling more fear than anger, disgust, or sadness when made to construct a fearful expression: “Raise your eyebrows. And open your eyes wide. Move your whole head back, so that your chin is tucked in a little bit, and let your mouth relax and hang open a little” (Duclos et al., 1989).

“Whenever I feel afraid  
I hold my head erect  
And whistle a happy tune.”  
—RICHARD RODGERS AND OSCAR  
HAMMERSTEIN, *THE KING AND I*, 1958

**facial feedback effect**

the tendency of facial muscle states to trigger corresponding feelings such as fear, anger, or happiness.

This **facial feedback effect** has been repeated many times, in many places, for many basic emotions (**FIGURE 42.6**). Just activating one of the smiling muscles by holding a pen in the teeth (rather than with the lips, which activates a frowning muscle) is enough to make cartoons seem more amusing (Strack et al., 1988). A heartier smile—made not just with the mouth but with raised cheeks that crinkle the eyes—enhances positive feelings even more when you are reacting to something pleasant or funny (Soussignan, 2001). Smile warmly on the outside and you feel better on the inside. When smiling, you will even more quickly understand sentences that describe pleasant events (Havas et al., 2007). Scowl and the whole world seems to scowl back.

So your face is more than a billboard that displays your feelings; it also feeds your feelings. No wonder depressed patients reportedly feel better after between-the-eyebrows Botox injections that paralyze the frowning muscles (Finzi & Wasserman, 2006). Two months after the treatment, 9 of the 10 nonfrowning patients given this treatment were no longer depressed. Follow-up studies have found that Botox paralysis of the frowning muscles slows people's reading of sadness or anger-related sentences, and it slows activity in emotion-related brain circuits (Havas et al., 2010; Hennenlotter et al., 2008). In such ways, Botox smooths life's emotional wrinkles.

Other researchers have observed a similar *behavior feedback* phenomenon (Snodgrass et al., 1986). You can duplicate the participants' experience: Walk for a few minutes with short, shuffling steps, keeping your eyes downcast. Now walk around taking long strides, with your arms swinging and your eyes looking straight ahead. Can you feel your mood shift? Going through the motions awakens the emotions.

Likewise, people perceive ambiguous behaviors differently depending on which finger they move up and down while reading a story. (This was said to be a study of the effect of using finger muscles "located near the reading muscles on the motor cortex.") If participants read the story while moving an extended middle finger, the story behaviors seemed more hostile. If read with a thumb up, they seemed more positive. Hostile gestures prime hostile perceptions (Chandler & Schwarz, 2009; Goldin-Meadow & Beilock, 2010).

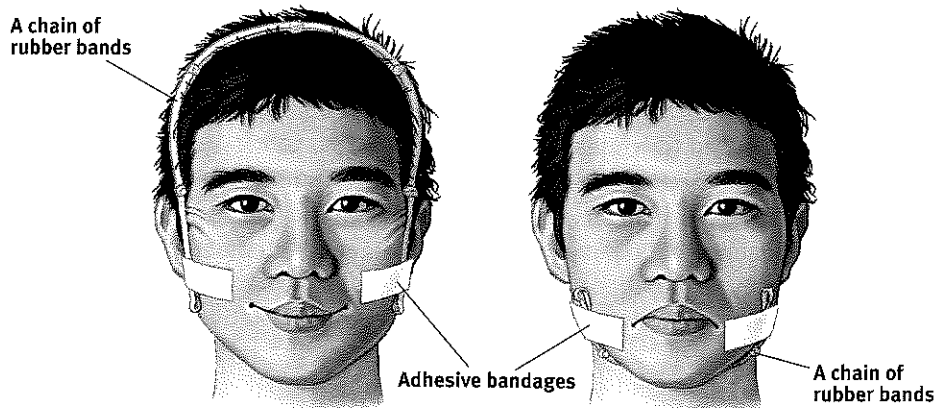
You can use your understanding of feedback effects to become more empathic: Let your own face mimic another person's expression. Acting as another acts helps us feel what another feels (Vaughn & Lanzetta, 1981). Indeed, natural mimicry of others' emotions helps explain why emotions are contagious (Dimberg et al., 2000; Neumann & Strack, 2000). Primates also ape one another, and such synchronized expressions help bond them (and us) together (de Waal, 2009). One social worker with Moebius syndrome, a rare facial paralysis disorder, struggled to make emotional connections with Hurricane Katrina refugees. When people made a sad expression, "I wasn't able to return it. I tried to do so with words and tone of voice, but it was no use. Stripped of the facial expression, the emotion just dies there, unshared" (Carey, 2010).

**Figure 42.6**

**How to make people smile without telling them to smile**

Do as Kazuo Mori and Hideko Mori (2009) did with students in Japan: Attach rubber bands to the sides of the face with adhesive bandages, and then run them either over the head or under the chin. (1) Based on the facial feedback effect, how might students report feeling when the rubber bands raise their cheeks as though in a smile? (2) How might students report feeling when the rubber bands pull their cheeks downward?

ANSWERS: (1) Most students report feeling more happy than sad when their cheeks are raised upward. (2) Most students report feeling more sad than happy when their cheeks are pulled downward.



\* \* \*

How do our emotions, personality, attitudes, and behaviors influence our risk of disease? What can we do to prevent illness and promote health? To study how stress and healthy and unhealthy behaviors influence health and illness, psychologists and physicians created the interdisciplinary field of *behavioral medicine*, integrating behavioral and medical knowledge. **Health psychology** provides psychology's contribution to behavioral medicine. Let's consider some of psychology's findings on stress and ways of coping with it.

**health psychology** a subfield of psychology that provides psychology's contribution to behavioral medicine.

## Before You Move On

### ▶ ASK YOURSELF

Can you think of one situation in which you would like to change the way you feel, and create a simple plan for doing so? For instance, if you would like to feel more cheerful on your way to class tomorrow morning rather than dragging yourself there, you might try walking briskly—with head held high and a pleasant expression on your face.

### ▶ TEST YOURSELF

Who tends to express more emotion—men or women? How do we know the answer to that question?

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

## Module 42 Review

42-1

How do we communicate nonverbally? How do the genders differ in this capacity?

- Much of our communication is through body movements, facial expressions, and voice tones. Even seconds-long filmed slices of behavior can reveal feelings.
- Women tend to read emotional cues more easily and to be more empathic.

42-3

How do our facial expressions influence our feelings?

- Research on the *facial feedback effect* shows that our facial expressions can trigger emotional feelings and signal our body to respond accordingly.
- We also mimic others' expressions, which helps us empathize.

42-2

How are nonverbal expressions of emotion understood within and across cultures?

- The meaning of gestures varies with culture, but facial expressions, such as those of happiness and fear, are common the world over.
- Cultures also differ in the amount of emotion they express.