

FOCUS ON VOCABULARY AND LANGUAGE

No one needs to tell you that feelings add *color* to your life, . . . Without **emotions**, we would experience a very dull and uninteresting existence; we would have no feelings of intense happiness or excitement, nor would we experience depression or sadness. Thus, emotions add a variety of interesting qualities (*color*) to our lives.

Nervous about an important encounter, we feel *stomach butterflies*. Anxious over *public speaking*, we *frequent the bathroom*. *Smoldering* over a family conflict, we get a *splitting* headache. When we are apprehensive and fearful, we have internal sensations that may feel as though small flying insects (*butterflies*) are fluttering around in our stomach (we feel *stomach butterflies*). Likewise, the prospect of talking to a group of people (*public speaking*) may create an urgent need to use the toilet (*frequent the bathroom*), and being quietly angry (*smoldering*) can give rise to a painful (*splitting*) headache.

In an instant, *the arousal of terror spilled into ecstasy*. In this anecdote, when Myers finally located his lost child (*toddler*) in the store, his apprehension and fear (*the arousal of terror*) transformed (*spilled*) into heightened and intense feelings of happiness (*ecstasy*), and he was overcome with positive emotions (*he was awash in grateful joy*). This story illustrates the various components of emotion—bodily (*physiological*) arousal, expressive behaviors, and consciously experienced thoughts and feelings.

Our heart races. Our pace quickens. Emotions exist to aid us in our survival. They focus our attention and give us energy to take action when we are challenged—our heartbeat accelerates (*our heart races*) and we walk more quickly (*our pace quickens*). Confronted with unexpected good news, we may start to cry and shed tears (*we may find our eyes tearing*). With positive emotions, we may feel excitement and liveliness (*exuberance*) and gain more confidence. Negative, prolonged emotions can harm our health.

Cognition and Emotion

A chicken-and-egg debate . . . The old riddle asks, “Which came first, the chicken or the egg?” Myers asks which comes first, bodily (*physiological*) arousal or emotional feelings? Furthermore, how do thinking (*cognition*) and feelings interact? To determine how the three components of emotion (*bodily arousal, expressive behaviors, and conscious experience*) fit together, psychologists need to answer these two questions.

Historical Emotion Theories

Common sense tells most of us that we cry because we are sad, *lash out* because we are angry, *tremble* because we are afraid. The **James-Lange theory** states that bodily arousal precedes the experience of emotion. Thus, first we cry, then we feel sad; first we strike someone (*lash out*), then we experience anger; first we shiver and shake (*tremble*), then we feel fear. In contrast, the **Cannon-Bard theory** proposes that bodily responses and the experience of emotion occur at the same time, but separately; one does not cause the other. Most researchers now agree that our emotions also involve cognitions.

These men reported increases in *weeping, lumps in the throat, and getting choked up* when saying good-bye, *worshipping*, or *watching a touching movie*. For emotions expressed mostly in body areas above the neck, people with *high spinal cord injury* reported more intense reactions, such as crying

(weeping), becoming inarticulate (having *lumps in the throat*), and being overcome emotionally (*getting choked up*) when participating in religious ceremonies (*worshipping*), parting company (*saying good-bye*), or viewing a sentimental film (*watching a touching movie*). On the other hand, emotional intensity for most other feelings decreased substantially—especially if they involved body areas below the neck. A feeling of extreme annoyance (*anger*) did not have the emotional intensity it once had (*didn't have the heat that it used to*) and was experienced in a more intellectual way (*a mental kind of anger*). This provides partial support for the James-Lange theory, which proposes that physical reactions are important in the experience of emotions. Nevertheless, cognitions are believed to be involved in our emotional reactions.

Cognition Can Define Emotion: Schachter and Singer

. . . *testy* . . . This means to be ill-tempered or irritable. Those college men who were physiologically aroused, but who did not know the reason for their arousal, were affected by (“*caught*”) the apparent emotional state of the person they were with. They made different attributions about their aroused (*stirred-up*) state (for example, “I’m happy” or “I’m feeling testy”) on the basis of whether the accomplice acted in a euphoric or irritated way.

“Feelings that one interprets as fear in the presence of a *sheer drop* may be interpreted as *lust* in the presence of a *sheer blouse*.” Two different meanings of the word “*sheer*” contribute to the humor of this quote. A *sheer drop* is a very steep, downward slope that, if interpreted as dangerous, may produce feelings of intense anxiety. On the other hand, a *sheer blouse* is a very thin almost transparent female garment—the sight of a woman wearing such a see-through (*sheer*) shirt can arouse feelings that may be interpreted as sexual desire (*lust*). An emotion such as arousal (*a stirred-up state*) can be experienced in very different ways depending on how we interpret and label it. As Myers notes, arousal can stimulate (*fuel*) emotion, but cognition gives it direction (*channels it*).

Cognition May Not Precede Emotion: Zajonc, LeDoux, and Lazarus

But is the *heart* always subject to the *mind*? Robert Zajonc proposed that some emotional states are not preceded by cognitions. The emotions (*heart*) are not determined by our thoughts (*mind*) and we can have *some* feelings (*especially simple likes, dislikes, and fears*) without conscious thinking. However, these responses may involve unconscious processing.

. . . which makes it easier for our feelings to *hijack* our thinking than for our thinking to *rule* our feelings (LeDoux & Armony, 1999). Some neural pathways go from the ear or eye via the thalamus to the amygdala, an emotional control center. These pathways detour around (*bypass*) the cortical areas involved in thinking. This makes it possible to have extremely rapid (*greased-lightning*) emotional responses before cognitive factors become involved. Thus, our feelings can take over (*hijack*) our thinking, instead of our thinking controlling (*ruling*) our emotions.

Together, automatic emotion and conscious thinking *weave the fabric of our emotional lives*. Just as a person working on a loom can create cloth by interlacing threads of material (*weave the fabric*), our automatic emotion and conscious thinking work together to create or construct our mental and affective experiences (*they weave the fabric of our emotional lives*).

Embodied Emotion

Thinking Critically About: Lie Detection

Pinocchio's giveaway signal of lying may not be the length of his nose, but rather the *telltale* activity in places such as his left frontal lobe and anterior cingulate cortex . . . *Pinocchio* is a fictional character in a children's story whose nose grows longer every time he tells a lie. The **polygraph**, or *lie detector*, does not detect lies; rather, it measures a number of physiological reactions such as heart rate, blood pressure, and perspiration (*telltale signs*), which indicate a change in emotional state. Unlike *Pinocchio*, when people are given a standard polygraph test, they display no reliable or valid indicators of whether they are lying or telling the truth (*there are no giveaway signals of lying*). *Guilty knowledge tests* are more accurate. More recent research examining facial microexpressions or activity in certain brain areas (*the seat of deceit—the brain*) may prove to be better at detecting when people are not telling the truth (*nabbing liars*).

Others argue that jurors' and judges' *seat-of-the-pants judgments* “are worse than the science that is excluded” (Schauer, 2010). The use of fMRI lie detection technology is not ready for courtroom use (it is *excluded*). While a project is underway that aims to assess the appropriate use of this new technology, some critics say the present system—in which jurors and judges make decisions based on subjective feelings and biased perceptions (*seat-of-the-pants judgments*)—is worse than the science that is not allowed in the courtroom (*the science that is excluded*).

Expressed Emotion

Detecting Emotion in Others

Most of us read nonverbal cues well. We communicate our feelings with words (*verbally*) and through body language (*nonverbally*). Without hearing a single word, we can discern much about someone's emotional state by observing (*reading*) his or her bodily actions and facial expressions. As Myers notes, when we look at a large group of faces, a single angry face will be extremely noticeable (*it “pops out”*) and detected more quickly than a single happy face.

Gender, Emotion, and Nonverbal Behavior

If you have *empathy*, you identify with others and imagine what it must be like *to walk in their shoes*. The expression “*to walk in another's shoes*” means that one can infer and understand that which another person is experiencing and feeling. Those who have this kind of *empathy* tend to enjoy positive peer relationships.

. . . *slapstick comedy* . . . The humor in *slapstick comedy* is derived from fast physical actions and obvious jokes rather than language and verbal nuances. Women are more likely than men to express their feelings and identify with others (*to have empathy*) while watching a variety of videotapes, such as those that are sad, happy (such as *slapstick comedies*), or frightening.

Culture and Emotional Expression

Ditto for anger, and to a lesser extent the other basic expressions (Elfenbein & Ambady, 1999). There is a great deal of consistency across cultures in the interpretation of different emotional expressions. In tests, people the world over could reliably tell which face expressed happiness; this result was found over and over again (*ditto*), and similar results were found for other fundamental expressions (for example, anger and fear).

A *sneer*, for example, retains elements of an animal baring its teeth in a *snarl*. Darwin believed that all humans inherited the ability to express emotions through very similar facial expressions. Thus, a person's scornful or contemptuous grimace (*sneer*) shares many aspects of the fierce growl with teeth showing (*snarl*) typical of dogs and other animals. Emotional expressions are one form of social communication.

The Effects of Facial Expressions

Fake a big grin. Now scowl. Can you feel the “*smile therapy*” difference? Clearly, our mood affects how we look, but Myers is inviting you to test the idea that your facial expression can affect your mood. First, make a large, false smile (*fake a big grin*). Next, wrinkle or furrow your brow, frown and look sullen (*scowl*). People in numerous experiments felt different emotions under each condition. Smile and inside you feel happy (it is like “*smile therapy*”), scowl and you may see the world as more miserable than it is.

Experienced Emotion

Anger

Popular books and articles sometimes advise that releasing angry feelings can be better than *internalizing them*. One theory suggests that expressing your anger openly (having *hostile outbursts* or *venting your anger*) will provide some form of emotional release (*catharsis*)—and that this is better than not expressing your feelings (keeping feelings *pent-up*) and holding your anger inside (*internalizing it*). Under certain circumstances, expressing anger may provide temporary relief (*an afterglow*), but evidence also suggests that expressing your anger can increase or magnify (*breed more of*) that anger.

. . . *anger seems all the rage*. When we say something is “*all the rage*” we mean that it is very popular. The word *rage* is also a synonym for *anger*. Myers points out that, in recent Western political debates, hostile exchanges have been common (“*anger seems all the rage*”).

If stressed managers find they can *drain off some of their tension by berating* an employee . . . Myers notes that, if supervisors severely and angrily scold (*berate*) their workers, this act can increase or amplify the supervisors' hostile emotions. But Myers further points out that the act may also be reinforcing because it releases some of the frustration (*it drains off some of their tension*). Consequently, the next time these feelings arise, the more likely it is that the hostile behavior will be repeated (*they may be more likely to explode again*).

Without letting the offender off the hook or inviting further harm . . . We might hold wrongdoers (*offenders*) responsible or accountable for their actions (*we do not let the offenders off the hook*) and at the same time excuse or pardon (*forgive*) their behavior. In addition, we might feel less angry and calmer—with diminished negative feelings such as perspiration, blood pressure, heart rate, and facial tension—compared with how we feel when we maintain feelings of resentment (*rehearse our grudges*).

Happiness

These findings *lob a bombshell at modern materialism* . . . The contemporary tendency to accumulate wealth and possessions (*modern materialism*) in prosperous, industrialized countries has not resulted in greater happiness. This finding challenges and destroys (*lobs a bombshell at*) the myth that riches (*affluence*) bring happiness and social well-being.

Close-Up: Want to Be Happier?

Off your duffs, couch potatoes! This *Close-Up* lists a number of research-based suggestions for elevating mood and for creating more contentment and fulfillment with life. One recommendation is to become more physically active (*join the “movement” movement*). A vast amount of research shows very clearly the benefits of regular aerobic exercise in terms of better overall health, higher levels of energy, and lower levels of anxiety and depression. Myers advises sedentary people (*couch potatoes*) to get out of the sitting position (*get off your duffs*) and start exercising regularly.

Stress and Health

Stress: Some Basic Concepts

Stress is a slippery concept. The term **stress** is often used to describe a *stimulus* (a threatening or challenging event) or a *response* (fear or anxiety). Most psychologists refer to the former as a *stressor* and the latter as a *stress reaction*; they use the word *stress* to refer to the entire process of evaluating and dealing with threatening events. Thus, *stress* is not a simple or easily understood construct (*it is a slippery concept*).

. . . *uprooting* . . . Refugees and others who are forcibly made to leave their homes (*are uprooted*) have increased rates of depression, anxiety, psychological disorders, and other stress symptoms. In most instances, the health impairments come from long-term exposure to stress.

Experiencing a *cluster of crises*—losing a job, home, and partner, for example—puts one even more at risk. Important and significant changes in our lives are other types of life-event stressors that increase the probability of health problems. If a number of these events occur close together (*a cluster of crises*), people become more vulnerable to disease.

. . . *daily hassles* . . . Small, routine, annoying events (*daily hassles*) can have a cumulative effect on health and well-being. Some people can handle these *daily hassles* (they can *shrug them off*), while others are severely distressed by these inconveniences. Continual *daily hassles* can accumulate (*add up*) and have adverse effects (*take a toll*) on health and well-being.

As the Great Recession of 2008–2009 bottomed out, Americans’ *most oft-cited stressors* related to money . . . As the nation’s economic troubles (*the Great Recession*) reached their lowest level (*bottomed out*), Americans reported that money, work, and the economy were the most frequent stressors in their lives (*their most oft-cited stressors*).

“In a fight-or-flight scenario, epinephrine is the one handing out guns; *glucocorticoids* are the ones *drawing up blueprints* for new aircraft carriers needed for the war effort.” This is an analogy to a wartime situation in which there are two modes of responding to a threat. Fast response gives the soldiers the guns right away (like epinephrine and norepinephrine rapidly defending the body). Slower response prepares for future battles by making detailed diagrams (*drawing up blueprints*), which is similar to the slower *glucocorticoid* stress response.

Your heart rate *zooms*. According to Selye’s **general adaptation syndrome (GAS)**, there are three phases in our response to stress: *alarm reaction*, *resistance*, and *exhaustion*. During the first phase, the *sympathetic nervous system* responds rapidly; your heart rate quickly increases (*zooms*), blood is directed to the muscles, and you experience the weakness associated with being startled. You are now ready to fight or cope with the *stressor* (*the resistance phase*); if the situation is not resolved soon, you will experience *exhaustion* (the third phase).

Stress and Illness

Your immune system is not a *headless horseman*. The immune system does not operate as an autonomous system independent of other systems (*a headless horseman*). Instead, it works in close harmony with various brain systems and with the endocrine system, which secretes hormones. All these interact and affect each other in a very complex way.

One danger in *hyping* reports on emotions and cancer is that some patients may then blame themselves for their illness . . . One problem with overstating (*hyping*) the relationship between attitudes and cancer is that some cancer victims may feel that they have somehow caused their sickness. The biological factors involved in the disease cannot easily be mitigated (*derailed*) by believing good health is due to a “*healthy character*” (*the “wellness macho”*). Nor is it appropriate to blame (*lay a guilt trip on*) those who develop the illness. As Myers notes, we should be aware of the fine distinction (*thin line*) that separates science from desperately hopeful beliefs (*wishful thinking*).

Moreover, not one of the “*pure*” Type Bs—the most *mellow* and *laid back* of their group—had suffered a *heart attack*. Researchers have identified two personality types. **Type As** are reactive (*easily angered*), competitive, verbally aggressive, highly motivated, time-conscious, and lacking in patience. **Type Bs** are less easily angered (*mellow*) as well as easy-going (*laid back*), patient, understanding, and noncompetitive. The most prototypical (“*pure*”) Type Bs were the least likely to be afflicted by **coronary heart disease** (*heart attacks*).

But *after that initial honeymoon period*, researchers wanted to know more. Was the finding reliable? The discovery of the relationship between personality type (A or B) and health and well-being aroused much interest. However, once the initial excitement abated (*after that initial honeymoon period*), other investigators started more detailed research, asking questions about the specific mechanisms involved in personality type and risk of disease.

Type A individuals are more often “*combat ready*.” Research has shown that Type A individuals are physiologically more reactive and ready to fight (*combat ready*) than Type B individuals. When stressed, their *sympathetic nervous system* operates to increase the levels of cholesterol and fat in the blood; in addition, their negative (*toxic*) emotions, especially anger and depression, make them more coronary-prone.

. . . *hot tempered* . . . Those who are emotionally volatile (*hot tempered*) get angry very easily and are much more likely to suffer from heart attacks than more even tempered or less emotional individuals. As noted, rage seems to retaliate (*lash back*) and attack normal cardiac functioning (*strike us in the heart muscle*).

Promoting Health

Coping With Stress

(*Photo caption*) *Laughter among friends is good medicine*. The old saying “*laughter is the best medicine*” proposes that mirthful humor may be good for our health. Some research has shown the beneficial effects of laughter, which appears to act as a block or buffer against stress-induced problems. Those who have a good sense of humor and can find something funny in stressful life events tend to be healthier and may live longer .

The *cold fact* is that the effect of social ties *is nothing to sneeze at!* Myers is being humorous here. The expression “*that is nothing to sneeze at*” indicates that something (for example, an object, event, or accomplishment) is not minor or insignificant—and, of course, people with *colds* tend to sneeze a lot. In research on resistance to cold viruses, the finding that healthy volunteers who had the most social ties were less likely to catch a cold and produced less mucus (*the cold fact*) is not an insignificant result (*is nothing to sneeze at*). In addition, research shows that social support calms the cardiovascular system, lowering blood pressure and stress hormones.

Close relationships give us an opportunity for “*open heart therapy*,” . . . Research has shown that those with close, supportive friends and family tend to have fewer health problems and live longer. One reason for this may be that trusting relationships provide the opportunity to talk about our problems and feelings. Just as “*open heart surgery*” can save lives, having someone to talk to and share your troubles and concerns with can be a form of “*open heart therapy*” that results in fewer health problems (*confiding is good for soul and body*).

Reducing Stress

Many had, quite literally, *run away from their troubles*. Many research studies have shown the beneficial effect of **aerobic exercise** on stress, depression, and anxiety. In one study, women who took up jogging (*running*) showed a substantial reduction in depression. As Myers humorously puts it, they had, in reality, *run away from their troubles*.

(*Photo caption*) *The mood boost*. Regular exercise increases longevity and cardiovascular fitness; reduces stress, anxiety, and depression; and enhances positive emotional states (*it boosts our moods*). So, the popular trend toward being more physically active has many benefits, including building a stronger body and increasing our enthusiasm for life (*boosting the spirit*). Further, exercise increases arousal and the production of neurotransmitters (*orders up mood-boosting chemicals*) such as norepinephrine, serotonin, and the endorphins, and may also promote *neurogenesis*.

After a decade of study, however, the initial claims for biofeedback seemed *overblown* and *oversold* (Miller, 1985). *Biofeedback* became very popular in the 1970s, and the reports of its effectiveness for all kinds of problems led to much excitement. By the mid-1980s, however, when researchers took the time to evaluate the research findings objectively, it became clear that these assertions were exaggerated (*overblown*) and falsely promoted (*oversold*). Simple relaxation, without the use of costly equipment, is just as beneficial.

(*Margin note*) And then there are the mystics who seek to use the mind’s power to enable *novocaine-free cavity repair*. Their aim: *transcend dental medication*. This joke uses a play on words to create humor. The idea is that mystics and others who practice meditation (notably “transcendental meditation”) believe that, with the power of the mind, people can have their bad teeth fixed without the use of an anesthetic (*novocaine-free cavity repair*). Thus, the patients would be able to overcome the need for dental medication (*transcend dental medication*) through the use of “transcendental meditation.”