

13 : Emotion

CHAPTER OVERVIEW

Emotions are responses of the whole individual, involving physiological arousal, expressive behaviors, and conscious experience. Chapter 13 first discusses several theoretical controversies concerning the relationship and sequence of the components of emotion, primarily regarding whether the body's response to a stimulus causes the emotion that is felt and whether thinking is necessary to and must precede the experience of emotion. After describing the physiology of emotion and emotional expressiveness, it examines the components of emotion in detail, particularly as they relate to the emotions of fear, anger, and happiness.

NOTE: Answer guidelines for all Chapter 13 questions begin on page 347.

CHAPTER REVIEW

First, skim each section, noting headings and boldface items. After you have read the section, review each objective by answering the fill-in and essay-type questions that follow it. As you proceed, evaluate your performance by consulting the answers beginning on page 347. Do not continue with the next section until you understand each answer. If you need to, review or reread the section in the textbook before continuing.

Theories of Emotion (pp. 513–515)

David Myers at times uses idioms that are unfamiliar to some readers. If you do not know the meaning of any of the following expressions from the introduction and this section in the context in which they appear in the text, refer to page 354 for an explanation: *add color to your life*; *arousal of dread . . . elation of ecstasy*; *lash out*.

Objective 1: Identify the three components of emotions, and contrast the James-Lange, Cannon-Bard, and two-factor theories of emotion.

1. Emotions have three components: _____
_____, _____,
_____, and _____
_____.
2. According to the James-Lange theory, emotional states _____ (precede/follow) body arousal.

Describe two problems that Walter Cannon identified with the James-Lange theory.

3. Cannon proposed that emotional stimuli in the environment are routed simultaneously to the _____, which results in awareness of the emotion, and to the _____ nervous system, which causes the body's reaction. Because another scientist concurrently proposed similar ideas, this theory has come to be known as the _____ theory.
4. The two-factor theory of emotion proposes that emotion has two components: _____ arousal and a _____ label. This theory was proposed by _____.

Embodied Emotion (pp. 516–523)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to pages 354–355 for an explanation: *your stomach develops butterflies; shooting free throws; clutching, sinking sensation; peppy left hemisphere . . . perky disposition; Pinocchio . . . telltale sign; weeping, lumps in the throat . . . ; Which is the chicken and which the egg?; white lie; testy; hijack; The heart is not always subject to the mind.*

Objective 2: Describe the role of the autonomic nervous system during emotional arousal.

- Describe the major physiological changes that each of the following undergoes during emotional arousal:
 - heart: _____
 - muscles: _____
 - liver: _____
 - breathing: _____
 - digestion: _____
 - pupils: _____
 - blood: _____
 - skin: _____
- The responses of arousal are activated by the _____ nervous system. In response to its signal, the _____ glands release the hormones _____ and _____, which increase heart rate, blood pressure, and blood sugar.
- When the need for arousal has passed, the body is calmed through activation of the _____ nervous system.

Objective 3: Discuss the relationship between arousal and performance.

- People usually perform best when they feel _____ aroused.
- The level of arousal for optimal performance _____ (varies/is the same) for different tasks.

- For tasks that are _____, peak performance comes with relatively _____ (high/low) arousal. For tasks that are _____, optimal arousal is _____ (higher/lower).

Objective 4: Name three emotions that involve similar physiological arousal.

- The various emotions are associated with _____ (similar/different) forms of physiological arousal. In particular, the emotions of _____, _____, and _____ are difficult to distinguish physiologically.

Objective 5: Describe some physiological and brain pattern indicators of specific emotions.

- The emotions _____ and _____ are accompanied by differing _____ temperatures and _____ secretions.
- The emotions _____ and _____ stimulate different facial muscles.
- The brain circuits underlying different emotions _____ (are/are not) different. For example, seeing a fearful face elicits greater activity in the _____ than seeing a(n) _____ face. People who have generally negative personalities, and those who are prone to _____, show more activity in the _____ of the brain.
- When people experience positive moods, brain scans reveal more activity in the _____.
- Individuals with more active _____ (right/left) _____ lobes tend to be more cheerful than those in whom this pattern of brain activity is reversed. This may be due to the rich supply of _____ receptors in this area of the brain.

13. Electrical areas of the brain's _____ can trigger smiling and laughter.

14. (Thinking Critically) The technical name for the "lie detector" is the _____.

(Thinking Critically) Explain how lie detectors supposedly indicate whether a person is lying.

15. (Thinking Critically) How well the lie detector works depends on whether a person exhibits _____ while lying.

16. (Thinking Critically) Those who criticize lie detectors feel that the tests are particularly likely to err in the case of the _____ (innocent/guilty), because different _____ all register as _____.

17. (Thinking Critically) By and large, experts _____ (agree/do not agree) that lie detector tests are highly accurate.

18. (Thinking Critically) A test that assesses a suspect's knowledge of details of a crime that only the guilty person should know is the _____.

19. For victims with severed spinal cords who have lost all feeling below the neck, the intensity of emotions tends to _____. This result supports the _____ theory of emotion.

20. Most researchers _____ (agree/disagree) with Cannon and Bard's position that emotions involve _____ as well as arousal.

Objective 6: Explain how the spillover effect influences our experience of emotions.

21. The *spillover effect* refers to occasions when our _____ response to one event carries over into our response to another event.

22. Schachter and Singer found that physically aroused college men told that an injection would cause arousal _____ (did/did not) become emotional in response to an accomplice's aroused behavior. Physically aroused volunteers not expecting arousal _____ (did/did not) become emotional in response to an accomplice's behavior.

23. Arousal _____ emotion; cognition _____ emotion.

Objective 7: Distinguish the two alternative pathways that sensory stimuli may travel when triggering an emotional response.

24. Robert Zajonc believes that the feeling of emotion _____ (can/cannot) precede our cognitive labeling of that emotion.

Cite two pieces of evidence that support Zajonc's position.

25. A pathway from the _____ via the _____ to the _____ enables us to experience emotion before _____. For more complex emotions, sensory input is routed through the _____ for interpretation.

26. The researcher who disagrees with Zajonc and argues that most emotions require cognitive processing is _____. According to this view, emotions arise when we _____ an event as beneficial or harmful to our well-being.
27. Complex emotions arise from our _____ and _____. Highly emotional people tend to _____ events as being directed at them. They also tend to _____ their experiences by blowing them out of proportion.

Express some general conclusions that can be drawn about cognition and emotion.

Expressed Emotion (pp. 524–532)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to page 355 for an explanation: *good enough at reading; Fidgeting; Ditto; sneer; Fake a big grin.*

Objective 8: Describe some of the factors that affect our ability to decipher nonverbal cues.

1. Researchers have found that people who _____ (suppress/express) their emotions while watching a distressing film showed impaired _____ for details in the film. Emotions may be communicated in words and/or through body expressions, referred to as _____ communication.
2. Most people are especially good at interpreting nonverbal _____. We read fear and _____ mostly from the

_____, and happiness from the _____.

3. Introverts are _____ (better/worse) at reading others' emotions, whereas extraverts are themselves _____ (easier/harder) to read.
4. Experience can _____ people to particular emotions, as revealed by the fact that children who have been physically abused are quicker than others at perceiving _____.

Objective 9: Describe some gender differences in perceiving and communicating emotions.

5. Women are generally _____ (better/worse) than men at detecting nonverbal signs of emotion and in spotting _____. Women possess greater emotional _____ than men, as revealed by the tendency of men to describe their emotions in _____ terms. This gender difference may be a by-product of traditional _____ and may contribute to women's greater emotional _____.
6. Although women are _____ (more/less) likely than men to describe themselves as empathic, physiological measures reveal a much _____ (smaller/larger) gender difference. Women are _____ (more/less) likely than men to express empathy.
7. Women are also better at conveying _____ (which emotion?), whereas men surpass women in conveying their _____.

Objective 10: Discuss the research on reading and misreading facial and behavioral indicators of emotion.

8. Various emotions may be linked with hard-to-control _____. Most people _____ (are/are not) very accurate at detecting lying. Accuracy varies, however, with a person's _____ and training. For example, _____

(people in which professions?) seem to be especially good at detecting lying.

9. The absence of nonverbal cues to emotion is one reason that communications sent as _____ are easy to misread.

Objective 11: Discuss the culture-specific and culturally universal aspects of emotional expression, and explain how emotional expressions could enhance survival.

10. Gestures have _____ (the same/different) meanings in different cultures.
11. Studies of adults indicate that in different cultures facial expressions have _____ (the same/different) meanings. Studies of children indicate that the meaning of their facial expressions _____ (varies/does not vary) across cultures. The emotional facial expressions of blind children _____ (are/are not) the same as those of sighted children.
12. According to _____, human emotional expressions evolved because they helped our ancestors communicate before language developed. It has also been adaptive for us to _____ faces in particular _____.
13. In cultures that encourage _____, emotional expressions are often intense and prolonged. Cultures such as that of Japan _____ (also show intense emotion/hide their emotions). This points to the importance of realizing that emotions are not only biological and psychological but also _____.

Objective 12: Discuss the facial feedback and behavior feedback phenomena, and give an example of each.

14. Darwin believed that when an emotion is accompanied by an outward facial expression, the emotion is _____ (intensified/diminished).

15. In one study, students who were induced to smile _____ (found/did not find) cartoons more humorous.
16. The _____ effect occurs when expressions amplify our emotions by activating muscles associated with specific states.
17. Studies have found that imitating another person's facial expressions _____ (leads/does not lead) to greater empathy with that person's feelings.
18. Similarly, moving our body as we would when experiencing a particular emotion causes us to feel that emotion. This is the _____ effect.

Experienced Emotion (pp. 532–544)

If you do not know the meaning of any of the following words, phrases, or expressions in the context in which they appear in the text, refer to pages 355–356 for an explanation: *poisonous*; *Stone Age fears*; *hostile outbursts*; *drain off some of their tension*; *contradictory maxims*; *rush of euphoria*; *lob a bombshell*; *run amuck*; *Off your duffs*, *couch potatoes*.

Objective 13: Name several basic emotions, and describe two dimensions psychologists use to differentiate emotions.

1. Izard believes that there are _____ basic emotions, most of which _____ (are/are not) present in infancy. Although others claim that emotions such as pride and love should be added to the list, Izard contends that they are _____ of the basic emotions.
2. Throughout the world, people place emotions along two dimensions: _____, which refers to whether a feeling is _____ or _____, and high versus low _____.

Objective 14: State two ways we learn our fears.

3. Fear can by and large be seen as a(n) _____ response (adaptive/maladaptive).

4. Most human fears are acquired through _____.
5. In addition, some fears are acquired by _____ parents and friends.

Objective 15: Discuss some of the biological components of fear.

Explain why researchers think that some fears are biologically predisposed.

6. A key to fear learning lies in the _____, a neural center in the _____ system. Following damage to this area, humans who have been conditioned to fear a loud noise will _____ the conditioning but show no _____ effect of it.
7. The amygdala receives input from the _____, a higher-level center for processing emotion.
8. People who have suffered damage to the _____ will show the _____ but _____ (will/will not) be able to remember why.
9. Patients who have lost use of the _____ are unusually trusting of scary-looking people.
10. Fears that fall outside the average range are called _____. Fearfulness is shaped by both our _____ and our _____.

Objective 16: Identify some common triggers and consequences of anger, and assess the catharsis hypothesis.

11. In studying why we become angry, Averill has found that most people become angry several times per week and especially when another person's act seemed _____, _____, and _____.
12. The belief that expressing pent-up emotion is adaptive is most commonly found in cultures that emphasize _____. This is the _____ hypothesis. In cultures that emphasize _____, such as those of _____ or _____, expressions of anger are less common.
13. Psychologists have found that when anger has been provoked, retaliation may have a calming effect under certain circumstances. List the circumstances.
 - a. _____
 - b. _____
 - c. _____

Identify some potential problems with expressing anger.

14. List two suggestions offered by experts for handling anger.
 - a. _____
 - b. _____
15. Researchers have found that students who mentally rehearsed times they _____ someone who had hurt them had lower bodily arousal than when they thought of times when they did not.

Objective 17: Describe how the feel-good, do-good phenomenon works, and discuss the importance of research on subjective well-being.

16. Happy people tend to perceive the world as _____.

17. Happy people are also _____ than _____ (more/less) willing to help others. This is called the _____ phenomenon.

18. An individual's self-perceived happiness or satisfaction with life is called his or her _____.
Research on this subject helps us sift reality from all the contradictory beliefs.

Objective 18: Discuss some of the daily and longer-term variations in the duration of emotions.

19. Positive emotions _____ (rise/fall) early in the day and _____ (rise/fall) during the later hours.

20. Most people tend to _____ (underestimate/overestimate) the long-term emotional consequences of very bad news.

21. After experiencing tragedy or dramatically positive events, people generally _____ (regain/do not regain) their previous degree of happiness.

Objective 19: Summarize the findings on the relationship between affluence and happiness.

22. Researchers have found that levels of happiness _____ (do/do not) mirror differences in standards of living.

23. Generally speaking, losses have a _____ (stronger/weaker) emotional impact than gains.

24. During the last four decades, spendable income in the United States has more than doubled; personal happiness has _____ (increased/decreased/remained almost unchanged).

25. Research has demonstrated that people generally experience a higher quality of life and greater well-being when they strive for _____

_____ than _____ when they strive for _____.

Objective 20: Describe how adaptation and relative deprivation affect our appraisals of our achievements.

26. The idea that happiness is relative to one's recent experience is stated by the _____ phenomenon.

Explain how this principle accounts for the fact that, for some people, material desires can never be satisfied.

27. The principle that one feels worse off than others is known as _____.

_____ This helps to explain why the middle- and upper-income people who compare themselves with the relatively poor are _____ (slightly more/slightly less/equally) satisfied with life.

Objective 21: Summarize the ways that we can influence our own levels of happiness.

28. List six factors that have been shown to be positively correlated with feelings of happiness.

29. List five factors that are evidently unrelated to happiness.

30. Research studies of identical and fraternal twins have led to the estimate that _____ percent of the variation in people's happiness ratings is heritable.
31. (Close-Up) State several research-based suggestions for increasing your satisfaction with life.
- d. All emotions have the same underlying brain circuits but different body responses.

4. The Cannon-Bard theory of emotion states that:
- emotions have two ingredients: physical arousal and a cognitive label.
 - the conscious experience of an emotion occurs at the same time as the body's physical reaction.
 - emotional experiences are based on an awareness of the body's responses to an emotion-arousing stimulus.
 - emotional ups and downs tend to balance in the long run.

PROGRESS TEST 1

Multiple-Choice Questions

Circle your answers to the following questions and check them with the answers beginning on page 349. If your answer is incorrect, read the explanation for why it is incorrect and then consult the appropriate pages of the text (in parentheses following the correct answer).

- Which of the following is correct regarding the relationship between arousal and performance?
 - Generally, performance is optimal when arousal is low.
 - Generally, performance is optimal when arousal is high.
 - On easy tasks, performance is optimal when arousal is low.
 - On easy tasks, performance is optimal when arousal is high.
- Which division of the nervous system is especially involved in bringing about emotional arousal?
 - somatic nervous system
 - peripheral nervous system
 - sympathetic nervous system
 - parasympathetic nervous system
- Concerning emotions and their accompanying body responses, which of the following appears to be true?
 - Each emotion has its own body response and underlying brain circuit.
 - All emotions involve the same body response as a result of the same underlying brain circuit.
 - Many emotions involve similar body responses but have different underlying brain circuits.
 - All emotions have the same underlying brain circuits but different body responses.
- The Cannon-Bard theory of emotion states that:
 - emotions have two ingredients: physical arousal and a cognitive label.
 - the conscious experience of an emotion occurs at the same time as the body's physical reaction.
 - emotional experiences are based on an awareness of the body's responses to an emotion-arousing stimulus.
 - emotional ups and downs tend to balance in the long run.
- Electrical stimulation of which brain region can produce terror or rage in cats?

a. limbic system	c. cortex
b. hypothalamus	d. cerebellum
- The body's response to danger is triggered by the release of _____ by the _____ gland(s).
 - acetylcholine; adrenal
 - epinephrine and norepinephrine; adrenal
 - acetylcholine; pituitary
 - epinephrine and norepinephrine; pituitary
- Which of the following was *not* raised as a criticism of the James-Lange theory of emotion?
 - The body's responses are too similar to trigger the various emotions.
 - Emotional reactions occur before the body's responses can take place.
 - The cognitive activity of the cortex plays a role in the emotions we experience.
 - People with spinal cord injuries at the neck typically experience less emotion.
- (Thinking Critically) Current estimates are that the polygraph is inaccurate approximately _____ of the time.

a. three-fourths	c. one-third
b. one-half	d. one-fourth
- In the Schachter-Singer experiment, which college men reported feeling an emotional change in the presence of the experimenter's highly emotional confederate?
 - those receiving epinephrine and expecting to feel physical arousal
 - those receiving a placebo and expecting to feel physical arousal
 - those receiving epinephrine but not expecting to feel physical arousal
 - those receiving a placebo and not expecting to feel physical arousal