

CHAPTER 9

EMOTION AND STRESS

– PART I. LEARNING OBJECTIVES –

When you finish studying this chapter, you should be able to:

THE COMPONENTS OF EMOTIONS

1. Define emotion, and describe its four components.

THE RANGE OF HUMAN EMOTIONS

2. Describe Plutchik's conceptualization of the range of emotions (the emotion wheel).

THEORIES OF EMOTION

3. Describe and evaluate the James-Lange theory of emotion.
4. Describe and evaluate the Cannon-Bard theory of emotion.
5. Describe and evaluate the Schachter-Singer theory of emotions.
6. Describe Tomkins' facial feedback theory of emotions, and discuss research supporting the view that facial expression is associated with emotion.
7. Describe Solomon and Corbit's opponent-process theory of emotion, and discuss what the theory proposes happens with repeated exposure to an intense emotion-arousing stimulus.
8. Define stress and describe its physiological and psychological components.
9. Discuss Selye's general adaptation syndrome (GAS) regarding the body's physiological response to stress, and describe its three phases.
10. Discuss cognitive responses to stress, and describe the processes of primary and secondary appraisal.
11. Discuss emotional responses to stress.
12. Discuss behavioral responses to stress and describe three types of behavioral responses to stress.
13. Define stressor and discuss three factors that contribute to an event or situation being perceived as stressful.
14. Describe and evaluate the Social Readjustment Rating Scale (SRRS). Holmes and Rahe
15. Discuss the relationship between stress and coronary heart disease (CHD), and describe Type A and Type B personalities.
16. Discuss the relationship between stress and hypertension (high blood pressure).
17. Discuss the relationship between stress and cancer.
18. Discuss the research related to a possible cancer-prone personality.
19. Discuss the relationship between stress and the functioning of the immune system.
20. A..R.E. Alarm Resistance Exhaustion
21. Discuss stress and physical symptoms such as nausea, acid reflux, aerophasia, and stiff neck.

– PART II. OVERVIEW –

Emotions are closely connected with motivation. Emotion refers to subjective feelings and moods. In addition to subjective feelings, major components of emotion include cognitive processes, physiological arousal, and

behavioral processes. A number of conflicting theories for explaining emotion have been proposed. The James-Lange theory states that in an emotion-arousing situation, one first experiences physiological and muscular responses, and only after these occur is an emotion experienced. The Cannon-Bard theory states that emotional experiences and physiological changes occur simultaneously. The Schachter-Singer theory proposes that although physiological changes occur first, the key to what emotion is experienced involves how people cognitively assesses both their physical response and the situation. Tomkins' facial-feedback theory states that knowledge of one's facial expression (which has been shown to be cross-culturally similar) influences emotional state. Finally, Solomon and Corbit's opponent-process theory proposes that emotions exist in pairs. When one emotion is strongly aroused, eventually the opponent (or opposite) emotion will be activated to restore emotional equilibrium.

Stress is often a by-product of disruptive, unpleasant emotions. A number of factors that are related to an event being perceived as stressful are lack of control, suddenness, and ambiguity. Selye's general adaptation syndrome (GAS) describes the physiological response to stress as consisting of three phases. Initially the alarm phase occurs and the sympathetic nervous system is activated to confront the stress. If the stress continues, in the second phase (resistance) the parasympathetic nervous system is activated to limit the body's energy expenditures while continuing to deal with the stress. If the stress continues, the exhaustion phase is eventually reached, in which the body shows wear and tear and the individual becomes more susceptible to illness. In addition to physiological responses, there are also distinct psychological responses to stress. Cognitive responses include reduced concentration, impaired performance on cognitive tasks, and disruptive thoughts. Emotional responses include anxiety, anger, and depression. Behavioral responses include confronting (fight), avoiding (flight), or adapting to the situation.

Stress is a factor in many illnesses. Certain personality characteristics are related to the tendency to develop specific illnesses. Individuals who show Type A behaviors (ambitious, competitive, easily angered) are prone to develop coronary heart disease (CHD). Type A individuals and people who suppress anger are prone to develop high blood pressure. Some evidence exists linking stress and personality characteristics to cancer. The proposed cancer-prone personality is an individual who is inhibited, conforming, inclined to depression, and tends to suppress his or her emotions. Because increased levels of stress tend to decrease the functioning of the immune system, individuals who are under stress are more likely to contract a variety of infectious illnesses and possibly cancer.

– PART III. KEY TERMS/ MATCHING EXERCISES –

Match the following concepts with the appropriate descriptions. Check your answers against the Answer Key.

EMOTION

<i>Concepts</i>	<i>Descriptions</i>
_____ 1. Canon-Bard theory	a. Proposes that cognitive processes of interpreting both the emotion-causing event and bodily changes are central to the emotion experienced
_____ 2. Tomkins' facial feedback theory	b. Describes primary human emotions as consisting of four pairs of opposites (e.g., sadness and joy)
_____ 3. Plutchik's emotion wheel	c. Proposes that following an emotional response the opposite emotional response occurs to restore emotional equilibrium
_____ 4. Schachter-Singer theory	d. Proposes that bodily changes and behavioral reactions precede emotions
_____ 5. emotion	e. Proposes that knowledge of facial expression determines emotions
_____ 6. James-Lange theory	f. Subjective feelings and moods that often motivate actions
_____ 7. Solomon and Corbit's opponent-process theory	g. Proposes that bodily changes, behavioral responses, and emotions occur simultaneously

Answer Key

1. g 2. e 3. b 4. a 5. f 6. d 7. c

STRESS

<i>Concepts</i>	<i>Descriptions</i>
_____ 1. cancer-prone personality	a. Process of appraising events (as harmful, threatening, or challenging), of assessing potential responses, and of responding to those events
_____ 2. stressors	b. Describes inhibited, compliant, conforming individuals who tend to suppress their emotions
_____ 3. general adaptation syndrome (GAS)	c. Situations or events that produce stress
_____ 4. stress	d. Describes ambitious, demanding, and easily angered individuals who are prone to heart disease
_____ 5. exhaustion	e. Second phase of the body's reaction to a stressful event that involves activation of the parasympathetic nervous system
_____ 6. Type A personality	f. Physiological response to stress originally proposed by Selye
_____ 7. resistance	g. Describes relaxed, easy-going individuals who are not easily angered
_____ 8. Type B personality	h. Third phase of the body's reaction to a stressful event that results in increased susceptibility to disease
_____ 9. alarm	i. Body's initial reaction to a stressful event that involves activation of the sympathetic nervous system
_____ 10. Social Readjustment Rating Scale (SRRS)	j. Assesses the amount of stress a person has experienced in the past year

Answer Key

1. b 2. c 3. f 4. a 5. h 6. d 7. e 8. g 9. i
10. j

– PART IV. TRUE-FALSE STATEMENTS –

Fill in the blank before each statement with either a T (true) or an F (false). Check your answers against the Answer Key. Then go back to the items that are false and make the necessary change(s) to the statements to convert the items into true statements.

EMOTIONS

- _____ 1. Subjective feelings of emotions include both a general state and a specific feeling tone.

- _____ 2. According to Plutchik's emotion wheel, there are only eight human emotions.

- _____ 3. According to the Cannon-Bard theory of emotion, one first experiences physiological and muscular changes, then experiences an emotion.
- _____ 4. The facial feedback theory of emotion is consistent with the results of crosscultural studies concerning the ability of individuals to consistently label the emotional state of other people.
- _____ 5. Schachter and Singer's theory of emotion agrees with the James-Lange theory in that emotions follow physiological and behavioral changes.

STRESS

- _____ 6. Selye's general adaptation syndrome (GAS) emphasizes psychological factors associated with an individual's response to a stressful situation.
- _____ 7. Psychological responses to stress include cognitive, emotional, and behavioral responses.
- _____ 8. By definition, stress is always associated with negative events or situations.
- _____ 9. Situations that an individual does not have control over and are sudden and ambiguous are likely to be perceived as stressful.
- _____ 10. In the original long-term study of personality type and coronary heart disease, Type A men were three times as likely as Type B men to suffer heart attacks.
- _____ 11. Stressful events decrease the functioning of the body's immune system.

Answer Key

1. T 2. F 3. F 4. T 5. T 6. F 7. T 8. F 9. T
10. F 11. T

– PART V. MULTIPLE-CHOICE QUESTIONS –

Choose the best answer to each question. Circle your choice. Check your answers against the Answer Key. Questions marked with an asterisk (*) include annotated answers.

THE COMPONENTS OF EMOTION

- The four integral components of human emotions are
 - cognitive processes, subjective feelings, behavioral reactions, and facial expressions.
 - primary appraisal, secondary appraisal, behavioral reactions, and physiological arousal.
 - cognitive processes, subjective feelings, physiological arousal, and behavioral reactions.
 - cognitive processes, stressors, physiological arousal, and subjective feelings.
- The physiological component of emotion is closely associated with the
 - autonomic nervous system.
 - central nervous system.
 - skeletal or somatic nervous system.
 - brain stem functions.
- During an emotional state, which of the following would indicate physiological arousal?
 - a sense of fear
 - perception of the event as dangerous
 - screaming
 - an increase in blood pressure

THE RANGE OF HUMAN EMOTION

- According to Plutchik's emotion wheel, emotions that are directly across from each other
 - are opponent processes.
 - have the most in common.
 - are opposites.
 - are secondary emotions.

THEORIES OF EMOTION

- *5. Imagine you are driving and a small child runs out in front of your car. You slam on the brakes to avoid hitting the child. It is only as you drive away and notice your heart pounding that you say to yourself, "Boy, that was scary!" For which theory of emotion does this situation give support?
 - James-Lange only
 - Cannon-Bard only
 - Schachter-Singer only
 - both James-Lange and Schachter-Singer
- The James-Lange theory is supported by evidence that indicates that
 - the hypothalamus is involved in emotional expression.
 - people report less-intense emotional feelings after suffering a spinal cord injury.
 - following a fear response, people experience elation.
 - individuals tend to cognitively look for an appropriate emotional label for physiological changes.
- The Cannon-Bard theory states that
 - emotional experiences and physical changes occur simultaneously.
 - physical changes are necessary for emotional experiences.
 - emotional experiences precede physical changes.
 - emotional experiences follow physical changes.
- The Schachter-Singer theory agrees with the _____ theory in that emotions follow physical and behavioral changes, and agrees with the _____ theory in that cognitive processes are central to emotional experiences.
 - James-Lange / opponent-process (Solomon and Corbit)
 - James-Lange / Cannon-Bard
 - opponent-process (Solomon and Corbit) / Cannon-Bard
 - Cannon-Bard / James-Lange

- *9. In Schachter and Singer's experiment, subjects who were uninformed or misinformed concerning the side effects of "Suproxin" and waited with a confederate who acted happy or euphoric, tended to
- provide no emotional label to their arousal.
 - label their arousal as happy also.
 - label their arousal as anger directed at the "silly" confederate.
 - report no changes in their physical state.
10. The idea that facial expressions of many human emotions are similar in all human cultures was originally proposed by
- William James.
 - Charles Darwin.
 - Paul Ekman.
 - Sylvan Tomkins.
11. When actors were coached to assume a specific facial expression corresponding to a negative emotion (anger, fear, disgust, and sadness), they
- exhibited parasympathetic nervous system arousal.
 - exhibited the same physiological response to all four emotions.
 - exhibited distinct physiological responses to each of the four emotions.
 - could not tell what emotion they were modeling.
12. Ekman's research in which subjects were instructed to merely move their facial muscles in specific ways that automatically produced emotional reactions lends support to the _____ theory.
- James-Lange
 - Cannon-Bard
 - Schachter-Singer
 - opponent-process (Solomon and Corbit)
13. Solomon and Corbit's opponent-process theory proposes that, with repeated exposure to a situation that produces an intense emotion, the initial emotional reaction will _____ while the opponent emotional reaction will _____.
- weaken / remain constant
 - remain constant / grow stronger
 - weaken / grow stronger
 - grow stronger / weaken
14. Which theory (theories) of emotion fail(s) to adequately recognize that emotions are more than automatic reactions to stimuli?
- both the James-Lange and the Cannon-Bard theories
 - the Schachter-Singer theory
 - the James-Lange theory
 - Solomon and Corbit's opponent-process theory
15. The process of appraising events (as harmful, threatening, or challenging), of assessing potential responses, and of responding to those events defines
- the general adaptation syndrome.
 - stressors.
 - stress.
 - facial feedback theory.
- *16. The headline in *The National Busybody* reads "97 Pound Mom Lifts Minivan Off Toddler." Which phase of the general adaptation syndrome was "Mom" in at the time?
- exhaustion
 - resistance
 - peak
 - alarm
17. The correct order of the phases of Selye's general adaptation syndrome (GAS) is
- alarm, exhaustion, and resistance.
 - peak, exhaustion, and resistance.
 - alarm, resistance, and exhaustion.
 - resistance, alarm, and exhaustion.
18. At which stage of GAS does the body begin to show signs of wear and tear and exhibit increased susceptibility to disease?
- final
 - exhaustion
 - resistance
 - immunocompetence

19. According to Lazarus and Folkman, when in a potentially stressful situation we first engage in _____ to determine if the event is positive, neutral, or negative, and if it is negative, we then engage in _____ to determine if we have sufficient resources and coping abilities to successfully deal with the situation.
- initial analysis / final analysis
 - emotional appraisal / cognitive appraisal
 - primary appraisal / secondary appraisal
 - alarm reaction / resistance reaction
20. According to Lazarus and Folkman, if we perceive harm and threat in a situation to be high, we are likely to experience _____; however, if we feel we can cope, we will likely experience _____.
- low stress / lower stress
 - high stress / higher stress
 - minimal stress / higher stress
 - a high degree of stress / lower stress
- *21. Which of the following is *not* a common cognitive response to a stressful situation?
- disruptive thoughts
 - higher than normal levels of distraction
 - feelings of anxiety
 - impaired performance on cognitive tasks
22. The term “fight or flight” suggests which of the following psychological responses to stress?
- behavioral
 - physiological
 - emotional
 - cognitive
- *23. Which of the following events should be least stressful?
- having your parents tell you they are divorcing
 - having your roommate tell you to move out
 - having your partner initiate the break up of a long-term relationship
 - initiating the break up of a long-term relationship
24. Which of the following characteristics is *not* associated with increasing the likelihood that an event will be perceived as stressful?
- ambiguity
 - context
 - suddenness
 - lack of control
25. The main reason why ambiguous situations may cause stress is that one
- may not be able to determine an appropriate course of action.
 - needs time to mobilize a defense.
 - may feel out of control.
 - may not be able to plan ahead.
26. One of the primary problems with the Social Readjustment Rating Scale (SRRS) is that
- it is difficult to test the predications associated with the scale.
 - total life-change units can vary widely from person to person.
 - positive events may also be stressful.
 - it does not take into consideration the fact that people experiencing the same life-change event may react very differently.
27. The evidence linking stress to _____ is less conclusive and more controversial than for the other illnesses listed.
- malfunctioning of the immune system
 - coronary heart disease
 - cancer
 - hypertension
28. Which of the following has *not* been explored as a possible explanation for the link between Type A behavior and coronary heart disease?
- Type A behavior may be a coping response to a naturally more reactive nervous system
 - Type A behavior decreases the functioning of the immune system
 - Type A individuals are more physiologically reactive to stress than Type B individuals
 - Type A individuals engage in more high-risk behaviors for developing coronary heart disease

29. Stress affects the immune system by
- reducing immunocompetence.
 - enhancing immunocompetence.
 - activating the immune system.
 - destroying the immune system.
30. There are some indications of the existence of a cancer-prone personality characterized by the tendency to be
- hard driving, ambitious, and competitive.
 - angry, combative, and driven to achieve perfection.
 - inhibited, compliant, and depressed.
 - anxious, irritable, and easily embarrassed.
31. One probable variable linking stress and cancer is
- absence of stressful life changes.
 - a Type B personality.
 - hypertension.
 - an impaired immune system.

Answer Key

- | | | | | | | | | |
|-------|-------|--------|-------|--------|-------|--------|-------|-------|
| 1. c | 2. a | 3. d | 4. c | *5. d | 6. b | 7. b | 8. b | *9. b |
| 10. b | 11. c | 12. a | 13. c | 14. a | 15. c | *16. d | 17. c | 18. b |
| 19. c | 20. d | *21. c | 22. a | *23. d | 24. b | 25. a | 26. d | 27. c |
| 28. b | 29. a | 30. c | 31. d | | | | | |

Annotated Answers

5. The correct choice is **d**. First, the James-Lange theory proposes that physiological and muscular responses precede emotional states (I'm scared because my heart is pounding). Second, the Schachter-Singer theory proposes that emotions arise after one cognitively evaluates both the emotion-causing event and the body's physiological state.
- This choice is incorrect because it does not include the Schachter-Singer theory.
 - The Cannon-Bard theory proposes that one would feel scared at the same time as the heart rate increased.
 - This choice is incorrect because it does not include the James-Lange theory.
9. The correct choice is **b**. Subjects who were uninformed and misinformed tended to use the confederate's behavior as a relevant cue for identifying and labeling their unexplained arousal.
- The informed subjects who correctly anticipated the side effects of the injection tended not to supply an emotional label to their arousal.
 - The uninformed and misinformed subjects "adopted" the emotion of the confederate and did not respond to or evaluate it.
 - All subjects except for the control group experienced physiological changes and would have reported so.
16. The correct choice is **d**. During the initial alarm phase, the sympathetic nervous system is activated and the body's resources are mobilized. During the alarm phase people can perform seemingly "superhuman" feats.
- The exhaustion phase only occurs after prolonged or repeated stress.
 - During the resistance phase the parasympathetic nervous system is active and the person would not have the extra energy available to perform a superhuman feat.
 - There is no peak phase in GAS.
21. The correct choice is **c**. Even though anxiety contains a cognitive element, feelings of anxiety (or any other feeling) are emotional and not cognitive responses. The choices in **a**, **b**, and **d** are common cognitive responses to stress.

23. The correct choice is **d**. First, because you are initiating the break up you have control over the situation. Second, you would probably not experience the situation as sudden because you most likely would have been thinking about breaking up for a period of time.
- Your parents telling you of their impending divorce is something you would lack control over, increasing the situation's stressfulness. The news of the divorce might also have been sudden, which would also increase its stressfulness.
 - Your roommate telling you to move out could be sudden and you would not have control. It would also have a high measure of ambiguity (Where will I live?), which would further increase the stress of the situation.
 - Unlike the situation in which you initiated the break up, in this case you have less control and would probably perceive the situation as sudden.

– PART VI. SUMMARY TABLE –

To test your understanding of the material discussed in this chapter, complete the following table. Check your answers with those supplied in Part IX.

THEORIES OF EMOTION

Theory	Description	Supporting Evidence	Weaknesses
James-Lange theory			
Cannon-Bard theory			
Schachter-Singer theory			
Tomkins' facial feedback theory			
Solomon and Corbit's opponent-process theory			

– PART VII. THOUGHT QUESTIONS/CRITICAL THINKING –

Prepare answers to the following discussion questions.

1. Imagine that over Christmas vacation you've been separated from your boyfriend/girlfriend for three weeks. You've just arrived at the airport to meet your friend's plane. The plane is due to land any minute and you are hurrying to get to the waiting area before the plane lands. While passing through the mandatory metal detector, you set off the alarm. The guard looks at you suspiciously and sternly demands that you empty your pockets. You are offended and annoyed but empty your pockets until the problem is resolved and you are no longer suspected of being a terrorist. Your friend gets off the plane just as you arrive. When you see your friend's face, which instead of the warm smile you expect has a completely foreign expression (due to a very rough landing), you become concerned that your reunion may not be as happy as you expected. When your friend reaches you, he or she says, "What's wrong? You look upset?" What emotions would the different theories of emotion predict that you would be experiencing? How would these theories explain the reason for your experiencing a particular emotion?
2. In the chapter on motivation, you learned that there may be two optimum levels of arousal (one high and one low) that may switch back and forth. Which theory of emotion (James-Lange, Cannon-Bard, Schachter-Singer, Tomkins' facial feedback, or Solomon and Corbit's opponent process) is most consistent with this view of arousal? Explain your answer.
3. The link between stress and some illnesses (coronary heart disease, hypertension, malfunctioning of the immune system, and, perhaps, cancer) is becoming well established. It also appears that people who possess certain personality characteristics are more likely to develop specific illnesses. The Health Psychology section sidebar in this chapter suggests a number of stress-management strategies. Choose two or three of the strategies that would be most beneficial for an individual with Type A personality to use, and explain why use of these strategies would be important. Choose two or three of the strategies that would be most beneficial for an individual with a cancer-prone personality to use, and explain why use of these strategies would be important.

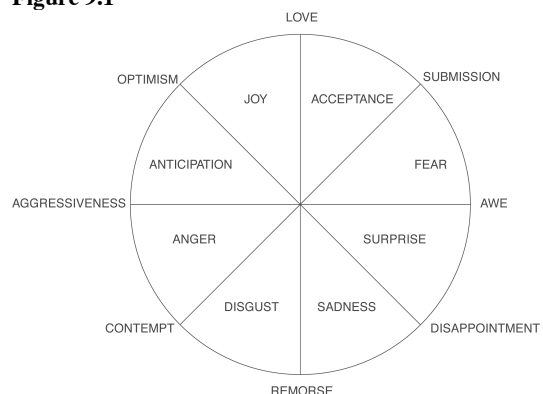
– PART VIII. APPLICATIONS –

1. Tomkins' facial feedback theory proposes that different facial expressions are associated with different emotional states. Cross-cultural research by Ekman found that people had 80 percent accuracy in identifying the correct emotion when viewing photographs illustrating happiness, sadness, surprise, anger, fear, and disgust. The figure (right) illustrates Plutchik's emotion wheel with the eight primary human emotions and the adjacent emotions listed.

Do you think it would be possible to link these two conceptualizations? (Do not as yet refer to Figure 9.4 in the text, which depicts the six emotional expressions.) Do you think that emotions close to each other on the emotion wheel would be represented by similar facial expressions? Do you think that emotions opposite each other on the emotion wheel would be represented by dissimilar facial expressions? According to the emotion wheel, does it make sense that in the Ekman study fear and surprise were most commonly confused?

Now examine Figure 9.4 to see if it provides evidence to support your answers to the questions in the preceding paragraph.

Figure 9.1



- Holmes and Rahe’s Social Readjustment Rating Scale for measuring the amount of stress a person has experienced in the last year contains questions that are relevant to people of all ages. However, as a college student, many of the typical stressors you experience (term papers, final exams, dorm living, etc.) are not listed. Develop a stress scale for college students. Identify at least 15–20 stressors commonly encountered by college students and decide on a life-change unit score for each stressor. What do you think would be a typical number of stress points (life-change units) for a college student to receive in a semester? What do you think would be a value associated with a high (and low) level of stress? Add up your points for the past semester and determine if your point total level (low, average, high) corresponds to the amount of stress you intuitively felt over the semester. If you have friends in psychology class who also did this application, compare your stress scales and look for similarities and differences in both the items included on the scale and the number of life-change units assigned to the stressors.

INTERACTIVE STRESS QUIZ FOR INSTANT HEALTH RISK RESULTS!

The following is an easy interactive stress test based on the research done by Holmes and Rahe*. It is designed to assess possible health risks, based on the things that have happened in your life in the last year.

Below are a variety of possible “normal” life events. Simply add up the numbers on the right of each event that has occurred in your life in the last 12 months.

Finally, a test you don't want a high score on!

According to their statistical prediction model, a score of 150 or less means a relatively low (about 30%) probability of stress-related illness (including heart attack, cancer, stroke, etc.). A score of 151 to 299 implies a 50% probability and a score of 300 or above implies an 80% probability of experiencing a health change—usually a negative change.

*Holmes & Rahe (1967) *Journal of Psychosomatic Research*, 11:213–219.

Death of a Spouse	100	_____
Divorce	73	_____
Marital separation	65	_____
Detention in jail or institution	63	_____
Death of a close family member	63	_____
Major personal injury or illness	53	_____
Marriage	50	_____
Being fired at work	47	_____
Marital reconciliation	45	_____
Retirement	45	_____
Major change in health or behavior of a family member	44	_____
Pregnancy	40	_____
Sexual difficulty	40	_____
Gaining a new family member through birth, adoption, or remarriage	39	_____
Major business readjustments	39	_____
Major change in financial state	38	_____
Death of a close friend	37	_____

Change to a different line of work	36	_____
Major increase in fights with spouse	35	_____
Taking on a mortgage	31	_____
Foreclosure on a mortgage or loan	30	_____
Major change in responsibility at work	29	_____
Son or daughter leaving home	29	_____
In-law troubles	29	_____
Outstanding personal achievement	28	_____
Spouse begins to cease work outside of home	26	_____
Go back to school	26	_____
Change in living condition (rebuilding, remodeling)	25	_____
Revision of personal habits	24	_____
Troubles with superior, boss	23	_____
Major change in working hours, conditions	20	_____
Change in residence	20	_____
Change to a new school	20	_____
Major change in usual type and/or amount of recreation	19	_____
Major change in church activities	19	_____
Major change in social activities	18	_____
Purchasing a new car, or other big purchase	17	_____
Major change in sleeping habits	16	_____
Major change in number of family get-togethers	15	_____
Major change in eating habits	15	_____
Vacation	13	_____
Christmas or holiday observance	12	_____
Minor violations of the law	11	_____

Below 150—35% chance of illness or accident within 2 years

Between 150–300—51% chance of illness or accident

Over 300—80% chance of illness or accident

– PART IX. SUMMARY TABLE SOLUTION –

THEORIES OF EMOTION

Theory	Description	Supporting Evidence	Weaknesses
James-Lange theory	Environmental stimuli trigger physiological and muscular responses, which then activate emotional states Different physiological responses result in different emotions	After spinal cord injuries, people report less intense emotions Negative emotions show specific physiological “fingerprints”	General physiological reactions associated with a variety of emotions are similar (for example, increased heart rate) Completely ignores the role of cognitive processes
Cannon-Bard theory	Subjective experiences and physiological and muscular responses occur simultaneously and are triggered by the thalamus	—	Perceives emotions as automatic reactions and does not discuss the role of cognition in evaluating emotions
Schachter-Singer theory	Physiological and behavioral responses occur first, then one cognitively evaluates the situation and messages from the body to interpret or label the emotion	Results of study with subjects who received epinephrine injections and were informed, uninformed, and misinformed	Some sudden emotional experiences seem to happen faster than would be predicted if it is necessary to evaluate the situation and physiological response
Tomkins’ facial feedback theory	Facial muscles respond to a variety of situations automatically, and feedback from facial muscles determines emotional experiences	Cross-cultural similarities exist in facial expressions If face is “posed” into a negative expression, individual shows physiological response characteristic of the emotion	—
Solomon and Corbit’s opponent-process theory	Emotions exist in opponent-process fashion After one strong emotion is experienced, the opposite emotion is activated to restore emotional balance With repeated activation of one emotion, the intensity or the original emotion weakens and the intensity of the opponent emotion grows stronger	Accounts for “addictive” behaviors such as mountain climbing, and also accounts for additions to drugs such as heroin	—

– BOOKS ABOUT STRESS, CHANGE, AND TRANSITIONS –

1. *Living Through Personal Crisis*, by Ann K. Stearns. (Ballantine.. New York. 1984) Comforting guidance for those who have experienced a loss.
Discusses the grieving process, feelings of guilt, readjustment to life and work, taking care of yourself, seeking professional help, and building a new life.
2. *Mastering the Winds of Change: Peak Performers Reveal, How to Stay on Top in Times of Turmoil*, by Erik Olesen. (Harper Collins, New York. 1994).
Strategies for mastering change and overcoming the stress it can create. How to view change as a challenge, when to control and when to let go, how to deal with setbacks and learn from mistakes, and how to use humor to cope with change.
3. *Necessary Losses*, by Judith Viorst (Fawcett, New York. 1987). Life's losses are unavoidable, and through them comes growth in perspective, maturity, and wisdom. This book explores what is given up in order to grow as well as the ways people respond to loss.
4. *New Passages: Mapping Your Life Across Time*, by Gail Sheehy. (Random House. New York. 1995).
Explores the transitions of life from our 40's through our 60's. The author argues that we can overcome societal discouragement and custom-design this second half of life so that it is full of promise.
5. *The Power of Optimism*, by Alan Loy McGinnin. (Harper Collins. New York. 1990). How positive thinking can lead to success, better health, and improved relationships. Explains how to take charge of the future by stopping negative thoughts and accepting what cannot be changed.
6. *Resiliency: How to Bounce Back Faster, Stronger, Smarter*, by Tessa Warschaw and Dee Barlow. (MasterMedia. New York. 1995).
How to increase resiliency and move forward in the face of highly resilient people for strategies others can use.

Chapter 9 Emotion and Stress

By
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Theories of Emotion

- What are the components of an emotion?
- Emotions are psychological responses of the whole organism that involve an interplay among:
 1. physiological arousal
 2. expressive behaviors
 3. Conscious experience

Does Your Heart Pound Because You Are Afraid or Are You Afraid Because You Feel Your Heart Pound?

- This is one of the oldest theoretical controversies regarding emotion.
- **William James and Carl Lange** believed that we feel emotion after we notice our body responses.
- **Walter Cannon and Philip Bard** believed that we feel emotion at the same time that our bodies respond.

Physical Response to Fear

- Most researchers believe that Cannon and Bard were more accurate, but we must note that the work of James and Lange emphasizes that physical responses are an integral part of the experience of emotion.

To Experience Emotions We Must Consciously Interpret and Label Them

- **Stanley Schacter's two-factor theory of emotion** contends that the cognitive labels we put on our states of arousal are an essential ingredient of emotion.
- **Richard Lazarus** believed that cognition or thinking is essential to the process of interpretation.

Emotions

- **Robert Zajonc**, believes that some simple emotional responses occur instantly, outside our conscious awareness and certainly before any interpretation occurs.
- If emotions are rooted in thinking, we can hope to change them by changing our thinking.
- Cognitive psychologists believe we can change people's thinking.

The Physiology of Emotion

- What are the physiological changes that accompany emotional arousal?
- In an emergency, the sympathetic nervous system automatically mobilizes the body for fight or flight. Directing the adrenal glands to release hormones that in turn increase heart rate, blood pressure and blood sugar level.

Arousal and Performance

- During arousal other changes include tense muscles, dry mouth, dilated pupils, slowed digestion and increased sweating.
- Our performance on a task is usually best when arousal is moderate though this varies with the difficulty of the task.
- That is why people who are very anxious tend not to do as well on exams.

Do Different Emotions Activate Different Physiological Responses?

- It appears that people's physical reaction to emotion is often indistinguishable.
- However, scientists have noted subtle differences in the brain pathways and hormones associated with different emotions.
- Eventually the different emotions should be able to be traced.

Major Types of Stress

- Frustration occurs when the pursuit of some goal is thwarted.
- Conflict
- In an approach-approach conflict, a choice must be made between two attractive goals.
- In an avoidance-avoidance conflict, a choice must be made between two unattractive goals.
- In an approach-avoidance conflict, a choice must be made about whether to pursue a goal that has positive and negative aspects.

Polygraphs

- These machines measure physiological indicators of emotion. However, many people can lie without expressing emotion and therefore, polygraphs are not used in a court of law.

Expressing Emotion

- How do we communicate nonverbally?
- Much of our communication is through the silent language of the body.
- Women tend to be better at reading and understanding of people's emotional clues.

Are Nonverbal Expressions of Emotions Universally Understood?

- Gestures appear to be culturally determined, but facial expressions such as those of happiness and fear are common all over the world.

Do Our Facial Expressions Influence Our Feelings?

- **Expressions** do more than communicate emotions to others. They also amplify our own feelings of emotion and signal our bodies to respond accordingly.

Experiencing Emotions

- What are the causes and consequences of **Anger**?
- **Anger** is most often aroused by events that not only are frustrating or insulting but also are interpreted as willful. Unjustified and avoidable.
- **Expressing anger maybe temporarily calming** but in the long run, it does not reduce anger.
- Expressing anger can actually arouse more anger.

What Are the Causes and Consequences of Happiness?

- A good mood boosts people's perceptions of the world and their willingness to help others (**the feel good, do-good phenomenon**).
- A person's self-perceived happiness or satisfaction with his or her subjective well-being.
- The moods triggered by the day's good or bad events seldom last beyond that day.

Significant Good Events

- Those events such as a substantial rise in income, seldom increase happiness for a long period of time.
- The adaptation-level phenomenon and the relative deprivation principle point out the short period of time that good events can produce.

Stress and Health

- **Walter Cannon** viewed stress, the process by which we appraise and respond to events that challenge or threaten us as the fight or flight system.
- **Hans Selye** saw it as a three-stage (alarm-resistance-exhaustion) or the general adaptation syndrome **GAS**.

What Events Provoke Stress Responses?

- Modern research on stress assesses the health consequences of catastrophic events, significant life changes and daily hassles.
- **The events** that tend to **provoke stress** responses are those that we perceive as both **negative and uncontrollable**.

Optimists and Stress

- Optimists seem to cope more successfully with stress and enjoy better health.

Control

- According to research, control is beneficial to many aspects of life and represents one of the most exciting developments in personality research in recent years.
- A high degree of control has been related to better coping mechanisms, and fewer stress effects. Greater mental and physical health, perseverance, higher aspirations and self-esteem. Lower anxiety, higher grades and greater social skills and popularity.

Why Are Some of Us More Prone than Others to Coronary Heart Disease?

- **Coronary heart disease**, North America's number one cause of death, has been linked with the competitive, hard-driving impatient, multi-tasking people and angry **Type A personality**.
- Under stress, the body of a reactive, hostile person secretes more of the hormones that accelerate the buildup of plaque on the heart's artery walls.
- **Type B personalities** are more relaxed and easygoing.

How Does Stress Make Us More Vulnerable to Disease?

- Stress diverts energy from the immune system, inhibiting the activities of its B and T lymphocytes and macrophages.
- Although stress does not cause diseases such as cancer, it may influence the disease's progression.
- Research indicates that conditioning also influences the immune system's responses.

Stress Summary

- The preponderance of research over the last forty years clearly points to the conclusion that Stress, although can be debilitating can also be dealt with effectively.
- It is the author's belief that it generally is not the knowledge of effective strategies for coping but rather the willingness to
 - (1) accept that we have a problem and
 - (2) that we are willing to take the time and devote the energy to changing old and ineffective habits that perpetuate the struggles.

Promoting Health

- What tactics can we use to manage stress and reduce stress-related ailments?
 - Aerobic exercise
 - Biofeedback
 - Counseling
 - Relaxation techniques
 - Hypnosis

Critical Thinking Question

- As a future psychologist, what would you suggest to a person who comes into your office and is struggling with emotions, stress and overall life style issues that are affecting this person's general health?

– OPEN BOOK QUIZ CHAPTER 9 PSYCHOLOGY 101 –

Define the following:

1. emotion
2. two-factor theory
3. polygraph
4. catharsis
5. feel-good, do-good phenomenon
6. stress
7. GAS
8. Type A
9. Type B
10. aerobic exercise
11. biofeedback

Extra Credit:

Your friend is very much out of shape and eats poorly. What would you recommend as a psychologist?