

Chapter in Review

1. Emotions are short-lived psychological states that include subjective experience or feeling, physiological changes, and behavioral responses. Moods are generally less intense and longer lasting, and it may be difficult to trace their origin. Affect is the “raw material” from which moods and emotions are created—the general quality of a person’s feelings at a particular time. Affect can differ in valence (positive-negative dimension) and level of activation (strength of arousal). Unpleasant emotions outnumber pleasant ones, perhaps because over evolutionary time, failing to pay attention to harmful or dangerous conditions had more serious consequences than failing to pay attention to beneficial conditions.
2. Emotions serve important functions. They help to guide rational choices and decisions, and without them we would likely not survive very long. “Emotional intelligence” (which may or may not be an actual form of intelligence) is the ability to identify, manage, and express one’s emotions constructively. Although most (or all) humans want to “feel good,” what this means differs not only from person to person, but may also differ by culture.
3. Most (but not all) researchers agree that basic emotions exist, although they may differ as to which emotions ought to be considered basic. A basic emotion is innate, distinct, and primary—all other emotions are derived from the primary set of basic emotions. There is fairly wide agreement (but not total consensus!) that fear, anger, sadness, enjoyment/happiness, disgust, contempt, and surprise are basic emotions. There are specific facial expressions associated with basic emotions, and Paul Ekman has devised the facial action coding system (FACS) to catalog the facial muscle configurations associated with each basic emotion. Basic emotions may play off one another in sequence or sometimes blend. Basic emotions may be affected by culture, for example, in emotion recognition and display rules. Display rules are implicit cultural standards and expectations that regulate the way emotion is displayed.
4. Most people lie during the day at least once. It is very difficult to tell if a person is lying. Some indications of lying, such as nervousness, may be present in truth-telling as well. Lying does increase cognitive load, and techniques that intentionally increase the liar’s cognitive load may be helpful in ferreting out liars.
5. William James and Carl Lange argued (the James-Lange theory) that emotion is feeling—a physiological response to a situation that only later comes to be interpreted by the mind as emotion. William Cannon and Phillip Bard (Cannon-Bard theory) argued instead that both the autonomic nervous system and the cerebral cortex are stimulated by the thalamus simultaneously when an emotion-laden event is perceived. Thus, becoming physiologically aroused and feeling the emotion occurs simultaneously. In their two-factor theory of emotion, cognitive theorists Stanley Schachter and Jerome Singer argued that physiological arousal occurs first (agreeing with James-Lange) but then stated that only when a cognitive label is attached to the arousal to explain it does the person experience emotion. In his cognitive-motivational-relational theory, cognitive theorist Richard Lazarus argues that both physiological arousal and emotion will only occur after a person interprets (appraises) the meaning of a given event.
6. In spite of cognitive theories, evidence shows that some emotions, notably fear, may bypass cognition entirely under certain circumstances, as argued by Robert Zajonc.

Neuroscientist Joseph LeDoux has demonstrated that there is a pathway of neural impulses from the thalamus (which receives sensory signals) to the amygdala, the principal center of fear response. This is the pathway for instantaneous fear response without the intervention of cognitive activity. However, fear may also occur following cognitive appraisal, although this response is slower.

7. Embodied emotion theorists believe that emotions are “captured” as “body memories.” When an emotion is experienced, the sensory phenomena and physiological and motor patterns of activity that occur during the experience are encoded in clusters of neurons. Over time, these experiences form a conception of each particular emotion to which a person returns each time he or she recognizes, recalls, or thinks about that emotion. Under such conditions, the clusters of relevant neurons are activated. Facial and postural feedback studies provide some evidence to support embodied emotion theory.
8. Anger is a difficult-to-define basic emotion that involves antagonism toward something or someone. Anger is common, has varied triggers, and can be dangerous. It generally occurs when a person feels unfairly treated or deliberately harmed in some way, or if he or she is aware of such things happening to someone else. Anger is generally an unpleasant experience, but “righteous anger” can be experienced as pleasant by some. Catharsis (venting) is popularly believed to relieve anger, but unless you are venting at the specific person who has angered you and you are convinced the person will not retaliate, venting increases anger—it does not decrease it. Forgiveness is a cognitive, motivational, and emotional process that unfolds over time. As the person forgives, he or she willingly renounces the “right” to resentful, bitter, and hostile feelings and judgments toward the offending party, abandons grudges or plans for revenge, and may also intentionally foster compassion, generosity, and other positive emotions toward the offender. Forgiveness has been shown to be an effective treatment for anger and may have numerous psychological, interpersonal, and health benefits.
9. Happiness can be defined as the relatively fleeting basic emotion happiness/enjoyment or as an overall subjective sense of well-being. Most people throughout the world are reasonably happy in the sense of subjective well-being. Money does not increase happiness unless the initial level of income is very low. Focusing on financial success beyond that necessary for a reasonably comfortable life may decrease happiness. There are “happiness set points” largely determined by genetics, but these set points can change as a result of circumstances. Levels of happiness are determined by happiness set point, life circumstances, and intentional activities, particularly social activities. There is a difference between a factor that results in overall well-being over the long term and what gives a person happiness or pleasure in the moment. For example, people may report that having and raising children has brought them a very great deal of happiness, but at any given moment of life, having to deal with one’s children might decrease happiness.
10. Health psychology is an interdisciplinary field that examines the ways that health and illness interact with psychology. Stress is defined differently by biologists and psychologists. Psychologists define stress as the psychological and physiological consequences of events that challenge a person’s ability to cope and which threaten well-being or interfere with important goals. These life events are called stressors.

College students throughout the world find similar life events stressful. However, stress is more than an event—it is a way of responding to events. Some “stressful events” may prove less stressful (or not at all stressful) to individuals with good coping skills.

11. Stress is not a bad thing if it is relatively mild and motivates people to accomplish goals or protect themselves and their loved ones against threats. Brief activation of stress response strengthens immune systems, while chronic, unremitting stress is damaging to immune and nervous systems. One reason that chronic stress is dangerous is that stress response takes away from long-term survival resources because activation of the sympathetic nervous system suppresses vital functions of the parasympathetic nervous system. Walter Cannon used the term *fight or flight response* to describe the biological processes triggered in response to extreme stress. Hans Selye drew from Cannon’s work to develop a model of chronic stress activation known as the General Activation Syndrome (GAS). GAS consists of three phases: the alarm phase, resistance, and exhaustion. Females may not respond with fight or flight in response to stress as often as men. Women may “tend and befriend” instead—seek supportive social relationships and provide care. The hormone oxytocin is implicated as a mechanism governing tend and befriend, while the hormones adrenaline and cortisol govern fight or flight.
12. Psychoneuroimmunology is the study of the interaction between psychology, the nervous and endocrine systems, and immune systems. There is a feedback loop between the brain and immune systems. Chronic stress depresses immune systems, which results in reduced ability to fight off disease, and development of unhealthful patterns of cognition and emotion. Research has demonstrated a link between chronic stress and development of upper-respiratory disease, chronic heart disease, and depression.
13. A placebo is any inert substance or bogus treatment administered to a person who believes the procedure or substance is genuine. Many medical professionals prescribe placebos, because these treatments—while bogus—sometimes have actual beneficial effects due to the patient’s belief that the treatment is genuine. However, in almost all cases placebos, when effective, exert their effects on symptoms rather than signs. Placebos are most likely to be effective in treatment of pain. Placebo has an “evil twin,” nocebo—a bogus treatment that has unwanted or adverse effects.
14. Ethnic minorities experience unique stressors: ethnic discrimination, stereotype threat, and own-group conformity pressure. However, some ethnic minorities may also experience unique protection against stress.
15. Coping is the management of stress—ensuring that the demands of potentially stressful situations do not overwhelm psychological or material resources. Methods of coping that have shown evidence of effectiveness include engaging in an ongoing program of moderate aerobic exercise; meditation based upon Buddhist and Hindu techniques; increasing social support (although you may not need to use this support as long as you are confident in the knowledge that it exists for you); promoting an optimistic outlook; practicing a religious or spiritual discipline, as long as it does not focus on the idea of punishment by God for misdeeds; and pet ownership.

Section Summaries

What is emotion?

1. Emotions are short-lived, relatively intense psychological states consisting of distinct subjective experience or feeling, physiological changes, and behavioral responses. Moods are longer lasting, less intense emotional states whose origin may be difficult to pinpoint. Affect is an umbrella term for the “raw material” from which emotions and moods are drawn. Affect exists along two dimensions: Valence and activation.
2. The number of unpleasant emotions greatly exceeds that of pleasant emotions.
3. Although emotion can sometimes overwhelm rational action, emotions are also necessary for rational decisions and behavior to take place. It is unlikely that human beings could have survived as a species without emotions.
4. Ideal affect is the sort of affect each person values, prefers, and wishes to experience. This may differ from the person’s actual affect. Some evidence shows that Far Eastern peoples may be more attracted to low-activated positive affect, while Americans (and perhaps other Westerners) prefer high-activated positive affect.

Are some emotions “basic”?

1. Certain emotions may warrant the term “basic” because they are innate, distinct, and form the basis for “families” of emotions derived from them. Most researchers include at least fear, sadness, enjoyment/happiness, anger, disgust, contempt, and surprise among their lists of basic emotions.
2. Emotion researcher Paul Ekman has charted the specific muscular configurations which form facial expressions of basic emotion in his facial action coding system.
3. In research studies people do poorly at detecting lies, but when people keep journals of the lies they tell they report that their lying is frequently detected. Police officers viewing video tapes of suspect interrogations are often able to detect lying quite well. Lying increases cognitive load, so that techniques which increase cognitive load further may be helpful in ferreting out liars.
4. Basic emotions are universal, but they are affected by culture. People are better at decoding emotional expressions of others from their own culture, and those in Western societies may use different parts of the face from those in Far Eastern societies when coming to judgments about others’ facial expressions of emotions.
5. Display rules are unspoken standards and expectations which regulate the way emotion is displayed in a given culture.

How do psychologists explain emotion?

1. The James-Lange theory states that emotional stimuli trigger a physiological reaction. Only when awareness of this reaction reaches the cerebral cortex is emotion experienced. The Cannon-Bard theory states that once emotional stimuli are perceived, physiological responses and emotional experience occur simultaneously.
2. The Schachter and Singer two-factor theory states that physiological arousal follows directly after perception of an emotional stimulus, but the process of cognitive labeling of the arousal intervenes prior to the experience of emotion. The Lazarus cognitive-motivational-relational theory states no physiological arousal or emotional experience can occur unless cognitive appraisal and/or labeling has already occurred.

3. LeDoux demonstrated that some emotional experiences, notably fear, may entirely bypass the cerebral cortex and, therefore, cognition. This may occur if sensory signals pass through the thalamus and are routed directly to the amygdala before being processed by the cerebral cortex.
4. Embodied emotion theorists point to evidence collected by researchers in facial and postural feedback to support their contention that when an emotion is recognized, recalled, or thought about, the emotion is “reactivated” in neurons and physiological structures which participated in the original experiences of that specific emotion.

How do people deal with anger?

1. Anger is a feeling of antagonism toward someone or something. It is generally experienced in response to an event or idea, but it may also exist as a character trait. Anger is generally an unpleasant feeling, but it may sometimes be pleasurable.
2. Anger often causes more suffering to the angry person than to its recipient. “Venting” anger appears to offer relief only when directed at the specific person who has angered you and you are convinced the person will not retaliate. Otherwise, venting increases anger. Although “talking it out” with a friend may sometimes be helpful, it may also serve as a “rehearsal” of the anger.
3. One of the most promising methods for reducing anger is forgiveness, engaged in as a conscious decision.

Who is happy (and why)?

1. Happiness can be defined as an emotion (intense and fleeting) or a general level of subjective well-being and life satisfaction.
2. Most people describe themselves as generally happy with their lives, and most people believe they themselves are happier than others are.
3. Increased income results in increased happiness primarily if initial levels of income are quite low. Otherwise, income is not strongly related to levels of emotional happiness. However, citizens of nations with high GDPs are much more likely to express overall life satisfaction. Focusing one’s life on making money can result in reduced happiness, particularly if one is comparing one’s wealth with that of others or against an ideal standard.
4. Each person’s general level of subjective well-being and life satisfaction is strongly influenced by a genetic “set point” to which each of us tends to return after uncharacteristic levels of increased or decreased happiness. However, these set points are not set in stone, and people are more likely to experience changes in happiness set point than in many other characteristics affected by genetics.
5. Apart from genetics and life events beyond one’s control, the factors which contribute the most to overall happiness, well-being, and life satisfaction are social in nature: friendships, love and parenting relationships, and contributions made to the welfare of others. However, such relationships do not always contribute the most to happiness as an intense and fleeting emotion.

What is stress?

1. Stress is usually defined as the psychological and physiological consequence of any event which challenges a person's ability to cope and which threatens well-being or interferes with important goals. Each specific stressful event is known as a stressor.
2. The stress response is highly adaptive in the short term and serves important functions. The most common response to short-term stress—even severe stress—is resilience. However, chronic, unremitting stress can be damaging to brain and body.
3. Fight or flight is the complex stress response first described by Walter Cannon and elaborated by Hans Selye in the general adaptation syndrome (GAS), which consists of three phases: alarm, resistance, and exhaustion.
4. According to Shelley Taylor, the tendency to care for infants and affiliate with others is a response to stress that is at least as common among women as fight or flight. The hormone oxytocin may trigger the desire to extend care and seek social support.
5. Although ethnic minorities suffer unique stressors, aspects of ethnic minority life may also protect against stress. Unique stressors of minority groups include ethnic discrimination, stereotype threat, and own-group conformity pressure.

Does stress cause illness?

1. Psychoneuroimmunology is the study of the interaction between psychology, the nervous and endocrine systems, and immune systems.
2. Stress can increase susceptibility to colds, and evidence also strongly suggests that stress and negative emotional style increase the risk of coronary heart disease (CHD).
3. Placebos have been shown to effectively treat pain under certain circumstances, although these effects are not at all as strong as those of actual pain-killing drugs. Nocebo effects include the experience of apparent side effects of medications that are not actually the result of the medications themselves.

Coping: How can stress be managed?

1. Some methods of coping with chronic stress that have demonstrated effectiveness include aerobic exercise, relaxation training and meditation, social support, optimism, religion and spiritual life, and pet ownership.
2. The relaxation response is a self-induced alteration in consciousness that results in decreased physiological and psychological arousal, and increased relaxed attention to the moment. The relaxation response is one aspect of most forms of meditation, although relaxation is primarily a “side effect” of meditation and not its purpose.
3. People whose lives include social support networks are better able to cope with stress. However, it is not necessary for a person actually to utilize his or her social support network for beneficial effects on stress to be felt, and sometimes utilization of social support can be counterproductive.
4. Optimistic and pessimistic explanatory styles differ along three dimensions of explanation: internal/external, permanent/temporary, and catastrophic/surmountable. An optimistic explanatory style inoculates a person from the effects of stress.
5. For reasons not completely understood, those with higher levels of religious involvement appear to experience fewer negative effects of stress than others. However, it is likely that most, but perhaps not all, of this is explainable by the indirect effects of religion, such as increased social support, superior health habits, increased sense of purpose, and positive emotion.

6. Some research suggests that pet ownership may reduce stress.