Chapter 2: The History of Motivation and Emotion

2.1. According to Aristotle’s theory, the efficient cause for drinking water would be __________, and the final cause for drinking water would be __________.
a. brain mechanisms of thirst, theory of hedonism  
b. maintenance of the body, to reduce feelings of thirst  
c. to reduce feelings of thirst, maintenance of the body  
d. pleasure of the mind, pleasure of the body

Answer: c

2.2. According to the Greek philosopher Socrates, a person may not always behave in accord with hedonism. This is because a person
a. is not always motivated by pain and pleasure.  
b. is motivated by what is right or wrong.  
c. is motivated by goal achievement.  
d. may lack knowledge of the hedonic consequences of an action.

Answer: d

2.3. According to the Greek philosophers Democritus and Epicurus, hedonism means
a. that in the long run, try to have the amount of pleasure exceed the amount of pain.  
b. that in the short run, try to have the amount of pleasure exceed the amount of pain.  
c. to live life to the fullest each day, as if there is no tomorrow.  
d. to be unwilling to endure a hardship that is necessary for accomplishing a goal.

Answer: a

2.4. To draw near the things that please us and to withdraw from the things that displease us was Thomas Hobbes' description of what type of motivation?
a. contrast  
b. incentive  
c. choice  
d. human nature

Answer: b

2.5. According to the philosopher John Locke, a person may acknowledge the existence of a greater goal, but instead chooses a small reward. Locke writes that the reason for this choice is that
a. the small reward is an incentive, the large reward is a final goal.  
b. the greater goal is also the one that is more difficult to achieve.  
c. a person does not realize the different pleasures a goal or reward will bring.  
d. the small reward is also the one that brings immediate pleasure.
2.6. What did Jeremy Bentham's principle of utility refer to?  
   a. All human motives originate in the unconscious.  
   b. Motivation depends on knowledge and competence.  
   c. Changes in happiness determine human behavior.  
   d. Behavior is based on doing what is right.  

Answer: c

2.7. A student plans to party, rather than study Thursday night for Friday’s exam. As a result of her decision, she will have fun Thursday evening, but experience displeasure days later from a low exam score. The student’s decision was based on which of Freud’s concepts?  
   a. reality principle  
   b. pleasure principle  
   c. unconscious  
   d. repression  

Answer: b

2.8. The modern-day law of effect is to hedonism as  
   a. an observable consequence of behavior is to a subjective feeling of pain or pleasure.  
   b. reward size is to reward delay.  
   c. a painful experience is to a pleasurable experience.  
   d. motivation is to emotion.  

Answer: a

2.9. According to the modern-day law of effect,  
   a. a punisher decreases behavior and a reinforcer increases behavior.  
   b. immediate rewards are more motivating than later rewards are.  
   c. an increase in a need is unpleasant, while a decrease in a need is pleasant.  
   d. pain and pleasure determine human behavior.  

Answer: a

2.10. Impulsiveness is to self-control as  
   a. reality principle is to pleasure principle.  
   b. pleasure principle is to reality principle  
   c. the unconscious is to the preconscious.  
   d. repression is to unconscious  

Answer: b
2.11. People are willing to endure negative emotions in order to accomplish a goal. For example, people are willing to endure fear if escape behavior (escape enemy) is required to win a computer game. Which of Sigmund Freud’s principles explains this behavior? Freud’s principle regarding
a. repression  
b. pleasure  
c. reality  
d. unconscious
Answer:  c

2.12. Positive psychology involves the study of
a. the impact of positive versus negative incentives.  
b. how delay of gratification strengthens a person’s persistence motivation.  
c. the alleviation of unhappiness in the lives of people.  
d. how people, groups, and institutions can function at their best.
Answer:  d

2.13. Population thinking assumes that
a. different populations or groups of people differ in what motivates them.  
b. populations can become extinct if they do not adapt to their environment.  
c. a sample of people is a representation from the larger population from which the sample was drawn.  
d. every person in a population is different in what motivates him or her.
Answer:  d

2.14. Variation in Darwin’s theory of evolution can refer to
a. differences among humans in the amount of some physical trait.  
b. physical traits being inherited from one generation to the next.  
c. the environment favoring some physical traits over others for survival.  
d. children receiving different amounts of a physical trait from each parent.
Answer:  a

2.15. Selection in Darwin’s theory of evolution can refer to
a. differences among humans in the amount of some physical trait.  
b. physical traits being inherited from one generation to the next.  
c. the environment favoring some physical traits over others for survival.  
d. children receiving different amounts of a physical trait from each parent.
Answer:  c

2.16. For Herbert Spencer, the relationship between hedonism and evolution was that
a. physical traits that aided survival were inherited by the next generation.
b. behavior that aided survival was accompanied by pleasurable consequences.
c. behavior detrimental to survival had neutral hedonic consequences.
d. learned behavior that was pleasurable was transmitted to the next generation.

Answer: b

2.17. Instincts as explanations of behavior have lost their popularity in psychology. The reason:
a. The list of possible instincts became too long.
b. Different instincts appeared contradictory in their explanations of behavior.
c. It was discovered that all instincts were actually the results of learning.
d. answers a and b

Answer: d

2.18. Some psychologists maintain that love is an instinct that evolved. This instinct evolved to solve what environmental problem?
a. protection problem
b. commitment problem
c. sharing problem
d. food-scarcity problem

Answer: b

2.19. Freud's major motivational concept
a. was about the conflict between different parts of a person’s cognitive consciousness.
b. dealt with how thoughts and ideas entered into the preconscious.
c. concerned the conscious expression of instinctual impulses, which reside in the unconscious.
d. concerned the latent content of a person’s dreams.

Answer: c

2.20. According to Freud, for an unconscious impulse to reach consciousness, the impulse
a. must pass by the censor located between the unconscious and preconscious.
b. must be repressed.
c. must have been elicited by a stimulus in the environment.
d. must slip by and avoid being detected by the eye of the conscious.

Answer: a

2.21. Freud postulated a reality principle. This principle
a. allows for the postponement of immediate pleasure to a more appropriate time.
b. always works to counteract the pleasure principle.
c. means that people are motivated by goals rather than by pleasures.
d. maintains that people are motivated by their preconscious rather than their unconscious.

Answer: a
2.22. For Freud, laughing at jokes that concerned sex and aggression
a. was a way of keeping dangerous impulses bottled up in the unconscious.
b. was a costly use of unconscious energy.
c. results from the lack of energy that was necessary for satisfying unconscious impulses.
d. was a socially approved way of satisfying instinctual impulses.

Answer: d

2.23. Instincts, drives, and needs have what motivational characteristics in common?
 a. They are activated involuntarily by the same class of stimuli.
b. They refer to the different temporal (time) aspects of consummatory behavior.
c. They refer to internal entities that seek or press for satisfaction.
d. They refer to the different motivating characteristics of an external incentive.

Answer: c

2.24. Which statement best reflects the current definition of the unconscious?
 a. The unconscious is the tendency to act emotionally rather than rationally from thought.
b. The unconscious is being unaware of processing the stimuli that affect our behavior.
c. The unconscious is the storehouse of our personal past.
d. The unconscious is the storehouse of our evolutionary past.

Answer: b

2.25. What does Woodworth’s concept of drive refer to?
 a. Drive is that part of behavior that is learned and is not the result of instinct.
b. Drive refers to behavior that persists in the absence of an initiating stimulus.
c. Drive is an external stimulus that produces approach behavior.
d. Drive refers to a reflex action.

Answer: b

2.26. How do needs motivate behavior according to Henry Murray, who postulated 22 needs, such as the need to achieve (six of them were described in book)?
 a. Needs create desires and a goal of satisfying those desires.
b. Needs are unconscious instinctual impulses that are expressed in behavior.
c. Needs are categories of incentives, such as money, grades, and traffic laws.
d. People are motivated to increase their need intensity.

Answer: a

2.27. Which of the following is not a characteristic of the basic psychological need of existential concerns? This need does not involve
a. concern about one’s own death.
b. concern with social isolation.
c. concern of self-insight.
d. concern with obtaining happiness.

Answer: d

2.28. In the Tolman and Honzik experiment, rats learned a complex maze. The sudden change in the number of errors per trial with the introduction/removal of a food reward shows the effects of
a. drive.
b. instinct.
c. incentive.
d. psychological need.

Answer: c

2.29. In the Tolman and Honzik experiment, rats learned a complex maze. After several trials, a food reward was introduced in the goal box. This resulted in a sudden __________ in the number of errors. OR After several trials, the food reward was removed from the goal box. This resulted in a sudden __________ in the number of errors.

a. increase, increase
b. decrease, decrease
c. decrease, increase
d. increase, decrease

Answer: c

2.30. An example of Carl Warden’s incentive-drive concept is
a. water is linked with hunger.
b. food is linked with hunger.
c. food is linked with water.
d. sugar is linked with salt.

Answer: b

2.31. The Columbia Obstruction Box employed an electrified grid that a rat had to cross in order to attain an incentive, such as food. A rat would make a number of grid crossings in order to obtain the incentive. The number of grid crossings was used to indicate
a. the strength of the incentive-drive link.
b. the strength of the drive.
c. the strength of the incentive.
d. the strength of the rat’s learning ability.

Answer: a
2.32. In Kurt Lewin’s field theory, the concept of psychological force dealt with
a. an unconscious instinctual impulse.
b. the valence of and psychological distance of an incentive.
c. the psychological tension within a person.
d. both answers b and c

Answer: d

2.33. Lewin’s field theory of behavior postulates two concepts: valence of goal properties and
tension in a person. Motivation for approaching a goal would be greatest when a
a. goal is positive and tension is strong.
b. goal is negative and tension is weak.
c. goal is positive and tension is weak.
d. goal is negative and tension is strong.

Answer: a

2.34. Which question asks about the temporal effects in temporal motivation theory?
a. Is an incentive negative or positive?
b. Is an incentive available immediately or after some delay?
c. Is an incentive small or large?
d. Is an incentive easy or difficult to attain?

Answer: b

2.35. According to the French philosopher Rene Descartes, there are more negative emotions
than positive emotions. His explanation for this is that
a. negative emotions intrude into consciousness easier.
b. negative emotions cannot be categorized.
c. negative emotions motivate escape and avoidance from danger.
d. negative emotions do not rely on cognitive thought for their occurrence.

Answer: c

2.36. Action readiness is best described as
a. an incentive-drive link that activates behavior.
b. the impulse to satisfy a psychological need.
c. an incentive for arranging the motivation sequence.
d. an emotion providing the motive for specific actions.

Answer: d

2.37. In the late 1800s and early 1900s, psychologists hypothesized that physiological arousal
served what function in emotion?
a. Physiological arousal provided the information for an emotional feeling.
b. Physiological arousal energized emotion-specific behavior.
c. Physiological arousal did both (answers a and b).
d. Physiological arousal was equivalent to excitement with no specific function.

Answer: c

2.38. “I have a pang in my heart.” “My heart feels heavy.” These phrases refer to what characteristic or component of emotion?
a. Stout’s view that each emotion revives a set of ideas consistent with that emotion
b. the ideas of Bacon and Descartes that each emotion has a physiological accompaniment
c. impulses for action
d. Margaret Washburn’s concept of what occurs during a motor explosion

Answer: b

2.39. In The Expression of Emotion in Man and Animals (1873), Darwin describes facial expressions. According to Darwin, facial expressions had the following characteristics but one. That is, what characteristic did facial expressions not possess? Facial expressions
a. can influence the subjective feel of an emotion.
b. were mostly innate, although some practice may be required.
c. were linked to behavioral intentions.
d. influence our cognitive thoughts or direct our thinking

Answer: d

2.40. Currently, the search for the biological underpinnings of emotions has
a. shifted from physiological responses to brain maps.
b. shifted from brain maps to physiological responses.
c. shifted from cognitive impulses to behavioral impulses
d. shifted from subjective feelings to behavioral expressions.

Answer: a
ESSAY QUESTIONS

1. a. Define hedonism.
   b. Relate how the motivation produced by positive and negative incentives is related to hedonism.

2. Describe the relationship between impulsiveness versus self-control, on the one hand, and immediate versus delayed incentives, on the other.

3. a. Differentiate among Freud’s unconscious, pre-conscious, and conscious.
   b. Describe the impact of each concept on motivation.

4. People differ in psychological needs and personality traits.
   a. Use Darwin’s concept of population thinking to account for why these differences exist.
   b. How do these differences exhibit themselves in the motivation of behavior?

5. How do Woodworth’s concepts of mechanism and drive relate to knowledge, competence, and motivation (from chapter 1)?

6. What is a psychological need and how does it motivate behavior? Use examples of psychological needs from Murray’s list of such needs.

7. a. What does Warden’s incentive-drive link refer to?
   b. Relate this link to the results of Kintsch’s experiment that examined the level of thirst drive and size of water reward on the behavior of rats (from chapter 1).

8. a. What four factors are involved in Lewin’s formula for psychological force?
   b. How is psychological force a basis for motivation?
   c. How do these four factors contribute to motivation?

9. a. Differentiate among the components of emotion: feelings, physiological arousal, and facial expressions.
   b. Does any individual component refer to emotion, or does their combination refer to emotion? Explain!

10. a. What does it mean to state that “emotions are motives”?
    b. How does the concept of “action readiness” enter into your discussion?
Chapter 2. The History of Motivation and Emotion

- Overview
- Brief history of motivation
- Brief history of emotion
Brief History of Motivation

The ancient Greek philosophers, philosophers from 1600 on, and early psychologists all had opinions about motivation.
Aristotle’s Theory

• Causes of behavior:
  – Efficient causes trigger the behavior, e.g., food triggers eating.
  – Final cause is the purpose of behavior, e.g., eat to provide nourishment to body.
Aristotle’s Theory, continued

- Formal cause refers to a theory, e.g., humans innately prefer sweets as an aid to survival.
- Material cause refers to role of brain in behavior, e.g., brain’s hypothalamus triggers hunger.
Hedonism

Motivation is governed by hedonism.
Ancient Sources

- **Hedonism**: pursue pleasure and avoid pain.
- For ancient Greek philosophers Socrates (470-399 B.C.), Democritus (460-370 B.C.), and Epicurus (341-271 B.C.), hedonism meant pleasure is to exceed pain when averaged over the long run.
Later Philosophers

- Hobbes (1640) on incentive motivation: approach pleasing, avoid displeasing stimuli.
- Locke (1690) on choice: small immediate versus large delayed reward, nearness of reward increases our desire for it.
Later Philosophers, continued

Bentham’s (1789) principle of utility: things are beneficial if they increase happiness or decrease unhappiness.
**Sigmund Freud (1920)**

- **Pleasure principle**: pursue pleasure, felt as sudden decrease in tension.
- **Reality principle**: circumstances determine when to attain pleasure, postpone for greater pleasure later.
Edward Lee Thorndike (1911)

• **Law of effect**: satisfying consequences strengthen behavior, and

• Dissatisfying consequences weaken behavior.

• A reenactment of Thorndike's famous puzzle box experiment is at
  
  [www.youtube.com/watch?v=BDujDOLre-8](http://www.youtube.com/watch?v=BDujDOLre-8)
Law of Effect Today

• Consequences refer to observables (reinforcers/punishers) rather than to subjective states.
• Reinforcers are consequences that increase behavior.
• Punishers are consequences that decrease behavior.
Current Trends

• Impulsiveness: tendency to choose immediate reward, influenced more by nearness of reward.
• Self control: tendency to choose delayed rewards, influenced less by nearness of reward.
• Benefits of self-control: higher grades, less alcohol use, better adjustment, better interpersonal relations.
Current trends, continued

• **Positive psychology:** science that investigates what promotes maximal functioning of people, groups, and institutions.
• Study the conditions that produce happiness.
Evolution and Motivation

Our evolutionary past helps determine what currently motivates people today.
Charles Darwin (1859)

• **Theory of evolution**: changes in the frequency of physical and psychological traits are explained by principles of variation and selection.

• Video illustrating evolution with length and shape of humming bird’s bill is at [http://www.pbs.org/wgbh/evolution/library/11/2/quicktime/e_s_4.html](http://www.pbs.org/wgbh/evolution/library/11/2/quicktime/e_s_4.html).
Charles Darwin (1859), continued

- Variation: amount or value of a particular trait varies in frequency in the population.
- Selection: environment selects trait that aids survival; trait increases in frequency.
Figure 2.1. Variation and Selection in Evolution.
The percentage of slow-, medium-, and fast-running cheetahs changes over succeeding generations. Slow-running cheetahs decrease in the population because they are not fast enough to catch even the slowest prey. Medium-fast cheetahs hold their own, since they can catch the slowest prey. Fast-running cheetahs increase in the population because they can catch a greater number of prey they pursue.
Charles Darwin, continued

• Variation leads to population thinking.
• **Population thinking**: view emphasizing uniqueness of each individual and individual differences.
• Example: People differ in strength of their psychological needs and their personality traits.
Herbert Spencer (1899)

- Pleasure selects for behaviors that aid survival.
- Pain eliminates behaviors that are harmful to survival.
- Pleasure motivates eating, drinking, and sex.
- Remove the pleasure of those behaviors, and the result is an uninhabited planet.
Instincts

- **Instinct**: Inherited impulses that result in specific patterns of behavior.
- Some motivated behaviors appear to be instinctive.
- Examples: sucking, crying, smiling, emotional feelings.
Current Trends

• Instincts viewed as species-typical behavior.
• Behaviors exhibited by all members of the species.
• Behaviors that are innate.
• Behaviors that are released or activated by a stimulus.
Current Trends, continued

• Love as an example of an instinct (or emotion) that evolved to solve the commitment problem.
• Commitment means one individual remains loyal and faithful to another for the survival benefits of each.
• Love evolved to ensure commitment.
Unconscious Motivation

- Inaccessibility to one’s motives
- Being unaware of sources of one’s motivation
- A main originator of unconscious motivation is Sigmund Freud.
- A PBS 57-minute video about Sigmund Freud titled *Freud Under Analysis* is available at [http://www.youtube.com/watch?v=4RbusaCNYFI](http://www.youtube.com/watch?v=4RbusaCNYFI).
Freud’s Conscious-Unconscious Distinction

• Freud uses an analogy of two rooms to explain the unconscious, preconscious, and conscious.

• **Unconscious:** area of mind that is not open to inspection and is analogous to a large room that contains repressed impulses, instincts, desires.
Freud’s Conscious-Unconscious Distinction, continued

- **Preconscious**: area of mind that is accessible to inspection and is analogous to a small room containing thoughts, feelings, sensations.

- **Consciousness**: area of mind that is currently being inspected and is analogous to having attracted the eye of the conscious in the small room.
Figure 2.2. Freud’s Concept of Motivation.

Freud used two adjoining rooms separated by a doorway as a metaphor for his unconscious and preconscious motivation. Unconscious thoughts and impulses reside in the large room and try to enter the preconscious by slipping by the censor, who is standing guard between the two rooms. Thoughts and impulses in the smaller room of the preconscious compete for the attention of the conscious.
Freud’s Conscious-Unconscious Distinction, continued

• **Repression**: Censor prevents instinctual impulses from entering small room, i.e., from reaching the pre-conscious.

• Function of repression is to protect person from instincts that could produce anxiety, embarrassment, and punishment.
Motivational Instincts and the Unconscious

• According to Freud, instincts originate in the body and exert pressure.
• Aim of instinct is to be satisfied through interaction with an object.
• Main Freudian instincts: sex, death, ego preservation.
Satisfying Unconscious Impulses

• Instincts can be satisfied:
  – Through joke work
  – Through dreams: manifest (actual) content and latent (meaning) content
Current Trends

• Unconscious motivation as being unaware of processing and reacting to a stimulus.
• Person begins responding prior to being aware of intentions to do so.
• Demonstration of intending to response prior to awareness of intention is available at http://www.youtube.com/watch?v=IQA4nwTTmcs.
Internal Sources of Motivation

When motivation for behavior begins inside the organism or person as in the case of a drive or need.
Drive Concept

• Mechanism: how we do something or means by which an act is performed.

• Drive: stimulus that induced behavior and keeps behavior going even if stimulus is now absent.
Psychological Needs

• Needs are inherent characteristics that indicate a psychological deficit.
• Person is lacking some necessary ingredient available in the environment.
Psychological Needs, continued

• Primary needs: Murray’s (1938) physiological needs, e.g., need for food or iron.

• Secondary or psychogenic: Murray (1938) postulated 22 psychological needs, e.g., need for achievement or affiliation.
Psychological Needs, continued

• Example of two of Murray’s needs & Psychological Insight Test to measure the needs:
  • **Achievement:** To accomplish tasks, surpass self and others. “I am driven to ever greater efforts by an unslaked ambition.”
  • **Affiliation:** To approach others, win their affection, remain loyal. “I am in my element when I am with a group of people.”
Psychological Needs, continued

- Two more of Murray’s Needs & *Psychological Insight Test* to measure the needs:
  - *Autonomy:* To be independent and free, resist coercion. “I am unable to do my best work when in a subservient position.”
  - *Dominance:* To control your environment, to influence others. “I enjoy organizing or directing activities of a group, team or club.”
Current Trends

• Danger of creating too many psychological needs so that needs lose their explanatory power.
• A solution is to arrange needs in a hierarchy so that lower order needs are derived from higher needs.
Current Trends, continued

• Existential concern: a basic psychological need shared by all people.
• Existential concerns: one’s own death, isolation, self-identity or self-insight, freedom or free will, meaning of life.
External Sources of Motivation

• Incentives: stimuli that attract or repel.
• Tolman & Honzik (1930) experiment of hungry rats learning a maze:
  – Provide food incentive and maze errors decrease.
  – Remove food incentive and maze errors increase.
Figure 2.3. Incentive Change and Performance.

When a food incentive is introduced on trial 11, there is a sudden decrease in the number of errors in traversing a maze and when food is removed errors increase. *Source: “Introduction and Removal of Reward and Maze Performance in Rats” by E. C. Tolman and C. H. Honzik, 1930, University of California Publications in Psychology, 4, figure 4. Copyright 1930 The Regents of the University of California.*
External and Internal Sources Induce Behavior

• Motivation depends on both internal and external sources.
• Example: Hunger and food combine to motivate behavior.
Warden’s (1931) Incentive-Drive Link

- **Incentive-drive**: Incentive (water) links with drive (thirst) to motivate behavior.
- Increased hunger drive increases electrified grid crossings for food incentive.
- Delayed food incentive decreases electrified grid crossings in hungry rats.
FIGURE 2.4a  Drive and Performance. As the number of days of food deprivation increases, rats make more crossings of an electrified grid in order to obtain food.


FIGURE 2.4b  Incentive Delay and Performance. As the length of the delay for a food incentive increases, the number of electrified grid crossings made by hungry rats decreases.

Lewin’s (1936, 1938) Field Theory

• Theory that uses internal and external sources to develop idea of psychological force as motivation.
• **Psychological force**: Motivation depends on valence of objects in life space (personal environment), psychological tension, and psychological distance.
Lewin’s (1936, 1938) Field Theory, continued

\[
\text{Psychological Force} = \frac{\text{Valence of goal properties; tension in person}}{\text{Psychological distance between person and goal}}
\]
Current Trends

• Temporal motivation theory: description of how incentive value decreases with incentive delay
• Delayed incentives have less value or are less motivating than near incentives, e.g., value of tomorrow’s exam is greater than next week’s exam.
Brief History of Emotion

Historically, description of emotion shifted from outward physiological movement of the person to movement that occurs within the person.
Emotion as Subjective Feeling

- Personal feelings of affect that arise in consciousness.
- Feelings of bodily symptoms.
- Feelings that flood consciousness.
Basic Emotions

• Early Greeks (BC years) to Descartes (1649) to James (1884) considered basic emotions, e.g., love, hate, joy, sadness, hope, fear, desire.

• Cognitive interpretations of stimulus changes determine emotions.
Emotion as Motive for Action and Thought

- Emotions serve as impulses for action and thought.
- **Action readiness**: the impulse for action of emotion-relevant behavior.
- Motor explosion: nonadaptive response during an emotion, e.g., jump for joy.
Table 2.4. Stout’s (1903) View of the Class of Ideas Revived by Emotions

- Joy       “success and gratification”
- Grief     “loss and defeat”
- Fear      “danger”
- Anger     “insult and injuries”
- Jealousy  “encroachment of others on ... our own peculiar possessions”
Accompaniments of Emotion

• Physiological arousal has long been viewed as an accompaniment of emotion, e.g., heart rate.
• Bacon and Descartes noted that emotions involved physiological accompaniments.
**Physiological Arousal**

Arousal serves as either the readiness for action or as information for the qualitative feel of an emotion.
Table 2.4. Ideas on the Physiological Accompaniments of Emotion of Bacon (1627) and Descartes (1649)

- Fear: Paleness, tremble, hair erection, startle, screech
- Grief: Sigh, sob, groan, tears, distorted face, grind teeth
- Joy: Vigor of eyes, sing, leap, dance, at times tears
- Anger: Paleness, blush, tremble, foam at mouth
Table 2.4. Ideas on the Physiological Accompaniments of Emotion of Bacon (1627) and Descartes (1649), continued

- Lust: Flagrancy in eyes, priapism
- Love: Pulse is fuller and stronger, heat in breast
- Hate: Pulse feeble, quick; cold, heat alternate in breast
- Sadness: Pulse feeble, slow; constriction around heart
Facial Expression

• Facial expressions have long been viewed as accompaniments of emotion.
• Expressions as indicator of emotional feelings.
• Expressions as signals used to satisfy one’s social motives.
Current Trends

• There is not a good correspondence between patterns of physiological arousal and associated subjective emotional feelings.
• Current research attempts to link brain maps of emotion with subjective feelings and associated actions.