

## Unit 5 Notes: Motivation and Emotion

### Drives

- *motivation*--a specific need, desire or want that prompts goal-directed behavior
- *drives*--goal-directed tendencies based on a change in an organism's biological state
  - for example, you are deprived of nutrition and you will become hungry. Hunger then is a primary drive
- *primary drives*--unlearned, innate drives
- *secondary drives*--learned and acquired through experience.
  
- research has been conducted to determine what are our most important primary drives
- rats were placed in a box and given access to a second box via an electrified grid
- results from this study indicate that the following are top five motivators (or the top five things that would cause rats to go from box A to box B)
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.

### Instincts

- drives are different from *instincts* in that instincts are unchanging sequences of behavior that are species-specific
  - for example, salmon swim up river to spawn, a behavior not seen in other species

### Biological Bases

- the *septum* is the primary pleasure center in the brain
  - mild stimulation induces pleasure and sexual arousal
  - it also acts to inhibit aggression
  - if the septal area is damaged, aggressive behavior occurs--this is called *septal rage*
- the *arousal theory* states that there is an optimal level of arousal for a given task
  - low levels of arousal are needed for hard tasks that require concentration and focus
  - moderate levels are needed for moderately difficult tasks
  - high levels are needed for tasks that require endurance and persistence
- the *opponent-process theory* of motivation states that for each motivating drive there is also a disincentive to that drive
  - once an individual is satiated for a particular drive, there is an opposite or opponent drive to avoid fulfilling that drive (e.g. once you've eaten you are no longer hungry and stop searching for food)
  - in addictive behaviors, once the addictive behavior is performed and lessens in intensity, there is a rebound effect where the opponent drive remains active
  - more and more of the addictive substance is then needed to achieve the desired result, thereby leading to addiction
- the main drives are hunger, thirst and sex--these are all connected to the functioning of the hypothalamus
- the hypothalamus regulates temperature, metabolism and water balance
- it also has a role in arousal, aggressive behavior and sexual behavior

- the *lateral hypothalamus* (LH) involves the hunger center
- the LH tells the organism when to begin eating and drinking
  - damage to the LH can cause *aphagia*--a refusal to eat or drink voluntarily to the point the organism must be force-fed through tubes
- the LH also plays a role in rage and fighting
- the *ventromedial hypothalamus* (VMH) involves the satiety center
- the VMH tells the individual when he or she has eaten enough
  - brain lesions in the VMH typically lead to overeating and obesity--this is called *hyperphagia*

### Hunger

- the *glucostatic hypothesis* asserts that hunger is tied to glucose levels in the body
  - glucose levels do appear to influence the immediate perception of hunger and feelings of satiation
- the *lipostatic hypothesis* asserts that hunger is tied to fat levels in the body
  - fat levels do appear to be involved with general eating patterns
- there is general agreement that *both* glucose and fat levels influence hunger

### Thirst

- *osmoregulation*--a condition in which *osmoreceptors* in the hypothalamus determine the water level in the body
  - if the water levels are too low, osmoreceptors release an *antidiuretic hormone* to compensate for the level
- *volumetric sensors* in the hypothalamus measure water levels at the extracellular level
  - if the water levels are too low, the hormone *angiotensin* is released that causes the individual to feel thirsty, thereby leading to drinking behavior

### Pain

- the *gate theory of pain* states that a special gating mechanism found in the spinal cord can turn pain signals on and off
- this affects whether the individual feels pain or not because it blocks the perception of pain from the brain

### Stimulus Motives

- *stimulus motives* are unlearned motives that prompt us to explore or change the world around us
- they come in several types:
  - *exploration* or *curiosity* are directed at finding out about the world around us
  - *manipulation* or *contact* involves touching or handling an object before we are satisfied

### Harlow Studies

- the classic study on the need for contact was conducted by Harry Harlow
- newborn baby monkeys were separated at birth and provided with two surrogate mothers
  - one made of cloth
  - the other made of wire but equipped with a nursing bottle
  - both were warmed by a light bulb
- Harlow discovered that the baby monkeys preferred the cloth surrogate over the wire surrogate that fed them
- this illustrates the importance of affection, cuddling and closeness

### Learned Motives

- there are a variety of learned motives that also direct our behavior:
- *aggression*--behavior aimed at harming others; this can be seen in *road rage* behaviors
- *frustration-aggression theory*--unique to western cultures, states that when our goals are blocked, we become frustrated; when we become too frustrated, we become aggressive

- *achievement*--the need to excel and to overcome obstacles; frequently seen in high school students!
- *power*--the need to win recognition or to influence or control other people; people who always must be *in charge* of groups or decisions would illustrate this power motive
- *affiliation*--the need to be with others; formed groups such as clubs are unnecessary, just merely being with others, like in a shopping mall

#### **Kurt Lewin**

- Kurt Lewin believed that we *approach* experiences that produce a positive affect (or emotion) and *avoid* experiences that produce a negative affect
- when situations are similar to experiences in the past, they produce a positive affect (emotion) and when they're different, they produce a negative affect

#### **David McClellan**

- David McClelland proposed an *Achievement Motive (nAch)* or need for achievement
- individuals with a high nAch will seek situations that validate their positive affect through effective and successful problem solving
  - they seek moderate risk, individual responsibility and feedback on their accomplishments
- individuals with a low nAch will avoid these situations and perform less well

#### **Abraham Maslow**

- Abraham Maslow also believed in our self-actualizing tendency by satisfying certain needs he arranged these in a hierarchical structure
  - the lower level needs represent our survival needs
  - the upper level needs our growth or meta-needs
- Maslow represented this *hierarchy of needs* in a pyramid, using the concept that the lower needs had to be met to form the foundation on which to build the higher level needs
- most of our time is spent toward the lower level needs
- the number of people who are self-actualized is relatively small.
- higher level needs are more difficult to measure because of the subtlety of their nature
- individuals who exhibit primarily lower (deficiency-oriented) needs are typically:
  - self-centered
  - reject their own impulses
  - seek goals common to others
  - look for short-term gratification
  - view others in terms of how they can be used to satisfy their own needs
  - behave on the basis of external cues
- individuals who exhibit primarily higher (growth-oriented) needs:
  - are typically more concerned with the world at large and other people
  - accept their impulses
  - attain unique and individual goals
  - look for long-term gratification
  - accept others for who they are
  - behave based on internal cues

#### **Yerkes-Dodson Law**

- the *Yerkes-Dodson Law* states that there are times when we can try too hard
- technically, our motivation to perform outweighs our ability to perform
- motivation and performance reach an optimal point and then performance starts to decline

## Stress

- the impact of life changes and emergency situations relates to our stress level
- *stress* can be both positive and negative
- it provokes different reactions in individuals
- stress can be produced by change, hassles, pressure, frustration and conflict
- *stressors* are defined as things causing stress whereas *stress reactions* relate to environmental situations
  
- the *Holmes-Rahe Social Readjustment Scale* measures life-changing units (LCUs)
- the total number of life events producing stress over a 12-month period is added up
- while this tells the amount of stress an individual has encountered, it does not indicate the effectiveness in coping with that stress
  
- there are two basic types of stressors:
  - *transient stressors*--stress that occurs once and does not recur
  - *chronic stressors*--stress that is steady and ongoing
- stress activates the sympathetic nervous system that increases heart rate, respiration and blood pressure
  - for transient stressors this gives the individual what they need to deal with the stressor
  - for chronic stressors, however, the individual can become mentally and emotionally taxed with depleted physiological reserves

## Coping with Stress

- there are two basic strategies for coping with stress.
- *direct coping* involves confrontation, compromise and withdrawal
  - these are actions people take to change an uncomfortable situation.
- *defensive coping* involves the use of defense mechanisms such as rationalization, denial and procrastination
  - these are ways people convince themselves that they are not really threatened or do not really want something they cannot get

## Hans Selye

- Hans Selye proposed that our body adapts to stress in three phases
- he called this the General Adaptation Syndrome (GAS)
  - Stage 1 is *alarm reaction* in which the sympathetic nervous system is activated and the physiological changes listed above occur
  - Stage 2 is *resistance* in which the body reacts to the perceived stress through an outpouring of hormones
  - Stage 3 is *exhaustion* during which the body has exhausted its efforts to fight stress and is more prone to illness

## Emotion

- *emotion* is defined as *feeling* that underlies behavior, such as happiness
- it can additionally be seen as a *response* when, for example, a person sees a particular situation as fearful or threatening, like public speaking
- it can also be seen as a *motivation* when emotional excitement accompanies satisfying a physiological state, like delight when you get to eat chocolate as a reward for a behavior.

## Theories of Emotion

- there are six main theories of emotion:
- the *James-Lange theory* states that body changes come before perceived emotions
  - if a person is walking along and sees a snake, according to James-Lange, they will run away and *then* feel afraid

- the *Cannon-Bard theory* states that body changes and emotions occur simultaneously
  - a person would see the snake, feel afraid and run away at the same time
- the *Schacter-Singer* or *cognitive theory* states that how we perceive a situations dictates what emotions we will feel
  - if a person is fearful a snakes, coming upon a snake on a trail will provoke fear as an emotion; if he is not afraid of snakes, he will not feel fear
- the *opponent process theory* states that when we have an emotional response, it is always accompanied by the opposite emotion as well
  - for example, the joy of having your friends throw you a surprise 18th birthday party will give way briefly to sadness when the event is over.
- the *theory of cognitive dissonance* is proposed by Leon Festinger.
  - Festinger states that when we have two contradictory beliefs we feel anxiety
    - for example, we know how to fix our car but we bring it to a mechanic to fix
  - we will attempt to reduce our anxiety, called *dissonance reduction*, by coming up with a reason for our actions
    - we might justify the mechanic working on our car because we "don't have the proper tools" or "don't have the time to fix it."
  - cognitive dissonance also occurs when our thoughts and behaviors are inconsistent
    - a person knows smoking cigarettes is bad for his health but smokes them anyway
    - he may rationalize this by saying "he's not smoking that much" or "evidence is contradictory on the effects of smoking on health"
- Kurt Lewin believes that we experience anxiety whenever we are confronted with positive and negative conflicts
  - when we are confronted by two positive alternatives, this is an *approach-approach* situation
    - for example, a boy can only ask out one of two girls to the prom but would enjoy attending the event with either one
  - an *approach-avoidance* situation occurs when the individual must choose between something positive and something negative
    - for example, you really want to go swimming but the water is very cold
  - an *avoidance-avoidance* situation occurs when the individual must choose between two negative alternatives
    - for example, on Saturday morning you have your choice of either mowing the lawn or cleaning up you room, but you'd rather just go out with your friends

### **Measuring Emotion**

- there are several ways to *measure* emotion physiologically
- heart rate increases, blood pressure rises, breathing becomes faster, and pupils dilate
- in addition, brain wave patterns change, which can be measured with an *electroencephalograph (EEG)*
- people also begin to sweat, increasing electrical conductivity that can be measured by their *galvanic skin response (GSR)*
  - it is this GSR change that is used in *polygraph* (or *lie-detector*)tests

### **Type A/B Personality**

- how an individual reacts to stress varies from person to person
- it also depends on the severity of the stress
- stress can be both positive and negative
- individuals can react in one of two ways, reflected as Type A or Type B personalities
  - *Type A* personalities react to stress through impatience and intolerance; they tend to behave aggressively, try to do many things at once (like talk on the phone and do homework at the same time), judge their accomplishments on efficiency and numbers, have nervous habits, and don't stop to "smell the roses"
  - *Type B* personalities are more relaxed and patient; they tend to be more flexible and adapt well to their surroundings; they tend to slow down and enjoy life a bit more