Emotion Theory

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Emotions

Just how many emotions are there?
Some have criticized Plutchik’s model as applying only to English-speakers.

Revised model of basic emotions includes:

- Happiness
- Surprise
- Sadness
- Fear
- Disgust
- Anger
Darwin

Expression of Emotions in Man and Animals
What and Why of Emotions

Emotion
- Feeling, such as fear, joy, or surprise, that underlies behavior

A subjective sensation experienced as a type of psycho-physiological arousal

Result from the interaction of
- perception of environmental stimuli
- neural & hormonal responses to perceptions (feelings)
- a cognitive appraisal of the situation arousing the state
- an outward expression of the state
What is the Value of Emotion?

Emotions

- determine personal viability
- prepare us for action
- shape our behavior (emotions are reinforcing)
- regulate social interaction
- facilitate communication nonverbally
- facilitate adult-child relations and thus development
- make life worth living by adding value to experience
- allow us to respond flexibly to our environment (approaching good, avoiding bad)
What Exactly are Emotions?

An emotion involves physiological arousal, expressive behavior and conscious experience.

What psychologists do agree on is that emotions contain both a cognitive and physiological element.

What they do not agree on is, which comes first? When we encounter a situation that scares us, do we become aroused and from this state of arousal deduce that we are scared? Or do we decide mentally that the situation is scary, which then causes our physiology to react?
Basic Characteristics of Emotions

• Pure emotions do not last long and have a short duration. Mood, on the other hand, tends to last longer.
• Emotional experience can act as a motivation for action. The disgusted diner, for example, sending his uncooked steak back to the chef and putting his coat on to leave the restaurant. Where motivations are internal stimuli, emotions are reactions (responses).
• Emotional experience is elicited in part by conscious mental assessments. Such perceptual assessment can lead to very different emotional expressions. So getting an annual bonus might bring joy, which might turn to anger when you learn your co-workers all got bigger bonuses than you. Therefore cognitive appraisal is central to emotional experience.
• Emotional experience is either positive or negative, pleasant or unpleasant to us.
Theories and Concepts of Emotion

Three Components of Emotion

1. Physiological--arousal comes from brain (particularly the limbic system) and autonomic nervous system (ANS)
Physiological Component and the Autonomic Nervous System (ANS)

<table>
<thead>
<tr>
<th>Sympathetic</th>
<th>Parasympathetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupils dilated</td>
<td>Eyes</td>
</tr>
<tr>
<td>Dry</td>
<td>Mouth</td>
</tr>
<tr>
<td>Goose bumps, perspiration</td>
<td>Skin</td>
</tr>
<tr>
<td>Respiration increased</td>
<td>Lungs</td>
</tr>
<tr>
<td>Increased rate</td>
<td>Heart</td>
</tr>
<tr>
<td>Increased epinephrine and norepinephrine</td>
<td>Adrenal glands</td>
</tr>
<tr>
<td>Decreased motility</td>
<td>Digestion</td>
</tr>
<tr>
<td></td>
<td>Increased motility</td>
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</tbody>
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Theories and Concepts of Emotion

2. Cognitive--thoughts, values and expectations

3. Behavioral--expressions, gestures, and body positions
Theories and Concepts of Emotion-- Four Theories of Emotion

- James-Lange: emotions occur after arousal
- Cannon-Bard: arousal and emotion occur simultaneously
- Facial-Feedback: facial movements elicit arousal and specific emotions
- Schachter’s Two-Factor: arousal leads to search for label and then emotion occurs
Theories of Emotions

Theories of emotion

James-Lange theory of emotion

- The theory that emotional feelings result when an individual becomes aware of a physiological response to an emotion-provoking stimulus
- Requires separate and distinct physiological activity for each emotion
Theories of Emotions

James-Lange Theory

- Event
- Arousal and physiological changes
- Interpretation of the physiological changes
- Emotion
Challenges to the James-Lange Theory

Cannon (1927): emotional encounters are emergency situations which directly trigger a central brain process in the thalamus. Which lead to two simultaneous but independent outcomes:

- heightened arousal system which prepares the body to cope with the emergency
- the conscious experience of the emotion is registered in the cortex
Cannon argues the James-Lange theory is too slow in accounting for instantaneous emotional feeling.

Yet his own theory also contains a flaw. If the brain decides upon emotional experience based upon physiological arousal, then individuals who receive no physiological arousal signals should not experience emotion.

Chwalisz et al. (1988) reported that people who had sustained spinal injuries do experience them!
Theories of Emotions

Theories of emotion

- Cannon-Bard theory of emotion

  The theory that an emotion-provoking stimulus is transmitted simultaneously to the cortex, providing the feeling of emotion, and to the sympathetic nervous system, causing the physiological arousal.
Theories of Emotions

- Cannon-Bard Theory

1. Event
2. Arousal and physiological changes
3. Emotion
Theories of Emotions

Theories of emotion

- **Cannon-Bard theory of emotion**
  - The theory that an emotion-provoking stimulus is transmitted simultaneously to the cortex, providing the feeling of emotion, and to the sympathetic nervous system, causing the physiological arousal
  - Cognitive labeling and action would follow consciousness of feeling and physiological arousal
Theories and Concepts of Emotion:

Overview of Four Theories of Emotion

- **James-Lange Theory**
  - Emotional stimulus (snake) → ANS arousal → Behavior (run) → Emotion/feelings (fear)
  - (a) The emotion occurs after the body is aroused.

- **Cannon-Bard Theory**
  - Emotional stimulus (snake) → Thalamus → ANS arousal → Behavior (run) → Emotion/feelings (fear)
  - (b) Arousal and emotion occur simultaneously.

- **Facial-Feedback Hypothesis**
  - Emotional stimulus (snake) → Facial expression → ANS arousal → Behavior (run) → Emotion/feelings (fear)
  - (c) Changes in facial expression produces arousal and emotion.

- **Schachter’s Two-Factor Theory**
  - Emotional stimulus (snake) → Arousal plus label (“I am afraid.”) → Emotion/feelings (fear) → Behavior (run)
  - (d) Arousal alerts the brain to find a reason for the arousal. Once the arousal is labeled, the emotion occurs.
Three Ways to Measure Emotion

Body/Physical

- blood pressure
- heart rate
- adrenaline levels
- muscle activity when smiling, frowning, etc.
- neural images
- posture
- tears,
- perspiration
- lie detector readings
Three Ways to Measure Emotion

Thoughts (observed indirectly through)

- spoken and written words on rating scales
- answers to open-ended questions on surveys and during interviews
- responses to projective instruments, sentence stems, etc.
- self-assessments or perceptions regarding the behavior and intentions of others
- other cognitive operations such as rational/logical thinking
Three Ways to Measure Emotion

**Behavior**

- facial expressions
- activity level
- alertness
- screaming
- laughing
- smiling

- aggression
- approach/avoidance
- attention/distraction
- insomnia