T8 – EMOTION, MOTIVATION & BEHAVIOUR

FEM4101

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LEARNING OUTCOMES

1. Able to explain positive and negative emotion.

2. Able to explain the effect of emotion on motivation and behaviour.
"An emotion is a complex psychological state that involves three distinct components: a subjective experience, a physiological response, and a behavioural or expressive response." (Hockenbury & Hockenbury, 2007)

Cognitive and biological approaches to psychology have often been used in understanding how we experience emotions, and how they affect our behaviour.
WHAT IS EMOTION?

- Emotion is a 4 part process consisting of physiological arousal, cognitive interpretation, subjective feelings, and behavioural expression.
While our emotions are very different, they all involve a state of mental and physical arousal focused on some event of importance.

- Emotions are reciprocal with mood, temperament, personality, disposition, and motivation.
- Emotions can be influenced by hormones and neurotransmitters - dopamine and serotonin.
Emotion and motivation are complimentary process.

The concept of emotion emphasises arousal, both physical and mental, while motivation emphasises how this arousal becomes action.

Emotions help us respond to important situations and to convey our intentions to others.
Emotions are the result of genetics and learning, especially early in life.

Emotions serve as arousal states that help organisms cope with important recurring situations.

Learned emotional responses, along with genetic predisposition are important components of many psychological disorders, including depression, panic attacks and phobias.
Despite different languages, cultures and social norms, studies suggest that people "speak and understand substantially the same ‘facial language’ the world around."
SEVEN BASIC EMOTIONS

- Essentially, people share a set of universal emotion expression that support the point to the biological heritage of the human species.

- Paul Ekman, a leading psychologist in emotions, suggests humans everywhere can recognize seven basic emotions: sadness, fear, anger, disgust, contempt, happiness and surprise.

- According to Ekman, the seven emotions are universal, but the display rules vary greatly, depending on the culture.

- He defines display rules as the permissible ways of displaying emotions in a given society.
SEVEN BASIC EMOTIONS

- Surprise
- Anger
- Joy
- Sadness
- Contempt
- Fear
- Disgust

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EMOTION: ANGER

- eyebrows down and together
- eyes glare
- narrowing of the lips
EMOTION: CONTEMPT

contempt

1. lip corner tightened and raised on only one side of face
EMOTION: DISGUST

- Nose wrinkling
- Upper lip raised
EMOTION: FEAR

1. eyebrows raised and pulled together
2. raised upper eyelids
3. tensed lower eyelids
4. lips slightly stretched horizontally back to ears
EMOTION: HAPPINESS

happiness

A real smile always includes:

1. crow’s feet wrinkles
2. pushed up cheeks
3. movement from muscle that orbits the eye
EMOTION: SADNESS

1. Drooping upper eyelids
2. Losing focus in eyes
3. Slight pulling down of lip corners
EMOTION: SURPRISE

surprise

Lasts for only one second:

1. eyebrows raised
2. eyes widened
3. mouth open
In addition to being universal, the ability to read facial expressions is nearly ageless.

Psychologists think that children as young as 5 years old have the same ability to recognise emotion on a person’s face as an adult does.
While we can recognize Ekman’s seven emotions, most of us can think of others like greed, envy, regret, optimism, etc.

Robert Plutchik suggests that rather than seven, we have eight primary emotions and eight secondary emotions. He depicts this in his Emotion Wheel.

More complex emotions occur when pairs of adjacent emotions combine.

Eg: love is a combination of joy and acceptance.
WHEEL OF EMOTION
• The biggest breakthrough in the study of emotions was the discovery of two distinct emotional pathways in the brain.

• One of the pathways is fast, and operates mainly at an unconscious level where it screens incoming stimuli and helps us respond quickly to stimuli even before they reach consciousness.
• These cues seem to have a built-in, innate sensitivity to certain cues - explains why we have more fears of spiders, heights and lightening than cars or electricity.

• The other pathway is much slower and linked to explicit memory. While it generates emotions more slowly, it delivers more complex information to our consciousness.
• This system relies heavily on the cerebral cortex, which is why we can feel fear, despite knowing there is no real basis for that feeling.
THE LIMBIC SYSTEM

- While the two pathways differ, they do have some things in common. Both rely heavily on the limbic system.
- The amygdala plays an especially important role in both emotion pathways.
- In the past it was thought that the amygdala was simply involved in negative emotions.
- Recently it has been discovered that it plays a role in positive emotions as well.
The Bipolar Brain

- **Ventral Striatum:** Processes rewards & assists with judgment and behavioral decisions
- **Amygdala:** Attaches emotional significance to sensory input
- **Hippocampus:** Memory processing
- **Subiculum:** Distinguishes danger vs. reward situations
- **Prefrontal Cortex:** Regulates emotion, processes rewards & motivation
- **Raphe Nucleus:** Produces and disperses serotonin
EMOTION IN MEN AND WOMEN

- In our culture, on average, women are viewed as far more emotional than men. This may be the result of two factors.

1. **Biology and the genetic make-up** of men and women do lead to women “having more emotion.”

2. **Culture**, may be the bigger of the two causes. Boys and girls learn different lessons about emotion and emotional control. Boys are largely taught to hide emotions that may be seen as weaknesses and are praise for emotions that show strength and dominance. Girls are taught the exact opposite.
• Different parts of our brain deal with different emotions.
• In the cerebral cortex, the right hemisphere generally specialises in negative emotions and the left hemisphere generally processes more positive and joyful emotions.
• The idea that each hemisphere specialises in different classes of emotion has been called lateralization of emotion.
There are multiple theories on how our emotions affect our behaviour and mental processes.

1. The James-Lange Theory of Emotion
2. The Cannon-Bard Theory of Emotion
3. Schachter-Singer Theory
4. Cognitive Appraisal Theory
5. Opponent-Process Theory
THE JAMES-LANGE THEORY OF EMOTION

- Emotions occur as a result of physiological reactions to events.
- An emotion provoking stimulus a physical response, that then leads to emotion.
- According to this theory, people see an external stimulus that leads to a physiological reaction.
- Individual emotional reaction is dependent upon how they interpret those physical reactions.
Eg: “We feel sorry because we cry; angry because we strike; afraid because we tremble.” William James
The Physiological Component
A Historical Perspective
James-Lange Theory of Emotion

- Emotion arises from physiological arousal
  - Happiness comes from smiling
  - Sadness comes from crying

Diagram:
1. Perceived event
2. Physiological and behavioral responses
3. Emotional experience
THE CANNON-BARD THEORY OF EMOTION

- This theory states that we feel emotions and experience physiological reactions such as sweating, trembling and muscle tension simultaneously.

- A theory that an emotional feeling and an internal physiological response occur at the same time.
The Physiological Component
A Historical Perspective
Cannon-Bard Theory of Emotion

- Emotion originates in the thalamus
- “Body” (physiological systems) and “Mind” (emotional experience) are independently activated at the same time
SCHACHTER-SINGER THEORY (TWO FACTOR THEORY)

- This theory suggests that the physiological arousal occurs first, and then the individual must identify the reason behind this arousal in order to experience and label it as an emotion.

- This theory suggests that the emotions we feel depend on two things: our internal physical state, the external situation we find ourselves in.
Schachter’s Two-Factor Theory of Emotion

- **Physiological arousal**
  - Sweaty palms
  - Increased heart rate
  - Rapid breathing

- **Cognitive Label**
  - Attribute source of arousal to a cause.

- **To have an emotion, both factors are required.**
COGNITIVE APPRAISAL THEORY

- The thought that we look back on a situation and consciously decide how we should **feel about the situation.**
OPPONENT-PROCESS THEORY

• Every process that has an affective balance, (i.e. pleasant or unpleasant), is followed by a secondary, "opponent process".

• This opponent process sets in after the primary process is quieted. With repeated exposure, the primary process becomes weaker while the opponent process is strengthened.

• One emotion is triggered by suppressing its opposite emotion.

• Eg: Drugs - the highs experienced by some drugs are replaced with lows (withdrawals). Eventually people take drugs not for the highs, but to avoid the lows.
YERKES-DODSON LAW

- A theory that a degree of psychological arousal helps performance, but only to a certain point. Too much or too little arousal can decrease performance. Also known as the Inverted U.

![Graph showing the Yerkes-Dodson Law](image)
Common sense
"I tremble because I feel afraid"

Stimulus → Conscious feeling → Fear → Autonomic arousal

James-Lange
"I feel afraid because I tremble"

Stimulus → Autonomic arousal → Conscious feeling → Fear

Cannon-Bard
"The dog makes me tremble and feel afraid"

Stimulus → Subcortical brain activity → Conscious feeling → Autonomic arousal

Schachter
"I label my trembling as fear because I appraise the situation as dangerous"

Stimulus → Autonomic arousal → Appraisal → Conscious feeling → Fear

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In psychology, stress is not a situation, but a response.

Psychologists talk about stress and stressors a little different than you or I might:

**Stress:** A physical and mental response to a challenging or threatening situation

**Stressor:** A stressful stimulus or situation demanding adaptation
TRAUMATIC STRESSORS

- Certain events go beyond a “normal” stressor; examples would be the World Tsunami in 2004, Columbine, Hurricane Katriana, etc.
- These are called traumatic stressors.
- To be considered a traumatic stressor, it must be a situation that threatens yours, or others’ physical safety and promotes a feeling of helplessness.
- Human created catastrophes are always worse, why?
RESPONSE TO TRAUMATIC STRESSORS

• In the face of catastrophic situations, most people pass through five stages:

1. **Psychic Numbness**: shock, confusion, lack of understanding

2. **Automatic Action**: little awareness of the experience, poor memory/recall

3. **Communal Effort**: people work together, but with little planning

4. **Letdown**: the setting-in of the magnitude and impact of the situation

5. **Recovery**: Survivors adapt to changes caused by the disaster
Post Traumatic Stress Disorder (PTSD): Individuals who have undergone severe ordeals—rape, combat, beatings, torture—may experience a delayed pattern of stress symptoms that can appear as long as years after the event.

- Victims of PTSD often have the following symptoms:
  - Distracted
  - Disorganized
  - Suffer memory difficulties
  - Experience psychic numbing (diminished hedonic capacity)
  - Feelings of alienation
RESPONSE TO A NORMAL STRESSOR

- The physical response to a normal stressor is fairly universal as well and follows the same sequence:
  - An initiation of arousal.
  - A protective behavioural reaction (fight or flight).
  - Internal response of the autonomic nervous system.
  - A decrease in the effectiveness of the immune system.
There are two main types of stress:

**Acute Stress:** A temporary pattern of stressor-activated arousal with a distinct onset, and limited duration - Short term stress.

**Chronic Stress:** A continuous state of stressful arousal, persisting over time - Long term stress.
General Adaptation Syndrome is a pattern of general physical responses that take essentially the same form in responding to any serious chronic stressor.
Stage 1: alarm reaction (AR): The immediate reaction to a stressor. In the initial phase of stress, humans exhibit a "fight or flight" response, which prepares the body for physical activity. However, this initial response can also decrease the effectiveness of the immune system, making persons more susceptible to illness during this phase.

Stage 2: stage of resistance (SR): Might also be named the stage of adaptation, instead of the stage of resistance. During this phase, if the stress continues, the body adapts to the stressors it is exposed to. Changes at many levels take place in order to reduce the effect of the stressor.
Stage 3: stage of exhaustion (SE): At this stage, the stress has continued for some time. The body's resistance to the stress may gradually be reduced, or may collapse quickly. Generally, this means the immune system, and the body's ability to resist disease, may be almost totally eliminated.

Patients who experience long-term stress may succumb to heart attacks or severe infection due to their reduced immunity.

General Adaptation Syndrome is a pattern of general physical responses that take essentially the same form in responding to any serious chronic stressor.
POSITIVE AND NEGATIVE EMOTIONS

Negative emotions (Goal incongruent):

- Anger
- Fright/anxiety
- Guilt/shame
- Sadness
- Envy/jealousy
- Disgust
POSITIVE EMOTIONS

- Positive emotions (Goal congruent)
  - Happiness / Joy
  - Love / Affection
  - Pride
  - Relief
Emotion is often defined as a complex state of feeling that results in physical and psychological changes that influence thought and behavior.

- Emotions control your thinking, behavior, and actions.
- Emotions also affect our physical bodies as much as our body affects our feelings and thinking.
THANK YOU