

GE1137

Movies and Psychology

Emotion

Scene IV - Thriller



Emotion

- The “feeling” aspect of consciousness
 - A class of *subjective feeling* elicited by *stimuli* that have high significance to an individual
 - Charles Darwin: A product of evolution and is therefore *universal*
 - Biology vs. Learning
 - E.g., Children blind from birth
- outside / internal (memory...)*
- built-in in genes*



Universal Categories of Emotion

- Paul Ekman (1934~)
 - Six basic emotions (Ekman, 1973): **happy**, *快乐*
sad, **anger**, **fear**, **surprise**, **disgust** *contempt*
 - Extended list of basic emotions in 1990s: e.g., embarrassment, guilt, pride, relief, satisfaction, shame...
 - Micro facial expression



Universal Categories of Emotion

- Type of emotion might be universal
- *Display rules* differ across cultures (or groups, e.g., gender)
- Culture affects who can display which emotion to whom and when



Three Components of Emotion

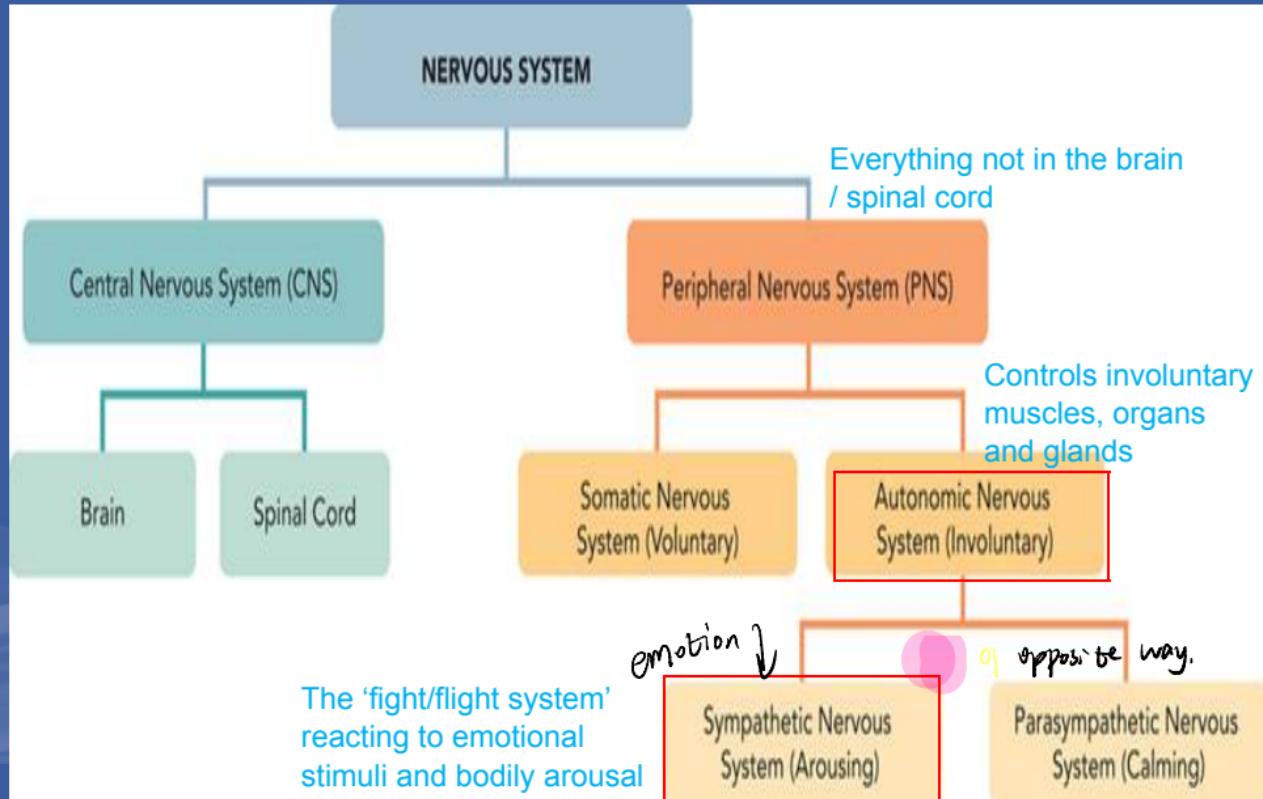
1. The **physical** (or physiology) component
 - Includes the “fight or flight” response of the autonomic nervous system
 - E.g., Heart rate and breathing rate increase, blood pressure surges, start sweating, pupils dilate, digestion slows

2. The **behavioral** component
 - Is the product of motor neurons, e.g., fight or flight responses, facial expressions

3. The **cognitive** component
 - Includes an appraisal of the situation to determine what emotion we are experiencing and how intense it is
 - Also includes the (social) influences from others



The Nervous System: Divisions



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Physiology of emotion

- Different physiological responses associate with different emotions
 - Heart rate: anger, fear, sadness > disgust
 - Skin conductance: disgust
 - Blood pressure: anger

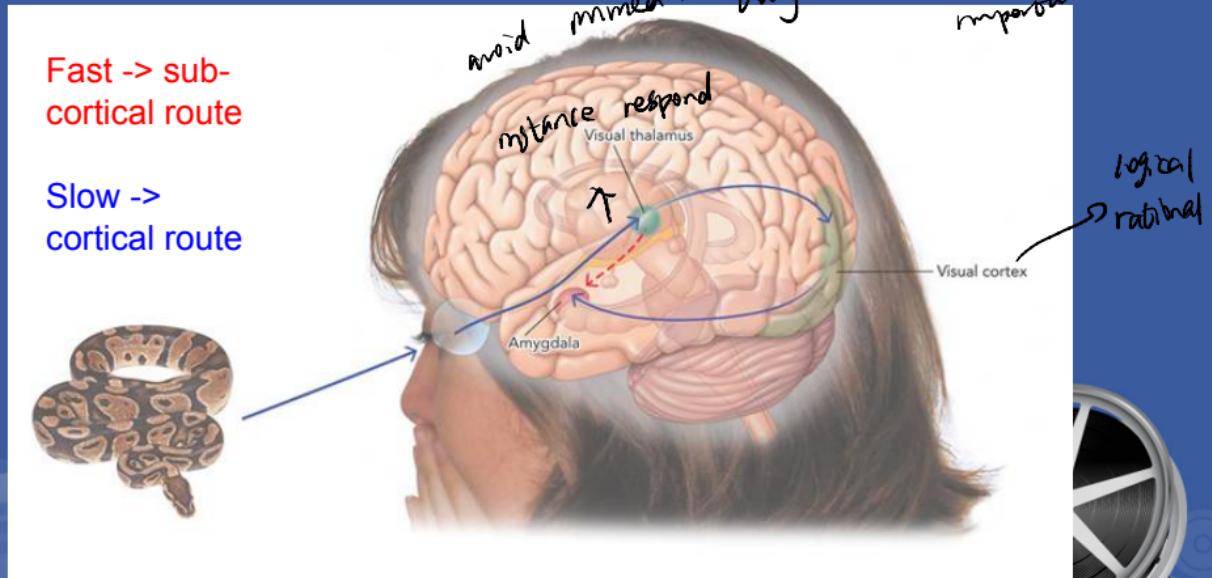


Brain and Emotions

- Amygdala ***
 - evaluate the significance of stimuli and generate emotional responses (both human and animals)
 - generate hormonal secretions and autonomic reactions that accompany strong emotions
 - damage causes “psychic blindness” and the inability to recognize fear in facial expressions and voice



Brain Pathways of Fear

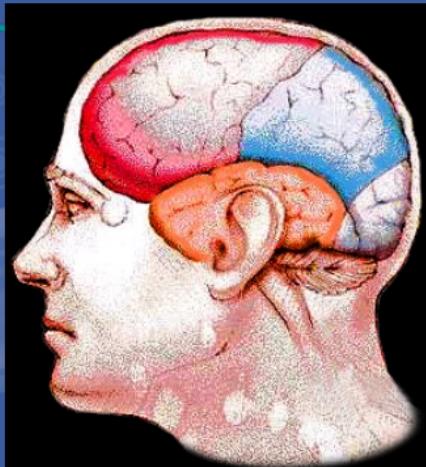


Brain and Emotions

Frontal lobes

influence people's conscious emotional feelings and ability to act in planned ways based on feelings (e.g., effects of prefrontal lobotomy)

Frontal



Parietal

Occipital

Temporal

Left frontal lobe
may be mostly
involved in
processing
positive emotions

Right frontal lobe
involved with
negative emotions

Integrating the Theories

- LeDoux (1996, 2007) contends that there are different brain systems for different emotions
 - **Fear** is generated almost instantaneously by the amygdala
 - More complex emotions, e.g., **love** or **guilt**, that do not require instantaneous responding for survival, may require higher-level processing



Psychology of Disgust

- Appears to have evolved to protect the individual from contact with bad stimuli.
- A **learned** emotion.
 - not present in children under 2.
 - seems to be absent in animals.
- A learned emotion towards morally disgusting behaviors
- A product of social influence
 - E.g., when smoking was popular



Behavioral aspect of Emotion

- Fight/ flight (anger - confront; fear - avoid)
- Facial expression
- *Facial feedback hypothesis*



Facial feedback hypothesis

- Assumption: facial muscles send signals to the brain, allowing the brain to determine which emotion is being experienced
- Research
 - Rating funniness of cartoons
 - Two conditions: “smile” vs. “frown”
 - Rated cartoons as funnier under “smile” condition!



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- What about people with facial paralysis??
(Keillor et al., 2002)



Cognitive aspect of Emotion

- “What you think your feeling is?”
 - Subjective interpretation or labelling of one’s internal emotional state
- Factors to be considered
 - Bodily/ physiological responses
 - Behaviors
 - Stimuli; Situation; Experience; Other people....



Theories of Emotion

Physical

Behavioral

Cognitive



Theories of Emotion

Common Sense Theory

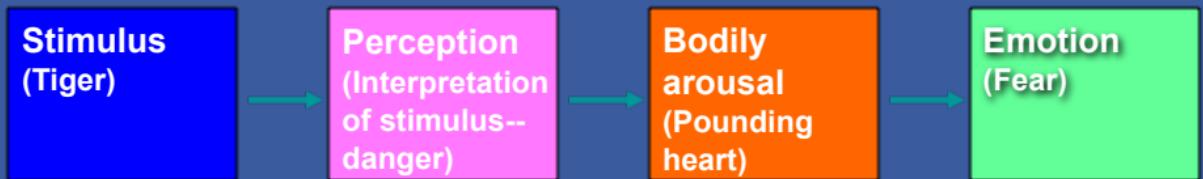


- Perception of a stimulus elicits emotion which in turn causes bodily arousal



James's Peripheral Feedback Theory

James-Lange Theory of emotion (1885)



- Perception of a stimulus -> bodily arousal -> emotion
- Emotion is the *perception of the bodily / physiological changes*

*"we feel sorry because we cry, angry because we strike,
afraid because we tremble."*



But...

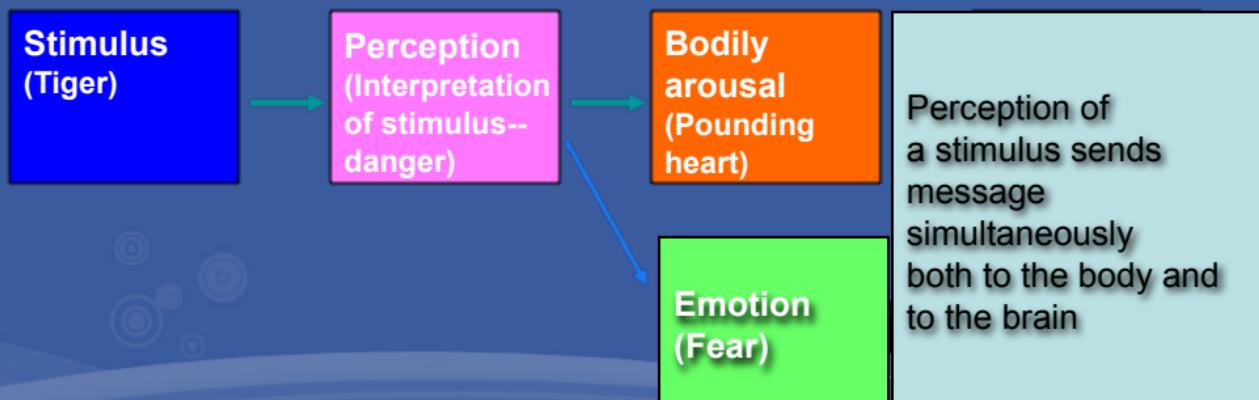
- Some research findings seem not to be consistent with this view
 - E.g., patients with spinal cord injuries
- We sweat and our heart beats faster when we are afraid, angry, or sexually aroused
 - How to tell the difference?
- Also, sometimes we feel sad and THEN we cry?



Cannon-Bard's Simultaneous Theory

Cannon-Bard's Theory

- By Walter Cannon (1927) and Philip Bard (1934)



The emotion-inducing stimuli elicit both an emotional response and bodily response at the same time



But...

- A tiger in the zoo *is* different from a tiger in the wild!
- What about our mental interpretation of the stimuli?



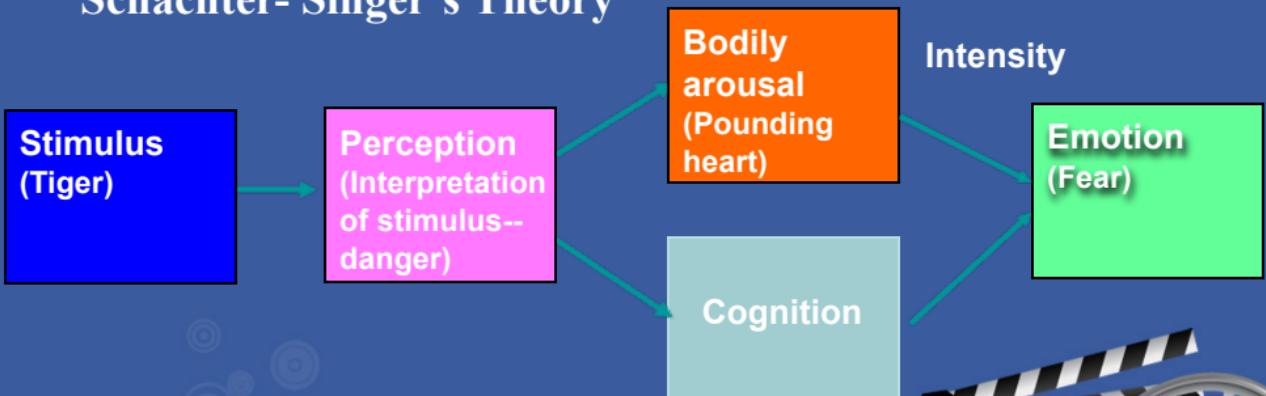
Schachter-Singer's Two Factor Theory

- By Stanley Schachter & Jerome Singer (1962)
- Physical arousal (peripheral feedback) +
Cognitive appraisal of the cues from environment



Two-Factor Theory of Emotion

Schachter- Singer's Theory



- Cognitive interpretation influences the type of emotion felt
- Degree of bodily arousal influences the intensity of emotion



The Angry/Happy man study (Schachter & Singer, 1962)

- Participants: Male student volunteers
 - They were told to do a questionnaire about a newly developed vitamin
- Task: All being injected a drug called “epinephrine”
 - Increase in physical arousal
- Conditions:
 - Waiting room A: Angry man
 - Waiting room B: Happy man



The Angry/Happy man study (Schachter & Singer, 1962)

- Conditions:
 - Waiting room A: Angry man
 - Waiting room B: Happy man
- At the end participants were asked to describe their own feelings
 - Condition A -> anger
 - Condition B -> Happiness



Fear and Horror movies



Fear

- Evolutionary perspective: Avoid from dangers (survival value), e.g., darkness, spider, tiger...
 - Partly inherited from our ancestors
 - Our brains are “prepared” to fear something!
-
- **Evidence 1:** Research on monkeys (Cook & Mineka, 1989)
 - Participants: Monkeys raised up in laboratory; No exposure to snake before
 - Group A video: Fear response of another monkey + plastic snake
 - Group B video: Fear response of another monkey + plastic flower
 - Testing condition: Participants' later responses toward snake and flower



Fear

- **Evidence 2:** Research on children (LoBue & DeLoache 2008)
- Participants: 3-yr old preschoolers
- Task: Find out the deviant picture
- Condition A: 7 pictures of grasshopper + 1 picture of snake (much faster)
- Condition B: 7 pictures of snake + 1 picture of grasshopper
- Same results for Snake vs. other candidates



Fear

- **Evidence 3:**
- Similar elements are found in the ancient stories across different cultures (e.g., fear of darkness, sharp teeth, after-life existence...)
- Consistent with Carl Jung's theory of Collective Sub-consciousness (above individual level);
- Some “Fears” are innate and universal!



Fear

- Evolutionary bias; Fear of darkness, sharp teeth, or eaten alive (e.g., Dracula, Dr. Hannibal)



What is a horror movie?

- According to G. D. Walters (2004)
 - “(Horror movie) is a fictionalized account designed to evoke terror through the implied presence of supernatural or grossly abnormal forces”



What is a horror movie?

- Based on one statistics, 12 of the 100 top grossing movies of all time fall into the horror genre (IMDb, 2003)
- Why do people go to horror movies?



Eight Psychological Theories (Walters, 2004)

- 1. Psychoanalysis
 - Manifestation of the uncanny (id); thoughts and feelings repressed by the ego
 - Critics: Hard to test empirically
- 2. Catharsis
 - Aristotle; people like scary stories or dramas; to discharge negative emotions
 - Critics: Research showed opposite results; violent movies make people becoming more aggressive



Eight Psychological Theories (Walters, 2004)

- 3. Excitation Transfer
 - Intensify the positive effect at the end
 - Critics: Not all popular horror movies have a happy ending
- 4. Curiosity/ Fascination
 - Violation of social norms; outside the viewer's everyday experience
 - Critics: Not all viewers enjoy seeing norm violators in the movie not being punished



Eight Psychological Theories (Walters, 2004)

- 5. Sensation seeking
 - High sensation seeking people like horror movies more
 - Critics: Findings not always significant; difficult to interpret a preference on movie with a single personality trait

- 6. Dispositional alignment
 - Violence directed to someone considered deserving it -> more positive
 - Violence directed to someone considered innocent -> more negative
 - Critics: can only explain which episode of a horror movie is more acceptable



Eight Psychological Theories (Walters, 2004)

- 7. Gender role socialization (Zillmann et al., 1986)
 - Boys -> much more enjoyable if the girl companion is frightened
 - Girls -> much less enjoyable if the boy companion is frightened
 - Critics: Cannot explain why people go to horror movie alone or in their adulthood

- 8. Societal concerns
 - In wartimes -> zombie movies
 - Serial killers -> movies featuring psychopath
 - Critics: Many horror movies work across national boundaries



Three key features of a horror movie

- Tension
- Relevance
- Unrealism



Tension

- Horror movies create tension through mystery, suspense, terror, or shock
- Different from other genres; Tension based on the distortion of natural forms
- *** Musical score/ sound track add to the tension by building suspense and supplying information about a character's emotional state



Relevance

- Universal relevance: fundamental level of fear and terror, e.g., darkness, danger, and death...
 - Avoiding dark places (darkness)
 - Attempting to understand the unknown (danger)
 - Postponing death (death)
- Cultural relevance; Sub-group relevance; Personal relevance



Unrealism

- People prefer watching horror movies (with extremely violent and bloodily scenes) than documentary videos of relatively less unpleasant scenes (Haidt et al., 1994)
- Fictional nature of horror movie! -> Psychological distance between the viewer and the violent acts
- The music score intensifies the sense of unreality into the picture; protective function



What does our brain tells us?



What does our brain tells us?

- Thomas Straube: horror movie does not relate to the activation in amygdala at all!!!
- Instead, it associates with other parts of our brain, e.g., visual cortex, thalamus, insular cortex (self-awareness), and prefrontal cortex (planning, attention, and problem solving!!!)



A vehicle for learning!

- Horror movie as a safe place for personal growth
- Similar to going to the zoo to see an exotic animal (e.g., tiger)
- Horror movies require us to face the unknown (universal fear) in a safe place
- To understand it and make it less scary
- To put our fears into context
- To understand more about ourselves and our relationship with others

