

Lecture 16
March 9th
PSYC 200

EMOTIONS

Introduction

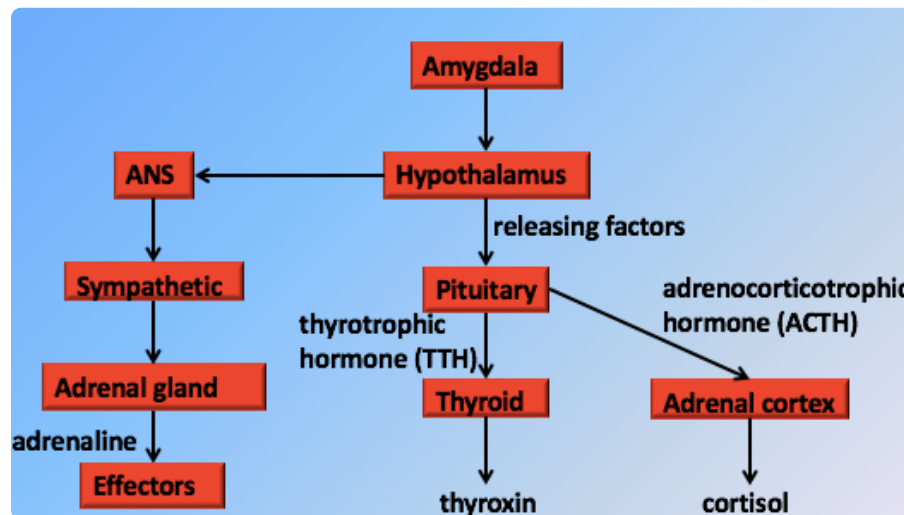
- What is an emotion? It's a subjective/personal reaction to an object or event
 - Emotional experience: subjective feelings (happy, sad, scared)
 - Emotional expression: behavioural manifestation of the subjective feelings (physical)
- The nature of emotions (emotional expression)
 - Physiological arousal: changes we experience inside
 - Expressive behaviour: outward behaviour responses
 - Cognitive experience: brain activity reaction
- the three components above are controlled by the amygdala found in hippocampus and it coordinates emotional response
- what is the relationship between the terms 'mood' and 'emotion'?
 - mood is a general feeling and isn't related to anything specific

Theories of Emotion

- The universality hypothesis (Charles Darwin)
 - Facial expressions are understood across all cultures, their meaning is universal
- James-Lange theory
 - emotional expressions take place before the emotional experience (behaviour before feelings)
 - we will experience emotional responses in response to physical changes in our bodies
 - example: you see a snake and you physically react first and experience emotion of fear afterwards
 - 'you will feel sad if you cry' according to this theory
- The Cannon-Bard theory
 - emotional experience and emotional expressions all take place at the same time
- Schachter and Singer's two-factor theory
 - suggests that there are 2 different factors that contribute to the emotions we experience
 - 1st factor: cognitive evaluation: label the expression
 - 2nd factor: physiological arousal (I am afraid)
 - we experience an event which triggers the physiological arousal which will cause your brain to find a reason for the arousal and that is why you will behave accordingly (start crying or be happy)
- Lazarus and the cognitive appraisal theory: our interpretation of a situation causes an emotional response that is based on that interpretation **(TEST QUESTION)**
 - misattribution effect: assign the incorrect meaning to an emotion, applies more to schachter and singer's theory rather than lazarus's
 - event is taking a test, you look up and lock eyes with another person, you're nervous but instead you feel like it's love at first sight
- Zajonc and the mere exposure effect: differs from the last two mentioned in the sense that according to this theory, you do not have to think about your physiological response in order to experience an emotion
 - not all emotional reactions occur consciously
- exposure effect
 - prior exposure to a stimulus prepares us to react in a certain way to that stimulus in the future
 - study where a person was looking at a screen and the screen was flashing a bunch of symbols really quickly, in response to one specific symbol the person would have an electric shock in their brain but since they were flashing so fast the brain couldn't process an emotional response
- amygdala: plays an important role in coordinating emotional response, it will evaluate the emotional significance of an experience and send info to other parts of the brain which will then trigger an appropriate emotional response
- Plutchik's Emotion Wheel
 - you can combine primary emotions in order to experience secondary emotions (combining joy and acceptance to experience love, combining disgust and sadness to experience remorse)

Emotion and the Body

- Brain structures
 - amygdala: gets most info from sensory organs, info is relayed through the thalamus
 - rapid subcortical pathway: sensory stimuli --> thalamus --> amygdala --> cortex (**MC TEST QUESTION**)
 - has been proposed to explain schachter's and singer's theory
 - slower cortical pathway: sensory stimuli --> thalamus --> cortex --> amygdala (**MC TEST QUESTION**)
 - event relayed to thalamus, thalamus relays info to cortex which evaluates what is going on, and then info is relayed to amygdala where an appropriate response is generated
 - has been proposed to explain lazarus's model
 - Klüver-Bucy syndrome (Heinrich Klüver and Paul Bucy): researchers performed temporal lobe lesions on animals and noticed the behavioural changes:
 - animals experience difficulty in interpreting the significance of an object, in order to understand the objects they put them in their mouth
 - hyper sexuality: they were constantly horny
 - diminished emotional response (cat would go play with snake without experiencing any fear)
 - Phineas Gage: he sustained extensive damage to the prefrontal portion of his brain, there was a dramatic change in his emotional behaviour, before accident he was really serious and organized and energetic and after the accident he became childish and participated in abnormal behaviour (dropping his pants in public)
 - the prefrontal cortex: plays an important role in initiating behaviour, it is largely influenced by the emotional signals that we get from the amygdala, if you disconnect the amygdala you will be acting void of any emotional input and expression, you will act inappropriately in response to situations
- Autonomic Nervous System
 - sympathetic division
 - parasympathetic division



- hypothalamus will trigger the sympathetic nervous system (1), it is activated when you are active/spending energy and an emotional response is an expenditure, (1) will increase the activity of the adrenal gland (2), (2) will release adrenaline which then have effects on your physical being (boost blood pressure, increase heartbeat/breathing rate)
 - the hypothalamus will increase the activity of the pituitary gland which will release TTH hormone which will increase activity of the thyroid gland and this will release thyroxin (this increases metabolic rate therefore increasing energy expenditure)
 - the hypothalamus triggers the activity of the pituitary gland which then also release ACTH hormone, which causes the adrenal cortex to release cortisol (this makes more energy available to the body, does this by raising blood sugar levels)
- comparing specific emotions
 - example: anger will change finger temperature more so than joy and sadness will, anger and fear and sadness will increase heart rate than other emotions, fear will move different muscles in your face as compared to joy

- the amygdala is more active when observing a fearful stimulus as compared to something that will make you angry
- negative emotions activate the right side of your brain and positive emotions activate the left side, people who are depressed tend to show a hypoactive (under-active) right side of their brain
- lie detectors: should be called emotion detectors
 - they measure blood pressure, heart rate, perspiration and respiration
 - fear increases these 4 things as well, taking this test will freak you out enough for investigators believe that you aren't telling the truth
 - how to beat this test
 - there are three types of questions on this test: 1) neutral question 2) control questions (are supposed to evoke an emotional response but not necessarily related to the crime in question) 3) irrelevant questions (directly related to the crime, "did you kill professor martin or not? we know you wanted to, don't lie to us")
 - if your emotional response to the control is greater than relevant questions, they would say that you are being truthful
 - if your emotional response to the relevant questions is greater than the control questions, they would say that you are lying
 - you got to figure out a way to increase emotional response to control questions, need to increase your physiological arousal during control questions (count backwards, tighten your anus)

Nonverbal Emotional Expression

example: we are able to identify angry expressions better than disgust expressions

- Facial expression and eye contact
- gender differences
 - example: women make eye contact while talking to each other, they also nod their heads in a subtle manner, men don't pick up these cues because they do not use these expression while having a conversation
- culture
- the facial feedback hypothesis and facial expression
 - states that if a person who makes a certain facial expression will feel the corresponding emotion
 - as long as the person is not feeling some other competing emotion
 - if you are asked to make a frown, you will feel sad
- deceptive expression
 - hiding emotions: true emotions differ from false ones
 - intensification: you're happy to see someone but you exaggerate your emotional expression, overdo it
 - deintensification: you're feeling intense sadness in public and you want to minimize this, muting emotional response, you still look sad but not as sad as you feel
 - masking: sometimes you feel sad but you force a smile, you're showing one emotion but you're feeling another one, you don't look sad but you feel very sad
 - neutralizing: 'poker face', don't show any emotion at all
 - Detecting emotions
 - morphology: all you have to do is study the shape of the face of a person to see if they're genuine/sincere expressions, there should be a symmetry
 - shape of the muscle groups one is using when displaying emotions

Experienced Emotion

- Cognition and emotion: how you think influences how you feel
 - mood-congruent processing
 - we selectively process info that is congruent (the same as) the emotional state we are in
 - our emotions influence what we choose to see/perceive
 - example: when you're depressed you only perceive negative things
 - emotion regulation: "think before you act"
 - pre frontal cortex plays an important role
 - the use of cognitive strategies to control and influence our emotional responses
 - affective forecasting
 - imagining how we might feel about a future event
 - valence and arousal
 - all emotions have a positive and negative tone, they all vary in arousal (high/low)
 - example: sadness has a negative tone and a low arousal, anger has a positive valence and a high arousal

- Fear: most of it is learned through experience
- Anger: some elements are culture specific, some cultures (interdependence culture) express anger less often than others (intradependance culture)
 - Catharsis theory
 - A person should express emotions, such as anger, to prevent them from building up and exploding
- Happiness
 - Feel-good, do-good phenomenon: if you are a happy person you are more likely to help others
 - Subjective well-being: measures how happy you are with your life, measures your self-perceived satisfaction with your life
 - if you are optimistic, in a close relationship, have faith in something, have a meaningful job, have good eating/sleeping habits, have a high self-esteem, you will tend to be very happy
 - age, gender, education don't influence happiness
 - physical attractiveness will make you happy
 - Relative deprivation
 - Most of us judge our levels of happiness by comparing to others
 - when we judge ourselves to someone with a higher social status, we will feel unhappy with ourselves