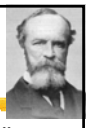
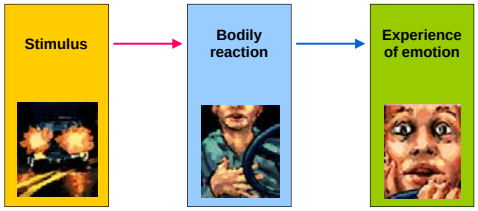
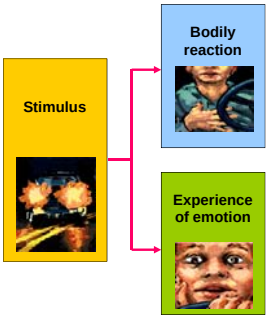
James-Lange Theory of Emotion



- Stimulus triggers bodily reaction (i.e., arousal), which our brains interpret, giving us the experience of emotion.



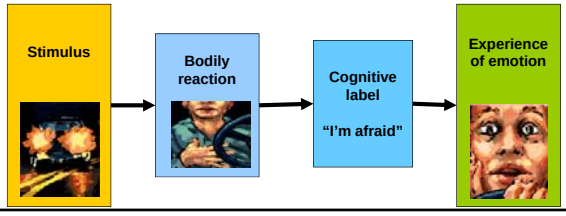
Cannon-Bard Theory of Emotion



- Stimulus triggers bodily reaction and experience of emotion independently.
- C-B believed that there was a brain structure dedicated to emotion that could interpret sensory information (e.g., visual information) directly and give us appropriate emotion (no need for information from the body).

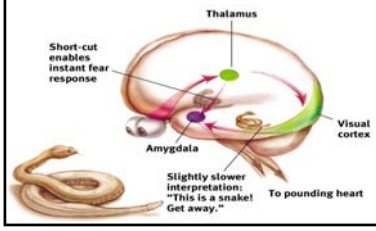
Schachter-Singer Two Factor Theory of Emotion

- A problem with J-L theory is that bodily reaction (i.e., arousal) is the same regardless of whether it's caused by positive or negative things. Therefore, brain must use outside information to label the bodily reaction and determine the specific emotion experienced.



Cognitive label not always necessary

- Sensory information goes to thalamus, which then sends it to be processed by complex cortical structures. But thalamus also sends it to the amygdala, which has crude abilities to process sensory information and make immediate response.



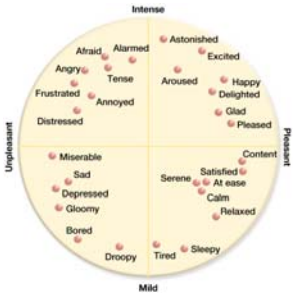
The amygdala is most sensitive to stimuli that signal danger. You can activate the amygdala by showing the above "fearful" eyes for as short as 17 ms (totally subliminal).

Circumplex model of emotion (Russell, 1980)

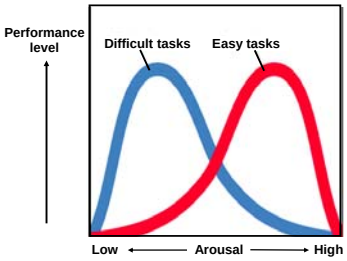
All emotions can be described with just two dimensions:

Valence (horizontal): Is the emotion positive (pleasant) or negative (unpleasant)?

Arousal (vertical): Is the emotion arousing (intense) or calming (mild)?



Arousal and Performance



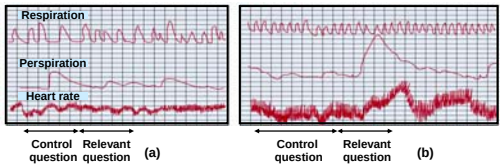
- Performance peaks at lower levels of arousal for difficult tasks, and at higher levels for easy or well-learned tasks

Emotion-Lie Detectors

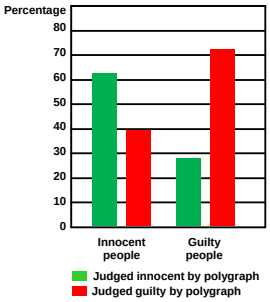
- Polygraph
  - machine commonly used in attempts to detect lies
  - measures several of the physiological responses accompanying emotion
    - perspiration
    - heart rate
    - blood pressure
    - breathing changes

Control Question Test Method

- Control Question
  - Have you ever stolen any money?
- Relevant Question
  - Did you steal $100 from work last Tuesday?
- Relevant > Control --> Lie



Emotion-
Lie Detectors



- 50 Innocents
- 50 Theives
  - 1/3 of innocent declared guilty
  - 1/4 of guilty declared innocent (from Kleinmuntz & Szucko, 1984)

Studies estimate that polygraphs produce false positive results 30-50% of the time!

Emotion-
Lie Detectors

- Liars can beat polygraphs
  - Lower arousal response (or signs of arousal) to relevant question…
    - Sedatives, antiperspirant on fingertips
  - Increase arousal to control question.
    - Tacks in shoe, bite cheek, bad thoughts…

- Of course, to do this, you have to know which questions are control and which are relevant, <u>and you will if you're guilty</u>.

Emotion-
Lie Detectors

- Truthful people can fail lie detectors

Innocent people easily figure out what the relevant questions are because they know about the crime they're being accused of committing.

Control Question:	Relevant question:
Have you ever had sexual fantasies about children?	*Did you have anal sex with the 3 year old boy next door?*

Just being accused of something makes people nervous. Relevant questions serve as a reminder of the accusation and also put people "on the spot," which makes them nervous (aroused) and more likely to seem like liars.

NEVER take a polygraph!

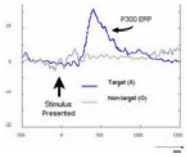
If you refuse to take one, this fact CANNOT be used against you in court.

…however…

If you take one, evidence from it CAN be used against you in most jurisdictions.

Always remember: If you're being asked to take a polygraph, <u>somebody thinks you're guilty</u>. Don't accidently prove them right!

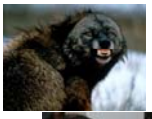
Better way to detect lies?



Parietal Lobe

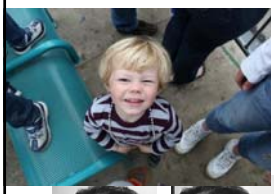
Expressing Emotion

⌘Emotions are often displayed similarly across cultures and species.



Expressing Emotion

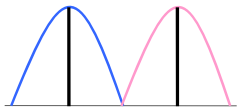
⌘Duchenne Versus Fake Smiles



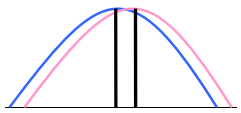
Guiluame Duchenne electrically stimulating involuntary muscles involved in smiling and laughter.

Expressing & Detecting Emotion (gender differences)

- ⌘ Women are somewhat better than men at detecting non-verbal displays of emotion.
- ⌘ Men tend to describe emotional reactions in simpler terms.
- ⌘ Women are somewhat more likely to respond emotionally to someone else's non-verbal emotional display.



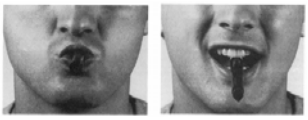
Stereotype



Reality

Expressing Emotion

- Not only do our facial expressions of emotions help to communicate how we feel, they also influence how we feel when we make them.
- Similar to James-Lang theory that our behaviors or responses lead to emotional experiences.



Happiness

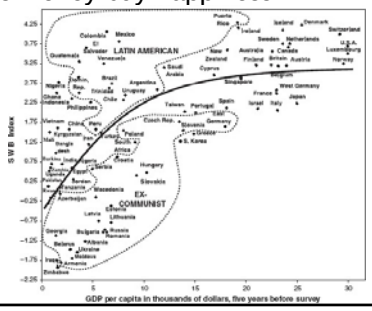
- Subjective Well-Being
  - self-perceived happiness or satisfaction with life
  - used along with measures of objective well-being
    - physical and economic indicators to evaluate people's quality of life

Correlates of Happiness

- What makes us happy?
  - Feelings of autonomy (control over one's life)
  - Feelings of competence (your good at what you do)
  - Feelings of relatedness (you're included in activities, etc. of your social group)
- Does money make us happy?

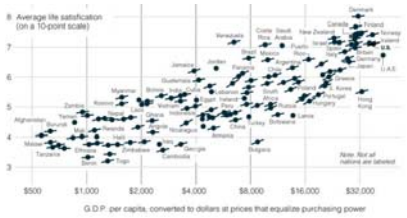
Money and Happiness

- Does money buy happiness?



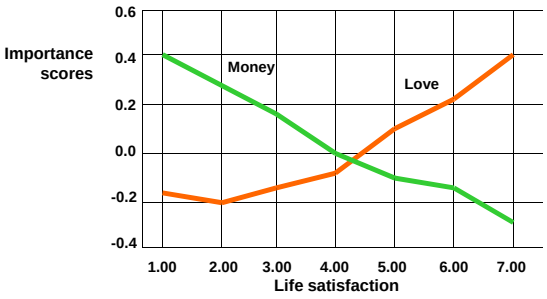
Money and Happiness

⌘Does money buy happiness?

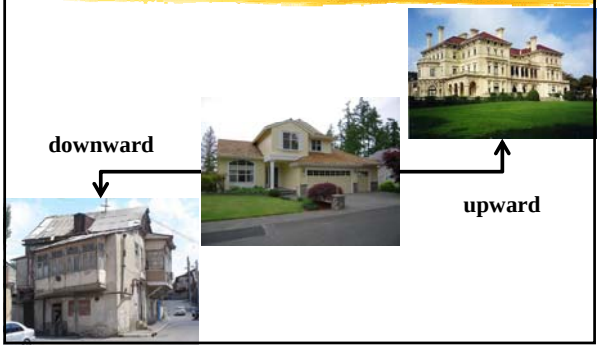


Money and Happiness

⌘Values and life satisfaction



Social Comparison



Counterfactual Thinking

What might have been...

Counterfactual Thinking

Which grade would you be happier with?

80% B or 89% B

What might have been?