

# What is Emotion?

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



Neutral



Sad



Angry



Happy

# Why Do We Have Emotional Responses?

- probable adaptive value
  - anger → fighting
  - fear → running / hiding
  - love → protection / caring
  - disgust → avoiding

## Why Do We Have Emotional Responses?

- external emotional cues very useful in social situations
  - facial expressions
  - body language / posture
- e.g., if others can see we are angry, they can avoid us, or avoid provoking us

# Expressed Emotion

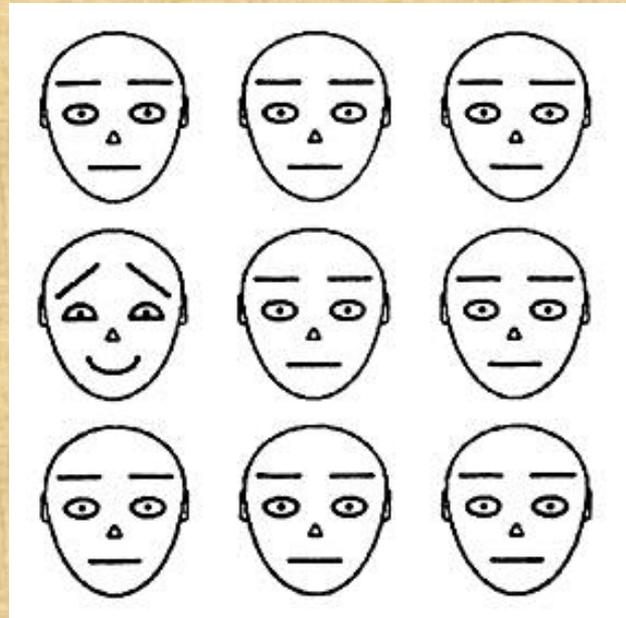
Emotions are expressed on the face, by the body, and by the intonation of voice. Is this non-verbal language of emotion universal?



What is responsible  
For facial expressions?

# Nonverbal Communication

Most of us are good at deciphering emotions through non-verbal communication. In a crowd of faces a single angry face will “pop out” faster than a single happy face (Fox et al. 2000).



*Experience can sensitize us to certain emotions.*

Shown a series of faces that morphed from sadness or fear to anger, physically abused children are much quicker to detect anger.



When shown the middle face, evenly mixing fear with anger, physically abused children were more likely than non-abused children to perceive the face as angry.

# Gender, Emotion, and Nonverbal Behavior

Women are much better at discerning nonverbal emotions than men. When shown sad, happy, and scary film clips women expressed more emotions than men.

# "Hard-Wired" Emotions

- Are some emotional responses innate?



*Interest*



*Fear*



*Disgust*



*Anger*



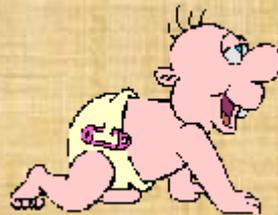
*Sadness*



*Joy*

# "Hard-Wired" Emotions

Babies also seem to have innate ability to interpret the facial expressions of others



# “Hard-Wired” Emotions

- Social referencing
  - Babies rely on parent's emotional signals



# Universality of Emotions



- Despite different languages, cultures and social norms, studies suggest that people "speak and understand substantially the same 'facial language' the world around."

# Paul Ekman - Seven Basic Emotions

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



He says that these are **Universal emotions**

Here is a sample of 6 of Ekman's emotions. Which one is missing?

# Neurocultural model - Ekman

- Facial expressions are a result of separate systems for cognition and emotion that interact producing the dual influence of
- (1) universal, biologically innate factors
  - Sub-cortical system (beneath cerebral cortex)
    - Spontaneous facial expression
    - Bottom-up 'reflexive' expression
    - Universal
- (2) culturally specific, learned display rules.
  - Cortical system (cerebral cortex involvement)
    - Mediates voluntary system (display rules)
    - Controlled
    - Top-down 'contrived' expression

# DISPLAY RULES

- **A SOCIAL GROUP'S INFORMAL NORMS ABOUT WHEN, WHERE, AND HOW ONE SHOULD EXPRESS EMOTIONS.**
- **WHEN THOSE RULES ARE VIOLATED NOBODY KNOWS QUITE HOW TO REACT.**

**CONSIDER: IF, WHEN PREPARING TO LIGHT YOUR DAUGHTERS BIRTHDAY CAKE, YOU NOTICE THAT THERE IS A FINGER MARK IN THE CAKE, WHAT MIGHT YOU EXPECT A PERSON TO DO?**

**DESPERATE HOUSEWIVES**

Display rules serve to mediate neural impulses  
(we saw what happens when display rules aren't followed in the birthday party clip. It makes people surprised and uneasy.)

- Display rules can prevent triggering of facial muscles
- Reduce the output of the display
- Make the display shorter/substitute alternative display

# Are there cross-cultural differences in recognition accuracy rates?

Americans are better at recognizing anger, disgust, fear, and sadness than Japanese

- Cultural source of these differences may be individualism.
  - Individualism is associated with better recognition of anger, fear, and happiness.

# Paul Ekman - Microexpressions

