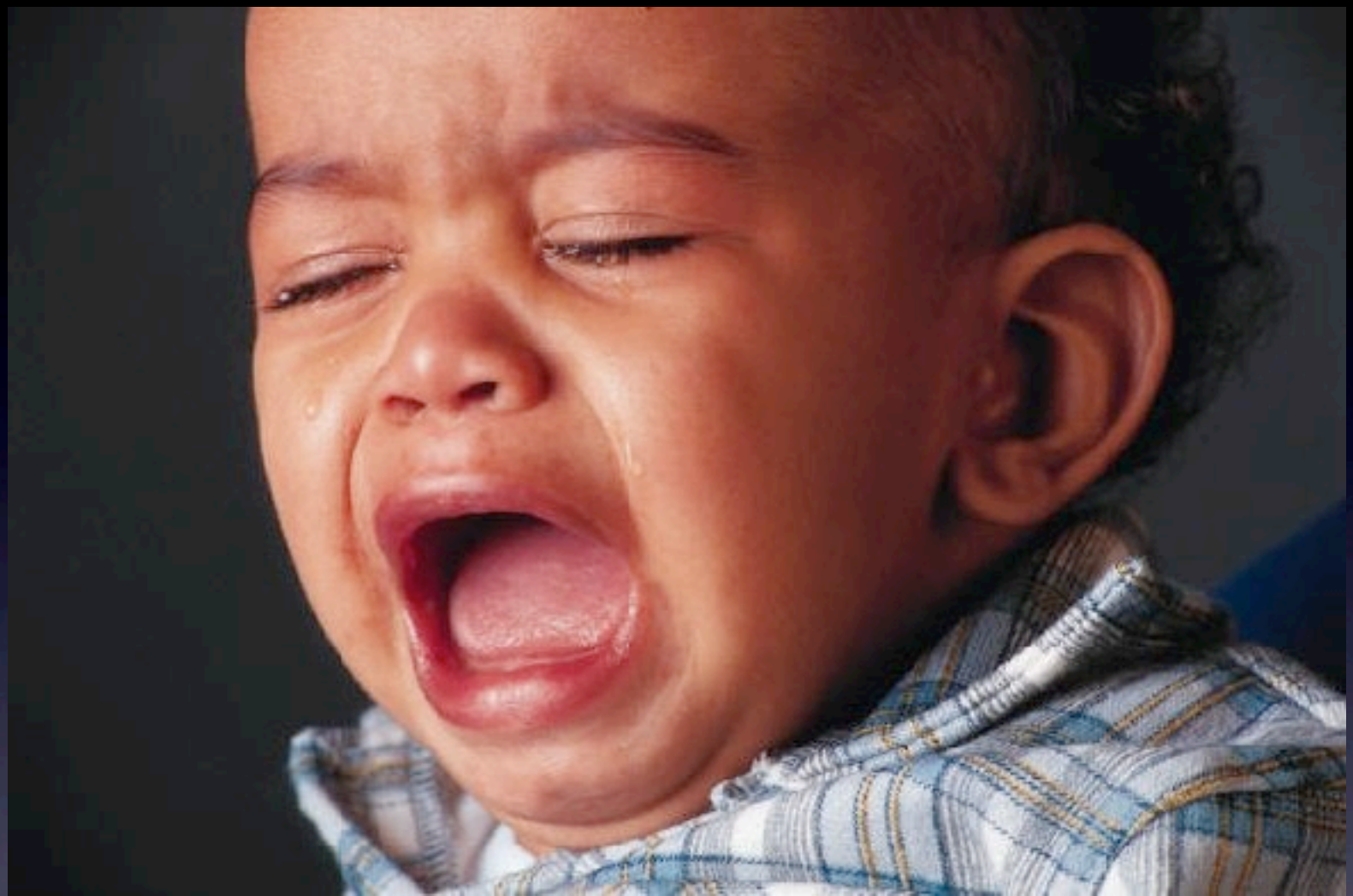
Emotional Development

Psychology of Emotion
Lecture 7
Professor David Pizarro

What happens to emotions over time?

- The study of emotional development can answer a number of questions...

- The BIG question is simply--what changes...



From here...

...to here?

...and even to here?

One big point about development:

From birth to maturity, emotions go from relatively undifferentiated positive and negative states, to increasingly different "discrete" states.

Overview

Emotion in infancy

Emotion in early childhood

Emotion in old age

What happens to emotions over time?

- The study of emotional development attempts to answer a number of questions...
  - How do we go from a limited set of emotional reactions to full-blown adult emotions?
  - How much of this is innate?
  - How much depends on other factors being present?
  - How much requires socialization?

Emotions in Infancy

Side-note on studying emotion in infants

- Infants don't have language, so they can' tell you what they're really feeling.
- But they don't have *manners* yet either. They will show you whatever face they feel like showing you.

Is facial expression enough to call it an emotion?

- Facial muscle activation (adapted from adult measures)
- Socially recognizable expressions
- Often "extra" requirement to claim an emotion in an infant: that the presence of a facial expression be in the "appropriate" eliciting conditions.

Example of 'appropriateness' criteria: "Emotional" Displays at Birth?

- Infants make a variety of what we might think of as "emotional" displays at birth.
  - They cry
  - They smile during REM sleep
  - They make a disgust face to bitter/sour tastes

Are these facial expressions meaningful?

- They cry--but are they sad or angry?
- They smile--but are they happy?
- Reflexive distaste, but is it disgust?
- These expressions are not made reliably in response to the "right" sorts of situations.

Are these facial expressions Innate?

- Test: Do blind babies have emotional facial expressions like sighted babies?

  -Yes, especially smiling

  -But, as time goes on, blind people make fewer facial expressions of emotion

  (except happiness)

  -Not good at posing facial expressions

Back to topic: Emotion in Infancy

- Crying
- Smiling
- Other "Basic" Emotions

Crying: The Universal Display of Neg. Emotion

- Basic cry:
  - Rhythmic, cry, brief silence, in-breath whistle, brief rest
- Anger cry:
  - Like basic but with more air forced through vocal cords
- Pain cry:
  - Sudden loud cry, long initial cry followed by extended breath holding

Basic Early Infant Crying

Smiling: Universal Display of Positive Emotion

- Reflexive smile:
  - not in response to external stimuli
  - usually during irregular sleep

- Social smile:
  - appears around 2 months
  - response to external stimuli like faces

Smiling cont'd

- Smile thought to be relatively general, non-specific positive response
  - Recent research suggests infants differentiate positive events by the type of smile they give
  - High-cheek movement marks more positive (joyful) events
  - Adults can recognize this difference

Other "Basic" emotions: Fear and Anxiety

- Fear and wariness toward strangers
  - 6-12 months, peaks at 9-10 months
- Separation protest:
  - fear and crying when care giver leaves
  - peaks around 15 months
- Fear in response to danger at around 10 months
  - "Visual Cliff"

Visual Cliff

Critically: Emotions are "appraisals"

- Michael Lewis and colleagues have shown that children are angry and happy in response to goal achievement or blocking.
  - Hand strapped to device that plays music in response to movements.
  - When this stops, children get angry
  - Angriest when music is non-contingent

Emotion in Early Childhood

What changes from Infancy to Early Childhood:

- Many "mature" emotions dependent on cognitive development
  - Sense of Self
  - Theory of Mind
  - Understanding Social Norms
  - Increased Linguistic Abilities

Example: Fear

- 7 months: Loud noise, sudden movement
- Preschool: Imaginary things
- Elementary School: Physical threats
- Adolescence: Social Fears

Increased Abilities: Recognizing Emotions

- Facial Expression

1. Matching facial expression to music tone

   -- 5-9 months: attend to happy face when hear happy music

   --not true for sad music-sad face

2. Matching facial expression to approach/avoid

   --10 months: attend to face of others, no implication for action

   --12 months: others' expressions predict infants' actions toward a novel object

Recognizing Emotions, cont'd

- Able to use Several cues

-Facial Expression

-Tone ("prosody")

- -Manipulate content and prosody

- "My puppy ran away" in a happy voice

--Sad content

--Happy prosody

-Age 4-10, Relative shift from focusing on content to prosody

Recognizing Emotion Faces in Early Childhood

- Widen & Russell (2003)
- Free-labeling of Emotion Faces
- Young children fairly poor, but better with age
  - Happy, Angry, Sad emerge first (in that order)
  - Scared, surprised, disgusted only later

Self-Conscious Emotions

- In early childhood start being able to use social standards and rules to evaluate behavior
- Basics start to appear around 2.5 years of age
  - e.g., pride, shame, guilt, embarrassment

Example: Embarrassment at 4, 6, and 8 years of Age

Instructions: Explain embarrassment to an alien and How would you feel if you forgot your lines in the school play?

- **Age 4:**
  - No understanding=Unable to define "embarrassed"
  - More likely to describe it as sad or angry
- **Age 6**:
  - Start to understand social norms
  - But describe it as feeling sad
- **Age 8**:
  - Understand social norms, attribute mental states to others, and describe emotion as "embarrassed".

Other skills emerge in early childhood...

- Better at talking about emotions
  - Increase in emotion-related words
  - can label emotions and talk about past and future emotions
  - Able to use emotion language in pretend play
- Increased ability to reflect on emotions
- Can talk about causes and consequences of emotions

Childhood abilities cont'd

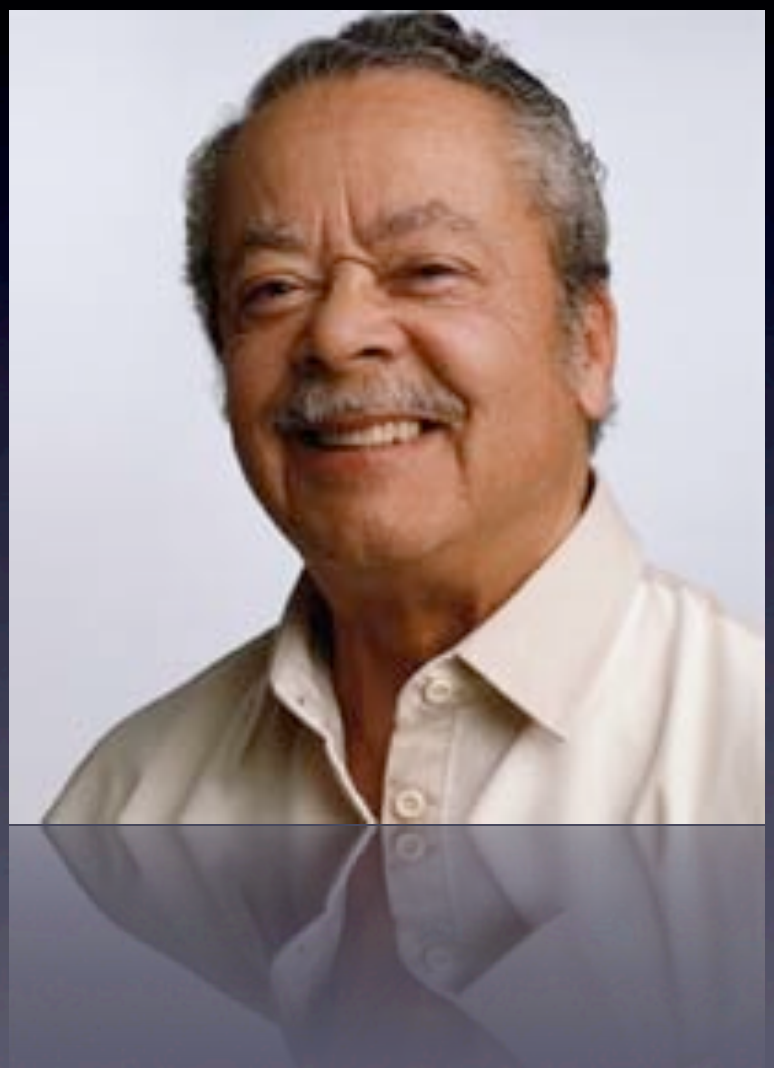
- Come to understand that same event can elicit different emotions in different people
- Increased awareness about controlling emotions to meet social standards
- Emotions and emotional regulation play a large role in the success of peer relationships

Emotion in Old Age

Emotions Change in Old Age

General Trend:

More Positive Emotions
Less Negative Emotions



Emotion in Old Age

"Relived Emotion" Task

-Three component measurement

--No differences in facial expressions, or self-report

--Decrease in autonomic reactivity

Emotion in Old Age: Selectivity Hypothesis

- Decrease in attention to Negative Information
- Increase in Attention to Positive Information
- Increase in Memory for Positive Information

Laura Carstensen

Attentional Bias

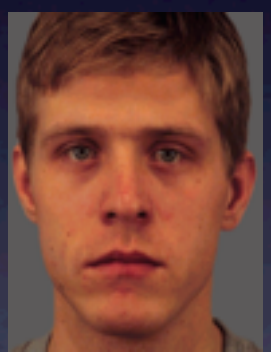
- Younger (18-35) vs Older (62-94)
- Viewed pairs of faces

-Neutral & Happiness

-Neutral & Sadness

-Neutral & Anger






Experimental Paradigm: Attention

Experimental Paradigm: Attention

Respond to dot as fast as you can

Findings: Attentional Bias

- Younger (18-35) vs Older (62-94)
- Viewed pair of faces
- Faces disappear; Dot appears
- Reaction times of Older Subjects

-Happiness > Neutral

-Sadness < Neutral

-Anger < Neutral

Increased Memory for Positive Emotional Information

- In addition:

  -Older subjects show increased memory for happy faces

- Subjects presented with IAPS pictures

  -Positive, negative, neutral pictures

  -Older subjects recall/recognize

  --positive pictures > negative, neutral

Summary: So what "develops" in emotional development?

- Basic hardware seems present at birth
- Infants become increasingly responsive to environmental contingencies and display "basic" emotions reliably
- As other abilities emerge, emotions become more complex
- "Higher" abilities like regulation can improve even through adolescence
- Old age marked by different emotional style due to changing goals, changing environment