

# Individual Differences in Emotion



Psychology of Emotion  
Lecture 10  
Prof. David Pizarro

# Universality vs. Variability

- Reminder--we focus a great deal on human universals.
  - shared evolutionary history
  - shared basic biology
- But even with similar basic hardware, flexibility gives rise to *variability*
- We've talked about one source of variability:  
Culture

# The power of personality?

- But there are differences not just between groups, but across individuals.
- Plenty of debate as to whether situations or personality influence behavior *more powerfully*
- This debate aside, what might we expect to differ across individuals?

# Personality & Emotionality

- Converging ideas about the sorts of ways individuals differ in their emotional styles
- “Big” idea
  - Individuals have differing levels of *positive* and *negative* emotionality
  - Referred to by many different names
- Plausible biological basis for the distinction

# Eysenck's PEN Model

- Extroversion (Positive Emotion)
  - Different resting levels of cortical arousal
  - Extraverts: Below optimal level
    - Seek out positive experiences for stimulation
    - Increased positive emotion
- Neuroticism (Negative Emotion)
  - Different reactivity in sympathetic nervous system (fight/flight)
  - Neurotics: Highly reactive (low threshold)
    - Easily upset, increases negative emotion



# Gray's Inhibition/ Approach Model

- Behavioral Inhibition System (BIS)
  - Sensitivity to novel or punishing stimuli
  - Increased negative emotion (anxiety/fear)
- Behavioral Approach System (BAS)
  - Sensitivity to rewarding stimuli
  - Increased positive emotion (pleasure)
  - Dopamine

# BIS/BAS Scale

- 1. If I think something unpleasant is going to happen, I usually get pretty worked up.
- 2. When good things happen to me, it affects me strongly.
- 3. I worry about making mistakes.
- 4. When I want something, I usually go all-out to get it.
- 5. I'm always willing to try something new if I think it will be fun.
- 6. Criticism or scolding hurts me quite a bit.
- 7. When I'm doing well at something, I love to keep at it.
- 8. When I see an opportunity for something I like, I get excited right away.
- 9. I feel pretty worried or upset when I think or know somebody is angry with me.
- 10. If I see a chance to get something I want, I move on it right away.
- 11. I often act on the spur of the moment.
- 12. Even if something bad is about to happen to me, I rarely experience fear or nervousness.
- 13. I will often do things for no other reason than that they might be fun.
- 14. I go out of my way to get things I want.
- 15. I feel worried when I think I have done poorly at something.
- 16. I crave excitement and new sensations.
- 17. When I get something I want, I feel excited and energized.
- 18. I have very few fears compared to my friends.
- 19. When I go after something, I use a no hold barred approach.
- 20. It would excite me to win a contest.

# What is the source of difference across individuals?

- Assume the existence of stable individual differences in positive vs. negative emotionality
- What is the primary cause of these differences?
  - Differences in parental care, family environment, socio-economic status?
  - Genetic, heritable differences?

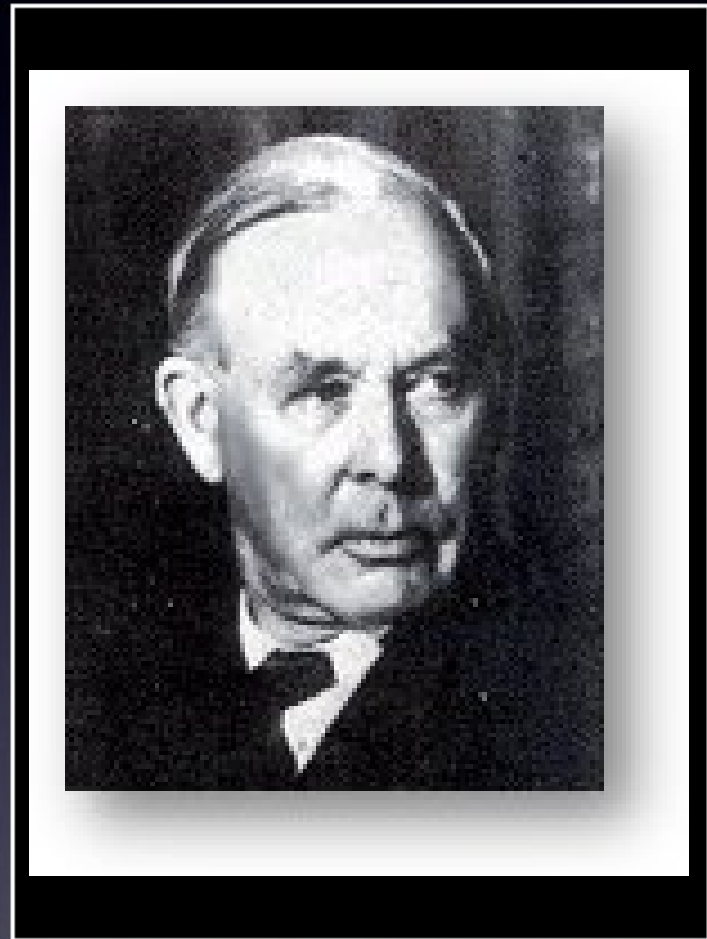


# The Developmental Debates...

- The pendulum between Nature and Nurture swings more frequently
- For many reasons, dominant view in development stressed environment (Freud, Behaviorism)
  - Attachment Theory
  - Temperament

# John Bowlby (1907-1990)

- Trained in Psychology, Medicine (Psychiatry) and Psychoanalysis
- Took Lorenz's ethological notion of "imprinting"
- Published "Attachment" in 1969



# Attachment Theory

- *Attachment* refers to the bond between child and caregiver (or more generally, the bond between two people)
- Key claim is that there are different *styles* of infant attachment
- These attachment styles are important for how we form other relationships (first attachment relationship acts as *prototype*)

# Ainsworth's "Strange Situation"

- Parent and Infant alone in a room
- Child explores without parental participation
- Stranger enters room, talks to parent, and approaches child
- Parent leaves quietly
- Returns after a few minutes and comforts child



# Attachment Styles: “Secure”

- Child explores freely
- Engages with strangers
- Visibly upset when the parent departs
- Happy to see the parent return



# Attachment Styles: “Anxious Resistant”

- Anxious of exploration and of strangers, even when the parent is present
- When the mother departs, the child is extremely distressed
- The child is ambivalent when parent returns
- Seeks to remain close to the parent but resentful

# Attachment Style: “Anxious-Avoidant”

- Avoids or ignore the parent - showing little emotion when the parent departs or returns.
- The child will not explore very much regardless of who is there.
- Strangers will not be treated much differently from the parent.
- There is not much emotional range displayed regardless of who is in the room or if it is empty.

# Attachment Styles: “Disorganized Attachment”

- Erratic, inconsistent style
- Their actions and responses to caregivers are often a mix of behaviors, including avoidance or resistance.
- These children are described as displaying dazed behavior, sometimes seeming either confused or apprehensive in the presence of a caregiver

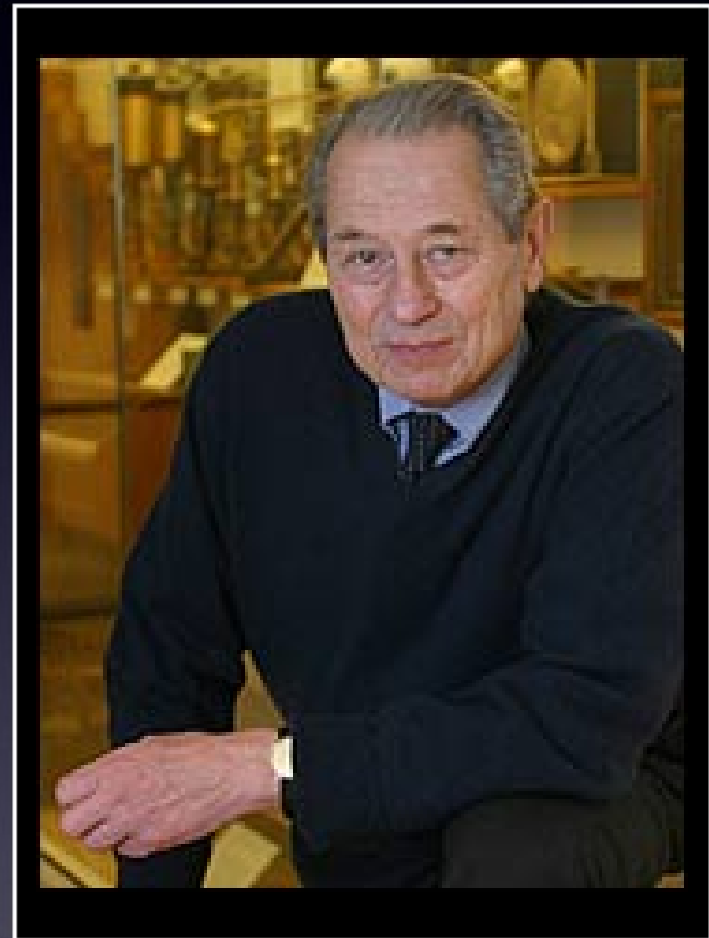
# Implications for Emotionality

- Quality of infant-caregiver attachment relationship determines adult characteristics
  - Degree of positive emotionality
  - Degree of negative emotionality
- Importance on Parental Involvement

# Temperament

## Jerome Kagan

- Component of emotionality
- Early emerging
- -“Disposition,”  
“Tendency,” or “Bias”
- Biologically based
- Typically inherited
- Stable across situations  
and time





# “Galen’s Prophecy”

- Four “Humours”
  - Blood (heart)
  - Phlegm (head)
  - Black Bile (liver)
  - Yellow Bile (gall bladder)
- “Balance” of these four causes personality traits



# Swinging of the Pendulum...

“Now he looks back in embarrassment at the degree to which the notion of the blank slate held sway only a half-century ago. ‘In my first academic job I taught hundreds of students that you could produce an autistic child if a mother was cold and unresponsive,’ he says, an idea discredited a generation ago by genetic studies. ‘That is incredible.’”

# Dimensions of Temperament

- Activity level
  - General arousal
- Impulsivity
  - Time taken to express emotion
- Positive Emotionality
  - Smiling, Laughing, Sociability
- Negative Emotionality
  - Irritability, Fearfulness, Soothability

# Studies on Temperament

- 1986 began studies dangling toys in front of babies (500 of them)
- 20% of babies showed distress (“high reactive”
  - "crying and vigorous pumping of the legs and arms, sometimes with arching of the back"
- 40% showed little or no emotion/motion (“low reactive”)
  - (rest fell in the middle)

# Follow-up

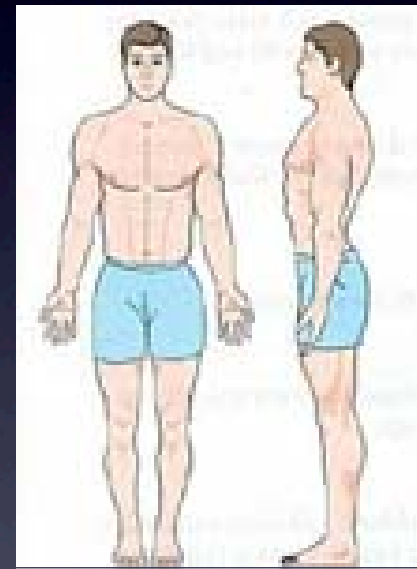
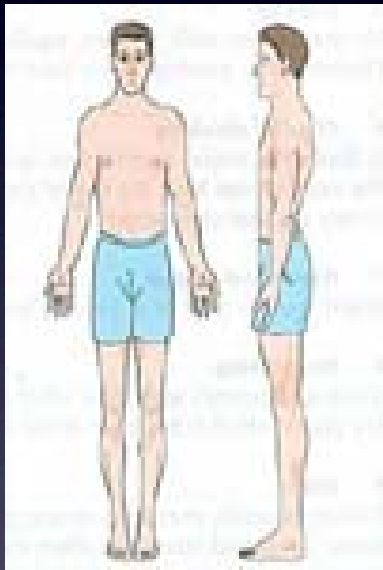
- Came back into lab at ages 2, 4, 7, and 10-12
- At 10-12 were given full battery of tests/ scans while asked to give a “surprise speech”
- Quite a bit of stability:
  - ~20% of “high reactives” were behaviorally similar
  - ~1/3 of “low reactives” were calm and cool, like when
- Although many drifted toward “middle”, only 5% “flipped”



- Temperamental differences in infancy predict inhibited behavior and negative emotion over the lifespan
  - Higher resting heart rate
  - Novelty
    - More motor activity
    - Negative emotion
  - Greater startle responses

# Temperament and Physical Characteristics

- Behavioral Inhibition found more in:
  - Blue eyes
  - Ectomorph than mesomorph/endomorph



# Ectomorph, Endomorph, Mesomorph

# Temperament and Physical Characteristics

- Behavioral Inhibition found more in:
  - Blue eyes
  - Ectomorph than mesomorph/endomorph
  - Narrow face
- Cross-species Support
  - Fearful rats: gray coat > black coat
  - Fearful foxes: lighter coat > dark coat
  - Fearful dogs: ectomorphic body > other

# Upshot?

- Infant temperament seems to predict adult emotional differences
- You can't really turn a "screamer" into a cool cat.
- But STILL, plenty of room for change...



# Differences in Emotionality Across Lifespan

- Whether due to nature or nurture, it seems as if early individual differences in emotionality are good predictors of future behavior
- Example...

# Yearbook Study

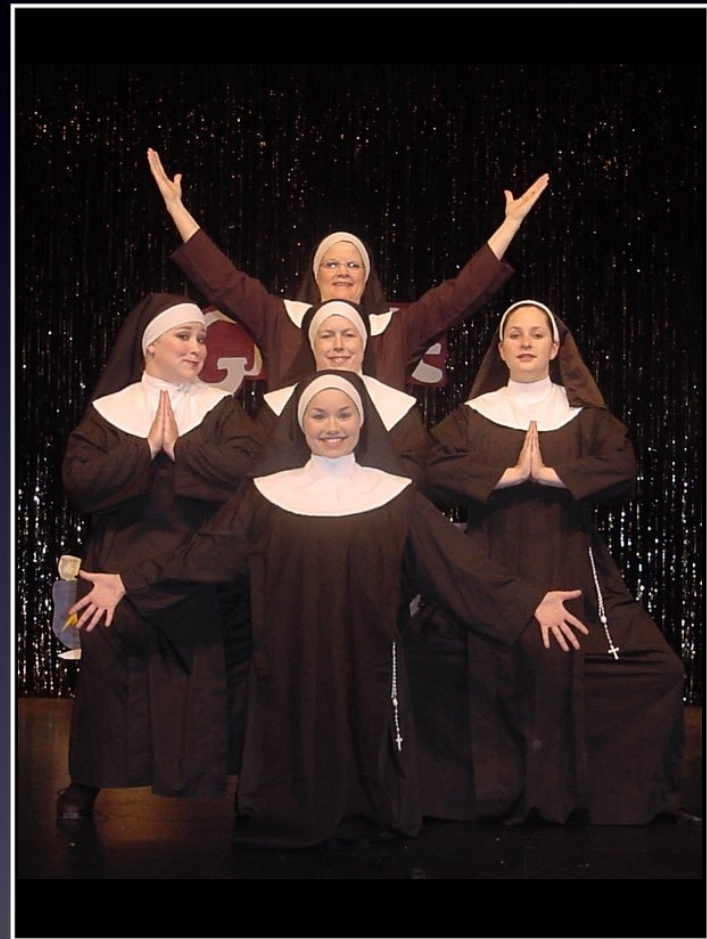
## (Keltner & Harker)

- What can a smile from yearbook tell you about the rest of someone's life?
- Yearbook study: Photos coded for smiling
- Smilers: 20 years later
  - ↓ Negative emotionality
  - ↑ Affiliation and competence
  - ↑ Marital satisfaction
  - ↑ Acceptance by others



# “Nun” Study (Danner, Snowdon, & Friesen)

- Examined diaries of 180 nuns in convents across the U.S.
- Written in 1930 (age ~22)
- Coded for positive/negative emotion words
- Positive words predicted longevity



# Beyond Positive/Negative: Other Individual Differences in Emotions

- ID in Shame vs. Guilt
- ID in Empathy
- ID in Disgust
- (plenty of others we won't get too, like fear/  
anxiety, anger)