

Personality (Pt. 2)



PSYCH 1101: DAY 27

PROF. DAVID PIZARRO
CORNELLPSYCH.NET

Where Do Personality Traits Come From?

The Biological Roots Of Personality



JEROME KAGAN

Biological mechanisms at the heart of personality differences:

- positive emotionality/negative emotionality
 - also labeled: approach system/avoid system
 - also labeled: extraversion/neuroticism

“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.’”

"Galen's Prophecy"

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



GALEN OF PERGAMON

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

- In 1986, Kagan 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)

Infant Temperament



[HTTPS://WWW.YOUTUBE.COM/WATCH?V=FAMYT5GRD3K](https://www.youtube.com/watch?v=FAMYT5GRD3K)

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”

Follow-Up (Cont'd)

- 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

In Sum

- There are stable, reliable differences in personality
- These can be measured, and they can predict a great deal of behavior
- They are likely based in variability in our basic emotional systems
- Why? Is it advantageous at all?
 - Some arguments that these differences may have adaptive benefit
 - But it may simply be a byproduct (like variability in height or shoe-size)