

## Personality

“A devil, a born devil on whose nature nurture can never stick”

- The Tempest

# + Think of a Person Activity!

- Think of a person you really admire and like
- What are some traits of that person?

OR

- Think of a person you really dislike
- What are some traits of that person?



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## Follow up from last week...

- Name everyone in the class =]





# What Are We Doing Today?



- Introduction to Personality
- Extraversion
- Altruism
- Aggression
- Personality in Siblings



# What is Personality?



- Traits
  - Temperament, character, values
  
- States
  - Emotional and mental
  
- Acts
  - Activities and behavior

**\*\*Stability and consistency over time\*\***



# The Many Personality Theories



- Trait theories
- Type theories
- Psychoanalytic
- Behaviorist theories
- Humanistic theories
- Biophysical theories



“Personality represents those characteristics of the person that describe and account for consistent patterns of feeling, thinking, and behaving”

*- Personality: Theory and Research (9th ed.)*



# Trait Theories



- A little history...
  - Allport and Odbert's lexical study
    - 18,000 person descriptive words
    - Traits (5,000)
    - States
    - Activities
    - Others (evaluation, skills, etc.)
  - Cattell's 16 PF
    - 5,000 traits → 200 clusters → 35 variables → 16 personality factors
    - Problem?



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# The Big Five; OCEAN



■ Openness to experience, intellect

■ Conscientiousness, constraint,

■ Extraversion, warmth, energy

■ Agreeableness, altruism, affection

■ Neuroticism: negative affectivity, nervousness

# + Superfactors and Facets



Big Five Dimension	Facets					
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<b>Openness to Experience</b>	Fantasy	Aesthetics	Feelings	Actions	Ideas	Values
<b>Conscientiousness</b>	Competence	Order	Dutifulness	Achievement Striving	Self-Discipline	Deliberation
<b>Extraversion</b>	Warmth	Gregariousness	Assertiveness	Activity	Excitement Seeking	Positive Emotions
<b>Agreeableness</b>	Trust	Straight-forwardness	Altruism	Compliance	Modesty	Tender-Mindedness
<b>Neuroticism</b>	Worry	Anger	Discouragement	Self-Consciousness	Impulsivity	Vulnerability



# So What?

- Pittsburgh Youth Study
  - Poor inner-city sample of Whites and Blacks in a high-crime environment
  - Juvenile delinquency in boys age 12
    - Low A and low C
  - School performance
    - High C and high O
    - But, high A = teacher's pet
  - Race not correlated with Big Five
  
- At age 16...
  - Arrests, drug use
    - Low A and low C
  - Academic achievement
    - High O and high C
  - Interpersonal effects
    - E+ predicts higher number of sexual partners
    - A+ predicts likeability (as rated by interviewer)





# Types Theory: Meyer Briggs



- ESTJ vs. INFP
  - Extraversion vs. Introversion
  - Sensing vs. Intuition
  - Thinking vs. Feeling
  - Judgment vs. Perception
  
- Problem?
  - Normal distribution

Example: Two women interview for a job; one is more qualified, but the other is a single mother. Whom do you give the job to?



# Extraversion



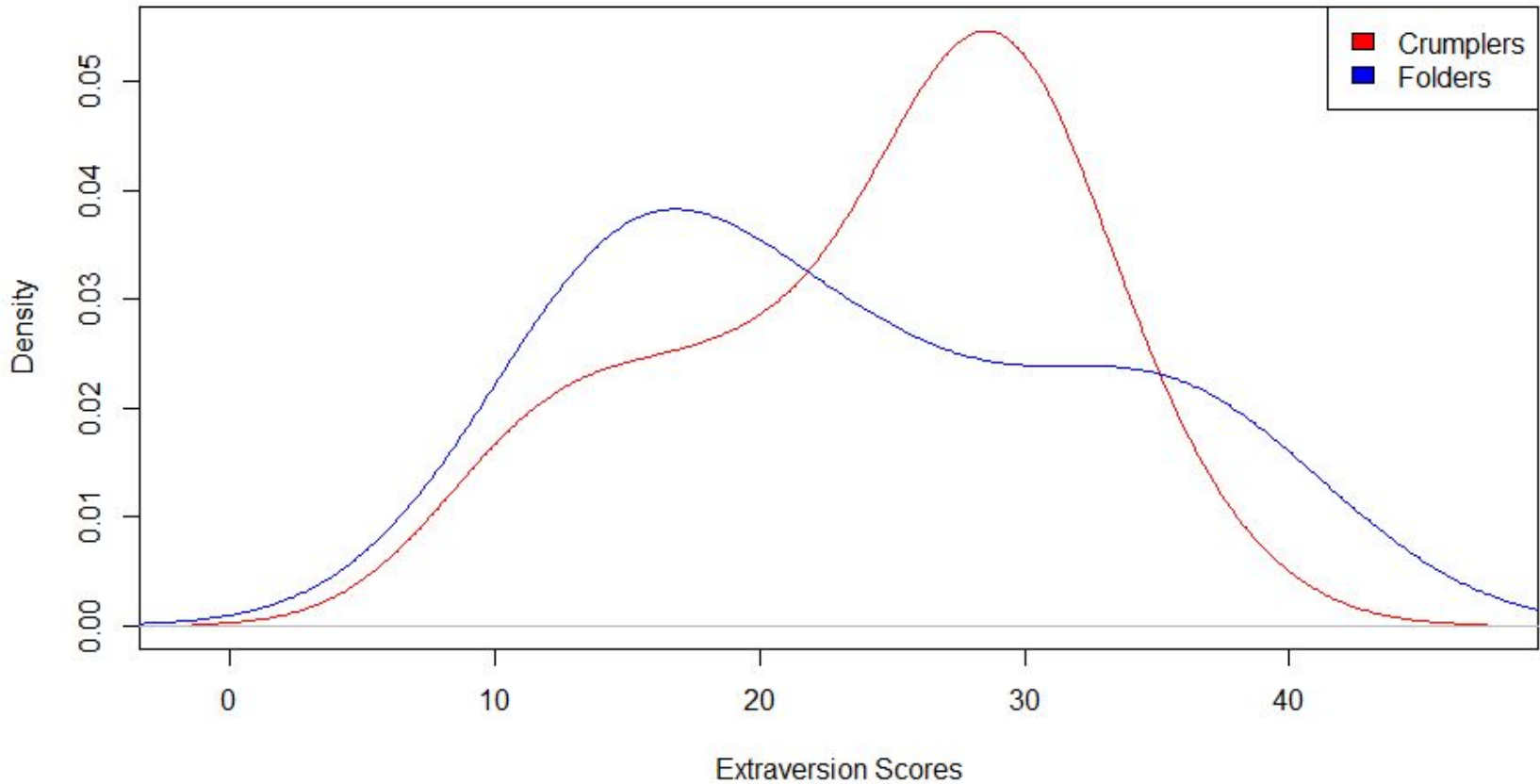
- Coined by Carl Jung
  - Extraverts tend to be more talkative, outgoing, sociable
  - Introverts manifest more reserved and solitary behavior
  
- Biological based
  - Cortical arousal
  - Reward system
  
- Measured the cerebral blood flow of E/I subjects using PET scans
  - Data suggested that extraverts' attention focused outwards and introverts' inwards
  - Research showed introverts have more neuronal activity
  - Studies also supported the cortical arousal theory
    - Lemon Juice Experiment

# + Tying Everything Together

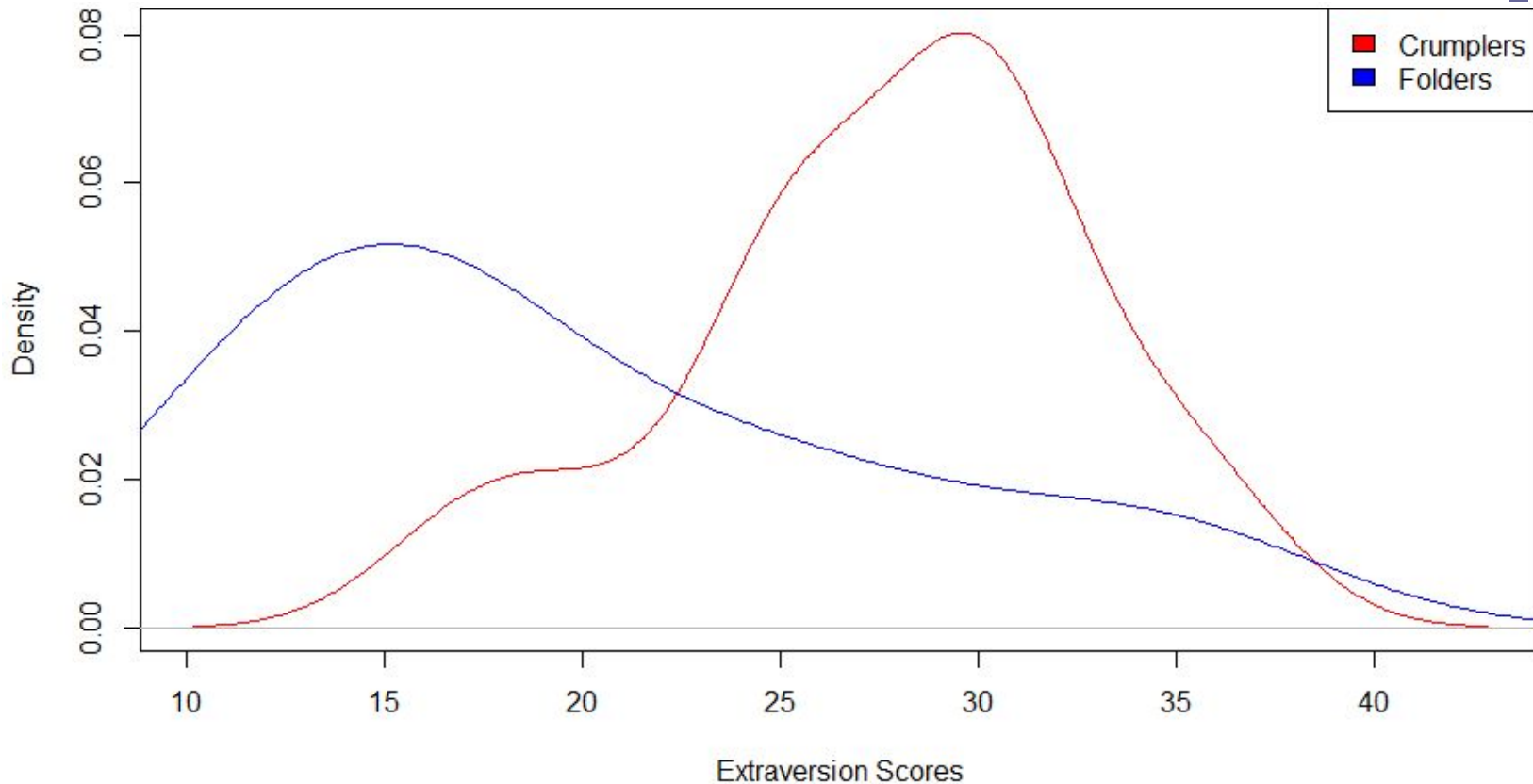
How do genes, neurobiology, and behavior interact at a societal level?

- Lisa's Gum Wrapper Study!





*Figure 1.* Density curve displaying extraversion scores for observed “folders” and “crumplers”.



*Figure 2.* Density curve displaying extraversion scores for “folders” and “crumplers,” according to self-report.



# + Let's Take a Little Break!



- Take a quick Big Five inventory test
  - [Tinyurl.com/big5nn](http://Tinyurl.com/big5nn)
  - There are 50 statements; answer the best you can! Go!
- Now, some questions for funsies...
  - Looking at your scores, were you surprised by any of them?
  - If you have a low O, when was the last time you went on an adventure?
  - If you have low E, when was the last time you imitated a conversation with a stranger at a social?
  - What other factors play a role in your daily behavior? Do your scores define you?



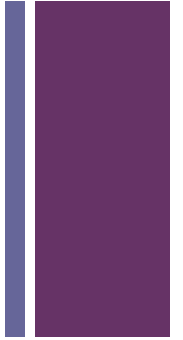
# Cat's results...



Trait	Score	Percentile
Extraversion	3.1	49
Extraversion reflects how much you are oriented towards things outside yourself and derive satisfaction from interacting with other people. <a href="#">[more]</a>		
Conscientiousness	4.2	83
Conscientiousness reflects how careful and orderly an individual is. <a href="#">[more]</a>		
Neuroticism	3.5	68
Neuroticism is the tendency to experience negative emotions. <a href="#">[more]</a>		
Agreeableness	3.8	39
Agreeableness reflects how much you like and try please others. <a href="#">[more]</a>		
Openness	3.5	18
Openness reflects how much you seek out new experiences. <a href="#">[more]</a>		



# Nature and Nurture in Personality Development



- Both genetics and environment affect personality
  - Genetic factors mostly only during younger decades of life
  - Environmental influences are a lifelong source



# Altruism

Principle or practice of concern for the welfare of others



# Hamilton's Rule and Kin Altruism



- Kin altruism
  - Altruistic acts driven by kin relations
  - Ground Squirrels
- Hamilton's Rule
  - “Kin selection causes genes to increase in frequency when the genetic relatedness of a recipient to an actor multiplied by the benefit to the recipient is greater than the reproductive cost to the actor”

$$rB > C$$

- $r$  = genetic relatedness,  $B$  = reproductive benefit,  $C$  = cost



# Altruism



- Empathy and personality is related to a helping personality
  - Tait, Dorothy's dissertation
  - Levels of altruism, empathy, and personal distress measured
  - Altruism remained the same, but empathy and personal distress decreased with manipulation
  - Supports the altruistic personality theory
- Relating to the Big Five
  - High E and high A

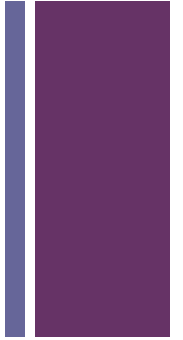


# Aggression

“Overt, often harmful, social interaction with the intention of inflicting damage or other unpleasantness upon another individual”



# Nature or Nurture?



- Well, like we said before...
- N = 234 6-yo twins
  - Social aggression: substantial environmental effects but only weak genetic factors were found
  - Physical aggression: significant effects of genes and unique environment were found
  - Social and physical aggression share most underlying genes, but few overlapping environmental factors
    - MAO-A



# + Environmental Factors

- Physical punishment/aggression by parents towards children
- Inhibited temperament of the child





# Marshmallow Study



# Delayed Gratification



- Executive function
  - A highly heritable trait
- Stanford's 1st Marshmallow Study (Mischel)
  - $n > 600$  children aged 4-6
  - Child was given a choice of eating a marshmallow now or waiting 15 minutes to get a 2<sup>nd</sup> one
  - 1/3<sup>rd</sup> deferred gratification
  - Age was a major determinant
- Correlations
  - Children who delayed gratification "were significantly more competent"
    - Problem? Parent report
  - Delay gratification correlated with higher SAT scores
- Genes at play
  - 2011 brain imaging of original Stanford participants
    - Prefrontal cortex and ventral striatum



# Executive Function



- Almost entirely genetic *in origin*
- Friedman et al.
  - N = 560 twins
  - Analyzed in terms of how similar MZ twins performed relative to DZ twins (reared together)
  - All executive functions is correlated roughly twice as much between MZ twins as between DZ twins
    - Individual variance falls in line with what would be expected from a perfectly heritable trait

# + What About Environment?

- Epigenetics!
- Two psychopathologies that related to executive dysfunctions
  - Anxiety disorder
    - Maternal obesity
  - ADHD
    - Mmethylation of genes associated with nicotine and alcohol dependence in women





# Another Quick Break!



- If you have a laptop...
- Stroop Effect
  - [Tinyurl.com/stroopnn](http://Tinyurl.com/stroopnn)



# Personality and Siblings



# Why are Siblings so Different?



- Genetic differences
- Non-Shared Environments
  - The family is NOT a shared environment
  - Disparities in parental investment; curvilinear trend

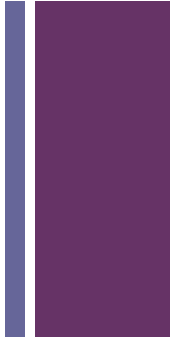


# + Born to Rebel (Sulloway)



- First borns
  - High C, low A, low O
  - Achievements
    - Firstborns overrepresented among American presidents, justices, world leaders, CEOs, etc.
  - O: Alpha males
    - Less trustful
  - E: Dominant, assertive
  - N: Anxious about status (dethroned)
  
- Laterborns
  - O: Peaceniks
  - E: Socialable, fun-loving, ad excitement seeking
  - N: Self conscious

# + Altruism, Sibling Edition



- We are twice as related to ourselves than to siblings
- Predicts sibling competition
- Darwin's "principle of divergence"
  - Want to be different
    - Character displacement
    - Adaptive radiation
- Niche partitioning in families

# + Adler's Birth Order Theory



- Oldest
  - Authoritarian or strict
  - Can be helpful if encouraged
  - Fear of being dethroned
- Middle
  - Good as mediators
  - Feel less favored by parents; more peer oriented
- Youngest
  - More attached to parents



# Entertainers and birth order



- Hypotheses
  - Firstborns play “tough guys”
    - Heroic action figures, formidable characters, military leaders, etc.
    - Low A
  - Laterborns play characters who are likeable, modest, down to earth
    - High A
    - More likely to become comedians, should be perceived as funnier (high E)



## Sibling Share Genes, But Rarely Personality



- Did you do the reading?!
  - There are three theories addressed about why being raised in the same family still lead to difference in personality. What are they?
  - If you are an only child, do you think having a sibling would change how you are now? Vice versa, if you have siblings, how do you think being an only child would change you?
  - What other factors do you think contribute to personality differences that were not addressed in the article?



# Reminders



- New homework is up!
  - 1 eager beaver - Today's HW will stay open.
  - Whoever you are - please open next week's HW again. Sorry! Or just email me.
- Next week is movie time!!
  - Might not want to miss the next 5 classes ;)
- [Insert shameless plug for BPxRotaract]