



Why are You ...who you are?

Genetics- chapter 3

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Class Objectives

- You got your blue eyes from your mother, and your freckles from your father. But where did you get your thrill-seeking personality and talent for singing?
- Did you learn these from your parents or was it predetermined by your genes?

- We will discuss Nature vs. Nurture

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What do Genetics have to do with Psychology?

- Today genetics are used to answer psychological questions in a variety of areas:
- Personality development, intelligence, and temperament.
- Causes and treatments for psychopathology- such as mood disorders, anxiety disorders and psychotic disorders

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## The Nature vs. Nurture Debate

- ☐ Nature refers to a person's biological make up (DNA)
- ☐ Nurture refers to a person's life experiences.
- ☐ What are some examples of nurture?
- ☐ Determining which one is more influential to our development has been a long-running debate in psychology.

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## Are we really "born" that way?!

- ☐ The Nature Theory suggests that our DNA determines more than just our physical traits.
- ☐ Example- Huntington's Disease – there is a better than 99.9% correlation between having the identified gene and the disease
- ☐ More abstract traits such as intelligence, personality, aggression, and sexual orientation are also encoded in an individual's DNA.

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## My biology is NOT my destiny!

- ☐ The Nurture Theory acknowledges that genetic tendencies may exist, but ultimately they don't matter –
- ☐ They believe that our behavioral characteristics result only from the environmental factors from our upbringing.
- ☐ Example- Research performed by B.F Skinner on learning supports this belief:
  - I can train you to be anything I want, regardless of your talents, tendencies, or ancestry.

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## So...Who's Right?

- In human development and behavior DNA and the environment BOTH productively contribute to the development of distinctive individuals.
- The "nature vs. nurture" debate still rages on as scientist's fight over how much of who we are is shaped by genes and how much by the environment.

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## How can we test this question?

- Identical Twins: (Monozygotic twins) occur when one fertilized egg splits into 2 identical cells, which then separate and develop independently.
- Identical twins have the exact same genetic makeup, which makes twins very important in psychological studies.
- Will having the same DNA produce the exact same person?**

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## Twin Studies

- Fraternal Twins (Dizygotic twins) are twins that occur when 2 sperm fertilize 2 eggs.
- These types of twins are as genetically similar as any other siblings.
- What questions might psychologists address in studies involving twins?**

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Next class...EXAM REVIEW!

🎲 Jeopardy- be prepared to play!

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