

Genes & Environment



Genetics and Behavior



The Project



- People have between 30,000-40,000 genes
- Mapped out on June 26, 2000
- Still don't know what the genes do
- Concern with eugenics
- Goals
 - Percentage of variance in personality due to genetics
 - How genes and environment interact



- Proportion of variance in a group of individuals that can be accounted for by genetic variance
 - **Phenotypic variance** = visual differences
 - **Genotypic variance** = genetic variation
- Each person's behaviors draw upon a different degree of genes and environment



Research on

- **Selective Breeding** (usu. dogs)
- **Family Studies**
- **Twin studies**
- **Adoption studies**



Personality Characteristics High in

- Extraversion and Neuroticism
- Activity Level
- Traditionalism
- Job Preferences
- Risky Behavior
- Sexual Orientation

Theory of



Basics of

Theory



- Explains survival and reproduction
- **Natural Selection**
 - those who can survive and reproduce in the given environment will pass on their genes
- Fluctuations in environment lead to fluctuations in which genes are “selected”

What Has Been Passed On?



- Need to belong
- Helping behaviors
- Emotions
- Sex Differences

Problems



- Adaptation process takes millions of years
- Not even close to sufficiently explaining WHY many behaviors occur
- Adaptive then, maladaptive now
- Several competing theories on same behavior
- Hindsight is 20/20
