

The Nature - Nurture Debate Genetics and Behaviour

There are 23 chromosomes un human egg and sperm cells. When combines that makes 46 chromosomes for each of us. These chromosomes are made of coils of DNA which contain thousands of genes.

Genotype is the genetic make up of an organism which remains constant throughout life. Phenotype refers to the physical traits that we can see.

Evolutionary Psychologists study the effects of evolution on the behavior of the organism.

See Darwin Awards..

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Natural Selection
 Over thousands of years new gene combinations and mutations are favored when advantageous to the animal
 "Survival of the fittest"

Effect is more complicated for humans...

- we can learn to adapt
- nature selects the fittest adaptations (mutations giving an advantage)
- so over thousands of years we are remarkable alike!

Read pages 89-91 Evolutionary explanations for differences between gender Problems/Critiques...

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Behaviour Genetics...
 -study the ways that we differ from each other. They focus on how genetics and environment affect behaviour.

What factors can explain our individual differences?

If you have a fraternal twin who has divorced the odds of your divorce go 1.6 time, identical twin - 5.5 times.

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Behaviour geneticists use twin studies and adoption studies.

Identical vs. Fraternal Twins

- controls home environment when raised in the same family
- identical twins are genetically identical
- fraternal twins are no more similar than ordinary siblings

Are identical twins behaviourally more similar than fraternal?
 - 13 000 Swedish twins - yes on extraversion and neuroticism

Are social effects of traits influenced?

- divorce
- trouble at work
- abilities
- personality
- interests

http://www.youtube.com/watch?v=y_jS-PYSLQ&safety_mode=true&persist_safety_mode=1&safe=active

<http://www.schooltube.com/video/7e22eb1e67572089ca1b/Separated-Twins>

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Separated Twins...

- are as alike as the same person tested twice
- separated identical twins had more different personalities than those raised together
- are more alike when identical than fraternal

*Twin Studies emphasize the genetic influence.

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Adoptees more resemble their biological parents in personality traits. Environmental factors shared by children in a family have almost no impact on personality.

Adoption Studies
 So...why are siblings in the same family so different?

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2 SETS OF RELATIVES...ARE THEY MORE LIKE ADOPTIVE OR BIOLOGICAL RELATIVES?

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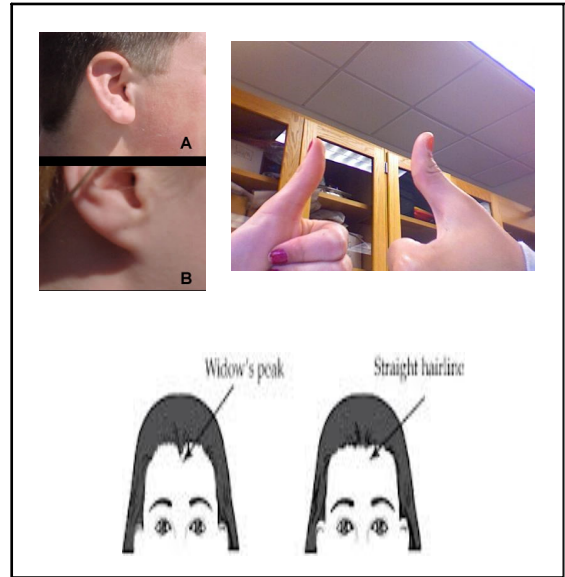
But...Family influence is important.

Siblings (adopted twins) have more similar beliefs, values, attitudes if raised in the same home.

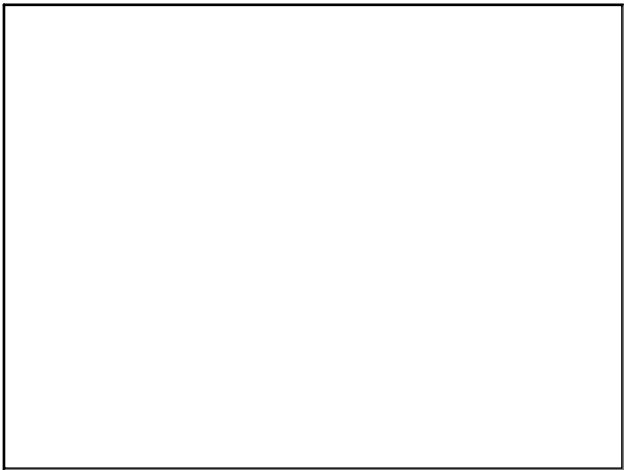
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Human Trait Inventory	
Tongue Roller	Left Thumb on top when hands folded
Non Tongue Roller	Right Thumb on top when hands folded
Attached earlobes	Hair on Mid-finger
Unattached Earlobes	No hair on mid-finger
Dimples	Bent little finger
No Dimples	Straight little finger
Right Handed	Second toe larger than big toe
Left Handed	Second toe not bigger than big toe
Widows Peak	Hitchhikers thumb
Straight Hairline	No hitchhikers thumb

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