

2016-10-24

Genetics

- **Chromosome** = a bundle of DNA and histones that form a condensed structure in the nucleus
 - Some people experience an irregular number of chromosomes
 - **Trisomy** = three chromosomes in a pair
 - **Monosomy** = only one chromosome in a pair
 - Irregularities usually happen in sex chromosomes(23rd pair)
 - **Turner's Syndrome** = monosomy 23; *only* one X as 23rd pair
 - **Down Syndrome** = trisomy 21
- **DNA(Deoxyribonucleic acid)** = long strand of nucleotide bases that serves to encode hereditary information
 - **Duble Helix** = geometric shape of DNA; described as a ladder that is twisted
- **Histone** = a protein that DNA can wrap around to reduce overall volume
- **Codon** = a group of three nucleotide bases that match with tRNA to assemble proteins
 - 1 codon corresponds to 1 amino acid instruction(INSERT, START, END, etc)
- **Allele** = a specific version of a gene
- **Genotype** = the collection of alleles one possesses
- **Phenotype** = the physical traits you exhibit
- **Dominant Allele** = an allele whose expression takes precedence over that of **recessive** alleles
- **Recessive Allele** = an allele whose expression is inhibited by the presence of a **dominant** allele

Sex-Linked Traits

- **Sex-Linked Traits** = phenotypes involved with the X or Y chromosomes
- typically *recessive* and located on X chromosome
 - Y chromosome actually contains very few genes
- Examples
 - Color blindness
 - Baldness
 - Hemophilia

2016-10-25

Evolutionary Psychology

- **Natural Selection** = a mechanism set forth by Darwin that describes how genetic information can spread through a population if it confers a survival benefit
- **Mutation** = errors in the genetic code
 - Can be caused by faulty replication
- **Evolutionary Psychology** = the study of behavior and mental processes using natural selection as an explanatory mechanism

Nature vs Nurture

- *Is our behavior more a product of our **genetics** or of our **environment**?*
 - **Identical Twins** = two organisms that developed from the same embryo
 - also called **Monozygotic twins**
 - **Fraternal Twins** = two organisms that developed from different fertilized embryos but gestated in same womb
 - also called **Dizygotic twins**
 - **Separated Twins** = identical twins that are separated at birth
 - Useful for studying influence of environment
 - **Adoption Studies** = studies of different children who are raised as if genetically related
 - Useful for studying influence of genetics
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2016-10-27

Behavior Genetics

- **Behavior Genetics** = a term that describes behaviors that are influenced by genetics
- **Temperament** = a unique set of traits about reaction and emotional intensity
- **Heritability** = the proportion of phenotypic variation that can be attributed to genetics

Environmental Influences

- **Culture** = a group of societal expectations and conventions that influence how we think
 - **Norm** = a cultural expectation that is hard to break
 - Similar to a **taboo**
 - **Personal Space** = a “buffer-zone” that is expected between people while interacting
 - **Memes** = units of culture that can spread among the population similar to genes
 - **Dank Meme** = a zesty meme that is masterfully crafted
 - Styles of child-rearing
 - Western parents tend to emphasize *independence*
 - * Results in teenagers hating their adolescence
 - I wish I was dead
 - Non-Western parents tend to emphasize *interdependence*
 - * Stronger sense of “family” or “community”
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2016-11-03

Prenatal Development

- **Developmental Psychology** = the branch of psychology that focuses on the emergence of physical, cognitive, and social capabilities
 - Characterized by multiple **stages**
- **Embryonic Development**
 - **Fertilization** = sperm cell enters egg and merges genetic information
 - **Zygote** = fertilized egg
 - * Rapidly “cleaves” or divides for a period of about two weeks
 - * Eventually turns into an **embryo**
 - **Embryo** = stage after zygote but before **fetus**
 - * Lasts from second week to about second month
 - **Fetus** = organism that develops into a human
 - * Lasts from second month until birth
 - **Teratogens** = any substance that can harm the developing offspring in the womb
 - * **Fetal Alcohol Syndrome(FAS)** = developmental problems caused by excessive consumption of alcohol on the mother’s part
 - Symptoms include mis-sized head or death

Infant Behavior

- **Infant Reflexes** = behaviors hard-coded into the infant's brain
 - Rooting = turns mouth towards anything that touches their face
 - Grasping = fingers will curl around an object placed in their hand
 - Stepping = legs will take steps instinctually if held up
 - Sucking = will place any object near face into their mouth
 - Startle(Moro) = throws arms out, arches back, and grabs onto something
 - Babinski = curls toes when feet are tickled

Sensory Development

- Depth perception
 - Emerges around 6th month
 - **Visual Cliff Experiment** = babies will just crawl off the edge of a fall
 - Sight
 - **Habituation** = a trend of decreasing response when frequency of exposure is increased
 - * Babies get bored with your stupid toys
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2016-11-07

Infancy and Childhood

Physical Maturation

- Physical Maturation = biological processes that develop the organ systems of a baby and increase its size
 - Mostly controlled by *nature*, **not** nurture
 - * Unless the baby is deprived of a nutrients
 - **Developmental Norms** = a set of milestones with expected times-tamps meant to help track progress of physical maturation
 - * Helps to spot problems early so they can be treated

Cognitive Maturation

- Cognitive Development
 - **Infantile Amnesia** = mechanism through which memories of the very earliest memories are not encoded
 - * Thought to be caused by a lack of neural networks used in memory encoding
 - **Cognition** = all mental processes related to thinking, knowing, remembering, and communicating
 - **Schema** = a model stripped of specificity that objects of perception can be categorized as
 - **Assimilation** = explaining perception in terms of developed schemas
 - **Acomodation** = encountering objects that cannot be categorized and generating new schemas

Jean Piaget

- Developed **cognitive development personality theory**
 - 4 states of cognitive development
 - * **Sensorimotor**
 - **Egocentrism** = the inability to view things from a perspective other than their own
 - **Object Permanence** = the understanding that things continue to exist even if they aren't visible
 - **Stranger Anxiety** = fear of unknown people, starts at 8 months
 - **Conservation** = the understanding that aspects of matter like mass or volume are conserved regardless of shape
 - * **Preoperational**
 - * **Concrete Operational**
 - * ****Formal Operational***