

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(23<sup>rd</sup> pair)
  - **Turner's Syndrome** = monosomy 23; *only* one X as 23<sup>rd</sup> 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
  - **Accomodation** = 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\***

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2016-11-09

## Social Development

### Attachment

- **Attachment** = an emotional connection with another person

- Coined by Mary Ainsworth
- Young children try to be close to caregiver
  - \* Similarly, they show anxiety when separated
- **Separation Anxiety** = distress resulting from separation from an attached person
  - Especially seen in infants
  - In healthy infants, as long as the parents are in the vicinity, they feel comfortable to engage in risky behavior
    - \* Called **secure attachment**
  - In unhealthy infants, they won't feel comfortable unless parent is very near
    - \* Called **insecure attachment**
    - \* **Avoidantly Attached** = child avoids parent and is fearful
    - \* **Anxious Resistant Attachment** = child doesn't avoid parent but isn't comfortable around them
- **Basic Trust** = a feeling that the world is predictable and understandable
  - Coined by Erik Erikson
  - Thought to be formed during infancy
    - \* Responsive caregivers
    - \* Loving parents
- **Self-Concept** = an understanding of one's traits and worth to others

### Harow's Surrogate Mother Experiments

- **Contact comfort** = a feeling induced by touching caregiver
- Monkeys, even when hungry, preferred the contact comfort of a cloth doll to a sustaining wire mother

### Early Life

- **Critical Period** = a segment of time in which exposure to certain stimuli result in essential cognitive and physical development
- **Imprinting** = the rapid attachment to those first exposed to
  - Sometimes happens immediately after birth

### Methods of Child Rearing

- **Authoritarian** = relies on the assumption that rules will be followed without question

- “Why? Because I said so.”
- **Permissive** = gives leeway to child and buys into their desires—few demands and little punishment
- **Authoritative** = a combination of “demanding” and “responsive”
  - Establishes rules, but willing to justify themselves without demanding unconditional obedience
  - Seen in psychological community as the *best* parenting style
- **Rejecting-Neglecting** = disinvestment in the child
  - Little attention is paid to child
  - Can result in abandonment issues

## Adolescence

- **Adolescence** = transition period between childhood and adulthood
- Lasts from **puberty** to socioeconomic independence
- **Puberty** = biological process of sexual and mental maturation
  - When people become capable of reproduction
- **Primary Sex Characteristics** = physical traits that are necessary to reproduction
  - Primarily genitalia
  - **Menarche** = first menstrual period
- **Secondary Sex Characteristics** = physical traits that serve as identifiers for their gender
  - Males
    - \* Body hair
    - \* Deepening voices
  - Females
    - \* Fat redistribution to breasts and hips
  - Both
    - \* Pubic hair
- Self-Esteem and Maturation
  - Boys feel more comfortable with their bodies if they mature early
  - Girls feel less comfortable with their bodies if they mature early

## **Kohlberg's Theory of Moral Development**

1. Punishment and obedience orientation
  - Responding to punishment
2. Naive hedonism
  - Doing things for rewards or favors
3. Good boy/girl mentality
  - Doing things because of approval by peers and parents
4. Acceptance of Norms
  - Accepts laws and conventions for what they are: does not question them
5. Seeking Peaceful Change
  - Continues to obey law; works to change the law within the confines of the law
6. Self-Actualization
  - Change requires that you disobey the law