PY 101 – 012

Monday, February 1, 2016

Week 4, Day 1 Notes

Development & Adaptive Process

Quizlet on vocab from this day: <https://quizlet.com/_1yzbi5>

Male Vs. Female Brain

* As a species, males have larger brains
* Females solve complex problems primarily using language-related regions of the brain and males tend to use spatial regions
* Brain areas for processing languages are more likely to be found in both halves of female's brains

What shapes us during childhood?

* Some combo of biology and environment
  + Studied by developmental psychology
* Humans grow and mature at about the same periods in their life spans

Hormonal Influences during prenatal development

* Hormones that circulate in the womb influence developing fetus
* Mother's emotional state can also affect fetus

Exposure to teratogens during prenatal development

* achine generated alternative text:
  
  + On the right is a fetus' brain of a mother who drank alcohol.
    - Much less brain folds
* Includes opiates, cocaine, or cannabis
  + achine generated alternative text:
    
    - Hydrocephalus is a problem which can result from these teratogens

Biology & Environment Influence Developmental Milestones

* Dynamic systems theory
  + Development is a self-organizing process
  + New forms of behavior = biology \* environment/culture
    - Some sort of stimuli around a child or infant can cause them to learn a behavior
      * Ex. Leave a baby in a room on it's back and when you return if it is on it's stomach, it may have done this because it saw a toy and wanted the toy and lunged its body-weight at it
        + achine generated alternative text:
          Walk holding on 
          to furniture 
          (9.2 months

General baby developmental process

Brain Development Promotes Learning

* Mind develops adaptively
  + New useful skills appear at appropriate times, even in absence of specific training
  + A baby can only see about a foot in distance
    - This is probably because a baby more or less only needs to be able to see a mother's face or breast
* Basic reflexes
  + Grasping reflex
    - If we evolved from primates this would be useful because we would need to cling to our parents as they move around
  + Rooting reflex
    - If you put something nipple-like near a baby's face, it will turn its face towards it and probably try to suckle it
      * This is a basic survival need

Myelination & Neuronal Connections

* Brains way of insulating its "wires"
* Brain organizes itself and its functions
  + Synaptic pruning
    - Brain will get rid of things that you don't use
      * Use it or lose it
      * Defects in synaptic pruning could contribute to autism

Sensitive Learning Periods

* Certain connections are made most easily during particular times in development as long as the brain receives the right stimuli
  + **Sensitive periods**
* Language is easier to learn as a child
  + First 5 to 10 years
    - achine generated alternative text:
      3 Year Old Children 
      00 
      Normal 
      Extreme N

Attachment and Emotion Regulation

* **Socioemotional development**
* **Adaptive process**
  + Inability to cope with emotions may be perceived as threatening and inhibit social functioning
  + People who can express their emotions without hurting themselves or others will likely function better in society
* Social bonds
  + We are social animals and need to bond with other people
    - Increases chances of survival
    - Increases chances of passing on your genetic information
* Parent-child bonds
  + These bonds motivate children to conform to adult expectations for emotional expression
  + Develop early in life
    - Fundamental need for infants
    - **Attachment**
* Attachment is adaptive
  + Consists of dynamic and mutually-beneficial relationship
    - Increases chance of survival for infant, engenders greater parental investment in caregivers
  + Attachment behaviors begin during the first months of life
    - May vary somewhat depending on cultural practices
* Attachment responses increase when children move away from caregivers
  + **Strange-situation test**
    - Child, caregiver, and friendly-but-unfamiliar person play in room
    - Caregiver leaves
    - Child's behavior is observed
    - Caregiver returns
    - Child's reaction to return is observed

Vocab

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| --- | --- |
| Synesthesia | A condition in which sensory experiences overlap (Ex. Sound triggers color sense) |
| Developmental psychology | Study of changes over the life span in physiology, cognition, and social behavior |
| Prenatal period | Begins with conception and ends with birth (part of lifespan) |
| Infancy | Begins at birth and lasts between 18 to 24 months (part of lifespan) |
| Childhood | Begins at birth and lasts until somewhere between ages 11 and 14 |
| Adulthood | begins at the end of adolescence and lasts until death |
| Teratogens | environmental agents that harm the embryo or fetus (e.g. drugs, alcohol, bacteria, viruses, and chemicals) |
| Fetal alcohol syndrome (FAS) | Disorders caused by drinking during pregnancy |
| Dynamic systems theory | Development is a self-organizing process and development processes rise out of needs |
| Grasping reflex | A reflex already present in infants to hold onto a finger or nearby objects |
| Rooting reflex | Turning and sucking that infants automatically engage when a nipple or similar object touches an area near their mouths |
| Synaptic pruning | a process whereby the synaptic connections in the brain that are used are preserved, and those that are not used are lost (e.g., “use it or lose it”) |
| Sensitive periods | time periods when specific skills develop most easily |
| Socioemotional development | Maturation of skills and abilities that enable people to live successfully in the world with other people |
| Adaptive process | The need to cope with emotions which could be perceived as threatening to others |
| Attachment | A strong emotional connection that persists over time regardless of circumstances |
| Strange-situation test | Test which assesses attachment behaviors in humans (developed by Mary Ainsworth) |