Developmental Psychology

Nature vs. Nurture
Development
Developmental Psychology

• Key Issues in Development
• Genetics & Heredity
• Cultural Influences on Behavior
• Studying Development
• Physical Development
• Cognitive Development
• Moral Development
• Social & Emotional Development
• Gender
Key Issues in Development

• Nature vs. Nurture
  – How much do heredity and environment influence development?

• Continuity vs. Stages/Discontinuity
  – Is development gradual or does it happen in stages?

• Stability vs. Change
  – Do traits (like those of personality) persist throughout life or do they change as we grow?
Genetics & Heredity

• Behavior Genetics
  – Study human differences and weigh the effects and interplay of heredity and environment

• Molecular Genetics
  – Studies structure and function of genes
  – Seeks to identify certain genes which influence behavior

• Evolutionary Psychology
  – Understand how behavior helps us to survive
  – Examine natural selection and mutations
Genetics & Heredity

- **DNA (Deoxyribonucleic Acid)**
  - molecule containing genetic information
  - Genes
    - segments of DNA that make up chromosome; capable of synthesizing a protein
  - Chromosomes
    - threadlike structures made of DNA molecules that contain the genes
  - Genome
    - Complete instructions for making an organism
Genetics & Heredity

• Genes
  – Heterozygous vs. Homozygous
    • Homozygous: Identical forms of a particular gene
    • Heterozygous: Different forms of a particular gene
  – Dominant vs. Recessive
    • Dominant: Gene which is expressed if heterozygous
    • Recessive: Hidden gene, which is not expressed in a heterozygous gene (expressed only if homozygous)
  – Genotype vs. Phenotype
    • Genotype: genetic makeup of a trait of an individual
    • Phenotype: physical expression of the gene
Genetics & Heredity

• Gene-Responsible Abnormalities
  – Tay-Sachs Syndrome
    • progressive loss of nervous function and death in a baby
  – Albinism
    • failure to produce or store pigment
  – Phenylketonuria (PKU)
    • severe, irreversible brain damage unless people consume a diet low in phenylalanine; lack enzyme to process that amino acid
Genetics & Heredity

• Gene-Responsible Abnormalities
  – Huntington’s Disease
    • dominant gene defect, degeneration of the nervous system
  – Sex-Linked Traits
    • Color-Blindness
      – Recessive gene on X chromosome
      – more common in males; can’t see colors
Genetics & Heredity

• Chromosomal Abnormalities
  – Turner’s Syndrome
    • Female with one X chromosome only; typically short with webbed neck, no ovaries, no secondary sex characteristics; certain cognitive deficits
  – Klinefelter’s Syndrome
    • males with XXY; typically no secondary sex characteristics, breast tissue develops
  – Down Syndrome
    • 3 copies of chromosome 21; mental retardation
Genetics & Heredity

- **Heritability**
  - proportion of variation among individuals due to genetic causes
  - Heritability for identical twins would have to be zero
Genetics & Heredity

- **Twins**
  - Monozygotic Twins
    - Identical twins
    - 1 egg and 1 sperm
    - Share 100% genes
  - Dizygotic Twins
    - Fraternal twins
    - 2 eggs and 2 sperm
    - Share 50% genes
Cultural Influences on Behavior

• Culture
  – Enduring behaviors, ideas, attitudes, values, and traditions shared by a group of people and transmitted from one generation to the next
  – **Norms**: understood rules for accepted and expected behavior; prescribe “proper” behavior
    • Ex: Personal Space
  – Individualism vs. Collectivism
Studying Development

• Twin Studies
  – Compare identical and fraternal twins
  – Compare identical twins separated at birth

• Adoption Studies
  – Compare biological and adoptive relatives
Studying Development

• Longitudinal Study
  – Follows same group of people for a long time

• Cross-Sectional Study
  – Evaluate different age groups at the same time

• Cohort-Sequential Study
  – Age groups assessed multiple times
  – Cross between longitudinal & cross-Sectional

• Retrospective Study
  – Case studies that reconstruct life changes
Physical Development

• Prenatal Development
  – Zygote
    • Fertilized egg; rapid cell division
    • First 2 weeks after conception
  – Embryo
    • Organs start to develop
    • About 2 weeks to 2 months
  – Fetus
    • Organs become more refined
    • About 2 months until birth
Physical Development

- **Prenatal Development**
  - Teratogens: agents such as viruses or drugs that can cause harm during prenatal development
  - Ex: Alcohol & Fetal Alcohol Syndrome (FAS)
Physical Development

• **Neonatal Reflexes**
  
  • simple, automatic, inborn responses
  
  • Rooting Reflex
    – turn when cheek was touched
  
  • Sucking Reflex
    – suck things put in mouth
  
  • Swallowing Reflex
    – contraction of throat muscles
  
  • Palmar Reflex
    – grasping; close fingers around object
Physical Development

• **Neonatal Reflexes**
  • Moro Reflex
    – startle to loud noise
  • Babinski Reflex
    – fan toes when foot is stroked
Physical Development

• Brain Development
  – Habituation: decreasing responsiveness with repeated stimulation; as infants gain familiarity with a visual stimulus, their interest wanes and they look away sooner
    • Shows early negative correlation with intelligence (as habituation time increases, IQ decreases)
  – Maturation: biological growth processes that enable orderly changes in behavior, relatively uninfluenced by experience
Physical Development

• **Motor Development**
  – Behaviors reflect maturing nervous system and are NOT imitation.
Physical Development

• Adolescence
  – Transition from childhood to adulthood
  – Puberty
    • Primary Sex Characteristics: reproductive organs and genitals
    • Secondary Sex Characteristics: non-reproductive features associated with sexual maturity
    • Menarche: female’s first menstruation
    • Spermarche: males’ first ejaculation
Physical Development

• Aging
  – Physical capabilities peak in mid-20s
  – As we age, neural processes slow, reproductive function declines, degenerative diseases more likely
    • Menopause: cessation of ability to reproduce
    • Less likely to get minor illness, but more likely to develop long-term illness
  – Decline in sensory abilities
Physical Development

• Aging
  – **Alzheimer’s Disease**: progressive and irreversible brain disorder characterized by gradual deterioration of memory, reasoning, language, and finally physical functioning
  – **Parkinson’s Disease**: degenerative disease of the brain (central nervous system) that often impairs motor skills (tardive dyskinesia), speech, and other functions
Physical Development

• Aging
  – Crystallized Intelligence: accumulated knowledge and verbal skills
    • Increases with age
  – Fluid Intelligence: ability to reason speedily and abstractly
    • Decreases with age
Cognitive Development

• Jean Piaget’s Stages of Cognitive Development
  – Schemata
    • Preexisting mental frameworks that organize and interpret information and changes with exposure to new information
  – Adaptation
    • Assimilation: interpretation of new experiences in terms of current understanding (schemata)
    • Accommodation: adapting current understandings (schemata) to incorporate new info
Cognitive Development

• Jean Piaget’s Stages of Cognitive Development
  – Stage 1: Sensorimotor (0-2 years)
    • Infants learn by looking, hearing, touching, grasping, and putting things in their mouths
    • Object Permanence: knowing that objects continue to exist even when out of sight
    • Stranger Anxiety: fear of unfamiliar people
      – indicates ability to differentiate among people they know and don’t know
Cognitive Development

- Jean Piaget’s Stages of Cognitive Development
  - Stage 2: Preoperational (2-7 years)
    - Use of symbols (including language), clearer sense of time, pretend and creative play
    - Egocentrism: seeing world from their own perspective only
    - Theory of Mind: the understanding of the mental states of others, including their intentions, desires, beliefs, emotions
    - Centration: looking at only one aspect of a problem
Cognitive Development

• Jean Piaget’s Stages of Cognitive Development
  – Stage 3: Concrete Operational (7-12 years)
    • Can use simple logic; egocentrism is no longer demonstrated
    • Conservation: principle that properties such as mass, volume, and number remain the same despite changes in the forms of the objects
    • Reversibility: awareness that actions can be reversed
    • Classification: idea that one set can include another; can master hierarchical organization
Cognitive Development

• Jean Piaget’s Stages of Cognitive Development
  – Stage 4: Formal Operational (12+ years)
    • Can engage in abstract or hypothetical thinking
Cognitive Development

• Lev Vygotsky’s Sociocultural Theory of Cognitive Development
  – Internalization
    • absorbing information from a specified social environmental context
    • children learn from interactions with others
  – Zone of Proximal Development (ZPD)
    • range between the level at which a child can solve a problem alone and with the assistance of adults
  – Role of Mentors & Scaffolding
Moral Development

• Lawrence Kohlberg’s Theory of Moral Development
  – Preconventional Morality
    • Avoid Punishment, Gain Rewards
    • Self-Interests, Fair Deals
  – Conventional Morality
    • Good Intentions and Interpersonal Relationships
    • Maintain Social Order
  – Postconventional Morality
    • Society’s Welfare, Social Contract
    • Universal Principles, Justice
Moral Development

• Criticisms of Kohlberg’s Theory
  – Carol Gilligan brought up the differences between males and females in terms of moral development which makes women appear to be less moral

  • Women rarely reach highest stages of morality because they think about caring for others rather than the abstract ideas focused on mostly by men

  – Other critics stress that we react differently in different situations, not consistently

  – Theory favors individualistic societies
Social & Emotional Development

• **Awareness of Self and Others**
  – **Self-Awareness**: consciousness of oneself as a person
  – **“Rouge Test”**
  – **Self-Concept**: understanding and evaluation of who we are
  – **Social Referencing**: observing behavior of others in social situations to obtain information or guidance
Social & Emotional Development

• **Temperament**
  – Natural predisposition to show a particular mood; excitability; genetically determined
  • Easy
    – Calm, happy, adaptable; regular eating and sleeping patterns; do well in new situations
  • Difficult
    – Fussy; irregular eating and sleeping patterns; not adaptable; fearful of new people and situations; easily upset; intense in reactions
  • Slow to Warm Up
    – Inactive, reflective; tend to withdraw or react negatively to novelty; reactions become more positive with time
Social & Emotional Development

• **Attachment**
  – John Bowlby
    • *Attachment*: emotional tie with another person; especially between children and their caregivers
  – Harry Harlow
    • Body Contact vs. Nourishment
    • Studies with Rhesus Monkeys
Social & Emotional Development

• Attachment
  – Mary Ainsworth

  • Strange Situation
    – Secure Attachment
      » when mother left, child was upset; comforted when mother returned
    – Anxious-Resistant/Anxious-Ambivalent
      » when mother left, child was much more upset; not comforted by mother’s return, wanted to be comforted and punish the mother at the same time
    – Anxious-Avoidant
      » when mother left, child was less concerned; when mother returned, child was not concerned
Social & Emotional Development

• Diana Baumrind’s Parenting Styles
  – Authoritarian
    • Strict; high expectations; highly controlling; emphasize obedience to authority; very demanding
  – Authoritative
    • moderate; set limits; rely on natural consequences; high expectations
  – Permissive
    • indulgent; accepting and warm; allow children to set their own rules, schedules, and activities
Social & Emotional Development

• Parenting Styles
  – Uninvolved
    • demand little; respond minimally; might entail neglect and rejection
Social & Emotional Development

• Erik Erikson’s Stages of Psychosocial Development
  – Stage 1: Trust vs. Mistrust (0-1)
    • begin to trust others based on consistency of caregiver(s)
  – Stage 2: Autonomy vs. Shame & Doubt (1-3)
    • begin to assert their independence
  – Stage 3: Initiative vs. Guilt (3-6)
    • plan activities, make up games, initiate activities with others
Social & Emotional Development

• Erik Erikson’s Stages of Psychosocial Development
  – Stage 4: Industry vs. Inferiority (6-12)
    • develop sense of pride in accomplishments
  – Stage 5: Identity vs. Role Confusion (Adolescence)
    • begin to look at career, explore possibilities, begin to form identity based upon outcome of exploration
Social & Emotional Development

• **Erik Erikson’s Stages of Psychosocial Development**
  – Stage 6: Intimacy vs. Isolation (Young Adulthood)
    • relationships leading toward longer commitments
  – Stage 7: Generativity vs. Stagnation (Middle Adulthood)
    • develop sense of being a part of the bigger picture; give back to society
  – Stage 8: Integrity vs. Despair (Late Adulthood)
    • contemplate accomplishments and life as a whole
Social & Emotional Development

• James Marcia’s Statuses of Identity Achievement
  – Crisis vs. Commitment
    • Crisis: time of upheaval where old values or choices are being reexamined
    • Commitment: outcome of a crisis; commitment to a particular identity
Social & Emotional Development

- James Marcia’s Statuses of Identity Achievement
  - Identity Diffusion
    - no crisis nor commitment
  - Identity Foreclosure
    - commitment, no crisis
  - Identity Moratorium
    - crisis, no commitment
  - Identity Achievement
    - crisis & commitment
Social & Emotional Development

- **Adolescent Social Issues**
  - **Imaginary Audience/Spotlight Effect**: overestimating others' noticing and evaluating our appearance, performance, and blunders
  - **Personal Fable**: form of egocentrism normally exhibited during early adolescence, and it is characterized by an over-differentiating of one's experiences and feelings from others to the point of assuming those experiences are unique from those of others
Social & Emotional Development

• Kübler-Ross’ Stages of Grieving
  – 5 Stages of Grieving
    • Denial
    • Anger
    • Bargaining
    • Depression
    • Acceptance
  – Criticized because not all terminal patients go through all stages or in that particular order
Gender

• Gender vs. Sex
  – Gender is culturally and socially determined
  – Sex is biologically determined

• Gender Identity
  – Sense of being male or female

• Gender Role
  – Sets of expectations that prescribe how males and females should act
Gender

• Androgyny
  – Presence of desirable masculine and feminine characteristics

• Physical Determinants of Gender
  – Chromosomes
    • X Chromosome
      – Women have 2; Men have 1
    • Y Chromosome
      – Women have none; Men have 1
  – Hormones
    • Estrogen vs. Testosterone
Gender

• Gender Development
  – Gender-Typing: acquisition of masculine or feminine role
    • Gender Schema Theory
      – children form a schema of gender that filters their perceptions of the world and influences behavior
    • Social Learning Theory
      – children observe and imitate to learn to behave, and are reinforced or punished for efforts
  • Oedipal/Electra Complex
    – children identify with their same-sex parent after unconscious conflict involving the opposite-sex parent