

# DUCHENE

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## Ch. 1: Basic Concepts and Methods

### An Introduction to Human Development

Age-related changes in:

- Behavior
- Thinking
- Emotion
- Personality

An entire lifespan!

### Philosophical Roots - Original Sin

- Saint Augustine (4<sup>th</sup> Century) → spiritual cleansing
- Humans are born selfish
- Addresses moral dimensions of development

### The Blank State

- John Locke (17<sup>th</sup> Century)
- At birth mind is a blank slate (tabula rasa)
- Environment shapes children's development (specifically adults)
- Individual differences due to experiences

### Innate Goodness

- Jean-Jacques Rousseau (18<sup>th</sup> Century)
- All humans are naturally good
- Children need only nurturance and protection to grow

### Early Scientific Theories

Charles Darwin (famous for theory of evolution)

- Examined interactions between environment and biological processes
- Baby biographies - detailed records of own children's early years

### Domains of Development

- 20<sup>th</sup> Century
    - Realize that people are living longer
  - Scientists took on a lifespan perspective
    - Look at development from conception to death
- 1) Physical Domain (changes in body) 2) Cognitive Domain (changes in ways in

which we process information) 3) Social Domain (changes in way we interact)

### Periods of Development

- Prenatal (conception to birth)
- Infancy (birth until child acquires a language)
- Early Childhood (language development until child enters school)
- Middle Childhood (school to adolescence)
- Adolescence (puberty to legal age of adulthood)
- Early Adulthood (legal age to 40)
- Middle Adulthood (40 to 60)
- Late Adulthood (60 to death)

### Key Issues in the Study of Human Development

→ Nature vs. Nurture

- Nature (genetics)
  - Inborn propensities; biological influences
  - Inborn biases
- Nurture
  - Learning from environmental experiences

↳ Gene by environment

→ Continuity vs. Discontinuity

- Continuity
  - Quantitative change (in amount or degree)
- Discontinuity
  - Qualitative changes in kind or type (quality)
  - Qualitatively distinct periods of development

### Contexts of Development - Vulnerability and Resilience

- Vulnerabilities and protective factors interact w/ child's environment
- Same environment  $\neq$  same outcome
  - Effect depends on qualities the child brings to the interaction
- Resilient children gain support from more optimal environments
- Critical period: limited time in which an event can optimally occur
- Sensitive period: an open window of time in which acquisition of skill is more likely to occur

Psychosexual  
Psychosocial  
Behavioral Learning  
↳ Classical conditioning  
w/ humans  
operant cond  
social cognitio

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## Ch. 2: Theories of Development

### Theory

• Theory: a coherent set of ideas that help explain and predict behavior

Example: Mentoring and impoverished youth

### ① • Psychoanalytic Theories:

- Describe development as being unconscious
- Focus on examining inner workings of mind
- Children's early experiences shape their development

↳ Sigmund Freud (1856-1939)

- Worked w/ patients diagnosed w/ severe mental disorders
- Behavior involves both conscious and unconscious processes
- Libido - internal drive for pleasure
- 3 Structures of Personality:
  - 1) Id [present @ birth] - desires immediate gratification; pleasure system, unconscious
  - 2) Ego [first 2-3 years of life] - uses reasoning to make a decision; executive branch; conscious
  - 3) Superego [develops ≈ 6 years] - considers what is right or wrong; moral branch; conscience

- Freud's Psychosexual Stages (Psychoanalytic)

- 1) Oral [birth-1 year] - pleasure is centered around mouth (suck, teethe)
- 2) Anal [1-3 years] - pleasure involves the anus (potty trained)
- 3) Phallic [3-6 years] - self manipulation is enjoyable (penis-touch themselves)
  - Oedipus and Electra complex
  - sexual desire for moms (Oedipus) boys compete against father
  - sexual desire for fathers (Electra) girls compete against mother
- 4) Latency [6-12 years] - focus more on social + intellectual development (school)
- 5) Genital [12 yrs-onward] - sexual urge outside of family (romantic relationships)

### ② ↳ Erik Erikson (neo-Freudian 1902-1994) Psychosocial

- Development is a result of interactions btwn internal drive and environment
- Eight Stages of Development
  - individuals presented w/ crisis within each stage
- Healthy development requires a favorable ratio of positive to negative experiences

\* if overstimulated or understimulated you will be locked in that stage

- 1) Trust vs Mistrust [birth-1 yr] - trust between caregiver and infant sets stage for subsequent relationships
- 2) Autonomy vs Shame/Doubt [1-3 yrs] - child develops sense of autonomy; shame develops when independence is withheld
- 3) Initiative vs Guilt [3-6 yrs] - child becomes more responsible (leave parents to go to school)
- 4) Industry vs Inferiority [6-12 yrs] - academics becomes an integral part of life
- 5) Identity vs Role Confusion [12-18 yrs] - teens need to find out who they are
- 6) Intimacy vs Isolation [18-30 yrs] - form close relationships w/ others
- 7) Generativity vs Stagnation [30-late adulthood] - helping young generation
- 8) Integrity vs Despair [late adulthood] - reflect on past to determine whether life was eventful

### ③ Learning Theories:

- Observing behavior teaches us about humans
- Humans learn through experiences with the environment
- Classical Conditioning: Ivan Pavlov
  - Studied dogs & their responses to food
    - Stimulus-response connection
    - Could he train dogs to salivate at the thought of food being presented?
      - Experiment - ring a bell every time he presented dog w/ food
      - Over time, the bell alone caused dogs to salivate
- Classical Conditioning: Watson
  - Little Albert Study
    - Gave boy white mouse to play with
    - Watson made noise behind Albert several times which scared him
    - Albert began to fear the rat even when noise was not present
    - Fear extended to anything white in color and furry in texture
- Operant Conditioning: B.F. Skinner
  - Focused on consequences of behavior
  - Rewards and punishment shape development
  - Behavior that is rewarded - more likely to occur
  - Behavior that is punished - less likely to recur
  - Extinction - gradual elimination
- Social Cognitive: Albert Bandura
  - Observational Learning or modeling
    - Learning resulting from seeing a model reinforced or punished for a behavior

Stimulus  
→  
Response

Theory is  
called Behaviorism

Similar to  
living vicariously  
through someone

- Dependent on four factors:
  - Attention
  - Memory
  - Physical capabilities
  - Motivation

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### Cognitive Theories:

- Jean Piaget
    - Piaget focused on children's thinking and the way that they process information
    - Piaget believed that children are little scientists who are constantly exploring to make sense of their worlds
    - Scheme
      - Internal cognitive structure that guides our thinking
    - Assimilation (learn a rule)
      - Process of adding new info to our preexisting ideas about the world
    - Accomodation (exception to the rule)
      - Changing our ideas to make room for more info
    - Equilibration (putting all your info together)
      - Balancing assimilation and accommodation
  - Jean Piaget: Stages of Cognitive Development
    - 1.) Sensorimotor Stage [birth - 18 months]
      - Infant becomes more mobile
      - Uses sensory and motor schemes to learn more about the world
    - 2.) Preoperational Stage [18 months - 6 years]
      - Children acquire language
      - Begin to realize what's real and make believe
        - Pretend play
    - 3.) Concrete Operational Stage [6 - 12 years]
      - Children begin to solve problems
    - 4.) Formal Operational Stage [Adolescence - Adult]
      - Thinking becomes more abstract
      - Begin to understand hypotheticals
- \*Know

\* Know

- Vygotsky's Socio-Cultural Theory
  - Complex forms of thinking have their origin in social interactions
  - Children's interactions w/ others lead to advanced cognitive abilities
    - Zone of Proximal Development
      - Diff btwn what a child can do on their own + what they can do w/ help
    - Scaffolding
      - An adult or more competent peer helps a child and aid is slowly removed when they acquire the skill
- Information Processing Theory
  - considers how the mind manages and stores info
  - Info moves through 3 stages of memory
    - Sensory memory (sight, smell, sense, etc)
    - Short-term memory or working memory (pick & choose)
    - Long-term memory

### Biological Theories:

- Behavioral Genetics
  - Focuses on effects of heredity on genes
  - Traits e.g. shyness, intelligence, aggressiveness are influenced by genes
  - Related people have similar traits based on genes (Twin studies)
  - Child's pattern of inherited quality can influence how she behaves w/ others
    - Parents w/ high IQs → child w/ high IQ
    - Aggressive parents → Aggressive child
- Ethology
  - Focuses on species in their natural environment
  - Genetically determined survival behaviors
    - Ex: Ducks & imprinting; Attachment

### Bioecological Theory:

- Urie Bronfenbrenner
  - Explains development in terms of relationships btwn people and their environments
  - Contexts
    - macrosystem - culture in which we live
    - exosystem - indirectly affect us
    - microsystem - involves our immediate surrounding
    - mesosystem - links btwn all the things in microsystem
    - biological system - individual's genetic, hormonal, etc.

## Eclecticism:

- Multiple Theoretical Approaches
  - Build on ideas from several sources
  - Avoids rigid adherence to a single theory
  - Allows deeper probing of specific behaviors

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## Ch. 3

### Conception and Genetics:

- Genotype - the genetic blueprint
- Phenotype - observable characteristics
- Dominant-recessive pattern
  - Dominant genes always express their characteristics (overrides recessive)
  - Recessive genes come in pairs to express their characteristics

		Mom		Curly = Dominant Straight = Recessive
		Curly	Straight	
Dad	Curly	CC	CS	
	Straight	CS	SS	

Genetic Disorders: errors in gene formation can threaten the health of a newborn

- Recessive genes - more likely to develop genetic disorders

Chromosomal Errors - Trisomies : too many or too few chromosomes

- Trisomy 21 - Down syndrome
  - Mental retardation
  - Distinctive facial features
  - Physical abnormalities
- Maternal age is a major factor  
(young women probably don't know much about prenatal care)

Pregnancy and Prenatal Development

The Mother's Experience - 3 trimesters

Look @ Textbook!

### 3 Stages of Prenatal Development

#### (1) The Germinal Stage

- From conception (Day 0) to implantation (Day 14)
- Sperm unites w/ ovum to create zygote
- Zygote lines the uterus
- Specialized cells (umbilical cord, placenta, embryo)

#### (2) The Embryonic Stage

- Forms the foundations of all body organs
- Neural tube develops
- Arms and legs develop
- All major organs and systems begin to develop

#### (3) The Fetal Stage

- Fetus grows rapidly
- Refinement of all organ systems
- Fetus recognizes mother's voice
- Full term status - week 37 onward

### Prenatal Sex Differences:

- Males are:
  - More physically active
  - Higher rates of miscarriages
  - More vulnerable to prenatal problems
- Females are:
  - More sensitive to external stimulation
  - More rapid skeletal development

### Problems - Teratogens:

- Substances that can damage an embryo
- Each organ system most vulnerable to harm when its development is most rapid
- The first 8 weeks the most dangerous
- Duration and intensity of teratogen ~~cause~~ problems
- Drugs -
  - Prescription
  - Over the counter
  - Marijuana + Heroin
  - cocaine
  - smoking
  - alcohol use (Fetal Alcohol Syndrome)



Exam: Study Guide will have everything we need to know

- Maternal Diseases
  - Rubella ("German measles")
  - HIV
  - Other STDs (Syphilis, herpes, gonorrhea, cytomegalovirus)
- Maternal Influences
  - Diet:
    - Folic acid deficiencies
    - Malnutrition (low birth weight, brain stunting, fetal death)
  - Age
    - First pregnancies are occurring later - average age 25.1 yrs
    - Women over 35 have higher risks for pregnancy complications

### The Physical Process of Birth: Labor

- Stage 1
  - Contractions
  - Dilation of the cervix (10 cm.) and effacement (flattening of uterus)
- Stage 2
  - Actual delivery of the baby
    - Head crowns and emerges
- Stage 3
  - Delivery of the placenta and umbilical cord

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### Ch. 4: Physical, Sensory, and Perceptual Development in Infancy

#### The Brain and Nervous System:

- Develops rapidly during the first 2 years
- Cortex - least developed at birth

#### Synaptic Development:

- Synaptogenesis
  - Creation of synapses (connections b/w neurons) - TONS @ birth - thicker than adulthood
- Pruning (about 18 months)
  - Eliminating unused neural pathways and connections
    - Use it or lose it

## • Plasticity

- The brain's ability to change in response to experience
- ## • Brain is malleable

## Growth:

- Cephalocaudal - development from head to toe
- Proximodistal - development from near to far (in → out)

## Reflexes and Behavioral States:

### • Adaptive Reflexes - Help survive

- Sucking, blinking, withdrawal from painful stimuli

### • States of Consciousness

- Neonates sleep 80% of the time
- By 8 weeks - sleep through the night
- By 6 months - 14 hours sleep per day

### • Cries

- Hunger: rhythmic pattern
- Anger cry: louder and more intense
- Pain cry: very abrupt onset

## Physical Changes:

### • Growth

- By age 1: Infants triple their body weight
- Around age 2: Toddlers reach half their adult heights + proportionately much larger heads

## Developing Body Systems and Motor Skills:

### • Dynamic Systems Theory

- Several factors interact to influence development  
Ex: Stepping reflex
- Muscles, bones, weight - all work together

## Health and Wellness - Nutrition

- Breastfeeding superior to bottle-feeding - Benefits for the baby
  - More rapid weight gain and size
  - Infants less likely to suffer from illnesses
  - Better immune system