History Of Psychology:
Developmental Perspectives

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Outline for Today

- Today
  - Introduce developmental psychology
  - Outline historical theorists
  - Discuss Contributions of Piaget's Theory

Why do People Study Children?

- Raising & Educating Children
- Understanding Human Nature and Development

Why do People Study Children?

Understanding Human Nature and Development

- Describe – state what’s going on
- Explain – understand why something occurs
- Predict – ability to foresee what will happen
- Modify – apply information

Child Development

- Development is the pattern of change that begins at conception and continues through the life span.

  - Child development is the scientific study of process of change and stability from conception though adolescence

  - Life-span development is the study of change and stability across the life span.

Development involves the interplay of ....

- Biological processes: Changes in an individual’s body.
- Cognitive processes: Changes in an individual’s thought, intelligence, and language.
- Socio-emotional processes: Changes in an individual’s relationships with other people, emotions, and personality.
Three Historical (and current!) Issues

1. How does change occur?
2. What’s most important – genes or environment?
3. How far reaching are early experiences?

How Does Change Occur Across these Periods?

- Change is:
  - Cumulative
  - Directional
  - Gradual?

Historical Developmental Issues

1. Continuity and Discontinuity
   - Continuity-Discontinuity Issue

2. Nature-Nurture Issue
   - Involves the debate about whether development is primarily influenced by nature or nurture
     - Nature: an organism's biological inheritance
     - Nurture: an organism's environmental influences
Nature-Nurture Issue

- **Biological perspective** (nature)
  - Cause of development is genetically determined patterns of change

- **Learning perspective** (nurture)
  - Major causes of developmental change are from the environment

- **Ecological perspective** (transactional)
  - Emphasize the interplay among the various factors that influence development

John Watson [1878]

- “Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select – doctor, lawyer, artist, merchant-chief, and even yes, beggar man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.”

Historical Developmental Issues

3. Early vs. Later Experience

- The issue of the degree to which early experiences (especially infancy) or later experiences are the key determinants of the child’s development

Trends in Child Development:
Yesterday and Today

- **Historical Views of Childhood**
  - **Miniature Adults** (6th-15th Centuries)
  - **Original sin view** (16th Century)
    - The belief that children were born into the world as evil beings and were basically bad

Trends in Child Development: Yesterday and Today

- **Historical Views of Childhood**
  - **Tabula rasa view** (17th Century)
    - The idea, proposed by John Locke, that children are like a "blank tablet"
  - **Innate goodness view** (18th Century)
    - The idea, Jean-Jacques Rousseau, that children are inherently good

Child Development—Yesterday and Today

- **The Modern Study of Child Development**
  - Shift from philosophical view to systematic observation and experimentation
  - Freud’s psychoanalytic theory
  - Stanley Hall 1887
  - John Watson’s (1928) theory of behaviorism influenced thinking about children.
Time Line of Developmental Psychology

- John Locke 1632 (nature)
- Jean Rousseau 1712 (nurture)
- Stanley Hall 1844
- James Baldwin 1861
- Alfred Binet 1857
- Maria Montessori 1870
- John Watson 1878
- Werner 1890
- Freud 1900
- Piaget 1912
- Les Vgotsky 1896
- Erik Erikson 1902
- Gibson 1910
- Urie Bronfenbrenner 1917

G. Stanley Hall (1844-1924)

- Coined the term “Adolescence”
- Questionnaires
- The Child Study Movement

James Mark Baldwin (1861-1934)

- Moved away from experimental psychology into developmental psychology
- Discussed how cognitive structures develop
  - Assimilations
  - Accommodation
  - Imitation

How do children adapt to their environment?

- Assimilation: The incorporation of new experiences into existing structures.
  *INCORPORATE
- Accommodation: The changing of old structures so that new experiences can be processed.
  *ALTER

Assimilation

Accommodation

Piaget’s Theory of Cognitive Development

- Theory based on observations of his three children
- How biology and experience shape cognitive development
Piaget’s Theory of Cognitive Development

Assumptions:
1. Intelligence is successful adaptation
2. Child actively constructs understanding of the world
3. All children pass through stages in same order

What develops?

1. Cognitive structures – schemas are the means by which experience is interpreted and organized
2. Early on, cognitive structures are quite basic, and consist of reflexes like sucking and grasping.

Why do we accommodate?

1. Normally, the mind is in a state of equilibrium: existing structures are stable, and assimilation is mostly occurring.
2. Discrepant experience can lead to disequilibrium or cognitive “instability”

Development occurs in stages

1. Children not simply slower, or less knowledgeable than adults → instead, they understand the world in a qualitatively different way.

Stages of Cognitive Development

<table>
<thead>
<tr>
<th>Stage</th>
<th>Age Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensorimotor</td>
<td>0 to 2 years</td>
<td>Infants gain knowledge of the world from the physical actions they perform. Infants coordinate sensory experiences with their actions. An infant progresses from reflexive, instinctual action to birth to the beginning of symbolic thought toward the end of this stage.</td>
</tr>
<tr>
<td>Preoperational</td>
<td>2 to 7 years</td>
<td>The child begins to use mental representations to understand the world. Symbolic thinking, reflected in the use of words and images, is used in this mental representation, which goes beyond the coordination of sensory information with physical action. However, there are some constraints on the child’s thinking at this stage, such as egocentrism and centration.</td>
</tr>
<tr>
<td>Concrete Operational</td>
<td>7 to 11 years</td>
<td>The child can now reason logically about concrete events. Understands the concept of conservation, organizes objects into hierarchical classes (classification), and plays objects in ordered series (variation).</td>
</tr>
<tr>
<td>Formal Operational</td>
<td>11 years Through Adulthood</td>
<td>The adolescent reasons in more abstract, idealistic, and logical hypothetical-deductive ways.</td>
</tr>
</tbody>
</table>

1. The Sensorimotor Period (0-2 years)

- **Ability to organize and coordinate sensations with physical movements**
- **Consists of six substages of cognitive development**
- **Is nonsymbolic through most of its duration**
- **Object permanence develops**

Piaget’s Description of Sensorimotor Thought
The Sensorimotor Period (0-2 years)

- Only some basic motor reflexes: grasping, sucking, eye movements, orientation to sound
- By exercising and coordinating these basic reflexes, infant develops intentionality and an understanding of object permanence and causality.

**Plageti's Substages of Sensorimotor Development**

<table>
<thead>
<tr>
<th>Plageti Substage</th>
<th>Substage 4: Coordination of secondary circular reactions (8–12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substage 1: Simple reflexes (birth–1 month)</td>
<td></td>
</tr>
<tr>
<td>Substage 2: First habits and primary circular reactions (1–4 months)</td>
<td></td>
</tr>
<tr>
<td>Substage 3: Secondary circular reactions (4–8 months)</td>
<td></td>
</tr>
<tr>
<td>Substage 5: Tertiary circular reactions, novelty, and curiosity (12–18 months)</td>
<td></td>
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<tr>
<td>Substage 6: Internalization of schemes (18–24 months)</td>
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</tbody>
</table>

Sensorimotor Stage

Using the Violation of Expectations Method to Study **Object Permanence** in Infants

Sensorimotor Stage

The Infant’s Understanding of Causality
Summary of Sensorimotor Skills

- Culminates in the emergence of symbolic representation.
- Object permanence understood.
- Basic means-ends skills have emerged-causality

2. The pre-operational period (2 yrs to 7 yrs)

- Symbolic thought without operations.
- Thinking is governed more by appearance than logical necessity.

The pre-operational period (2 yrs to 7 yrs)

- The Symbolic Function Sub-stage (Ages 2-4)

  - Ability to represent an object that is not present
    - Drawing
    - Pretend play

The pre-operational period (2 yrs to 7 yrs)

- The Symbolic Function Substage is limited by
- Egocentrism
  - Inability to distinguish between one’s own perspective and someone else’s
- Animism
  - Giving in animal or human qualities to inanimate objects

The pre-operational period (2 yrs to 7 yrs)

- The Intuitive Thought Sub-stage (ages 4-7)

  - Primitive reasoning “WHY? ” questions
  - They know something but unaware of how they know it.

The pre-operational period (2 yrs to 7 yrs)

- The Three Mountains Task

- Child seated here
The pre-operational period (2 yrs to 7 yrs)

- Centration
  - A centering of attention on one characteristic to the exclusion of all others.
  - Example: CONVERSION TASKS

Pre-operational thinking and problems of conservation

Pre-operational thinking and problems of conservation

Conservation Tasks

<table>
<thead>
<tr>
<th>Type of Conservation</th>
<th>Starting Configuration</th>
<th>Transformation</th>
<th>Final Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td></td>
<td></td>
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<tr>
<td>Length</td>
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<td></td>
<td></td>
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<tr>
<td>Mass</td>
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<tr>
<td>Area</td>
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Pre-operational thinking and problems of conservation

- Why do pre-operational children fail problems of conservation?
  - Because their thinking is not governed by principles of reversibility, compensation and identity

Pre-operational thinking and problems of conservation

- Reversibility: The pouring of water into the small container can be reversed.

Pre-operational thinking and problems of conservation

- Compensation: A decrease in the height of the new container is compensated by an increase in its width.

Pre-operational thinking and problems of conservation

- Identity: No amount of liquid has been added or taken away.

Preoperational Thought's Characteristics

- More symbolic than sensorimotor thought
- Inability to engage in operations; can't mentally reverse actions; lacks conservation skills
- Egocentric (inability to distinguish between own perspective and someone else's)
- Intuitive rather than logical

3. Concrete operational thinking (7-11 years)

- Physical operations now internalized and have become cognitive
- Qualitatively different reasoning in conservation problems.
- Logical Reasoning
- Thought is not yet abstract
Horizontal Decalage

- Different conservation problems solved at different ages. Can’t transfer knowledge
- Some claim it is a threat to Piaget’s domain general view of cognitive development
- Number (first to develop) vs. volume (last to develop)

Concrete Operational Thinking

- “A fly is like both insects and birds. It is like birds because it flies, but it is like insects because it has six legs”
- “I understand how this nickel and these five pennies are the same as this dime”

Concrete operational thinking

- Classification
  - Concrete operational children can divide things into sets and subsets and understand their relationship.
- Seriation: Ordering stimuli along a quantitative dimension (such as length).
- Transitivity: The ability to reason about and logically combine relationships.

4. Formal operations (11 – 15 years...)

- Thought no longer applied strictly to concrete problems.
- Directed inward: thought becomes the object of thought.
- Thinking goes beyond experience, more abstract

Characteristics of Formal Operational Thought

- Abstract
  - Adolescents think more abstractly than children. Formal operational thinkers can solve abstract algebraic equations, for example.
- Idealistic
  - Adolescents often think about what is possible. They think about ideal characteristics of themselves, others, and the world.
- Logical
  - Adolescents begin to think more like scientists, devising plans to solve problems and systematically testing solutions. Piaget called this type of logical thinking hypothetical-deductive reasoning.

FIGURE 7.2: “Where would you put a third eye?” Tom (age 7) did not show much inventiveness in drawing her “third eye.” But then (age 11) and at the top of a stick of hair: “I could move the eye to look in all directions.” John (age 11) wanted a third eye in his picture: “I could see around corners and see what kind of animal I’ll get out of this cookie jar.” Tom and John show early signs of formal operational thought.
Formal operations: Adolescent limits

1. Adolescent Egocentrism
   is heightened self-consciousness of adolescents, reflected in adolescents’ beliefs that others are as interested in them as they are in themselves

2. Imaginary Audience
   refers to the heightened self-consciousness of adolescents. They feel as though they are “on stage” at all times.

Formal operations: Adolescent limits

3. Personal Fable
   involves a sense of uniqueness that makes adolescents feel that no one can really understand them.

Evaluating Piaget

- Accurate reflection of Cognitive Development?

Evaluating Piaget

- Difficult- An enormous theory, Covers many ages and issues in development.
- Stage like progression only observed if one assumes a bird-eye view.
- Closer inspection reveals more continuous changes.

Trebor...

- John Locke 1632
- Darwin 1809
- Jean Rousseau 1712
- Stanley Hall 1844
- James Baldwin 1861
- Alfred Binet 1857
- Maria Montessori 1870
- John Watson 1878
- Werner 1890
- Piaget 1912
- Les Vgotsky 1896
- Erik Erikson 1902
- Gibson 1910
- Urie Brinfenbrenner 1917
Today’s Class

- Werner - Process Analysis
- Lev Vygotsky – Sociocultural Cognitive Theory
- Erik Erikson – Psychosocial Development
- Gibson – Depth Perception
- Urie Bronfenbrenner – Ecological Model

Heinz Werner (1890-1964)

Process analysis

- Uniformity vs. Multiformity
- Continuity vs. Discontinuity
- Unilinearity vs. Multilinearity
- Fixed vs. Mobile

Other questions …

- Is development irreversible OR it it plastic?
- Is development normative OR are there individual differences?
- Is development universal OR context specific?

Lev Vygotsky (1896-1934)

- Vygotsky’s Sociocultural Cognitive Theory
  - Cultural and social interaction guide cognitive development.
  - A child’s development is inseparable from social and cultural activities.
  - Children’s social interaction with more skilled adults and peers advances cognitive development

Lev Vygotsky: Children’s abilities

- Elementary Mental Function
  - are those functions a child is born with
- Higher Mental Functions
  - Embodies the use of signs to mediate memory functions. Link things together.
  - Language can be used to provide signs to mental images.

Lev Vygotsky: Zone of Proximal Development

[Diagram of Zone of Proximal Development]
Lev Vygotsky: Language and Thought

- Vygotsky (1962) believed that young children use language not only for social communication but also to plan, guide, and monitor their behavior in a self-regulatory fashion.

- Private speech, an important tool of thought during the early childhood years, represents an early transition in becoming more socially communicative.

Lev Vygotsky in the Classroom

- Assess the child’s ZPD.
- Use the child’s zone of proximal development in teaching.
- Use more-skilled peers as teachers.
- Monitor and encourage children’s use of private speech.
- Place instruction in a meaningful context.

Vygotsky vs. Piaget

1. Vygotsky was a social constructivist whereas Piaget was a cognitive constructivist.

2. Vygotsky proposed no general stages, whereas Piaget did.

3. Piaget advocated learning by exploring the world, whereas Vygotsky advocated learning through the help of a more skilled guide.

Vygotsky vs. Piaget

4. Both theorists viewed the teacher as a facilitator and guide, not a director.

5. Vygotsky may have overemphasized the role of language in thinking.

Eleanor Gibson (1910-2002)

- Perceptual learning

- Enrichment Theory vs. Differentiation theory

The Visual Cliff
Erik Erikson (1902-1994)

8 stages of psychosocial development

- Social relationships than individual personality and sexual feelings.
- Life-span development is important, compared to Freud who believed experiences in first five years shape personality.

<table>
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<th>8 Stages of Psychosocial Development</th>
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<tbody>
<tr>
<td>1. Infancy</td>
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<tr>
<td>2. Early Childhood</td>
</tr>
<tr>
<td>3. Play age</td>
</tr>
<tr>
<td>4. School Age</td>
</tr>
<tr>
<td>5. Adolescence</td>
</tr>
<tr>
<td>6. Young Adulthood</td>
</tr>
<tr>
<td>7. Adulthood</td>
</tr>
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<td>8. Mature age</td>
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<td>Autonomy vs. Shame &amp; Doubt</td>
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<td>Initiative vs. Guilt</td>
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<td>Industry vs. Inferiority</td>
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<tr>
<td>Identity vs. Identity Confusion</td>
</tr>
<tr>
<td>Intimacy vs. Isolation</td>
</tr>
<tr>
<td>Generativity vs. Stagnation</td>
</tr>
<tr>
<td>Integrity vs. Despair</td>
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Evaluating psychosocial theory

- Contributions:
  - early experience as important, family relationships as central
  - Adulthood is also important.
- Criticisms:
  - difficult to test, stage theory but each stage may be independent and overlap

Bronfenbrenner’s Theory

Urie Bronfenbrenner 1917-2005

Modern Influences in Developmental Psychology

- Observational Learning
- Social Cognitive Theory
  - Albert Bandura - Bobo doll experiment (1961)

Modern Influences in Developmental Psychology:

- Parental Influence
- Peer Influence
- Schools and Teachers
Modern Influences in Developmental Psychology: Technology

- 6.5 hours a day (45.5 hours a week) of TV, DVDs, CDs, Computer, Video Games
- Compared to 1 hr physical activity, 1 hr homework, .5 hr chores
- 63% TV on during meals
- 68% access to TV or video games or computer in bedroom
- 53% have no family rules on access or content

Kaiser Family Foundation 2005

Summary – perspectives on development

- **Biological perspective** (nature)
  - cause of development is genetically determined patterns of change
- **Learning perspective** (nurture)
  - major causes of developmental change are from the environment
- **Ecological perspective** (transactional)
  - emphasize the interplay among the various factors that influence development

The History of Child Development

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- Gibson 1910
- Urie Bronfenbrenner 1917
- Albert Bandura 1925

Television
- Television’s Many Roles – what we know!
  - Children may become less sensitive to the pain and suffering of others
  - Children may be more fearful of the world around them
  - Children may be more likely to behave in aggressive or harmful ways toward others
  - Children who watch more TV have more body fat

Where do these Theories fit?

1. Biological perspective
2. Learning perspective
3. Ecological perspective
4. Discontinuous Stages
5. Continuous - Gradual

Where do these Theories fit?

1. Biological – Gibson, Rousseau, Piaget
2. Learning – Watson, Locke
3. Ecological - Bronfenbrenner, Vygotsky
4. Continuous - Vygotsky
5. Discontinuous - Piaget, Erikson