An Introduction to Child Development

How Children Develop (3rd ed.)
Siegler, DeLoache & Eisenberg

Chapter 1

Overview

- Why Study Child Development?
- Historical Foundations of the study of Child Development
- Enduring Themes in Child Development
What is child development?

General terms:

• Changes in individual’s height, weight, behavior, or other characteristics or traits

But not all changes are development…

Formal term: Changes that are:

• Systematic not haphazard
• Successive not independent - for example, walking.

Werner: Global to complex - Walking counts but not weight increase

Milestones of Motor Development
What aspects of development are important?

1. **What** abilities do children develop?
   - Can infants perform arithmetic? (e.g., 1+1 = 2)

2. **When** do children develop an ability?
   - At what age can infants perform arithmetic?

3. **How** do children develop?
   - How do infants perform arithmetic? How do they advance from this point? How did it develop in the first place?

4. **Why** do children develop some abilities and not others?
   - Why are infants able to add and subtract?
Why Study Child Development?

Reason #1: Raising Children

- Knowledge of child development can help parents and teachers meet the challenges of rearing and educating children.

- Researchers have identified effective approaches that caregivers can use successfully in helping children manage anger and other negative emotions.
Reason #2: Choosing Social Policies

- Knowledge of child development permits informed decisions about social-policy questions that affect children
  - Research on children’s responses to leading interview questions helped courts obtain more accurate testimonies from preschool children

Reason #3: Understanding Human Nature

- Child-development research provides important insights into some of the most intriguing questions regarding human nature
  - The existence of innate concepts
  - The relationship between early and later experiences
    - Children adopted from inadequate orphanages in Romania show that the timing of experiences often influences their effects
Reason #4:

• **People change**

  We are different at different times in our lives.
  We think differently (perceive or attend to different info)
  We are influenced by different things
  We behave differently over time

  ![Images of people in different situations]

Reason #4:

• **Trajectory:** A single time-point lacks meaning

  **Predictability from pathway:**
  
  • know where children are going (developmentally at least)

  **Example:** infant word errors

  **Explanation:** 1. see how past events shape behaviors
  2. observe building blocks of later behaviors
Historical Foundations of the Study of Child Development

Early Philosophical Views
The Beginnings of Research

Early Philosophers

- Provided enduring insights about critical issues in childrearing – but their methods were unscientific

- Both Plato and Aristotle believed that the long-term welfare of society depended on children's being raised properly, but they differed in their approaches
Plato vs. Aristotle

- Plato emphasized self-control and discipline
- Aristotle was concerned with fitting child rearing to the needs of the individual child

Plato vs. Aristotle

- Plato emphasized self-control and discipline
- Aristotle was concerned with fitting child rearing to the needs of the individual child
- Plato believed that children are born with innate knowledge
- Aristotle believed that knowledge comes from experience
Later Philosophers

- **John Locke**, like Aristotle, saw the child as a *tabula rasa*

- **Jean-Jacques Rousseau** parents and society should give the child maximum freedom from the beginning

Research-Based Approach

- Emerged in the nineteenth century, in part as a result of two converging forces
  - **Social reform movements**: research conducted for the benefit of children
  - **Charles Darwin’s theory of evolution** inspired research in child development in order to gain insights into the nature of the human species
Formal Field of Inquiry

- Child development emerged as a formal field of inquiry in the late nineteenth and early twentieth centuries
- Sigmund Freud and John Watson formulated influential theories of development during this period

Freud and Watson

- **Freud**: biological drives, especially sexual ones, are crucial
- **Watson**: children’s behavior arises from the rewards and punishments following behaviors

The research methods for these theories were limited: but they were better grounded in research and inspired more sophisticated thinking
Enduring Themes in Child Development

Nature and Nurture
The Active Child
Continuity/Discontinuity
Mechanisms of Developmental Change
The Sociocultural Context
Individual Differences
Research and Children’s Welfare

Development Questions and Themes

<table>
<thead>
<tr>
<th>Questions</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do nature and nurture together shape development?</td>
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<td>How do children shape their own development?</td>
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<td>How can research promote children’s well-being?</td>
<td>Research and children’s welfare</td>
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</table>
1. **Nature and Nurture**

- The single most basic question about child development is how nature and nurture interact to shape the developmental process.
  - **Nature** refers to our biological endowment, especially the genes we receive from our parents.
  - **Nurture** refers to the wide range of environments, both physical and social, that influence our development.

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<table>
<thead>
<tr>
<th>Nature</th>
<th>Nurture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heredity</td>
<td>Environment</td>
</tr>
<tr>
<td>Eye color</td>
<td>Academic learning</td>
</tr>
<tr>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
1. Nature and Nurture

- Developmentalists now recognize that every characteristic we possess is created through the joint workings of nature and nurture.
- Accordingly, they ask how nature and nurture work together to shape development.

### TABLE 3.1
Summary of Family Studies of Intelligence

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Average $R$</th>
<th>Number of Pairs</th>
<th>Reared-together biological relatives</th>
<th>Reared-apart biological relatives</th>
<th>Reared-together nonbiological relatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>MZ twins</td>
<td>0.86</td>
<td>4,672</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DZ twins</td>
<td>0.60</td>
<td>5,533</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>0.47</td>
<td>26,473</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent–offspring</td>
<td>0.42</td>
<td>8,433</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Half-siblings</td>
<td>0.35</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cousins</td>
<td>0.15</td>
<td>1,176</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MZ twins</td>
<td>0.72</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>0.24</td>
<td>203</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent–offspring</td>
<td>0.24</td>
<td>720</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>0.32</td>
<td>714</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent–offspring</td>
<td>0.24</td>
<td>720</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: MZ = monozygotic; DZ = dizygotic.
2. How do children shape their own development?

- Children contribute to their own development from early in life, and their contributions increase as they grow older.
- Three of the most important contributions during children’s first years are their:
  - Attentional patterns
  - Use of language
  - Play
- Older children and adolescents choose many environments, friends, and activities for themselves; their choices can exert a large impact on their future.

3. Continuity vs. Discontinuity

Continuous development: Age-related changes occur gradually.
3. Continuity vs. Discontinuity

Discontinuous development: Age-related changes include occasional large shifts so that children of different ages seem qualitatively different.

Stage theories propose that development occurs in a progression of age-related, qualitative shifts.
3. Continuity vs. Discontinuity

- Depending on how it is viewed, changes in height can be viewed as either continuous or discontinuous.
  - Examining a boy’s height at yearly intervals from birth to 18 years makes the growth look gradual and continuous.
  - Examining changes in the same boy’s height from one year to the next makes growth seem discontinuous.

4. How does developmental change occur?

- Darwin’s theory of evolution provides a useful framework for thinking about the mechanisms that produce change in children’s development.
  - **Variation** refers to differences in thought and behavior within and among individuals.
  - **Selection** describes the more frequent survival and reproduction of organisms that are well adapted to their environment.
4. How does developmental change occur?

- Psychological variation and selection appear to produce changes within an individual lifetime.

  - Variation and selection are apparent in brain development and in the strategies used to solve single-digit addition problems.
5. How does the sociocultural context influence development?

- **Sociocultural context:** Refers to the physical, social, cultural, economic, and historical circumstances that make up any child’s environment.

- Contexts of development differ within and between cultures.
  - Mayan children typically share a bed with their parents for several years.
  - The US culture prizes independence and self-reliance, whereas the Mayan culture values interdependence.

5. How does the sociocultural context influence development?

- Development is affected by **ethnicity**, **race**, and **socioeconomic status**, which is a measure of social class based on income and education.
5. How does the sociocultural context influence development?

<table>
<thead>
<tr>
<th>Group</th>
<th>% in Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall U.S. population</td>
<td>15</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>11</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
</tr>
<tr>
<td>Hispanic</td>
<td>24</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>9</td>
</tr>
<tr>
<td>Married Couples</td>
<td>7</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>6</td>
</tr>
<tr>
<td>Black</td>
<td>12</td>
</tr>
<tr>
<td>Hispanic</td>
<td>18</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>7</td>
</tr>
<tr>
<td>Single parent: Female head of household</td>
<td>36</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>30</td>
</tr>
<tr>
<td>Black</td>
<td>51</td>
</tr>
<tr>
<td>Hispanic</td>
<td>41</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>21</td>
</tr>
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6. How do children become so different from each other?

- Individual differences among children arise very quickly in development
- Children's genes, their treatment by other people, their subjective reactions to other people, and their choice of environments all contribute to differences
7. How can research promote a child’s well-being?

- Child-development research yields practical benefits in diagnosing children’s problems and in helping children to overcome them.
- Preferential looking enabled the diagnosis of the effects of cataracts in infants as young as two months of age.

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