Infancy and Childhood

Part 1: Physical, Perceptual, and Language Development
Objectives:

• Define developmental psychology

• Describe the physical and perceptual development of newborns and children.

• Discuss the development of language.
I. Introduction

A. The study of changes that occur as an individual matures is called developmental psychology.

B. Developmental psychology studies how a person’s physical, social, emotional, moral, and intellectual growth and development occur in sequential interrelated stages of the human life cycle.
II. Nature vs. Nurture

A. Psychologists have long debated what the influences of human behavior are. Some psychologists have argued that much of our development comes to us as a result of our genetic make-up (nature). Others have argued much of our development comes as a result of what we have learned or experienced (nurture).
III. Newborns

A. Development begins long before an infant is even born.

1. Expectant mothers can feel strong movement and kicking—even hiccuping—inside them during the later stages of pregnancy.

2. It is common for a fetus (an unborn child) to suck its thumb, even though it has never suckled at its mother’s breast or had a bottle.
IV. Capacities of Newborns

A. Capacities are NOT learned behaviors. Capacities are those things a healthy newborn is capable of doing at birth. The inability to do these things may indicate health problems. Capacities allow newborns to adapt to their environment and meet essential basic needs.

Examples of Capacities of Newborns

1. Sucking
2. Turning head
3. Looking at/for things
4. Crying
5. Smiling
6. Showing fright or surprise
7. Grasping Reflex: an infant’s response to the touch of the palm of its hand
8. Rooting Reflex: when an alert newborn is touched anywhere around the mouth they will turn their head and mouth toward the source of the touch.
V. Physical Developments and Maturation of Infants

A. Basic Information:

1. On average, infants weigh 7.5 pounds at birth.
2. At birth, 95% of infants are between 5.5 and 10 pounds and are 18-22 inches in length.
3. Within the span of 2 years, the grasping, rooting, searching infant will develop into a child who can walk, talk, and feed themselves.
4. This transformation is the result of both maturation and learning.
B. **Maturation** is the internally programmed growth of a child. At various points of maturation the child achieves developmental milestones such as rolling over, raising their head, sitting without support, etc. Maturation works on a schedule (if they are healthy) and no amount of parent coaching will push a child to mature faster than he/she is physiologically ready.
V. Physical Development and Maturation of Infants (con’t)

The timeline above serves as a guide indicating how long it should take an infant to learn simple skills, such as motor functions, crawling, creeping, walking, etc.
V. Physical Development and Maturation of Infants (con’t)

C. By recording the ages at which thousands of infants first begin to smile, to sit upright, to crawl, etc. psychologists have been able to develop a timetable for maturation. The development of these timetables have been used by professionals in identifying children who have delays and who may require assistance and additional support from outside agencies.

D. One of the facts to come out of the development of these timetables is that the maturational plan inside each child is unique. Children will develop and achieve these skills at different times and rates, the timetables merely serve as guides of comparison.
VI. Perceptual Development

A. In addition to grasping and sucking, newborns have mature perception skills. In 1961, Robert Fantz showed infants different faces to discover their preferences. His research showed that infants preferred human faces and patterned materials the most. This research showed infants are born with and develop visual patterns.
VI. Perceptual Development (con’t)

B. In another experiment, researchers Eleanor Gibson and R.D. Walk (1960) created the visual-cliff experiment to try to determine if depth perception was a learned skill or if it was innate.
VI. Perceptual Development (con’t)

C. Findings of this experiment showed:

1. While very young infants (under 6 months) showed less fear and were willing to crawl over the cliff, older infants (6 months and older) who were experienced at crawling refused to cross over the cliff. (learned response)

2. Heart rates increased in younger infants when they crossed the cliff area. (perceived response)

3. Conclusions were that experienced crawlers had associated drop-offs with danger (learned response). Thus infants learn through experience, even though depth perception is partially innate.
VII. The Development of Language

A. Language and thought are closely intertwined; both abilities involve using symbols.

1. We are able to think and talk about objects that are present and about ideas that are not necessarily true.

2. A child begins to think, to represent things to himself, before he is able to speak.

3. The acquisition of language, however, propels the child into further intellectual development (Piaget, 1926).
VII. The Development of Language (con’t)

B. Animals have shown some capabilities of using language.

1. Psychologists believe that chimpanzees must develop at least as far as 2-year-old humans because, like 2-year-olds, they will look for a toy or a bit of food that has disappeared.

2. Chimps have learned sign language and how to use special typewriters connected to computers.

3. The chimps use only aspects of the human language.
VII. The Development of Language (con’t)

C. Some psychologists argue that language is reinforced behavior, while others claim it is inborn.

D. Some people claim there is a “critical period,” or a window of opportunity, for learning a language.

E. There are several steps in learning language:
   1. learning to make the signs
   2. giving the signs meaning
   3. learning grammar
VII. The Development of Language (con’t)

F. During the first year of life, the average child makes many sounds.

G. Late in the first year, the strings of babbles begin to sound more like the language that the child hears.

H. The leap to using sounds as symbols occurs sometime in the second year.

I. By the time children are 2 years old, they have a vocabulary of at least 50 words.

J. At age 2, though, a child’s grammar is still unlike that of an adult.
K. Infants and toddlers use telegraphic speech – sentences with words left out or used incorrectly, but still get the message across to those they are communicating with.

Examples of telegraphic speech:
“Where my apple?”
“Daddy fall down.”
“Daddy goed yesterday” instead of “Daddy went yesterday”
VII. The Development of Language (con’t)

L. By the time children have reached age four or five they have mastered the basics of their language. Their ability to use words will continue to grow with their ability to think about and understand things.

<table>
<thead>
<tr>
<th>Age</th>
<th>Language Abilities</th>
<th>Example</th>
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</thead>
<tbody>
<tr>
<td>1 year</td>
<td>Babbling begins and increases; by year’s end, infant masters sounds of own language and usually says his first word</td>
<td>baba, mama</td>
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<tr>
<td>2 years</td>
<td>Infant will progress to saying dozens of words; begins to speak in paired words; to ask a question, child issues a declaration in a rising tone; to negate something, child uses nouns with a negative word</td>
<td>All gone ball.</td>
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<tr>
<td></td>
<td></td>
<td>More ball.</td>
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<tr>
<td></td>
<td></td>
<td>Jenny go?</td>
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<tr>
<td></td>
<td></td>
<td>No ball.</td>
</tr>
<tr>
<td>3 years</td>
<td>Child acquires more grammatical knowledge; says appropriate sentences; uses simple declaratives; produces correct negative sentences; average size of vocabulary is about 400 words</td>
<td>I eating.</td>
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<tr>
<td></td>
<td></td>
<td>I’m eating.</td>
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<tr>
<td></td>
<td></td>
<td>Don’t go.</td>
</tr>
<tr>
<td>4 years</td>
<td>Child uses more grammatical rules and future tense; asks questions in adult form; average vocabulary is over 1,000 words</td>
<td>Will Jenny go?</td>
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<tr>
<td></td>
<td></td>
<td>I can’t go.</td>
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<tr>
<td></td>
<td></td>
<td>Why is Jenny crying?</td>
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<tr>
<td>5 years</td>
<td>Child uses more complex clauses; joins two or more ideas in one sentence</td>
<td>I see what you did.</td>
</tr>
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Source: Adapted from Developmental Psychology by Howard Gardner, 1963.