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## MODULE 14

# Infancy and Childhood

### Module Preview

Infants develop skills of sitting, standing, and walking in a predictable sequence; their actual timing is a function of individual maturation rate. Jean Piaget theorized that the mind develops by forming schemas that help us assimilate our experiences and that must occasionally be altered to accommodate new information. In this way, children progress from the simplicity of the sensorimotor stage through the increasingly complex preoperational and concrete operational stages to abstract formal operational thought.

Infants become attached to their parents largely because they are comfortable, familiar, and responsive. Denied such care, children may become withdrawn, anxious, and eventually abusive. Self-concept develops gradually, but by age 10, children's self-images are quite stable and are linked with their independence, optimism, and sociability. Children who develop a positive self-image tend to have been reared by parents who are authoritative but at the same time allow their children a sense of control over their own lives.

### Module Guide

#### Physical Development

- ▶ Exercise: Identifying Developmental Landmarks
- ▶ Videos: *Discovering Psychology, Updated Edition: The Responsive Brain*; Segment 24 of the Scientific American Frontiers series, 2nd ed.: *Baby Body Sense*

14-1. *Describe some developmental changes in brain and motor abilities during infancy and childhood, and explain why our earliest memories rarely predate our third birthday.*

Within the brain, nerve cells form before birth. After birth, the neural networks that enable us to walk, talk, and remember have a wild growth spurt. From ages 3 to 6, growth occurs most rapidly in the frontal lobes, which enable rational planning. The association areas linked with thinking, memory, and language are the last cortical areas to develop. **Maturation**, the biological growth processes that enable orderly changes in behavior, sets the basic course of development; experience adjusts it. Maturation accounts for commonalities, from standing before walking to using nouns before adjectives.

As the infant's muscles and nervous system mature, ever more complicated skills emerge. The sequence is universal; the timing varies. Babies roll over before they sit unsupported, and they usually creep before they walk. Genes play a major role. Identical twins typically begin sitting up and

walking on nearly the same day. Experience has a limited effect for other physical skills as well, including those that enable bowel and bladder control.

The average age of earliest conscious memory is 3.5 years. By 4 to 5 years, this *infantile amnesia* is giving way to remembered experiences. Experiments do show, however, that infants can retain learning over time. For example, 3-month-olds who learn to propel a mobile by moving their legs retain the association for at least a month. Studies of older children indicate that sometimes what the conscious mind cannot recall in words from the earliest years, the nervous system somehow remembers.

## Cognitive Development

- ▶ Exercises: Demonstrating Preoperational Thought; The Autism-Spectrum Quotient; “Reading the Mind in the Eyes” Test: Sample Items; Assessing Empathizing and Systemizing
- ▶ Exercise/Project: The Water-Level Task
- ▶ Lectures: Preoperational Thought and Moral Development; Vygotsky’s Sociocultural Theory of Cognitive Development
- ▶ Projects: Egocentrism; Conservation, Seriation, and Class Inclusion
- ▶ Videos: Module 14 of *The Mind* series, 2nd ed.: *Infant Cognitive Development*; Segments 25 and 27 of the Scientific American *Frontiers* series, 2nd ed.: *The Magic Years* and *A Change of Mind*; Video Clips 15, 16, 18, and 19 of *Digital Media Archive*, 1st ed.: *Psychology: Object Permanence, Stranger Anxiety, Piaget’s Conservation Task, and Body Part Counting System*; Program 7 of *Moving Images: Exploring Psychology Through Film: The “False Belief” Test: Theory of Mind*
- ▶ PsychSim 5: Cognitive Development
- ▶ ActivePsych: *Digital Media Archive*, 2nd ed.: *The Scale Errors, Piaget’s Conservation-of-Numbers Task, Piaget’s Conservation-of-Liquid Task A and B; Scientific American Frontiers*, 3rd ed.: *Cognitive Development: Overcoming Attentional Inertia, Childhood Disorder: Understanding Autism*
- ▶ Instructor Video Tool Kit: *Theory of Mind: Taking the Perspective of Others; The Two Faces of Autism*

14-2. *State Piaget’s understanding of how the mind develops, and outline Piaget’s four stages of cognitive development, noting current thinking regarding cognitive stages.*

**Cognition** refers to all the mental activities associated with thinking, knowing, remembering, and communicating. Jean Piaget maintained that the mind of the child is not a miniature model of the adult’s. He theorized that the mind tries to make sense of experience by forming **schemas**, concepts or frameworks that organize and interpret information. We **assimilate** new experiences, that is, interpret them in terms of our current understandings. But we also sometimes adjust, or **accommodate**, our current understanding to incorporate new information.

During the **sensorimotor stage** (birth to age 2) of cognitive development, children experience the world through their senses and actions. By about 8 months, an infant exhibits **object permanence**, an awareness that things still exist even when they are out of sight.

Piaget maintained that up to about age 6 or 7, children are in a **preoperational stage**—too young to perform mental operations. They are **egocentric**, that is, they cannot perceive things from another’s point of view and lack a **theory of mind**. (**Autism** is also marked by impaired ability to infer others’ mental states.) Piaget thought that at about age 6 or 7, children become capable of performing **concrete operations**, for example, those required to comprehend the principle of **conservation**. They think logically about concrete events, grasp concrete analogies, and comprehend mathematical transformations. By age 12, reasoning expands from the purely concrete to encompass abstract thinking, which Piaget called **formal operational** thinking.

Today’s researchers have shown that young children are more capable and their development more continuous than Piaget believed. The cognitive abilities that emerge at each stage have begun developing at earlier ages. Today’s researchers also see formal logic as a smaller part of cognition

than Piaget did. Nonetheless, studies support his idea that human cognition unfolds basically in the sequence he proposed.

## Social Development

- ▶ Lecture: Attachment Style, Compassion, and Self-Esteem
- ▶ Videos: Module 15 of *The Mind* series, 2nd ed.: *Social Development in Infancy*; Video Clip 12 of *Digital Media Archive: Psychology*, 1st ed.: *Harlow's Studies on Dependency in Monkeys*

14-3. *Discuss the effects of nourishment, body contact, and familiarity on infant social attachment.*

**Stranger anxiety** is the fear of unfamiliar faces that infants commonly display, beginning by about 8 months of age (soon after object permanence emerges). They greet strangers by crying and reaching for their familiar caregivers.

The **attachment** bond is a survival impulse that keeps infants close to their caregivers. Infants become attached to their parents or primary caregivers not simply because they gratify biological needs (nourishment) but because they provide body contact that is soft and warm. Familiarity provides another key to attachment. In animals, attachments based on familiarity often form during a **critical period** shortly after birth. This rigid attachment process is called **imprinting**. Although humans do not imprint, they do become attached to what they have known. Clearly, familiarity provides a safety signal.

- ▶ Exercise/Project: Measures of Attachment Type
- ▶ Videos: Video Clips 12, 17, and 20 of *Digital Media Archive, Psychology*, 1st ed.: *Harlow's Studies on Dependency in Monkeys*, *Morelli's Strange Situation Test*, and *Erikson's Stages of Psychological Development—Trust Versus Mistrust*; Module 21 of *Psychology: The Human Experience: Attachment*

14-4. *Contrast secure and insecure attachment, and discuss the roles of parents and infants in the development of attachment and an infant's feelings of basic trust.*

When placed in a *strange situation* such as a laboratory playroom, about 60 percent of children display *secure attachment*; they play comfortably in their mother's presence, are distressed when she leaves, and seek contact when she returns. Other infants, who are *insecurely attached*, are less likely to explore their surroundings, and when their mother leaves, cry loudly and remain upset, or seem indifferent to her going and returning. Sensitive, responsive parents tend to have securely attached children. Insensitive, unresponsive parents have infants who often become insecurely attached. Although genetically influenced temperament may elicit responsive parenting, parental sensitivity has been taught and does increase secure attachment to some extent. Erik Erikson attributed the child's development of **basic trust**—a sense that the world is predictable and reliable—to sensitive, loving caregivers. Adult relationships tend to reflect the attachment styles of early childhood.

14-5. *Assess the impact of parental neglect, family disruption, and day care on attachment patterns and development.*

Infants who experience abuse or extreme neglect often become withdrawn, frightened, even speechless. Young monkeys who are deprived of attachment may, as adults, cower in fright or lash out in aggression when placed with other monkeys their age. In humans, too, the unloved sometimes become the unloving.

Although most children who grow up under adversity are *resilient* and become normal adults, those who suffer severe and prolonged sexual abuse are at increased risk for health problems, psychological disorders, substance abuse, and criminality.

Both monkeys and infants who are temporarily deprived of attachment may become upset and, before long, withdrawn and even despairing. However, if placed in a more positive and stable environment, infants generally recover from the distress of separation. Children who are prevented from forming attachments by age 2 may be at risk for attachment problems.

Early research uncovered no negative impact of maternal employment on the child's development. More recent research has investigated the effects of differing quality of day care on different types and ages of children. Children who have spent the most time in day care seem to have slightly advanced thinking and language skills but also have an increased rate of aggressiveness and defiance. But the child's temperament, the mother's sensitivity, and the family's economic and educational level matter more than time spent in day care.

► Video: Program 8 of *Moving Images: Exploring Psychology Through Film: The Rouge Test: Self-Recognition*

14-6. *Trace the onset and development of children's self-concept.*

Self-concept, our understanding and evaluation of who we are, develops gradually. At about 15 to 18 months, infants will recognize themselves in a mirror. By school age, children start to describe themselves in terms of their gender, group memberships, and psychological traits. They also compare themselves with other children. By age 8 or 10, children's self-images are quite stable. Children with a positive self-concept are more confident, independent, optimistic, assertive, and sociable.

► Instructor Video Tool Kit: *Today's Overscheduled Children*

► Exercises: Dimensions of Parenting; Parental Authority Questionnaire; Parenting and Children's Traits

14-7. *Describe three parenting styles, and explain why authoritarian parenting is considered most effective.*

**Authoritarian** parents impose rules and expect obedience. **Permissive** parents submit to their children's desires, make few demands, and use little punishment. **Authoritative** parents are both demanding and responsive. Children with the highest self-esteem, self-reliance, and social competence generally have warm, concerned, and authoritative parents. Studies in cultures worldwide reflect the positive correlates of authoritative parenting. The effects are stronger when children are embedded in authoritative communities with connected adults who model a good life.

However, correlation is not causation. Socially mature and agreeable children may evoke authoritative parenting, or competent parents and their competent children may share genes that predispose social competence.