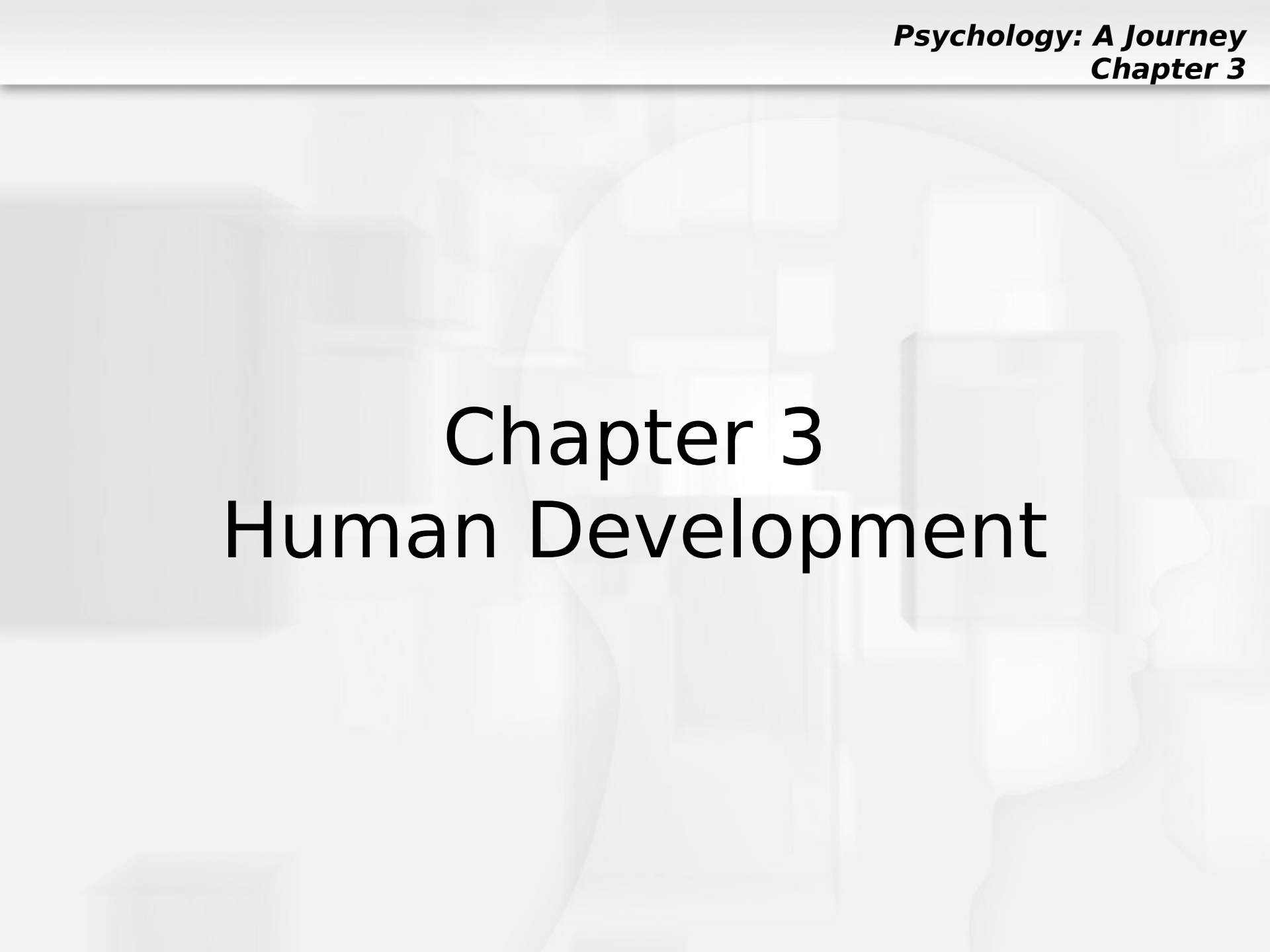




Chapter 3

Human Development

Nature vs. Nurture

- Developmental Psychology: The study of progressive age-related changes in behavior and abilities
- Heredity (Nature): Transmission of physical and psychological characteristics from parents to their children through genes
- Environment (“Nurture”): All external conditions that affect development
- Sensitive Periods: A period of increased sensitivity to environmental influences; also, a time when certain events must occur for normal development to take place

Newborns (Neonates) and Their Reflexes

- Grasping Reflex: If an object is placed in the infant's palm, she'll grasp it automatically (all reflexes are automatic responses; i.e., they come from nature, not nurture).
- Rooting Reflex: Lightly touch the infant's cheek and he'll turn toward the object and attempt to nurse; helps infant find bottle or breast.
- Sucking Reflex: Touch an object or nipple to the infant's mouth and she'll make rhythmic sucking movements.
- Moro Reflex: If a baby's position is abruptly changed or if he is startled by a loud noise, he will make a hugging motion.

Maturation

- Physical growth and development of the body, brain, and nervous system
- Increased muscular control occurs in patterns
 - Cephalocaudal: From head to toe
 - Proximodistal: From center of the body to the extremities

Figure 3.6

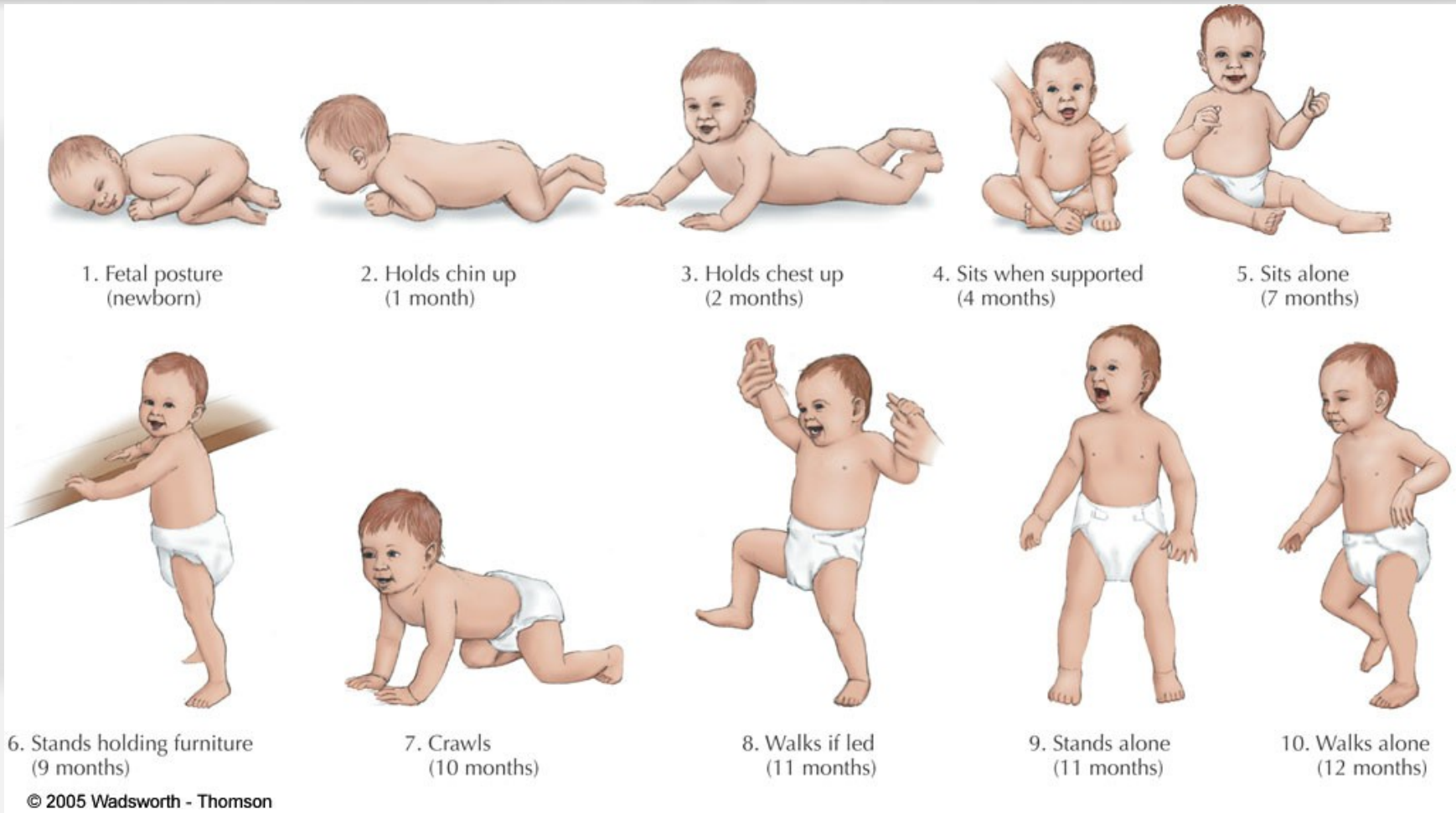


FIGURE 3.6 Motor development. Most infants follow an orderly pattern of motor development. Although the order in which children progress is similar, there are large individual differences in the ages at which each ability appears. The ages listed are averages for American children. It is not unusual for many of the skills to appear 1 or 2 months earlier than average or several months later (Frankenberg & Dodds, 1967; Harris & Liebert, 1991). Parents should not be alarmed if a child's behavior differs from the average.

Behavioral Capacities of the Newborn

- Lack muscle control, especially in extremities
- 1 day-old infants show a preference for their mom's voice
- Newborns have visual preferences

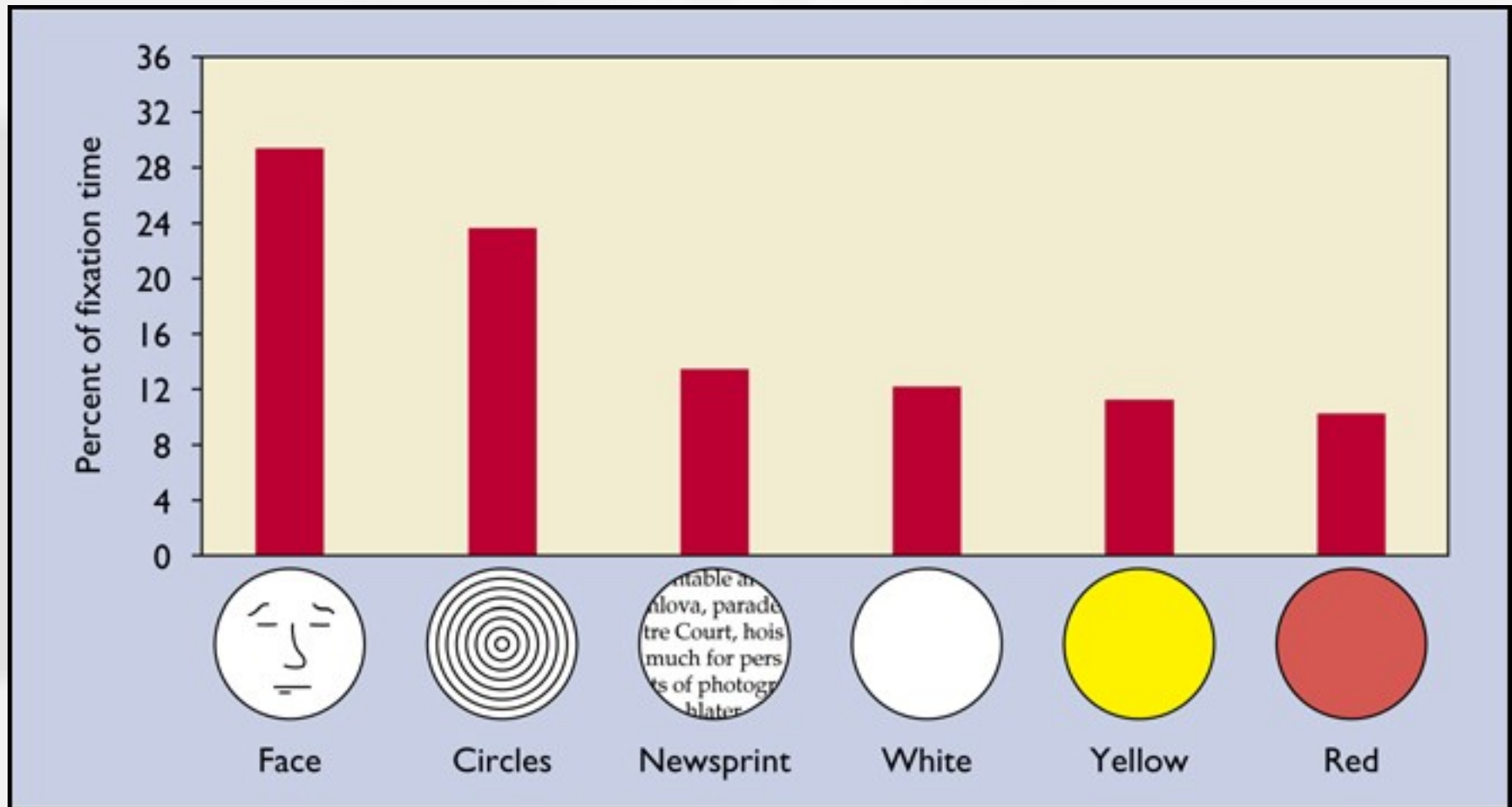


Figure 10.4

Infants pay more attention to faces than to other patterns. These results suggest that infants are born with certain visual preferences. (Based on Fantz, 1963)

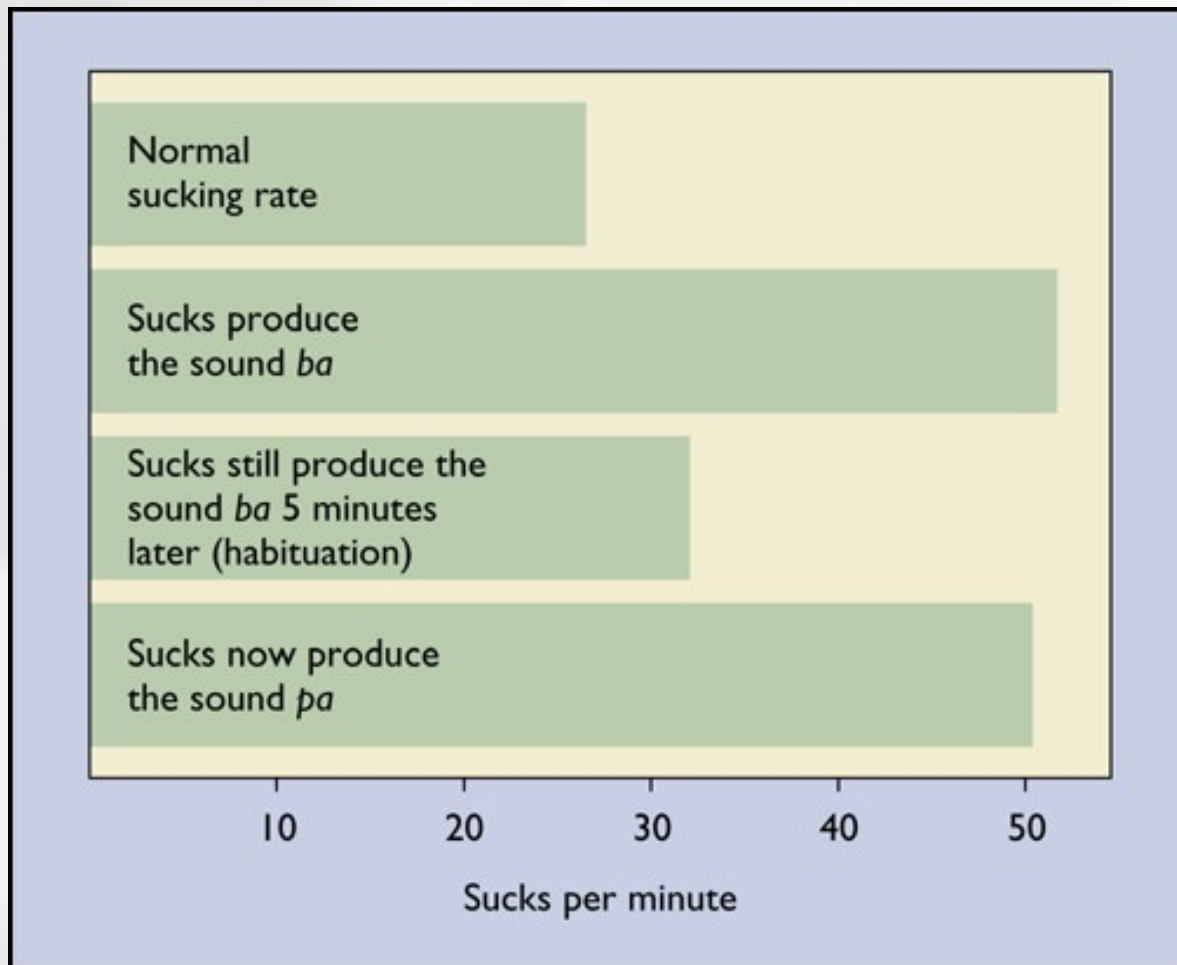
Behavioral Capacities of the Newborn

- *Newborns' Vision*
- As motor skills develop, perceptual abilities improve (e.g., depth perception)
 - Visual motor coordination develops quickly but must be practiced to continue being improved.
 - Experiments with kittens suggest that eye movements must be allowed to coordinate with body movements for further development of all visually guided behavior.

Behavioral Capacities of the Newborn

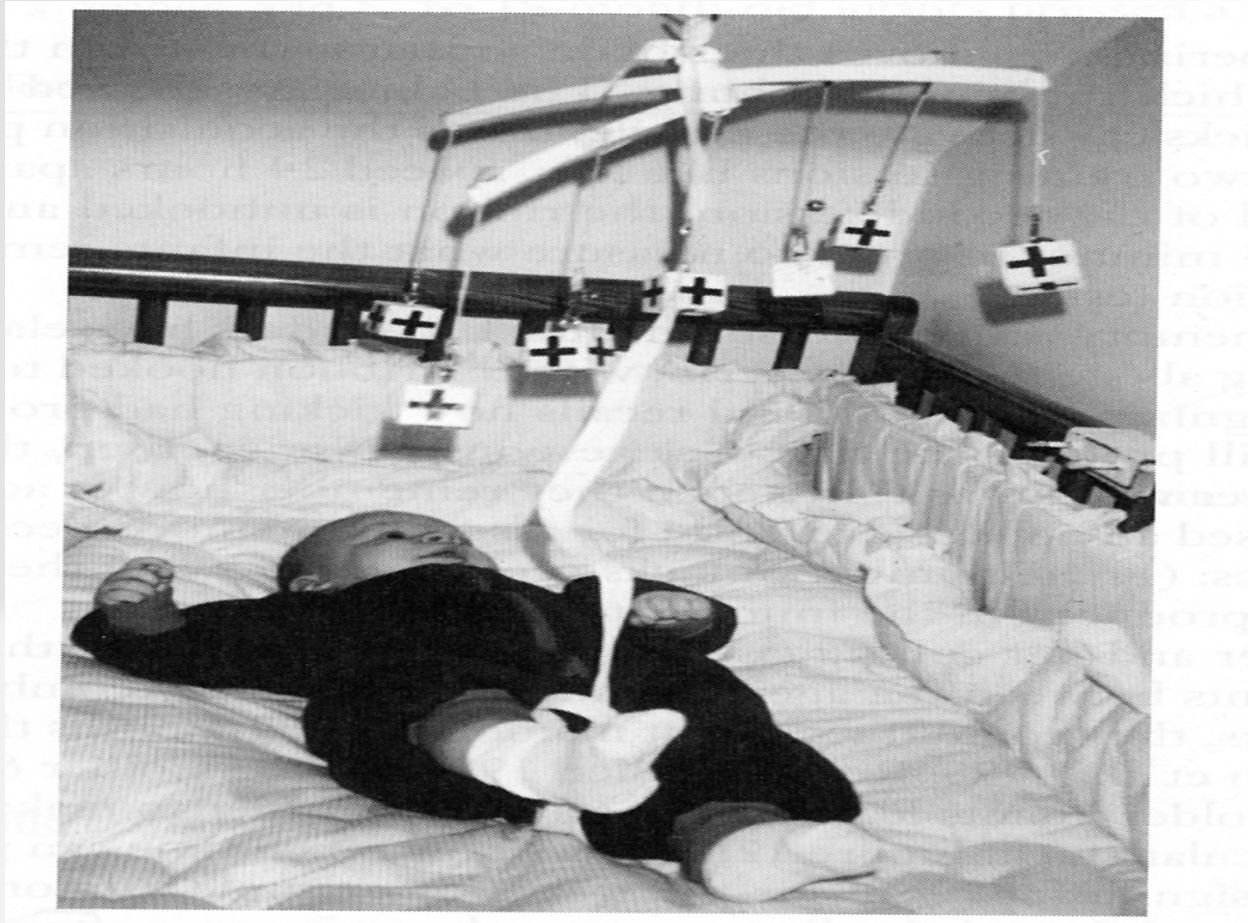
- Infants as young as one month old can discriminate between speech sounds.

Assessing Newborns' Hearing Capabilities via Habituation



- *Newborns' Learning and Memory*
 - 8 week-olds show ability to learn responses and remember them for days afterwards (make mobile move)

Mobile Task from Rovee-Collier (1984)



Mary Ainsworth and Attachment

- Emotional Attachment: close emotional bond babies form with their caregivers
- Separation Anxiety: Crying and signs of fear when a child is left alone or is with a stranger; appears around 8-12 months
- Quality of Attachment (Ainsworth)
 - Secure: Stable and positive emotional bond; upset by mother's absence
 - Insecure-Avoidant: Tendency to avoid reunion with parent or caregiver
 - Insecure-Ambivalent: Desire to be with parent or caregiver and some resistance to being reunited with Mom

Jean Piaget and Cognitive Development

- Piaget believed that all children passed through a set series of stages during their intellectual development; like Freud, he was a Stage Theorist.
- As child interacts with the environment, thinking/reasoning patterns change through two main processes:
 - Assimilation: Application of existing mental patterns to new situations.
 - Accommodation: Existing ideas are changed to accommodate new information or experiences.

Jean Piaget: Sensorimotor Stage

- Sensorimotor (0-2 Years): All sensory input and motor responses are coordinated; most intellectual development here is nonverbal.
 - Object Permanence: Concept that objects still exist when they are out of sight.

Sensorimotor Stage

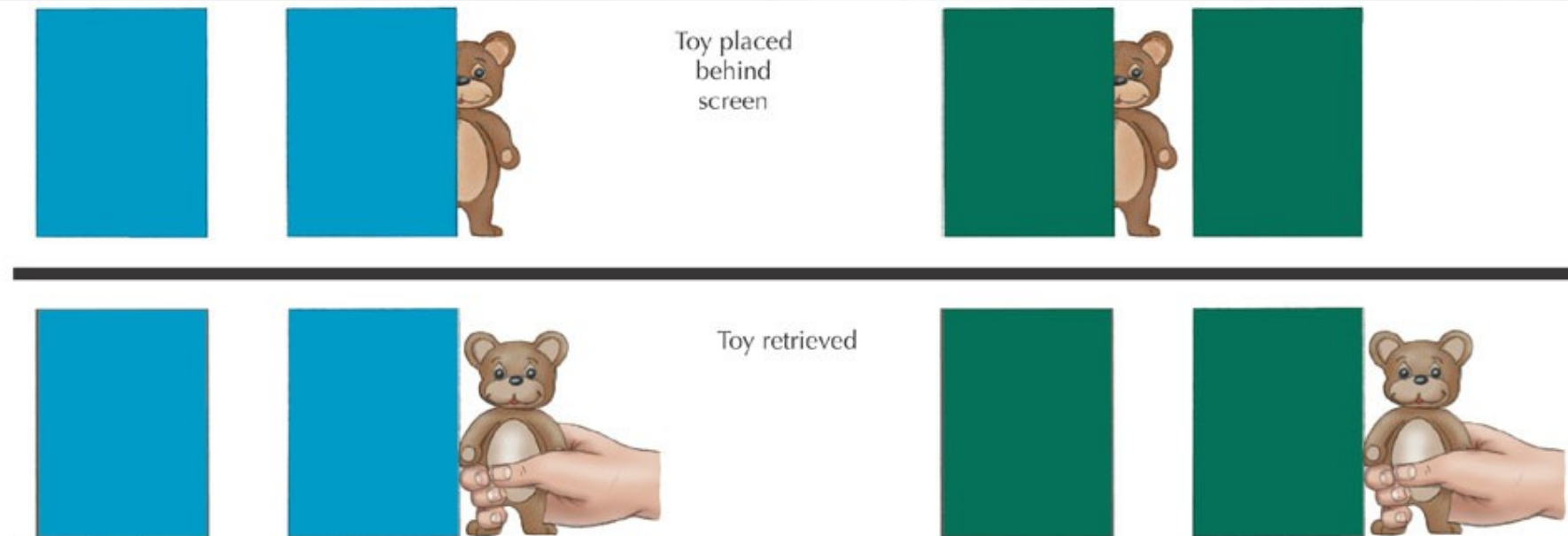


During the sensorimotor stage, children learn with their hands and mouths.

Object Permanence



Figure 3.16



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FIGURE 3.16 The panels on the left show a possible event, in which an infant watches as a toy is placed behind the right of two screens. After a delay of 70 seconds, the toy is brought into view from behind the right screen. In the two panels on the right, an impossible event occurs. The toy is placed behind the left screen and retrieved from behind the right. (A duplicate toy was hidden there before testing.) Eight-month-old infants react with surprise when they see the impossible event staged for them. Their reaction implies that they remember where the toy was hidden. Infants appear to have a capacity for memory and thinking that greatly exceeds what Piaget claimed is possible during the

Jean Piaget: Preoperational Stage

- Preoperational Stage (2-7 Years): Children begin to use language and think symbolically, BUT their thinking is still intuitive and egocentric.
 - Intuitive: Makes little use of reasoning and logic.
 - Egocentric Thought: Thought that is unable to accommodate viewpoints of others.

Three-Mountain Task (Preoperational)



Conservation of Volume (Preoperational)

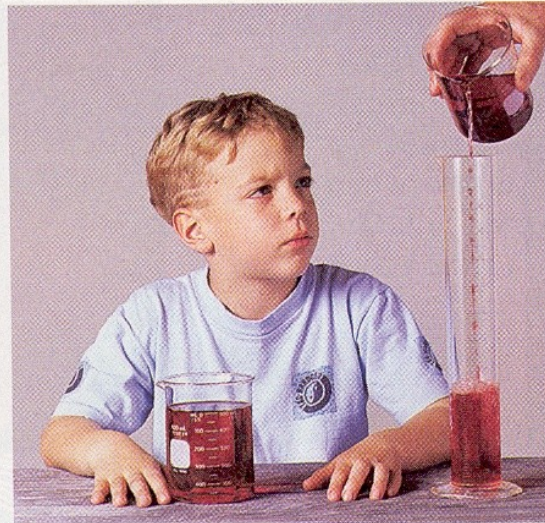
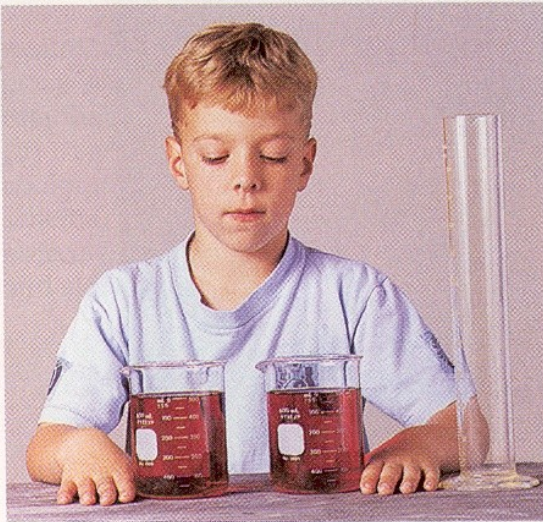


FIGURE 10.14 Preoperational children, usually younger than age 7, don't understand that a property of a substance—such as the volume of water—remains constant despite changes in its appearance. During the transition from preoperational thinking to concrete operations at around age 7, conservation tasks seem difficult and confusing to the child.

Jean Piaget: Concrete Operational Stage

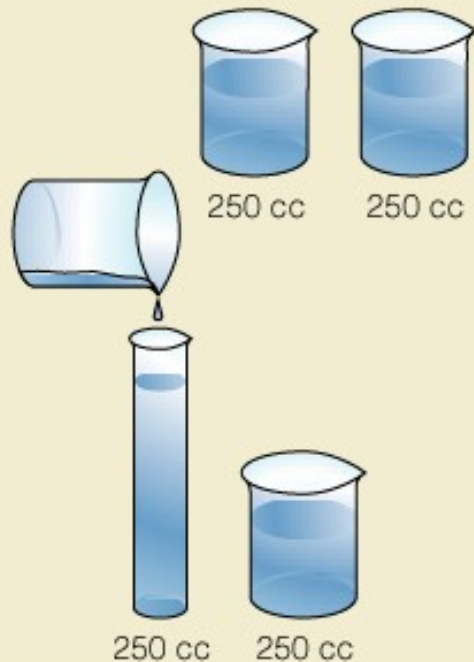
- Concrete Operational Stage (7-11Years): Children become able to use concepts of time, space, volume, and number BUT in ways that remain simplified and *concrete, not abstract*.
 - Conservation: Mass, weight, and volume remain unchanged when the shape or appearance of objects changes.
 - Reversibility of Thought: Relationships involving equality or identity can be reversed.



Conservation of number

Preoperational children say that these two rows contain the same number of pennies.

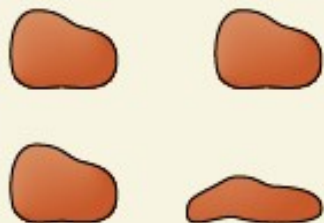
Preoperational children say that the second row has more pennies.



Conservation of volume

Preoperational children say that the two same-size containers have the same amount of water

Preoperational children say that the taller thinner container has more water



Conservation of mass

Preoperational children say that the two same-size balls of clay have the same amount of clay

Preoperational children say that a squashed ball of clay contains a different amount of clay than the same-size round ball of clay

Jean Piaget: Formal Operations

- Formal Operations Stage (11 Years and Up): Thinking now includes abstract, theoretical, and hypothetical ideas. Hypothetical Possibilities: Suppositions, guesses, or projections.
 - **Critics of Piaget's theory claim he underestimated children's abilities because he**
 - 1) didn't pay attention to cultural differences
 - 2) confused inability to make a physical response with lack of cognitive skills
 - 3) didn't think infants could form internal representations

Lev Vygotsky's Sociocultural Theory

- Children's cognitive development is heavily influenced by social and cultural factors.
- A child's thinking develops through dialogues with more capable persons
- Zone of Proximal Development: Range of tasks a child cannot master alone even though they are close to having the necessary mental skills; they need guidance from a more capable partner in order to complete the task.
- Scaffolding: Adjusting instruction so it is responsive to a beginner's behavior and so it supports the beginner's efforts to understand a problem or gain a mental skill

Age	Main Conflict	Typical Question
<i>Infant</i>	Basic trust versus mistrust	Is my social world predictable and supportive?
<i>Toddler</i> (ages 1–3)	Autonomy versus shame and doubt	Can I do things by myself or must I always rely on others?
<i>Preschool child</i> (ages 3–6)	Initiative versus guilt	Am I good or bad?
<i>Preadolescent</i> (ages 6–12)	Industry versus inferiority	Am I successful or worthless?
<i>Adolescent</i> (early teens)	Identity versus role confusion	Who am I?
<i>Young adult</i> (late teens and early 20s)	Intimacy versus isolation	Shall I share my life with another person or live alone?
<i>Middle adult</i> (late 20s to retirement)	Generativity versus stagnation	Will I succeed in my life, both as a parent and as a worker?
<i>Older adult</i> (after retirement)	Ego integrity versus despair	Have I lived a full life or have I failed?