



## Chapter 9

### The Preschool Years: Cognitive Development

#### Memory development

- **AUTOBIOGRAPHICAL MEMORY**, *memory of particular events from ones' own life*, is not very accurate until after three.
- Preschoolers' autobiographical memories fade, they may not be accurate (depending when they are assessed), and they are susceptible to suggestions.

#### (Memory Development in Information-Processing Approaches, continued)

- Preschoolers have difficulty describing certain information and oversimplify recollections which may have implications for eye witness testimony.
- Young children are susceptible to suggestions from adults.
- Questioning children right after the event and outside the courtroom may produce more accurate recollections.

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## Cognitive Changes that occur during the preschool years: Intellectual Development

### → Piaget's Stage of Preoperational Thinking

- Piaget saw the preschool years as a time of both stability and great change.
- Preschoolers are in the **PREOPERATIONAL STAGE**, from age 2 to 7
  - characterized by *symbolic thinking*
  - *Mental reasoning emerges, use of concepts*
  - *Less dependence on sensorimotor activity for understanding the world*



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### (Piaget's Stage of Preoperational Thinking continued)

- A key aspect of preoperational thought is *symbolic function* ( the ability to use symbols, words, or an object to represent something that is not physically present).
  - Using word duck as a symbol for an actual duck
  - Understanding that a toy duck represents an actual duck
- Symbolic function is directly related to language acquisition.



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### Another aspect of intellectual development during the preoperational period (according to Piaget):

**CENTRATION** - the process of concentrating on one limited aspect of a stimulus and ignoring other aspects (buttons)

- a major characteristic of preoperational thought
- the major limitation of this period because it leads to inaccuracy of thought.
- The cause of the children's mistake is allowing the visual image to dominate their thinking (appearance is everything!)



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### Centration: What You See is What You Think



Which row contains more buttons? Preschoolers usually say that the bottom row has more because it looks longer.

(an example of conservation of number, which we will discuss)



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### Another aspect of intellectual development during Piaget's preoperational period...

**Egocentrism**, the inability to take the perspective of others

- **EGOCENTRIC THOUGHT**, *thinking that does not take into account the viewpoint of others*, takes two forms:
  - 1) Lack of awareness that others see things from different *physical* perspectives.
  - 2) Failure to realize that others may hold *thoughts, feelings, and points-of-view* different from one's own.



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### (EGOCENTRIC THOUGHT, continued)

- Not intentional/inconsiderate—just lack of understanding that everyone doesn't view things like them!
- Egocentrism is at the root of many preschool behaviors, for example, talking to oneself and hiding games (if I can't see you, then you must not be able to see me!).



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Preschoolers are unable to understand the notion of **TRANSFORMATION**  
( the process in which one state is changed into another - because they ignore the intermediate steps [ inability to understand/fill in sequences of change] )



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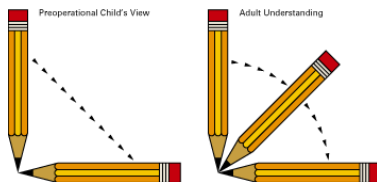
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#### The Falling Pencil & Transformation



Children in the preoperational period are not able to understand the successive transformations that the pencil follows. They cannot see the intermediary steps.



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A number of advances in thought occur in the preoperational stage.

1) INTUITIVE THOUGHT – (ages 4-7) the use of primitive reasoning and avid acquisition of knowledge about the world; simply put: **CURIOSITY**

- Leads children to think they know all the answers for how the world operates, but no logical basis yet.



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(advances in thought occur in the preoperational stage, continued)

2) Children begin to understand *functionality* - the concept that actions, events and outcomes are related to one another in fixed patterns.

- Pushing pedals moves bike faster, remote button changes channels on TV



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(advances in thought occur in the preoperational stage, continued)

3) They begin to understand the concept of *identity* - that certain things stay the same regardless of changes in shape, size and appearance

- Clay stretched out is the same amount of clay rolled into a ball
- According to Piaget, understanding identity necessary for children to develop an understanding of conservation (which is required for the child to transition to the next stage in his theory)



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**Conservation: Learning that Appearances are Deceiving**

- Preschoolers do *not* understand **CONSERVATION** - the knowledge that *quantity* is unrelated to the *arrangement and physical appearance* of objects



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### Types of Conservation Problems

- **Number**
  - Rearranging elements
  - The type of conservation task grasped the earliest!
- **Substance (Mass)**
  - Solids
  - Altering shape (clay)
- **Volume**
  - Liquids
  - Altering shape (water in container)

This is the last to be grasped



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### Evaluating Piaget's Approach to Cognitive Development

- **Critics of Piaget's theory argue that he seriously underestimated children's capabilities.**
  - They argue that cognition develops in a continuous manner, not in stages.
  - They believe that training can improve performance in conservation tasks.
  - They also argue that Piaget focused too much on the *deficiencies* of young children's thought.



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### Early Childhood Education

- **3/4 of children in U.S. are enrolled in some kind of care outside the home.**
  - Implicit or explicit teaching of skills
- **Major factor is working parents.**
- **Evidence suggests that children can benefit from early educational activities.**
  - "good" preschools = clear cognitive and social benefits according to developmental psychologists



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There are a variety of early education programs.

- **DAY CARE CENTERS** are places that typically provide care for children all day, while their parents work.
  - Some are home-care.
  - Others are provided by organized institutions
    - Community centers, churches, synagogues, etc.
    - Often more stable/regulated.



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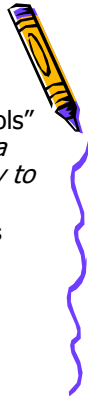
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(early education programs, continued)

- **PRESCHOOLS** ("nursery schools" provide care for several hours a day, and are designed primarily to enrich the child's development.
  - More limited time (only 3-5 hours per day)
  - Mainly serve those in middle and higher socioeconomic levels
    - Montessori preschools



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(early education programs, continued)

- **SCHOOL DAY CARE** is a child-care facility provided by some local school systems in the United States
  - About 1/2 the states in U.S. fund prekindergarten programs
  - Often targeted at disadvantaged children
  - Often high quality care



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There are pros and cons of attending early education programs



Advantages include increases in :

- verbal fluency
- memory and comprehension tasks
- self-confidence
- independence
- knowledge about the social world

Disadvantages found include children being

- less polite
- less compliant
- less respectful of adults
- sometimes more competitive and aggressive.



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The key factor in determining the effects of early education programs is quality.

- Well-trained care providers.
  - Overall size of the group and the child-care provider ratio.
  - Curriculum.
- ~ No one knows how many programs in the U.S. can be considered high quality, but there are far fewer than desired!
- The U.S. lags behind other industrialized nations in the quality, affordability, and availability of childcare.



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#### Preschools Around the World

- In France & Belgium, access to preschool is a legal right!
  - In Sweden & Finland, preschool care is provided automatically if needed
  - Russia has an extensive childcare system
- ~This contrasts with the U.S., which has no national policy on preschool education or the general care of children!



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## The Purpose of Preschool



The main purpose of preschool is very different in different cultures!

- In the United States, preschools are viewed as important in making children independent and giving them a good start.

The best-known program designed to promote future academic success is

**Head Start**

- Designed to serve the "whole child", including physical health, self-confidence, social responsibility, and social and emotional development.

## Is Head start successful?

- Success is controversial!
  - Although graduates of Head Start Tend to show immediate IQ gains, these increases *do not last*.
- BUT participants are more ready for future schooling and have better scholastic adjustment  
(spend less time in special education, less likely to be held back)