

## CHAPTER 9: COGNITIVE DEVELOPMENT IN EARLY CHILDHOOD

### PREOPERATIONAL PERIOD

- **Semiotic function:**
- Make-believe play increases dramatically during early childhood.
- Piaget believed that through pretending, young children practice and strengthen newly acquired representational schemes.

### Reasoning About Quantity

- **Concepts of Conservation:**
  - liquid volume
  - number
  - mass
  - length

### PIAGET: CONSERVATION TASK

- Centration:

**How does this change with age?**

- Decentration:
  - Must not only notice characteristics but consider
    - compensation
    - reversibility
- A child's ability perform these tasks signals the beginning of \_\_\_\_\_

### Modifications of Conservation Task

- Rose and Blank (1974)
  - One question/judgment condition:
  
  - Two question/judgment condition:
  
- Siegal (1988)
  - found conservation in 4, 5, & 6 year olds using the \_\_\_\_\_.
  - When a puppet failed to conserve \_\_\_\_\_  
\_\_\_\_\_
  - When the puppet accidentally spread out the coins \_\_\_\_\_
  
- Cardinal principle of counting:
  - 4-year olds sometimes seem to \_\_\_\_\_ so that the result of their counting is consistent with their judgment.

### Appearance & Reality

- **Appearance & Reality:** Understanding the distinction between appearance and reality uses similar skills to that of \_\_\_\_\_.
  
- Sort of like \_\_\_\_\_ conservation

**Rita DeVries (1969):** classic experiment

- Intro **Mynard**, a black cat: name and play with him
- hide his front 1/2 behind a screen -- strap on a
- remove screen:
  - Q's: What kind of animal? Really a dog? Can it bark?

## Reasoning About Classes and Logical Relations

### Classification

- Children not able to classify objects consistently until the preschool years.

### Seriation

- Preschoolers can find the largest or smallest stick in a fairly large group.

## Egocentric Thinking

- **Egocentrism:**
- **Three-mountains problem (Piaget's Task):**
  - 4-6 yrs:
  - 6-9 yrs:
  - 9-10 yrs:
- Modified Piagetian task:
- Communication and the decline of egocentrism:
- Preschoolers do show some evidence of adjusting their speech to the needs of their listeners under certain circumstances.
- Glucksberg & Krauss (1967): had 2 children sit on opposite sides of a screen, w/ identical set of blocks in front of them. The children's task was to stack the blocks in exactly the same order. One child was given the task of describing the blocks to the other.
- When the abstract figures were replaced with simple geometric shapes in different colors \_\_\_\_\_
- Conclusion:

## PRESCHOOLERS' ATTENTION AND MEMORY ABILITIES

### Information Processing Model

#### Developmental Changes in Recall

- **Memory span**: the amount of information held in STM/working memory.
  - George Miller's (1956):
  - Typically measured with a digit span task.
  - Preschoolers have a digit span of \_\_\_\_\_.

#### Why do we see an increase in memory span with age?

- The ability to employ \_\_\_\_\_
- Children < 7 yrs are \_\_\_\_\_ information to make it more meaningful.
- Children < 7 yrs have \_\_\_\_\_.
- They believe they can remember long list of words  
\_\_\_\_\_
- ↑ in memory span also results from \_\_\_\_\_, which ↑ cognitive resources available.
- Begin to view attention as a limited resource that must be deployed selectively

### Metamemory

- Metamemory

#### Flavell, Friedrichs, and Hoyt (1970)

- 1<sup>st</sup> trial child was shown one picture.
- On each subsequent trial the # of pictures increased, to a maximum of 10.
- First phase of the experiment: metamemory
- Second phase: recall test
- Results:

### Delayed Recall

- Older children's ( $\cong$  8 yrs and) free recall is more generally accurate than younger children.
  - This problem may not be memory based -
  - retrieval based –
  - egocentrism -
- In some of these experiments the same experimenter that was present during encoding is asking the child to recall → Do you see any problems with this?

### Social Cognition

#### The Child's Theory of Mind

In developing a theory of mind, children come to understand 5 principles:

- Minds exist.
- Minds have connections to the physical world.
- Minds are separate and different from the physical world.
- Minds can represent objects & events accurately or inaccurately.
- Minds actively interpret reality & emotional experiences.