

Cognitive (Intellectual) Development

- ▶ The development of an individual's mental abilities
- ▶ For many years this was measured mainly by using the results of intelligence (I.Q.) tests
- ▶ A Swiss psychologist named Jean Piaget changed this
 - He became interested in reasons instead of right or wrong answers

JEAN PIAGET



- ▶ CHILD PSYCHOLOGIST
- ▶ SAW CHILDREN AS "LITTLE SCIENTISTS" WHOSE MINDS WERE DIFFERENT THAN ADULT MINDS.
- ▶ INFLUENTIAL IN SCHOOL REFORM

We will look at Piaget's theories in depth, then introduce the theories of Vygotsky, then bring Piaget back into the conversation and compare the two.

A PREVIEW OF THEIR THEORIES:

*One must
develop before
One learns*



Jean Piaget

*Learning drives
development*



Lev Vygotsky

Schemas

- ▶ Children view the world through schemas (as do adults for the most part).
- ▶ Schemas are ways we organize and interpret the world around us, based on our experiences.
- ▶ It is basically what you picture in your head when you think of anything.
- ▶ Question: What influences schemas?

Right now in your head, picture a bird.



These 3 probably fit into your concept (schema) of a bird.

But does this one?



Remember:

"Schemas" and "Concepts" from the cognition unit are essentially the same thing.

Piaget's important concepts

- ▶ **Assimilation**- interpreting one's new experiences into one's existing schemas.

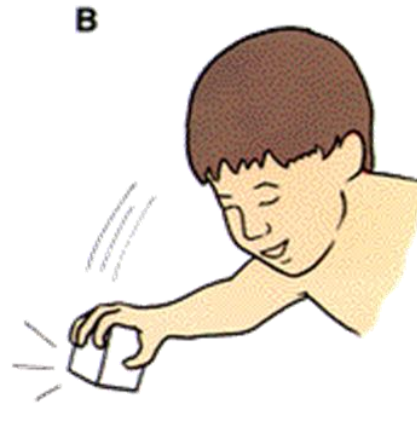


- **Accommodation**- adapting one's current understandings (schemas) to incorporate new information.

Star Wars according to a 3 year old



Banging is a favorite **scheme** used by babies to explore their world . . .



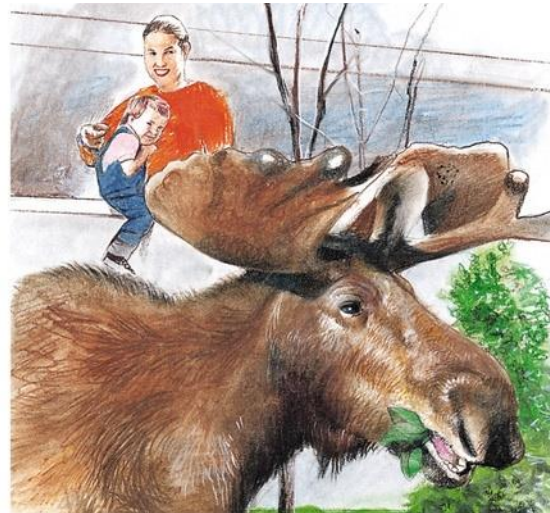
. . . And **assimilation** occurs when they incorporate new objects into the scheme.



Accommodation occurs when the new object doesn't fit the existing scheme.



Two-year-old Gabriella has learned the schema for "cow" from her picture books.



Gabriella sees a moose and calls it a "cow." She is trying to assimilate this new animal into an existing schema. Her mother tells her, "No, it's a moose."



Gabriella accommodates her schema for large, shaggy animals and continues to modify that schema to include "mommy moose," "baby moose," and so forth.

Is Boo assimilating or
accommodating? Why?



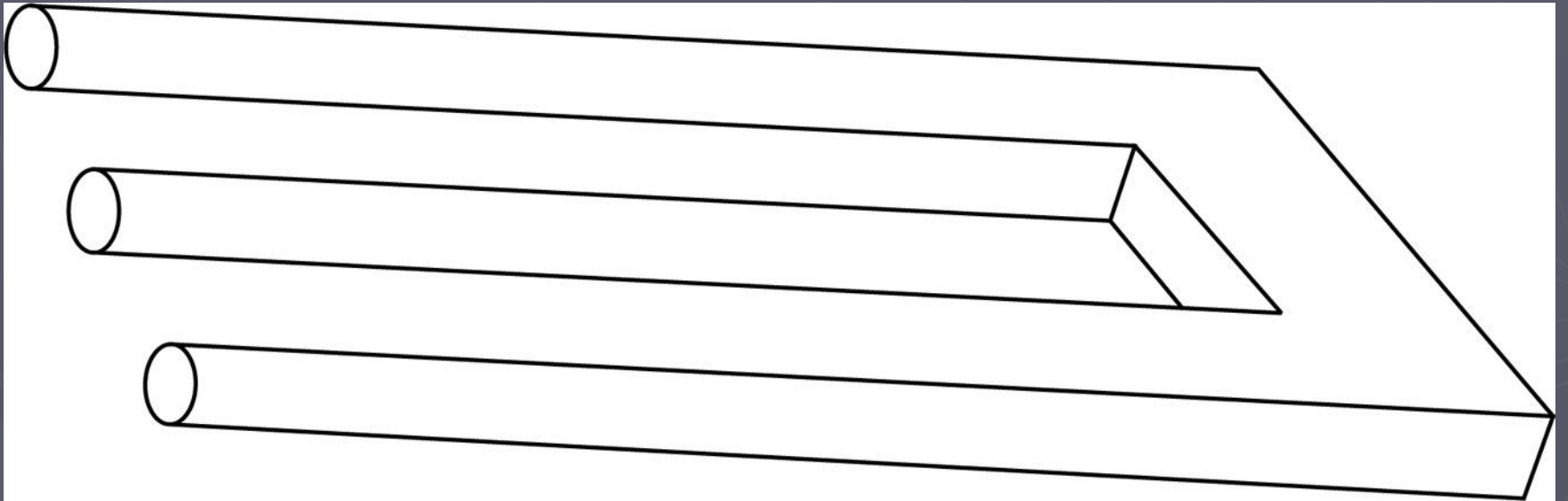


Figure 4.9 An impossible object
Myers: Psychology, Eighth Edition
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Piaget's Stages of Cognitive Development

Piaget hypothesized that children progress through four stages of cognitive development, each building on the previous one.

- ▶ **Sensorimotor**
- ▶ **Preoperational**
- ▶ **Concrete Operational**
- ▶ **Formal Operational**

Sensorimotor Stage

► The Sensorimotor Stage is from approximately **birth to 2 years** of age.

► Babies take in the world purely through their senses- looking, hearing, touching, mouthing and grasping.



*They are learning to sense,
They are learning to move.*

Sensorimotor Stage

- At 4 to 8 months of age, your child will learn that she can make things move by banging them and shaking them.

(Example--shaking a rattle, banging on toys, banging on tray of high chair)



Object Permanence

- THE major cognitive ability gained at this stage.
- Definition - objects that are out of sight still exist.
- Before Object Permanence- what is out of sight, is gone from the universe forever.
- Children younger than 6 months of age do not grasp object permanence



At 8 months of age what is out of sight is not out of mind.

A baby with no object permanence



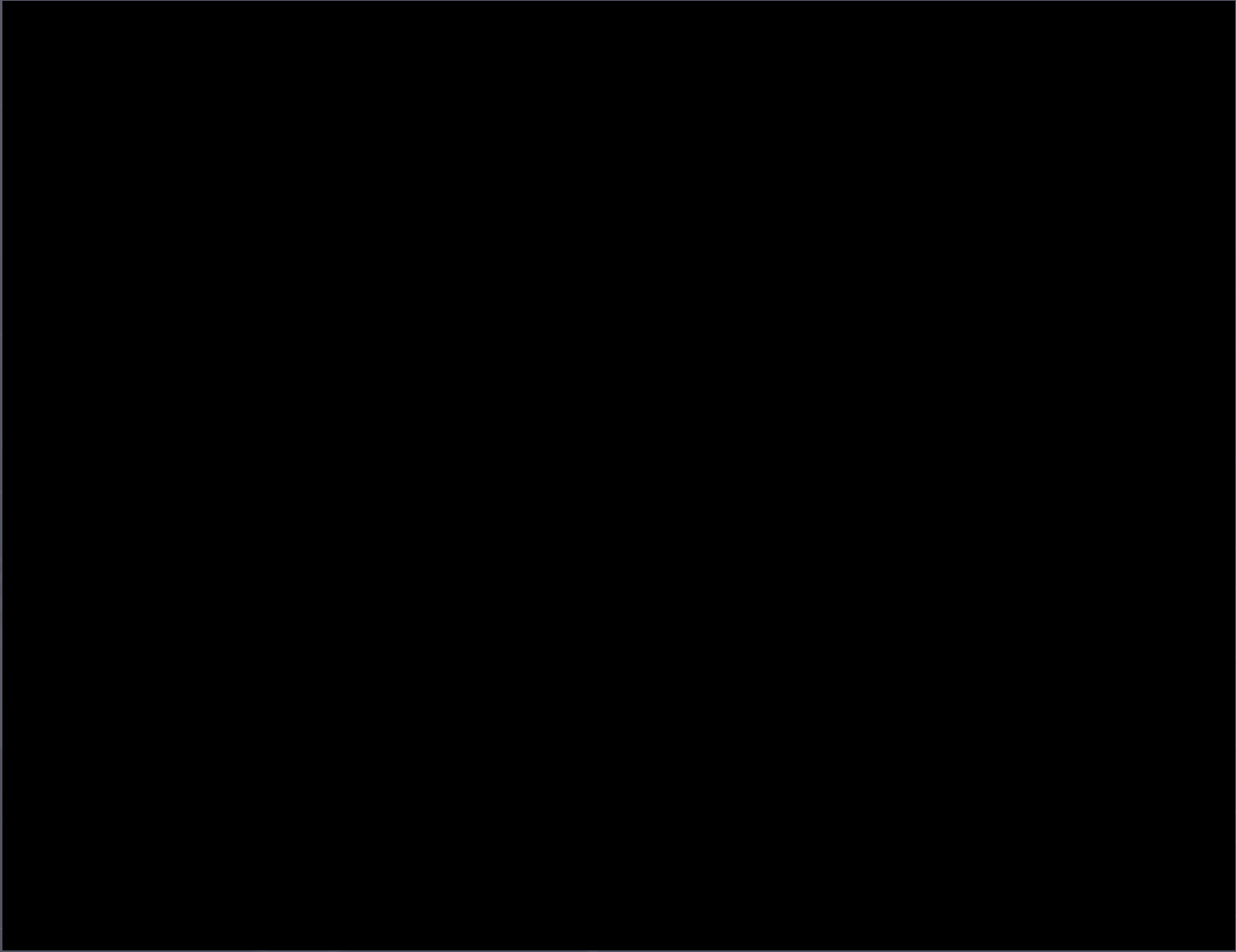


Stranger Anxiety

- ▶ The fear of strangers that infants commonly display, beginning by about 8 months of age.



Stranger Anxiety



Preoperational Stage

- ▶ The Preoperational Stage is from approximately **2 to 7 years** of age.



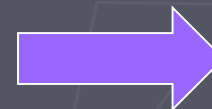
- ▶ A mix of impressive cognitive acquisitions and equally impressive limitations.

- A notable acquisition is **symbolic representation**, the use of one object to stand for another, which makes a variety of new behaviors possible

“Pretend you are brushing your teeth”

- Use finger to stand-in for a toothbrush. (3-4)

- Hold a pretend toothbrush (5-6)



Preoperational Stage

► LIMITATION:

- Children in the preoperational stage are **egocentric** (the inability to take on another's point of view).

"Do you have a brother?"

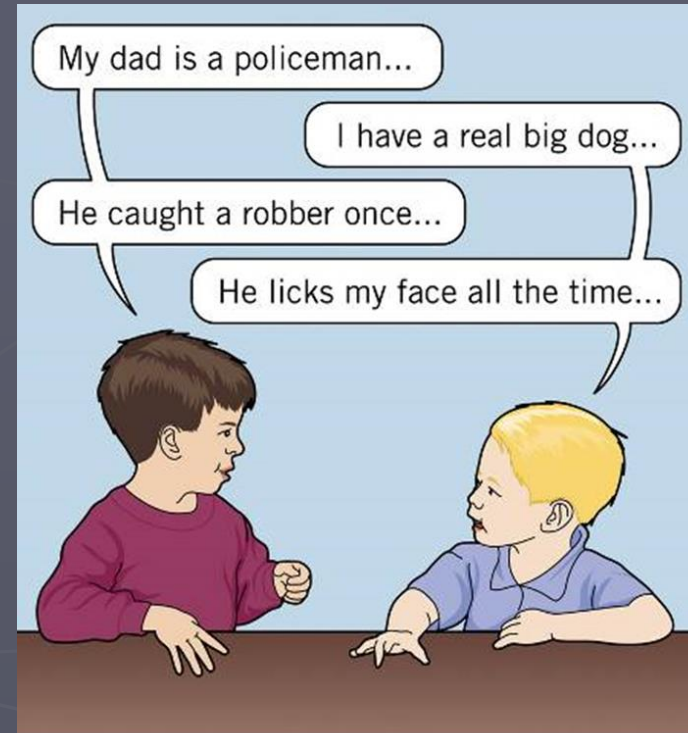
"Yes."

"What's his name?"

"Jim"

"Does Jim have a brother?"

"No."



Egocentrism

