Piaget - Preoperational Stage

- 2 to 7 years
- Preoperational thought: children use mental representations for objects and events.
- Operations: logical processes that can be reversed.
  - Children at this age do not think using operations (thus, preoperational)

Representational Thought

- Language
  - Average 2 year old: 200 words
  - Average 6 year old: 10,000 words
  - Increased vocabulary gives children the ability to talk about things that are not present.
- Art
  - Increased complexity in art work
Representation in Art

Drawing by 2 Year Old

Drawing by 4 Year Old

The Wiggles

• This drawing was done by a 6 year old who was depicting what she would like to have in her local neighborhood.

Representation in Play

• Symbolic play: Children use one object to stand for another
  – 18 months – pretend to talk on phone if they have play phone
  – Age 2 – can use banana as phone
  – Age 5 – can use anything as a phone (even if it does not look like a phone).
Symbolic Play

Preoperational Thinking

• Egocentrism: inability to take another person’s perspective

Preoperational Thinking

• Magical Thought:
  Inability to separate fantasy from reality
  – Animism: attributing animate characteristics to inanimate objects
Piaget’s Legacy

- Influenced education
  - Development of interactive and hands-on materials for active learners
  - Guidelines for when to introduce topics based on cognitive development

Vygotsky

- Lev Vygotsky (1896-1934)
  - Born in what would become part of the Soviet Union
  - Marxist – believed in equality for all
  - Wrote several books/articles before death (age 38) – most not published until long after his death from tuberculosis.

Vygotsky’s Theory

- Central idea: Children develop cognitive structures from their culture and their social interactions
  - Children listen to social speech
  - Turn social speech into private speech (said out loud to themselves)
- Internalization: external activity and speech become silent inner speech as children master tasks and concepts
Vygotsky’s Theory

• Zone of proximal development: range of problems children can solve with assistance
  — Cognitive structures in this zone are ones the child has started to internalize

• Effective instruction involves giving child challenges, along with help in solving them.

• Scaffolding: temporary support for child while cognitive structure is being developed.

Information Processing

• Theory of Mind: framework of concepts about how the mind works and why it works that way
  — Appearance-reality distinction: young children do not understand the difference between how something appears to be and how it really is
    • E.g., Daddy wearing a monster mask is not Daddy anymore to a 3 year old.
The Smarties Task

The Smarties task is frequently used to study preschoolers’ theory of mind. Most 3-year-olds answer like the child in the cartoon, which suggests that they fail to realize that other people may have false beliefs that deviate from what the child knows to be true.

Theory of Mind

• Children must learn that:
  – Other people have thoughts different from theirs
  – Talking to children about thinking, feeling, etc. helps in the development of a theory of the mind.

Language Development

• From age 2 to 6, children learn approximately 7 new words every day.
  – Fast mapping: the ability to learn a word after only one exposure
  – Bootstrapping: using what is known to figure out meanings of new words

known known unknown
Vocabulary Development

Figure 12 – Factors associated with vocabulary development

Learning Syntax

• Children learn how to combine words and form sentences gradually
  – Where Daddy?
  – Where Daddy is?
  – Where is Daddy?

• Age 3 – begin adding word endings (-s, -ing, -ed)

• Overregularization
  – “foots”
  – “goed”