Cognitive Development in Infants and Toddlers
PSY 356
Dr. Schuetze

Topics
- Cognitive Development – Piaget
- Language Development

Cognitive Development - Piaget

Psychologist Jean Piaget
Constructivism

- The belief that children actively create knowledge rather than passively receiving it from the environment.
  - Knowledge is constructed from experience
  - Born with ability and desire to learn.
  - Must be active to learn.
  - Thinking/learning is internalization of physical knowledge.

Adaptation

- Fundamental process by which schemes are altered through experience.
- Comprised of two complementary processes.

Mechanisms of Change

- Assimilation: information that fits into existing cognitive structure
  - schemas
Mechanisms of Change

- Accommodation: changing beliefs to fit new conceptual information

Equilibration

- Equilibration: regulatory process that maintains a functional balance between assimilation and accommodation

Process of Equilibration

- Children are satisfied with mode of thought (equilibrium)
- Become aware of shortcomings in existing knowledge (disequilibrium)
- Adopt a more sophisticated mode of thought (return to equilibrium)
Characteristics of Stages of Cognitive Development

- Each stage represents a qualitative change in thinking
- Culturally Invariant
- Includes structures and abilities of previous stages

Stages of Cognitive Development

- Sensorimotor
- Preoperational
- Concrete Operational
- Formal Operational
Sensorimotor Stage
- Birth to 2 years of age
- Use senses, motor skills to gain knowledge

Piaget – Object Permanence

Language
- Special form of communication in which we learn complex rules to manipulate symbols that can be used to generate an endless number of meaningful sentences.
  - Communication
  - Set of Symbols
  - Complex Rules
  - Endless Number of Meaningful Sentences

http://www.youtube.com/watch?v=ue8yJVhjS0
Prelinguistic Stage
- Birth to 1 year
- Crying
- Cooing
- Babbling
- Language Comprehension
- Ability to make discriminations not required by native language gradually lost:
  http://www.youtube.com/watch?v=WXWGnryJEaY

Linguistic Stage
- 1 year and up
- Holophrases
  - Infant-directed Speech
  - Overextension
  - Underextension

Vocabulary Development

![Bar chart showing vocabulary development over age]
**Linguistic Stage**

- Two-word combinations
- Telegraphic Speech
  - errors of overgeneralization

**Errors of Overgeneralization**

![Cartoon Image]

"Two slices of cheese on mine."
"I'll just have one chee."**

**Language Development**

**6 Months**
- Vocalization with intonation
- Responds to human voices without visual cues by turning his head and eyes

**12 Months**
- Uses one or more words with meaning
- Understands simple instructions

**18 Months**
- Has vocabulary of approximately 5-20 words
24 Months
- Can name a number of objects common to his surroundings
- Approximately 2/3 of what child says should be intelligible
- Vocabulary of approximately 150-300 words
- My and mine are beginning to emerge

36 Months
- Knows chief parts of body and should be able to indicate these if not name
- Handles three word sentences easily
- Has in the neighborhood of 900-1000 words
- About 90% of what child says should be intelligible