Development

- Change across the lifespan
  - Whole capabilities appear as kids grow up
  - And degrade in older adults
- Starts in utero
  - A very important environment

Some capabilities that develop

- Understanding physical support
- Theory of mind
- Understanding conservation of quantity
- Inhibitory control
- Reasoning ability, fluid intelligence
- Language
  - Evidence for a critical period ending age 12-15

Measuring infant mental processes

- Problem: Infants can’t speak, or understand instructions
- One solution: Habituation procedures
  - Show a stimulus until infant is habituated (bored)
  - Then manipulate the stimulus in a specific way
  - Then ask whether infant is dishabituated (surprised)
    - Measure with gaze duration
    - Surprise = longer looking times

Physical support

- Does the child stare?
  - If yes (3 month old):
    - Thinks box should fall
  - If no (slightly older):
    - Thinks everything’s ok
    - May think the finger supports the box
      - How to manipulate the stimulus to test this?
      - Pull away the finger
Experimental design

• How much should this person know about what’s going on?
  – As little as possible

Inhibitory control

• “In the shape game, if I show you a boat, like this, it goes in the left box. If I show you a rabbit, it goes in the right box.”
• “In the color game, if I show you a blue one, it goes in the left box. If I show you a red one, it goes in the right box.”

Inhibitory control

• Children “know” the rule
  – Can demonstrate where the items should go
• But can’t act on it
  – Usually viewed as inability to inhibit the first rule they learned
• Inhibitory control isn’t completely developed until our early 20s

Theory of mind

• Understanding that other people have minds of their own
  – And that their thoughts can differ from our own
• Before age 5 or so, kids think that everyone else thinks what they think

False belief test

Girl is asked, “Where does Teddy think the ball is?”
  – Also can’t figure out how to deceive Teddy …