Transition to Middle Childhood

Age of Reason and Responsibility
“The 5 to 7 shift”

- Increased responsibility for tasks
- Less supervision
- Direct instruction

Components of the transition

- Physical changes
- Neurological changes
- Cognitive changes
- Specific experiences

Physical Changes

- Rapid growth
- Weight gain
- Body strength
- Agility
- Fine motor control
And the lose their teeth!

Recall: Evocative Gene-Environment Interactions

- Child’s genes
- Parents’ Genes
- Child’s phenotype
- Child’s environment

Neurological Development

- Electrical activity
- EEG dominant type
- coherence
Stauder et al., 1993

- Conservers and nonconservers
- Ages 5 to 7
- ERP
  - no diff on “oddball” task
  - diff on conservation task

Neurological Development

- Myelination

![Myelination Graph](From Janowsky & Carper, 1996)
Note:

- EEG/ERP with kids is tricky
- Many possible interpretations
e.g., myelination (threshold or stabilization?)
- And, as always...

Be wary of correlational data

Cognitive Changes

- Memory Span
  - Speed of processing
  - Knowledge Base
  - Memory Strategies
  - Metamemory
- Inhibitory control
Improvement in Memory Span for Numbers as a function of age (Dempster, 1981)

Why the change?

• Speed of processing
  – Cross-cultural research
    • Chinese vs English
  – Word length Study
  – Retrieval Studies

Changes in Speed of Processing with Age (Kail, 1991)
Also changes in:

- Familiarity with numbers
- Speed can say them

World Knowledge

- What is the most unmusical band in the world?
  - A RUBBER BAND!!!!!!
- Why did the one-armed man cross the road?
  - TO GET TO THE SECOND-HAND SHOP!!!!!
the more you know...

- Information organized better
- Frees up capacity so can process more information
- Allows for more “executive” processing
  - Metacognition
  - Planning
  - Attention

Also changes in:

- Knowledge about memory strategies
- Selection of strategies

Strategies

- Rehearsal
- Organization
- Mnemonics
- Elaboration
Metamemory

- What is easy/hard to remember
- How well they can remember
- Which strategy to use in different situations

What brings about memory changes?

- Increase in speed of processing & capacity
- Increase in knowledge
- Acquisition of strategies for remembering
- Metamemory

Age or Experience?

- Unschooled children and adults rarely use strategies on “lab” tasks
Rogoff & Waddell, 1982