Human Memory Outline 5: Short-Term, Working Memory

I. Capacity of STM - The Magical Number 7 ± 2 (George Miller's article)
   A. Recoding - Chunking
   B. Mnemonic devices
      Grouping
      Hierarchies
   C. The Magical Number 4 - Cowan and the FOCUS OF ATTENTION

   BBS Article abstract

   Full Article:
   THE MAGICAL NUMBER 4 IN SHORT-TERM MEMORY: A RECONSIDERATION OF MENTAL STORAGE CAPACITY

II. Duration & Forgetting in STM
   A. STM Decay - Brown-Peterson Task
      1. Procedure
      2. Results
   B. Interference in STM
      1. Waugh & Norman (1965)
      2. Proactive interference (PI)

III. Codes in STM
   A. Verbal / Acoustic-Articulatory Codes
      Rhyming stimuli (Conrad 1963,1964)
      Long vs. short words
   B. Semantic Codes
      Release from Proactive Inhibition
   C. Visual Codes
      Visual/Name letter matching (Brooks, 1968)
      Mental rotation (ONLINE DEMO)

IV. Shepard & Metzler "Mental Rotation of Three-Dimensional Objects"
   A. Problem/objectives
      1.
   B. Procedure
      1.
      2.
      3. the pictures
   C. Variables
      1. IV's
      2. DV
   D. Results/conclusions
      1.
      2.
      3.

V. Sternberg (1966) "High-Speed Scanning in Human Memory" (download demo, Mac only)
   A. Problem - How is STM searched?
      1.
   B. Procedure
      1.
      2.
      3.
   C. Variables
      1. IVs
      2. DV
   D. Results/conclusions
      1.
      2.

VI. Working Memory
   A. Components of Baddeley's Model (see figure 4-13)
      1. Executive control system
      2. Articulatory loop
      3. Visuo-spatial scratch pad
   B. Working Memory Research
      1. Dual-task procedures
2. Other procedures
   Phonological similarity
   Word length effects
C. Application of Working Memory Model
   1. Memory capacity
   2. Child development
D. Overview/Summary of Working Memory

Return to home of Psychology 279 Human Memory

Send questions & suggestions to psycott@mizzou1.missouri.edu.