Human Memory Outline 7: EPISODIC LONG-TERM MEMORY

I. Information Storage in Episodic Memory
- A. Rehearsal
  - Recycling/practicing information
  1. Rehearsal & Storage
     - Ebbinghaus
       - 'Saving Score'
     - Hellyer (1962)
     - Rundus (1971) & Serial Position Effects
       - Recall depended on rehearsal FOR PRIMACY
  2. Two kinds of Rehearsal (Craik & Lockhart, 1972)
     - Maintenance rehearsal (Type I rehearsal)
     - Elaborative rehearsal (Type II rehearsal)
- B. Depth (or levels) of Processing (L.O.P) Theory
  - Craik & Lockhart (1972)
  1. Criticized STM - LTM distinctions
  2. Proposed alternative to multistore model
- C. Evidence for levels of processing
  1. Craik & Tulving (1975)
     - Incidental learning task - conditions:
       - STRUCTURAL
       - PHONEMIC
       - CATEGORY (SEMANTIC)
       - SENTENCE (SEMANTIC)
     - Unexpected retention test
       - Results - Memory better for 'deeper' levels of processing (SEMANTIC)
  2. Self-reference effect
  3. Generation effect
- D. Criticisms of L.O.P. approach
  1. Problem of defining 'depth'
  2. Deep processing not ALWAYS necessary
     - Morris, Bransford, & Franks (1977)
  3. Maintenance rehearsal CAN promote long-term retention
  4. Processing NOT ALWAYS hierarchical
     - No 'fixed sequence' of processing levels
- E. Why does LOP theory GENERALLY work?
  1. Elaboration hypothesis
  2. Distinctiveness hypothesis
     - Von Restorff Effect -
  3. Transfer-appropriate processing
     - 'PROCEDURALIST' approach - Memory depends on CORRESPONDENCE between ENCODING processes and RETRIEVAL cues

II. Forgetting & Retrieval from Episodic Memory
- A. Decay - forgetting due to TIME
  - Events/activities more important to forgetting
- B. Interference Research - Paired Associate Learning
  1. Proactive interference
     - Learn A-B Learn A-C Test for A-C
  2. Retroactive interference

Learn A-B Learn A-C Test for A-B
3. Associationist theories inadequate

C. Forgetting as retrieval failure
Loosing ACCESS to stored information
1. Everyday example TOT - "Tip-of-the-Tongue"
2. Research example - Tulving & Pearlstone (1966)
Conclusion: Information can be AVAILABLE but not ACCESSIBLE

III. Retrieval Cues & Encoding Specificity
A. Tulving Hypothesis: Specific way event is encoded, with related information, determines how well memory for event can be retrieved.
B. Encoding Specificity research -Thomson and Tulving (1970)
1. Research Question: Are strongly associated words good retrieval cues even if they were NOT encoded with the memory item?
(see text, p. 163)
Best recall when CUE was PRESENTED during study

for another example of how Encoding Specificity predicts how effect a retrieval cue will be, see text, page 161, Taple 5.4: "Retrieval Cue Demonstration"

IV. Memory & Context
A. State-Dependent Memory (internal-irrelevant context)
1. Information learned in particular physiological STATE best recalled in the same state
2. Drug effects: Eich, Weingartner, Stillman, & Gillin (1975)

3. Mood effects: Bower (1981)

4. Generality of State-Dependent Memory Effects

B. Environmental Reinstatement Effect
(external-irrelevant context)
1. Information learned in particular PLACE best recalled in the same place.
2. Godden & Baddeley (1975)
Skin divers

3. Smith et al (1979-1985)
Demonstrated environmental reinstatement in different rooms at university

Controls-

4. Generality of Environmental Reinstatement

V. Metamemory & Mnemonics
(For eview, extension, and practice of mnemonic techniques see the following excellent web site: MINDTOOLS
A. Overview
1. What are they?
Metamemory = knowledge about one's own memory, how it works & fails to work
Mnemonic = an active, strategic kind of learning device or method
2. What do mnemonic devices do?
a) Provides a structure for learning
Organizes encoding
b) Ensures a distinct, durable record
Improves retention; minimizes interference

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                c) Guides retrieval
                        Provides effective recall cues
B. Verbal Mnemonics
        1. Reduction and Elaboration Coding
                Reduction coding

                Elaboration
                        More flexible than reduction coding
        2. Rhyme
                Restricts possibilities
                Used with rhythm

        3. Natural Language Mediation
                Meaningless input converted into familiar word
                Convert one word into another word

        4. Semantic Elaboration


        5. Depth/Elaboration of Processing & Distinctiveness
                Apply principle of
                Encoding Specificity

C. Imagery Mnemonics
        1. Effectiveness of Imagery
                Alan Paivioís Dual coding hypothesis:


        2. Interactive images and image bizarreness

D. Wollen, Weber, & Lowry (1972). Bizarreness versus
            interaction of mental images as determinants of learning.

        1. Procedure

        2.  Results

        3. Others report more bizarre
                images sometimes recalled better

E. Specific Imagery Mnemonics
        1. Peg-Word System
        2. Method of Loci
        3. Keyword Method of Vocabulary Acquisition
        4. Name-Face Mnemonic

        Evaluation of technical mnemonics
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Return to home of Psychology 279 Human Memory

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