

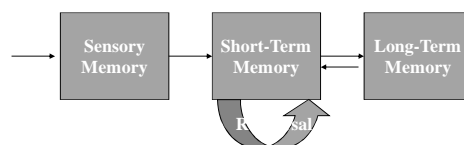
The Stage Model of Memory

Tony Lambert

Reading:

UoA text, Chapter 8, *Memory: Living with Yesterday*
(especially pp. 262-263)

The Three-Stage Model of Memory



Sensory Memory

Z R A T
B S L D
Q E K R

- George Sperling - partial report technique
 - High tone = Top
 - Medium tone = Middle
 - Low tone = Bottom
- Effect of delaying the tone

Working Memory & LTM

- William James
 - primary vs. secondary memory
- George Miller
 - 'the magic number 7 plus or minus two'
- 'chunking'

Chunking in Working Memory

- Chase
 - chunking & memory for chess positions

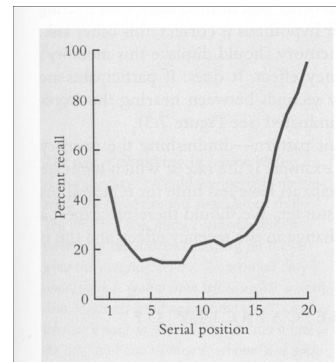
Distinguishing WM from LTM Evidence from Amnesia

- Clive Wearing & H.M.
 - Inability to enter new info. into LTM
 - Working memory intact
- K.F.
 - Working memory deficit - v. poor digit span
 - LTM intact
- double dissociation

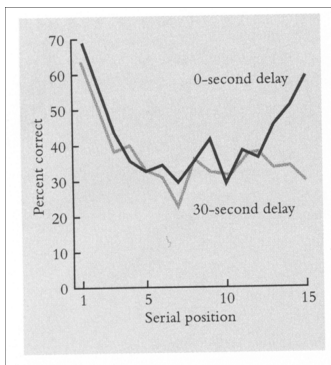
Distinguishing WM from LTM Evidence from normal individuals

- The serial position curve
- Primacy effect
- Recency effect

Primacy and recency effects



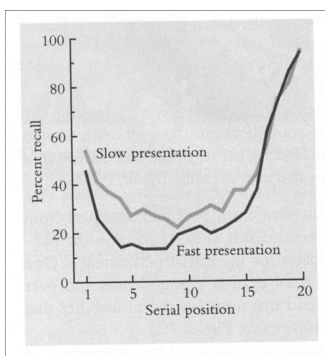
Abolishing the recency effect



The serial position curve

- Recency effect reflects retrieval from working memory

LTM component of the serial position curve



A problem with the stage theory of memory

- Rote rehearsal does not always lead to good long term memory
- Bekerian & Baddeley
 - BBC saturation advertising for a change of radio frequencies

The Levels of Processing approach (Craik & Lockhart)

- Emphasis on cognitive processes rather than memory structures
- deep processing - good memory
- shallow processing - poor memory
- Memory not a separate faculty -
 - *memory is a by-product of thought*

Craik & Tulving 1975

- Physical condition
 - Is the word in capital letters ?
- Acoustic condition
 - Does the word rhyme with TRAIN ?
- Semantic condition
 - Would the word fit into the sentence:
The girl placed the _____ on the table

Levels of processing & the self-reference effect

- Rogers *et al.* 1977
- Semantic condition
- Self reference condition

Depth & breadth of processing

- Elaboration
- Distinctiveness of memory traces

Depth & breadth of processing

Maintenance (rote) rehearsal
VS.
Elaborative rehearsal

Summing Up

- Working memory
 - relatively brief (approx. 30sec),
 - very limited in capacity ; 'chunking'
- Long term memory
 - permanent memory of all experience and knowledge ; enormous capacity
- Levels of processing approach
 - Memory as a by-product of thought