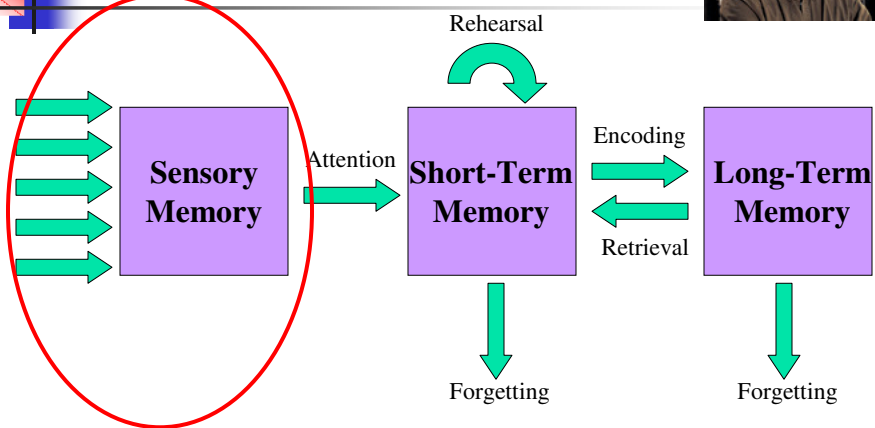
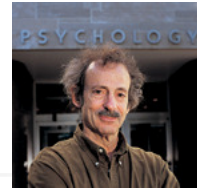


The Multi-Store Model



The Sensory Register

- External input buffer
- Separate stores for different senses
- Literal record of sensory information
- Entry cannot be avoided
- Information decays rapidly
- New information overwrites old

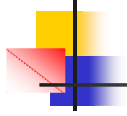
The Iconic Store



- What can be seen in a brief presentation?
- Whole report technique
 - Report all the letters you can
 - Limitations of whole report technique
- Sperling's partial report technique
 - Report all the letters on a row
 - Subjects don't know which row until after the display has been removed

Whole Report Procedure

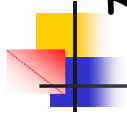
+



I G X E

N R+ B P

J Q K C

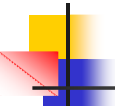


Report what you saw



Whole Report Procedure


+



P	B	R	N
C	K +	Q	J
X	N	G	I



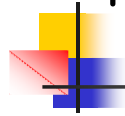
Report what you saw



Limitations of Whole Report

- People reported "seeing" more items than they could report
- Limitations on naming, not on seeing

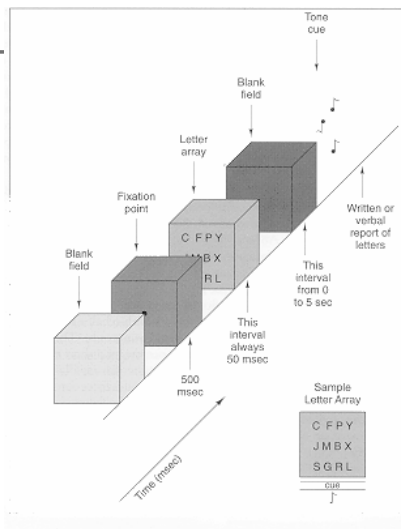
Partial Report Technique



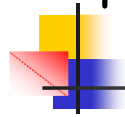
High

Middle

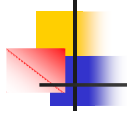
Low



Partial Report Procedure



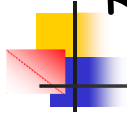
+



I G X E

N R+ B P

J Q K C

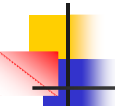


Report what you saw

Partial Report Procedure



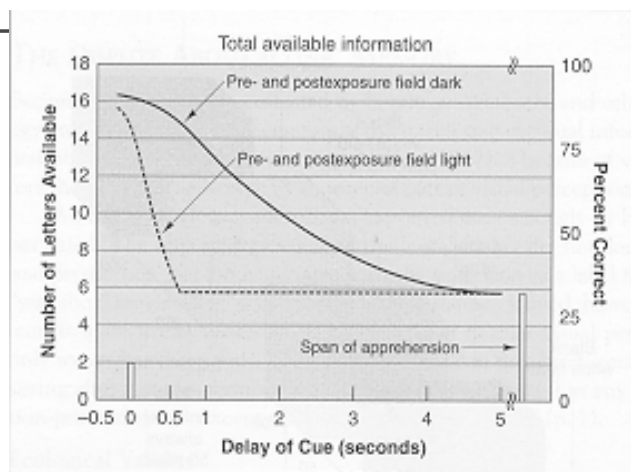
+

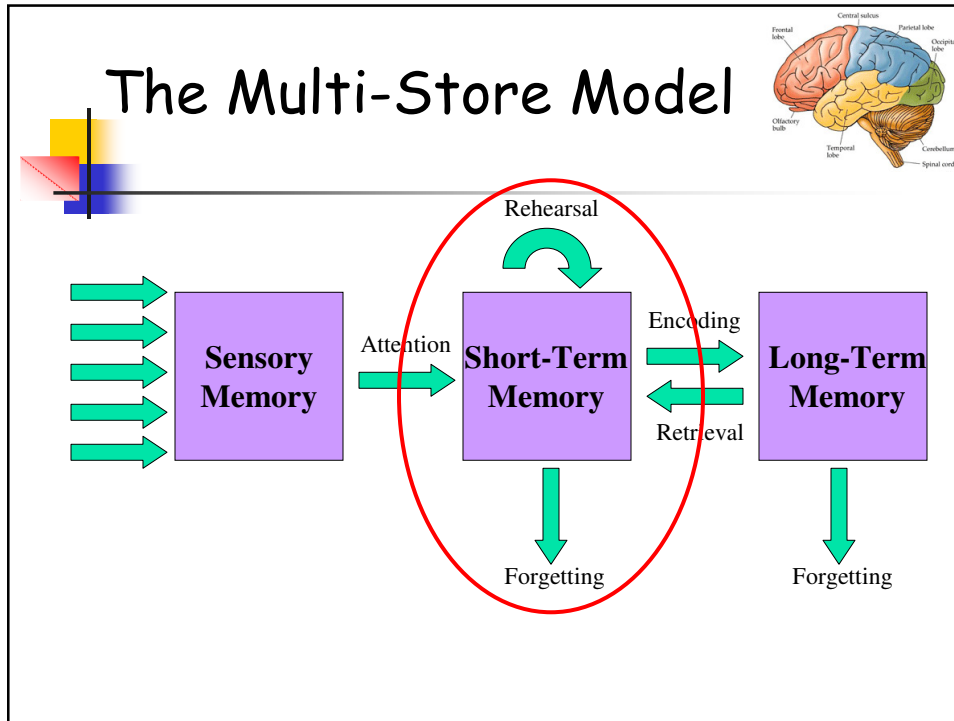


P	B	R	N
C	K +	Q	J
X	N	G	I

Report what you saw

Partial Report Technique





Short-Term Memory

- Short-term /working memory
- Limited capacity (7 + or - 2) or 2 sec.
- Inputs from SR and LTS
- Consciousness
- Coding: verbal/spatial
- Information can be maintained indefinitely, provided it is given constant attention
- Information decays in 15-20 seconds
- Rote vs Chunking mnemonics

Webster says...
Mnemonic :
Assisting or
designed to
assist memory

Short-Term Memory



- How is information lost?
 - Decay ==> Time
 - Interference ==> Older displaced by new
- Brown-Peterson Task
- Waugh & Norman



Brown-Peterson Task

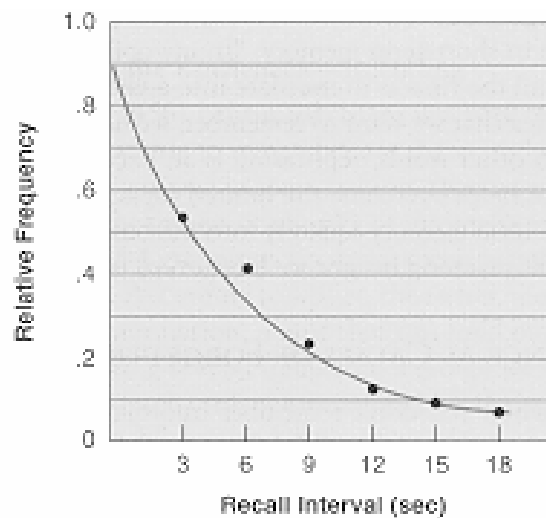


- Subjects presented with trigram (XQJ)
- Experimenter presents number (257)
- Subject counts backwards by 3's (2/sec)
- After x seconds, subjects recall trigram

Brown-Peterson Task

XQJ	VPG	LTW
187	89	131
184	86	128
?	83	125
	80	122
	?	119
		116
		113
		?

Brown-Peterson Task



Loss or Decay?

- Waugh & Norman -- Loss in B-P task could be due to decay or interference, because both covaried with retention interval
- Independently varied time and number of intervening items
- Does loss follow time or number of items?

Waugh & Norman Task

- Subjects presented with string of digits
- Digits read at 1 or 4 per second (time)
- Does recall vary as a function of time or items?

1 per second

6 2 9 4 1 8 3 4 8 1 0 4 2 6 7 3

(16 sec)

Probe Digit : 9

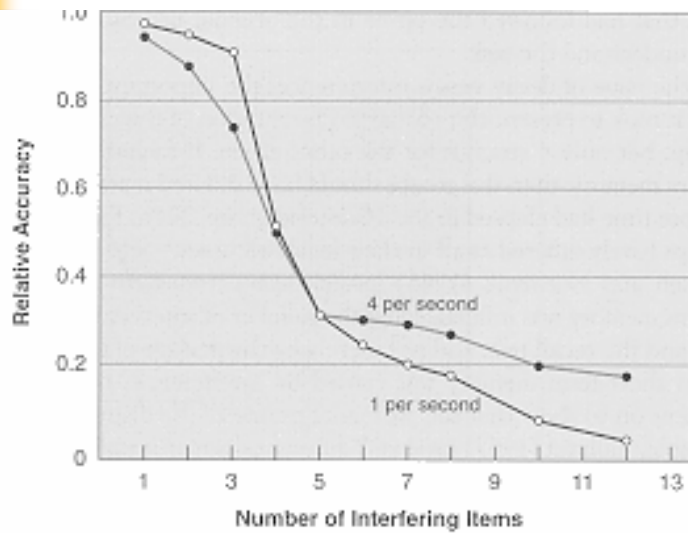
4 per second

6294183481042673

(4 sec)

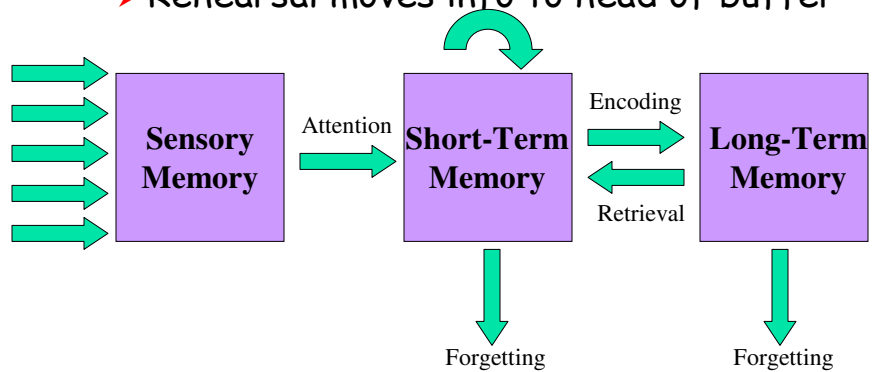
Response : 4

Waugh & Norman Task



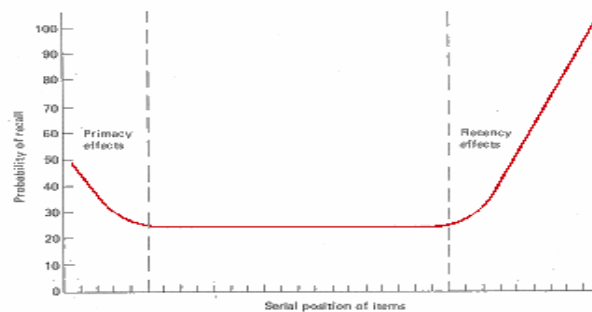
Loss from STM

- Loss is largely due to interference:
 - Old information is replaced by new
 - Rehearsal moves info to head of buffer



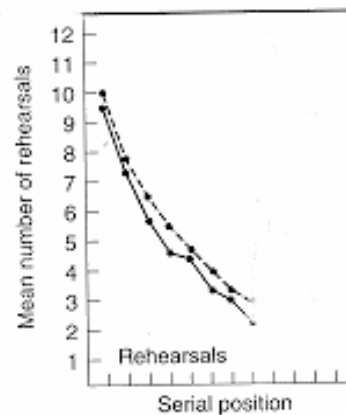
Serial Position Curves

- Subjects presented with a list of unrelated words
- Subjects recall all the words that can remember
- Plot recall as a function of position in the list



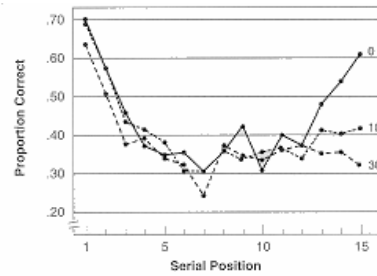
Effects of Rehearsal

- Rhundus -- subjects rehearsed outloud
- Primacy curve matched rehearsal curve
- Primacy determined by transfer to LTM



Effects of Distractors

- Glanzer -- distractor task at end of list
- Recency portion of curve abolished
- Recency determined by readout from STM



Serial Position Curves

- Primacy determined by transfer to LTM
- Recency determined by readout from STM

