

Human Memory

Chapter 7

The Seven Dwarfs?

Grouchy	Shy	Sneezy	Shorty
Gabby	Droopy	Lazy	Nifty
Fearful	Dopey	Pop	Happy
Sleepy	Sniffy	Grumpy	Doc
Smiley	Wishful	Bashful	Wheezy
Jumpy	Puffy	Cheerful	Stubby
Hopeful	Dumpy	Teach	Hungry

Santa's Reindeer?

Trouncer	Jogger	Hermes	Donder
Nova	Blitzen	Strutter	Schweitzer
Thor	Panther	Pixie	Catcher
Apollo	Cupid	Dasher	Gunnar
Nixon	Starlight	Bounder	Vixen
Dancer	Fancy	Flasher	Comet
Striker	Prancer	Howitzer	Leaper

Memory measures

- Recall
- Recognition
- Relearning

1. DUCK
2. TREE
3. party
4. fox
5. COLOR
6. penny
7. look
8. flower
9. ROBIN

10. SNOW
11. MARKET
12. HOUSE
13. HALL
14. gate
15. window
16. book
17. SAFE
18. pupil

A Pop Quiz!

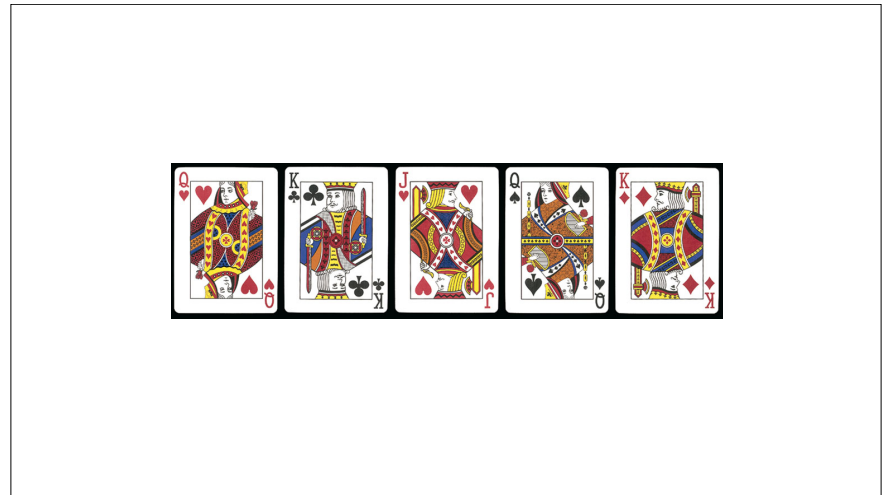
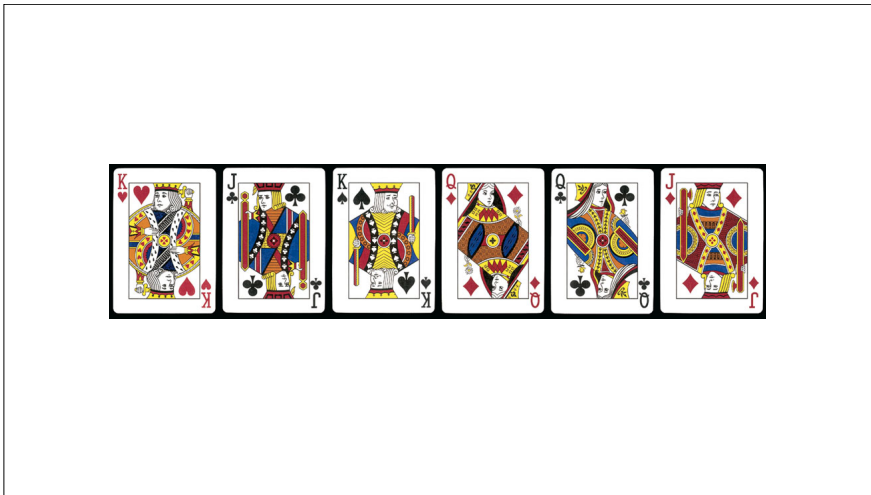
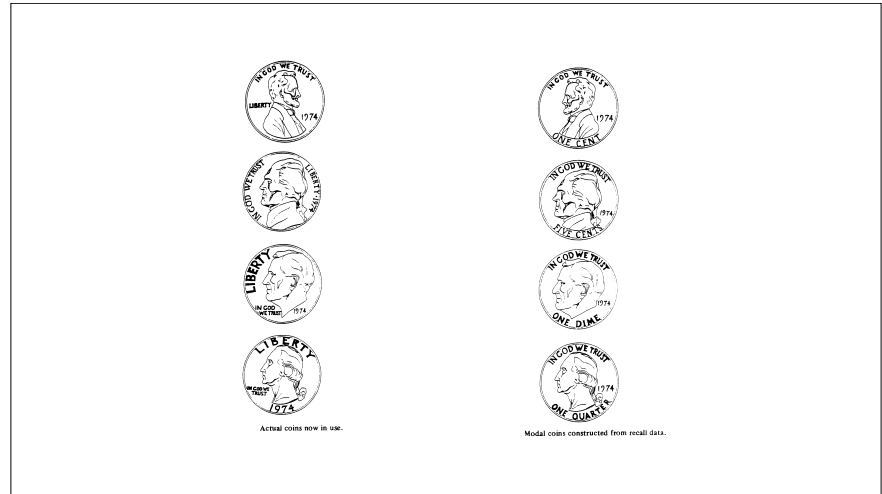
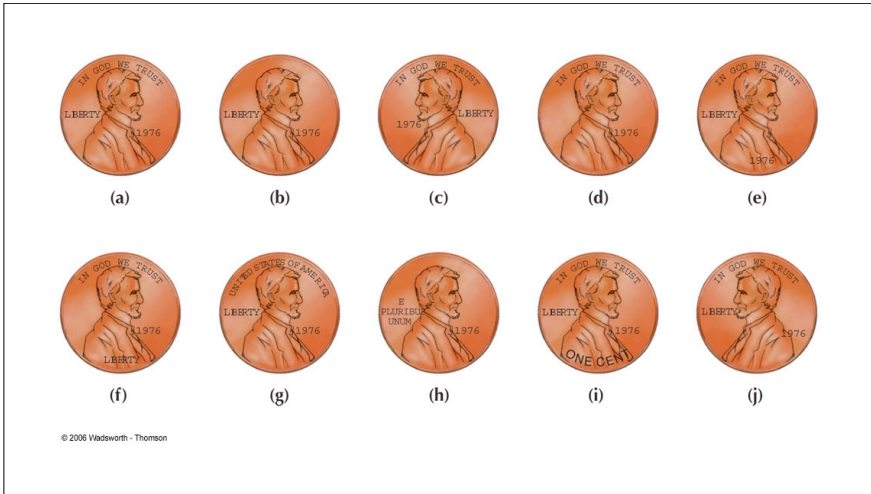
	Yes Answers	No Answers
Case	SNOW, fox, book	MARKET, flower, TREE
Rhyme	GATE, HALL, look	COLOR, party, safe
Sentence	pupil, ROBIN, DUCK	window, penny, HOUSE

Levels of Processing

- Shallow processing
 - Capital letters?
- Intermediate processing
 - Rhyme?
- Deep processing
 - Fit in the sentence?

Basic Memory Processes

- Encoding
- Storage
- Retrieval



Change Blindness



Visual Imagery

- Dual-coding theory
- semantic and visual

Memorize these word pairs

DRESS	APPLE
GRASS	MEAT
FLAG	COAST
FUR	MOUNTAIN
HOUSE	LIP
BUILDING	LETTER
MOTHER	CITY
ANIMAL	VILLAGE
SKY	SEAT
SUGAR	SHIP

Lesson

- Ineffective encoding = “forgetting”
 - pseudoforgetting
- Enriched encoding = remembering
 - elaboration

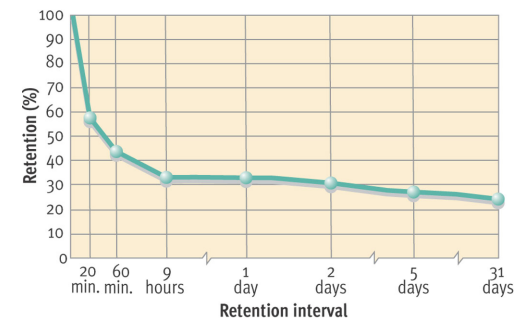
Other memory aids

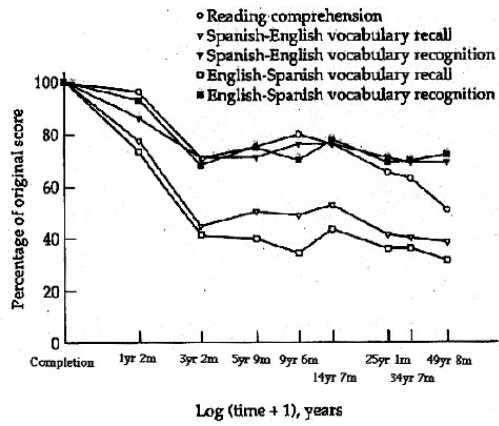
- Mnemonic devices
 - Acronyms and acrostics
- Overlearning
- Distributed Practice, not Massed Practice

Forgetting

- Pseudoforgetting
- Decay
- Interference
 - Retroactive
 - Proactive
- Retrieval failure
- Repression

Forgetting



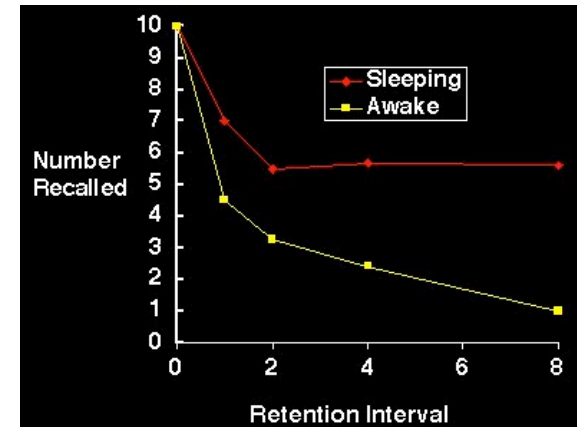
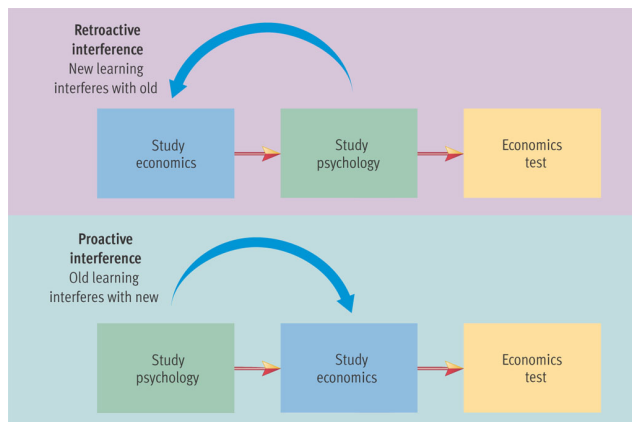


List I

TEACHER
LAWYER
GARDNER
DOCTOR
MECHANIC
ROOFER
ELECTRICIAN
PAINTER
CARPENTER
PROGRAMMER

List II

JUDGE
ARTIST
BUILDER
PROFESSOR
NURSE
ARCHITECT
SECRETARY
FIREFIGHTER
BANKER
PLUMBER



Memorize these words

BED	DOZE
REST	SLUMBER
AWAKE	SNORE
TIRED	NAP
DREAM	PEACE
WAKE	YAWN
SNOOZE	DROWSY
BLANKET	

Which words did you see?

SEAT	ROCKING
ROAD	CHOCOLATE
WAKE	SAND
PEACE	SLEEP
DROWSY	BED
NAP	CANDY
YAWN	TABLE
SITTING	SNORE

Memorize these words II

THREAD	HAYSTACK
PIN	THORN
EYE	HURT
SEWING	INJECTION
SHARP	SYRINGE
POINT	CLOTH
PRICK	KNITTING
THIMBLE	

Which words did you see?

WAKE	COUCH
NEEDLE	THIMBLE
CANDY	POINT
TOUGH	TOOTH
SMOOTH	HURT
INJECTION	LEGS
CLOTH	EYE
DROWSY	HAYSTACK

Set I

- Words on list
 - wake, peace, drowsy, nap, yawn, bed, snore
- Unrelated words not on list
 - seat, road, sitting, rocking, chocolate, sand, candy, table
- Related word not on list
 - sleep

Set II

- Words on list
 - injection, thimble, point, hurt, eye, haystack
- Unrelated words not on list
 - wake, candy, tough, smooth, cloth, drowsy, couch, tooth, legs
- Related word not on list
 - needle

False Memories

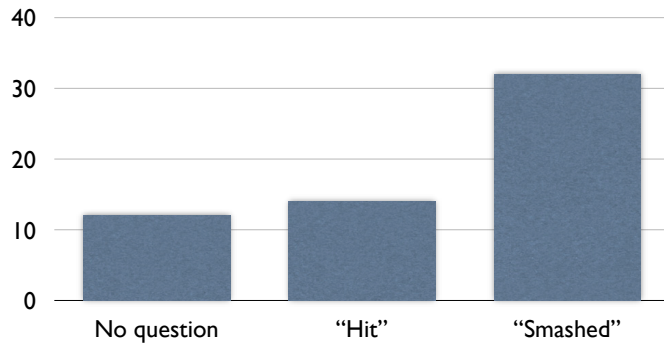
- Roediger & McDermott (1995)
- The misinformation effect
- Repressed & recovered memories

Loftus & Palmer (1974)

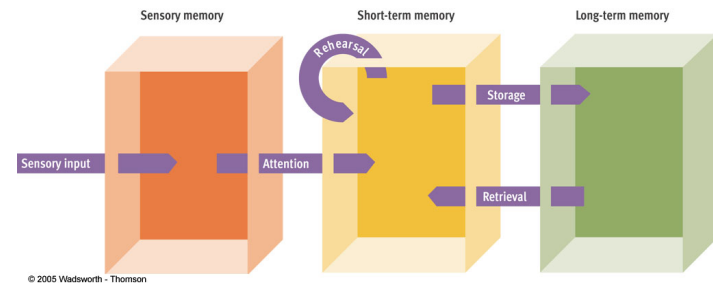
How fast were the cars going when they _____ each other?

Word used	Speed estimate
contacted	32 mph
bumped into	34
hit	38
collided with	39
smashed into	41

Percent remembering (non-existent) glass



Atkinson-Shiffrin Memory Model



Sensory Memory

- 1/4 second
- afterimage

Digit-span task George Miller (1956)

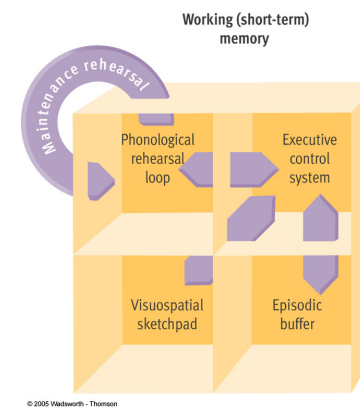
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4 1 6 2 5
9 3 8 7 4 2
2 7 6 3 9 5
5 8 4 1 9 3 2
2 6 7 1 4 9 5
8 3 5 6 4 9 2 1
1 4 2 8 3 9 6 5
6 2 5 7 3 4 9 8 1
4 7 2 5 1 6 3 8 9

A few more...

4 0 6 6 5 7 2 9 5 8
1 0 1 0 0 1 0 0 0 1 0 0 1 0
F B I T B S N F L
I R S M S U T N T C I A

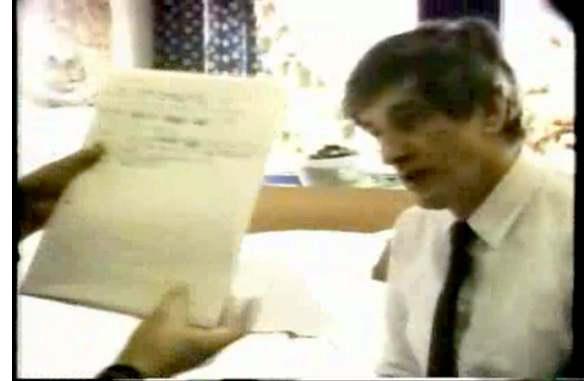
Short-term memory

- Duration: About 20 seconds
- Extend with rehearsal
- Capacity: "Magical number 7 ± 2 "
- Extend with chunking





Clive Wearing



Amnesia

