

THE BRAIN, BIOLOGY AND COGNITION

On-campus Session: Interactive memory studies

1

On the following slide, count the number of words that rhyme with 'my'...

2

need	buy	hat	sigh
car	try	high	match

3

On the following slide, count the number of words that represent emotions...

4

happy going child ball
house fearful chef anger

5

On the following slide count the number of words in capital letters...

6

town CARPET FIRE CHAIR

DOG church plane CRAB

7

On the following slide, count the number of words that represent occupations...

8

book window doctor horse

teacher plumber porter light

9

Next ...

•Write down the number of words...

- i. Rhyming with 'my'
- ii. Representing emotions
- iii. In capital letters
- iv. Representing occupations

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Now...

•Write down as many of the words that appeared on the slides as you can remember

•Try to remember ALL of the words

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Results

•Count up the number of words you could remember from the first and third set

•Count up the number of words you could remember from the second and fourth set

•Were you able to remember more from the second and fourth set?

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Stimulus material

1. need, buy, hat, sigh, car, try, high, match
2. happy, going, child, ball, house, fearful, chef, anger
3. town, CARPET, FIRE, CHAIR, DOG, church, plane, CRAB
4. book, window, doctor, horse, teacher, plumber, porter, light

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Explanation

- Experiment based on the ideas behind the 'Levels of Processing' approach to memory (Craik & Lockhart, 1972)
- Aims to look at the relationship between what we do with information when it is presented to us and subsequent levels of recall

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Explanation

- Task for first and third slides
 - Attend to a physical characteristic of the words
 - Sound (rhyme)
 - Appearance (upper case)
- Task for second and fourth slides
 - Attend to the meaning of the words

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Explanation

- Task for slides one and three would require 'shallow' processing
 - Hence less recall
- However the task for slides two and four would require 'deep' processing
 - More meaning extracted from stimuli
 - Hence higher levels of recall
 - Semantic memory
 - cf. serial position effect

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Notes on methodology

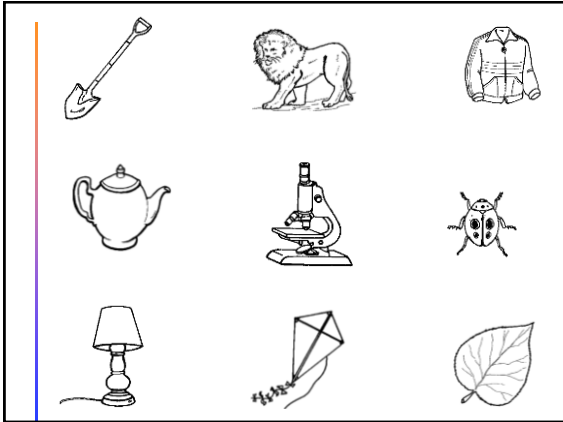
- Use of deception
 - Were you expecting to be asked to recall the words?
 - Aim of counting task was to distract you from the main purpose of the experiment
- 'Incidental Learning'
 - Reflects the fact that in everyday life, much learning takes place without expecting a memory test

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Picture span

Look at the following picture...

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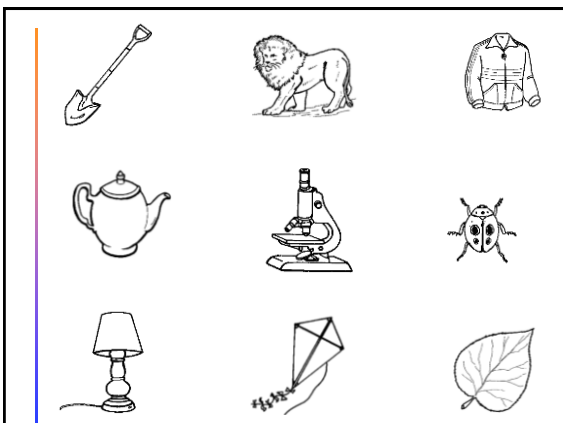


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Task:

**Draw what you have
just seen**

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Problems?

- Picture span - visuo-spatial task
- But cannot prevent processing pictures as words
 - Testing visuo-spatial sketchpad?
 - Phonological loop?
- Viewing picture involves automatically naming it
 - Use of random shapes – ‘greebles’ etc.

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Interactive Exercise

Remember/Know
Procedure

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Instructions

Series of words
will be presented
individually on
screen.

Simply read
the words to
yourself.

24

GRAVEL

25

BEAST

26

ARROW

27

KITTEN

28

NAPKIN

29

ARTIST

30

BANANA

31

BRICK

32

CARROT

33

FOREST

34

ORANGE

35

LAWYER

36

End of list

- Count backwards from Twenty
- Write down as many of the words as you can remember

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**Now you will see a
second list of words.**

**Again, just read each
word to yourself.**

38

GUESS

39

MERCY

40

ENIGMA

41

NORMAL

42

KNOWN

43

USUAL

44

WHILE

45

SINCE

46

SOCIAL

47

MORAL

48

NICETY

49

ABOUT

50

AFTER

51

End of list

- Count backwards from Twenty
- Write down as many of the words as you can remember

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Remember/Know

- For each word you recalled from both lists, place the following letter next to it:
 - R if you definitely remember the word from the lists
 - K if you think you know the word was in the lists but cannot remember it from the lists
- Then, count the number of words remembered and known from list one and list two.

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Recognition list

List 1	R/K		List 2	R/K
ARTIST			ABOUT	
ARROW			AFTER	
BANANA			ENIGMA	
BEAST			GUESS	
BRICK			KNOWN	
CARROT			MERCY	
FOREST			MORAL	
GRAVEL			NICETY	
KITTEN			NORMAL	
LAWYER			SINCE	
ORANGE			SOCIAL	
NAPKIN			USUAL	
SCHOOL			WHILE	

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Results



What was the difference between words from list one to list two? Were words from one of the lists remembered more than the other?



This procedure allows us to test two types of recognition: conscious and unconscious.

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**Complete the H5P
Forgetting from
Long-term memory
Quiz on Moodle**

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?

SESSION CLOSE
Any final questions?

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