





MEMORY
BOOT CAMP
Online!

with
Drs. Gail Eskes & Ryan Wilson

Topic 1: What is Memory?

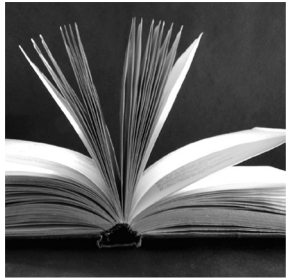





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Topic 1:
What is Memory?


- What is memory?
- Different types of memory
- 3 R's to a good memory



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Can you remember?



- What was the last movie you watched?
- Where did you celebrate your 18th birthday?
- What was the name of your English teacher in high school?
- What is the capital of Manitoba?
- Where is the 'M' on the computer keyboard?
- How do you ride a bicycle?

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What is memory?



- Brain records experiences for later use
- But, memory is not like a filing cabinet
- Memories are stored in networks of cells throughout the brain, more like a 3D fishing net
 - Memory 'trace' = network of connections made by cells working together
 - "Cells that fire together, wire together" - D.O. Hebb (native Nova Scotian)

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We have many types of memories

Episodes in our life
"Mental diary"



Facts and words
"Mental encyclopedia"



Procedures and skills
"Doing memory"



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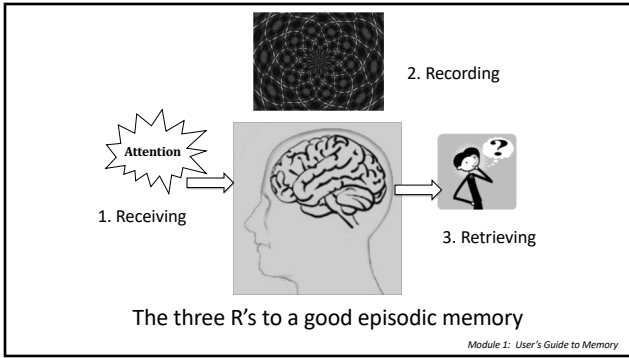
Different memories, different systems

- Episodic – recent and remote events from daily life
 - Recent: Dinner yesterday, last movie you watched
 - Remote: Your 18th birthday, the birth of your first child
 - Future: Plans for action, e.g., make a doctor's appt
- Semantic – knowledge (facts, words)
 - Capital of Manitoba, '2x3=6', 1st PM of Canada, meanings of words
- Procedural – motor/cognitive skills
 - Riding a bicycle, typing, playing the piano




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Receiving



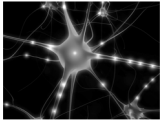
- The brain receives too much information and filters most of it out!
- Critical element = attention and processing
 - Attention to start the processing
 - Processing to connect it with what you know
 - Making it personally relevant
- The more processing, the stronger the memory
 - Deep linking

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Recording

- Memories stored via structural changes connecting brain cells
- These changes take time (months to years)
- Easily interrupted
 - Brain injury
 - Acute illness
 - Some medications
- Brain Health important!



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Retrieving



- Retrieval = active process of re-creating the information
 - Cues can help re-create the network
 - Not always completely accurate!
- More processing at receiving can boost process for retrieval
 - E.g., better linking of items into network
- Each retrieval success = more recording strength
 - Say it again, SAM

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Wrapping it Up



- What are the different types of memory?
 - Episodic memories of our daily lives,
 - Semantic memories we learn at school
 - Procedural memories we learn from practicing
- What are the 3 R's to a good episodic memory?
 - Receiving (attention and processing)
 - Recording (storage)
 - Retrieving (re-creating the network)

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Up Next

Topic 2:

Memory & Aging
The Good and the Bad!

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