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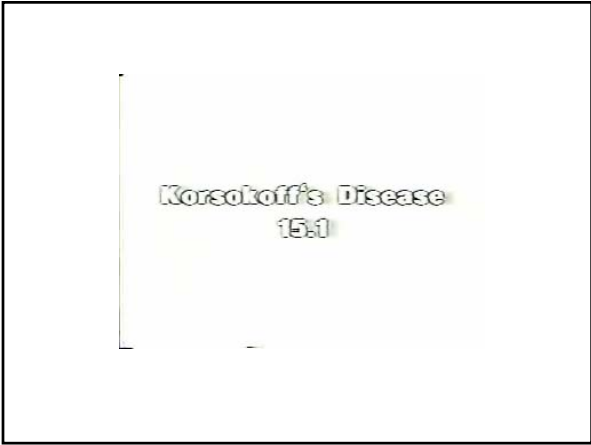
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- Remembers his birthdate, but not his age
- General disorientation about the present
- History of alcoholism
- Difficulties in forming new long-term memories
- Good working memory

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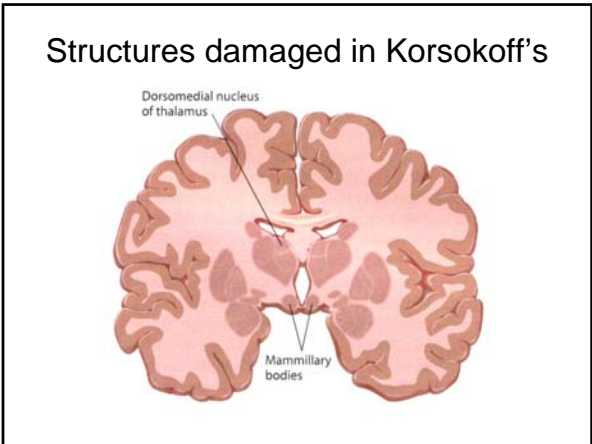
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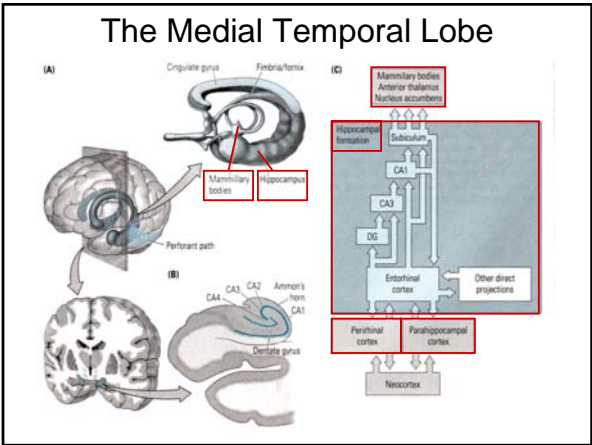
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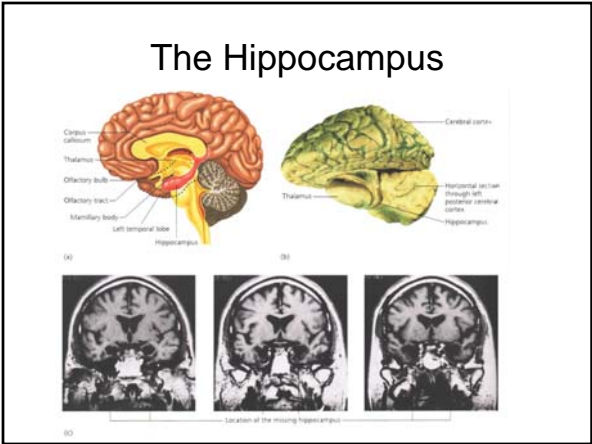
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H.M.

- Suffered from severe epilepsy  
Hippocampus (and Medial Temporal Lobe) are often source of epileptic disorder
- Went through surgery for removal of hippocampus and several neighboring structures

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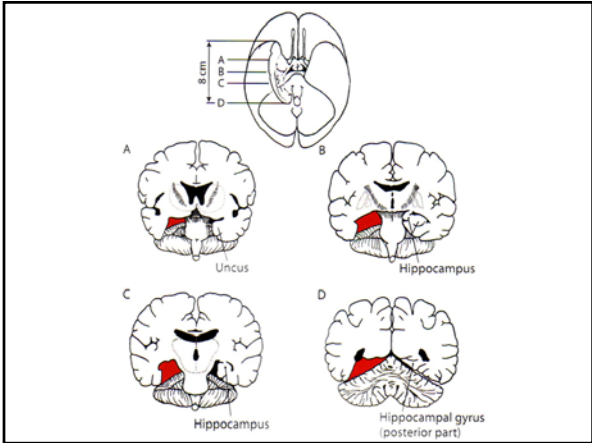
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H.M.

- Suffered from severe epilepsy  
Hippocampus (and Medial Temporal Lobe) are often source of epileptic disorder
- Went through surgery for removal of hippocampus and several neighboring structures
- The surgery helped his epilepsy, but...
- H.M. suffered from severe anterograde amnesia

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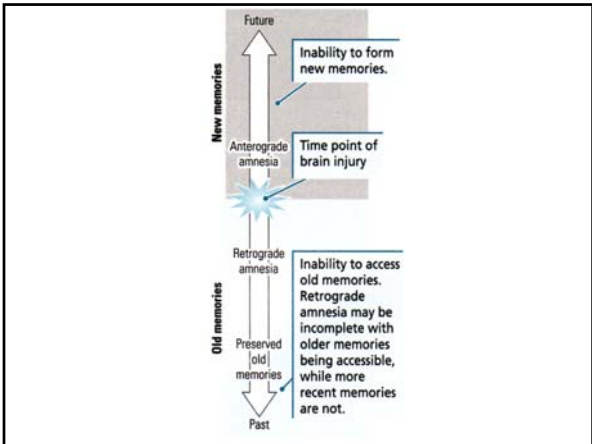
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**H.M.**

Anterograde amnesia (cannot form new memories)

Limited retrograde amnesia (~2 years prior to surgery; older memories preserved)

What does that tell us about hippocampal function?

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Some memory tasks H.M. is good at....

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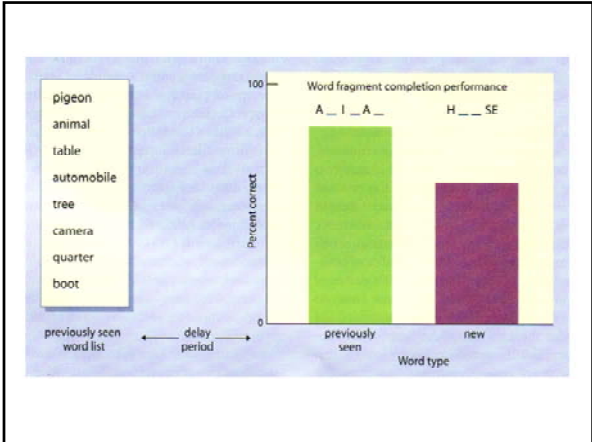
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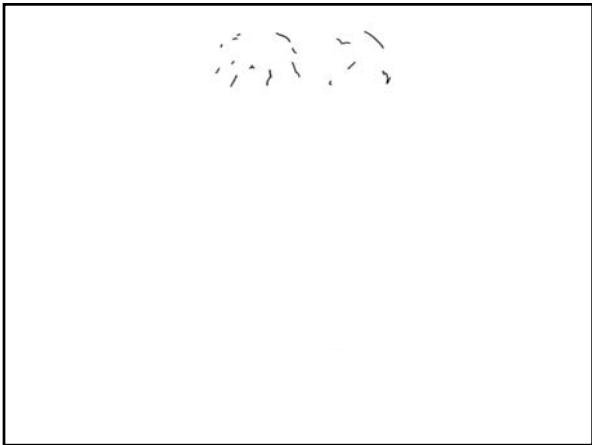
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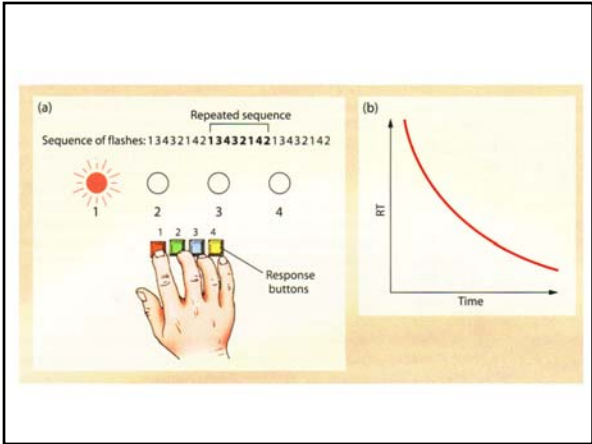
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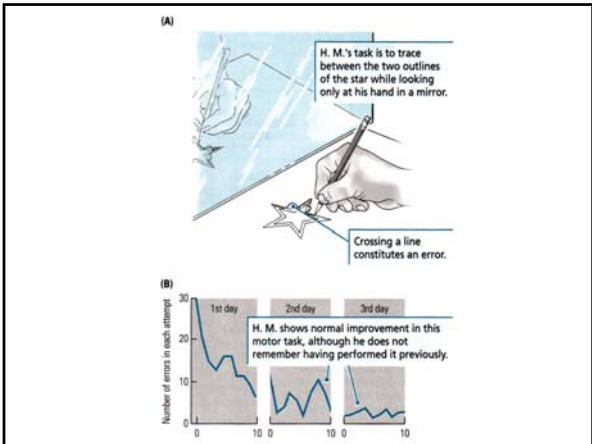
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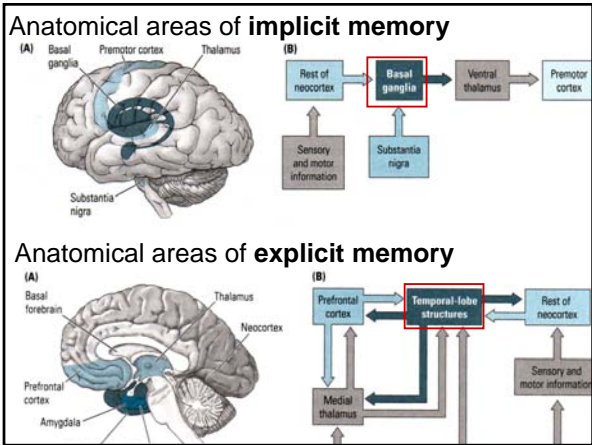
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**Medial Tempal Lobe and Epilepsy**

- epileptogenic focus (shown in red) - the region where the electrical seizure originates

narrow epileptogenic area      wide-spread epileptogenic area

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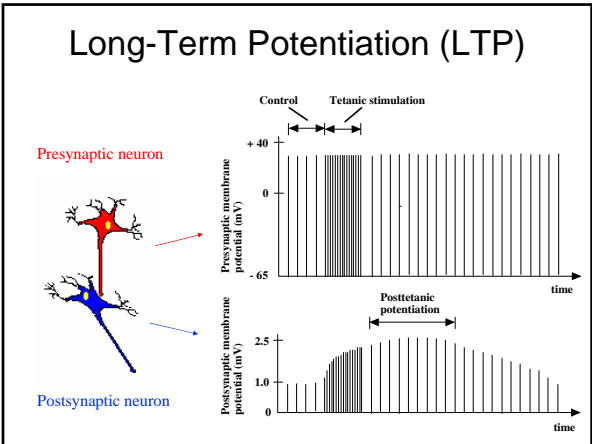
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### Hebb's Rule

- proposed in 1949 by the psychologist Donald Hebb
- *"When an axon of cell A... excites[s] cell B and repeatedly or persistently takes part in firing it, some growth process or metabolic change takes place in one or both cells so that A's efficiency as one of the cells firing B is increased."*
- simultaneous firing is important
- places emphasis on the conditional probability and the history of the two cells

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