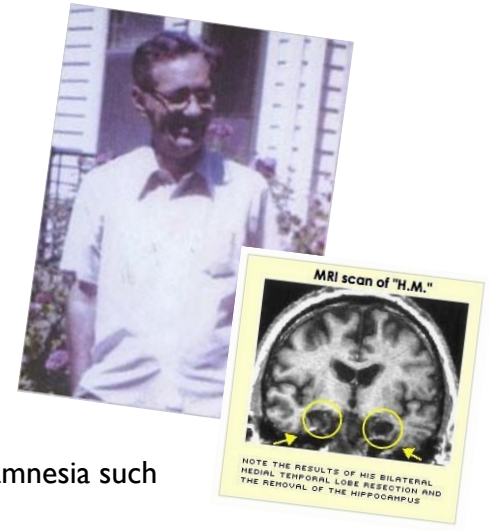
Using case studies to evaluate the Multistore Model



Case studies of brain damaged patients have been useful in supporting one of the key claims of the multistore model, that there are separate memory stores. If this is the case, then it should be possible to have brain damage which affects one store but not the other.

This has been supported by cases of patients with anterograde amnesia such as that of HM (Milner et al (1968).

1. What is anterograde amnesia?
2. What was the cause of HMs brain damage?
3. Which parts of his brain were damaged?
4. Describe his short term memory
5. Describe the effects on his Long term memory
6. How does HM's case support the multistore model?
7. HM's case suggests that ....

Furthermore, the case of Clive Wearing, (Baddeley 1990), who suffered both anterograde and retrograde amnesia, also supports the idea that STM and LTM may be separate stores.

1. What is retrograde amnesia?
2. What caused Clive's brain damage?
3. What part of his brain was damaged?
4. With regard to memory, what is Clive unable to?
5. What skills have been retained, demonstrating that certain aspects of LTM are unimpaired?
6. Which aspects of Multistore model are supported by this case?
7. This case supports the Multistore model in that....

8. How does this case refute the multistore model
9. The case of Clive Wearing indicates one problem with the multistore model in that...

One final case study which indicates that STM and LTM may be separate is that of KF, (Shallice and Warrington, 1970).

1. This case is different from HM and Clive Wearing in that KF suffered damage to his
2. What was the cause of KF's brain damage?
3. Which part of his brain was affected?
4. Describe KFs performance in the digit span task?
5. How did KF perform when the 'to be remembered' items were visual stimuli?
6. What happened when KF took part in a serial position curve experiment?
7. How does KFs' case support/refute the multistore model?

Both HM and Clive Wearing has certain skills which remained intact, for example Clive was able to recall how to play the piano and to read music and this has been taken as evidence that LTM is not a unitary store as suggested by Atkinson and Shiffrin and that instead there may be various different types of memory. This is further supported by the case study of brain damaged children conducted by Vargha-Khadem et al (1997):

1. Who were the Pps in this case study?
2. How did their amnesia affect them?
3. What does this tell us about the nature of LTM?
4. How does this link with the multistore model?

Finally, in a study of Spiers et al (2001) it was demonstrated that procedural memory was clearly a separate part of MTL to declarative memory, further refuting the claim that LTM is one store.

1. How many Pps were involved?
2. What types of memory were affected?
3. How does this link with MSM?