

# Summary of the study: Wilson et al (Memory 1)

## Aim

To report on the case of CW who suffers from a severe case of anterograde and retrograde amnesia

## Method

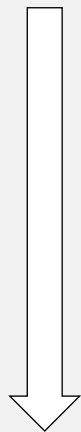
Longitudinal case study (21 years). Both qualitative and quantitative data

**Sample:** CW was born in the UK in 1938. He was an outstanding musician and gifted musical scholar and leader of the London Sinfonietta

## Materials

- **Neuropsychological tests** (IQ tests, tests of verbal fluency, and a digit span test (which tested his STM and LTM)).
- **MRI scans** of his brain (in 1991 & 15 years later in 2006 – rated by 3 independent experts)

## Outline of the study



**March 1985** - CW developed herpes simplex encephalitis, given life-saving medication but large parts of his brain had been destroyed by the virus

**October 1985** - CW referred to Wilson (CW had already been assessed: his STM was intact, autobiographical and episodic memory severely damaged, ability to create new memories severely damaged. Some damage to semantic memory)

**November 1985** - CW IQ test 'average' (but as extremely gifted before it is likely to have been poorer than before his illness). STM found again to be normal but LTM severely impaired. Semantic memory still impaired (scarecrow – a bird that flies and makes funny noises)

**1991** - first MRI. Significant abnormalities in hippocampal formations, amygdala, temporal poles

**2006** - second MRI also revealed damage to temporal cortices

## Numerous assessments across the 21 years of the study

*CW did not appear to accept he had a problem with his memory. He kept a diary but said he was not consciously aware of writing it. He thought he had not been conscious since the accident. Wilson et al thought he might be delusional but concluded he wasn't as he didn't show any other signs.*

***They concluded he had very limited 'autobiographical self'***

## Conclusions & Results linked to each.

### 1. Herpes simplex encephalitis can result in brain damage

- *CW had severe brain abnormalities*

### 2. Brain damage can result in both anterograde and retrograde amnesia

- *CW had both retrograde and anterograde amnesia*

### 3. Provides support for Multi-store model that STM and LTM have separate stores

- *CW had complete inability to form new memories*
- *CW had some loss of semantic memory*
- *CW had severely damaged episodic memory*

### 4. CWs sense of self disrupted by his memory disorder

- *CW could still: play the piano, recognise his wife and children, conduct an orchestra, read, write and talk*
- *CW had very limited autobiographical self*
- *CW had decreased performance & verbal IQ*

## Criticisms/Limitations

**1. Caused psychological distress:** CW repeatedly tested over 21 years, he may have provided consent but would not remember so he could not truly understand what he was consenting to.

**2. Was caused psychological harm** due to irritation caused by having his consciousness questioned.

**3. Confidentiality was not maintained** – his full name & personal background meant his identity was revealed.

**4. Hard to generalise results** because of extent of brain damage and unusual nature of the case.

