**Types of Long Term Memory**

**Procedural Memory**

* Tasks such as swimming that we do not call on conscious memory to do.
* Both semantic and episodic require conscious recall of facts and events.

**Semantic memory**

* Don’t need to know when and where you learnt the fact.
* Differs to episodic which is tied to time and place.
* Thought to be hierarchically organised – Bower et al.
	+ **Aim:** to investigate semantic categorisation in long-term memory.
	+ **Method:** two groups of participants with same words presented differently. 4 trials of 28 words (112 in total) either hierarchically (instrument, string, parcel, paper, photocopier, etc) or randomly. Hey were then asked to free recall as many words as possible.
	+ **Results:** ‘organised conditioned’ significantly higher – mean: 73 – than ‘random condition’ – mean: 21.
	+ **Conclusion:** as recall is facilitated by organisation, long-term memory storage is probably semantically organised.
	+ **Evaluation:** when participants carry out memory experiments, an assumption is made about how the material is encoded. It is assumed participants make semantic associations between the words in organised but not in random. But it may not be the case. And such controlled laboratory experiments may tell little about how memory works in the real world.
* Information is systematically linked to related information.

**Episodic Memory**

* Example of a question that would require episodic memory: *“What did you have for breakfast this morning?”*
* Cohen (1993) argued for a distinction between two types of episodic memory:
	+ **Autobiographical episodic memory –** memory for specific life events that have personal meaning, e.g. where you went on holiday last year.
	+ **Experimental episodic memory –** e.g. learning lists of words which are already stored in semantic memory but are now tied to the specific episode of processing the list of words for an experiment.
* A **flashbulb memory** is a detailed and vivid memory of an event that is stored after one occasion and lasts a lifetime. Often life-changing events such as births, deaths or associated with important historical events such as 9/11. Usually emotional arousal when memory is first encoded and it makes the memory particularly vivid.
	+ **Conway et al (1994)**
	+ **Aim:** to investigate a flashbulb memory for the memorable event of Margaret Thatcher’s resignation.
	+ **Method:** opportunity sample of 923 participants were interviewed soon after she resigned. Just over a third were interviewed 11months later. Details of the memory resignation were assessed for vividness and accuracy.
	+ **Results:** 86% had an accurate memory which could be considered a flashbulb memory.
	+ **Conclusion:** A flashbulb memory was formed from the distinctive event.
	+ **Evaluation:** Longitudinal study and nearly 2/3 participants were lost. Makes the remaining sample likely to be biased and results may lack generalisability.

**Clive Wearing**

* Suffered from a rare brain infection that left him with a moment to moment memory.
* Some procedural memories he had previously stored were still available to him.
* If asked “can you play the piano?” he replied “no” – declarative knowledge.
* In fact he could play the piano when sat in front of it – procedural memory.

**HM**

* 27year old suffered severe epilepsy.
* Surgeons carried out drastic operation to remove most of his hippocampus.
* Memory was affected – he could remember most events before operation but none after.
* Both episodic and semantic memories were damaged.
* Although he could not remember what he had for breakfast, he learnt how to play tennis.
* The part of his brain concerned with procedural memories (cerebellum) was not affected.

Although memory stores are mostly independent, many everyday tasks require an interaction between the stores. E.g. going into an exam – draw on previous memories/experiences, like where to sit. During exam – drawing on semantic knowledge and maybe even episodic memories of previous examinations.