**9 Memory**

Basic memory processes: encoding, storage, and retrieval

* Memory is a set of cognitive systems that allow the encoding, storage, and retrieval of information.

The multistore model of memory

* According to this model there are three memory stores: sensory store, short-term memory, and long-term memory. These differ in their capacity, encoding, and longevity.
* Short-term memory has a capacity of around seven items which are encoded acoustically or visually and can be sustained for a few seconds.
* Long-term memory is more likely to encode material semantically and has an unlimited capacity, maintaining memories indefinitely.

Working memory: a modern understanding of short-term memory

* Working memory is a way of looking at what happens in short-term memory when information is manipulated or processed.

Explicit and implicit memory: a modern view of long-term memory

* LTM has two types and two subtypes. Explicit memories are conscious memories for personal experiences or facts about the world. There are two subtypes of explicit memory: episodic memories and semantic memories. Implicit memory occurs when we recall something but have no awareness that we are doing so. Implicit memory is most frequently expressed as either procedural memory or repetition priming.

Levels of processing

* The levels-of-processing framework is an alternative way to look at memory, proposing that information can be encoded at deeper or shallower levels.
* According to the LOP approach, so-called ‘short-term memory’ simply represents shallower levels of processing, while LTM results from deeper levels.

Factors affecting retrieval

* Retrieval depends on cues, which may be internal state cues or external context cues.
* Flashbulb memories are those for major events. Their distinctive feature is that we tend to recall peripheral details remarkably well in addition to the event itself.
* Most people have a bias towards remembering happy events; however, this is reversed in depression, in which people find it easier to retrieve unhappy memories.
* Memories are constructed at the point of retrieval rather than played back. This process of reconstruction is influenced by schemas and scripts.

Eyewitness memory

* Because of the reconstructive nature of memory, eyewitness testimony can be surprisingly unreliable.
* Witness memory is less accurate when there is violence or a weapon present, and in particular it can be distorted by post-event information
* Children’s memory appears particularly vulnerable to post-event questioning, and aggressive questioning has resulted in cases of wrongful convictions of adults for crimes against children.

Memory fallibility

* The ‘seven sins of memory’ include sins of forgetting and sins of memory distortion. Sins of forgetting include transience, absent-mindedness, and blocking. Sins of memory distortion include misattribution, suggestibility, and bias.
* A seventh sin, persistence, refers to the intrusion of unwanted memories upon consciousness. This can occur after trauma.
* The fact that human memories are imperfect may reflect evolutionary ‘tradeoffs’ which cause fewer problems than we would encounter if forgetting and memory distortions did not exist.

Repression: motivated memory

* The notion that traumatic memories may be repressed and hidden from later recall has been highly controversial. Evidence is mixed but generally experimental evidence has only supported the existence of mild repression.

A related but conceptually separable debate concerns the recovery of forgotten memories for traumatic childhood events. It appears that there are genuine cases of recovered memory; however, there is a large body of evidence to show that many so-called recovered memories are false and result from poor therapeutic practice.