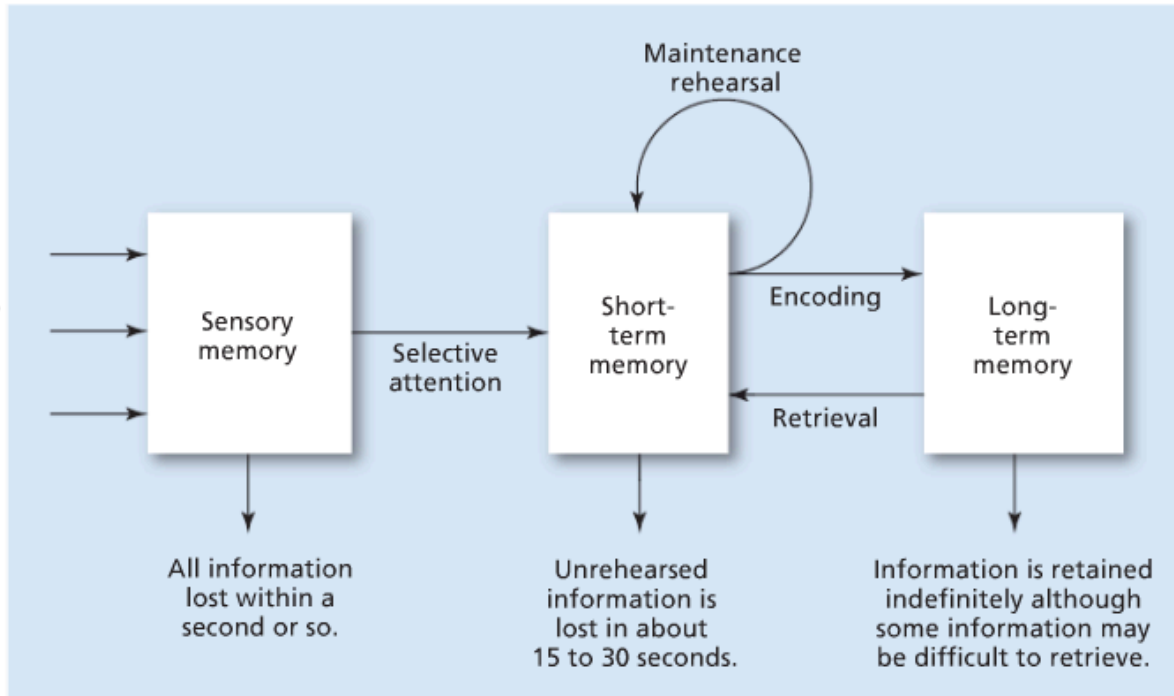


External Sensory Events



6.1

an active system that receives, organizes, stores, and retrieves information

Memory

three basic steps

- encoding
- storage
- retrieval

information-processing model — focuses on the way information is processed through different stages of memory

levels-of-processing model — focuses on the depth of processing associated with specific information

- deeper processing associated with longer retention

Models of Memory

parallel distributed processing (PDP) model — focuses on simultaneous processing of information across multiple neural networks

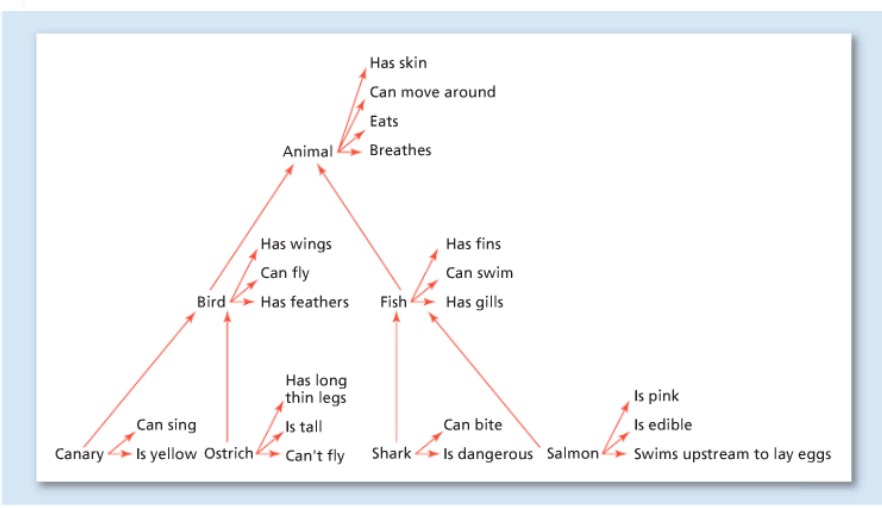
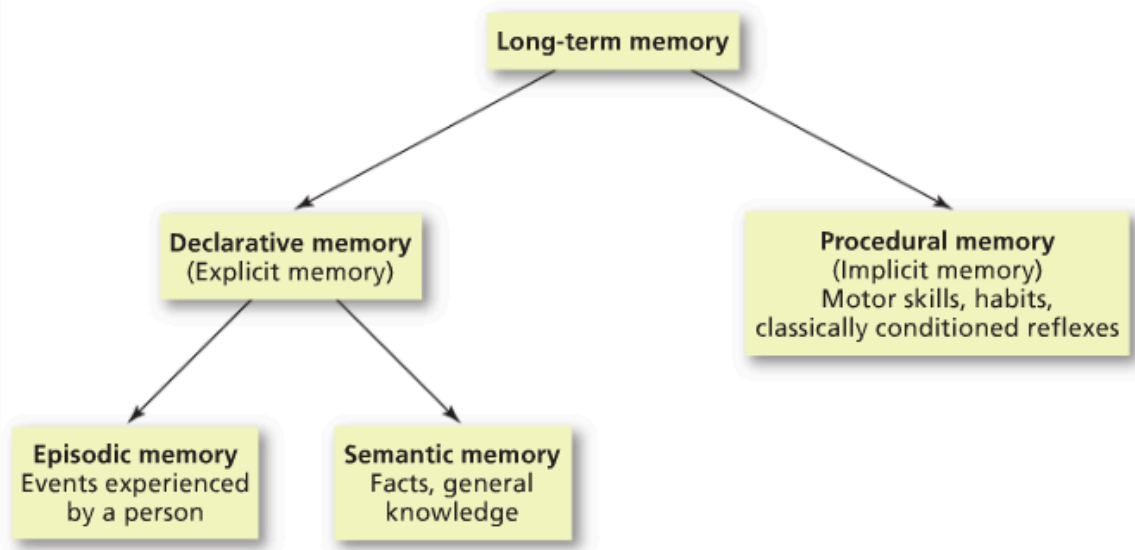
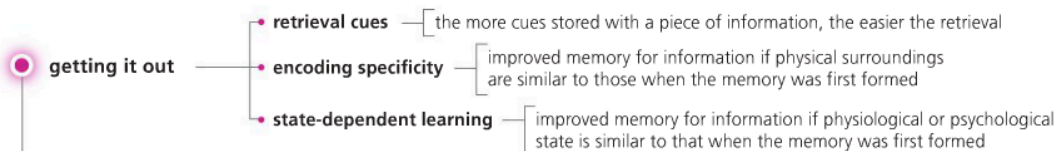
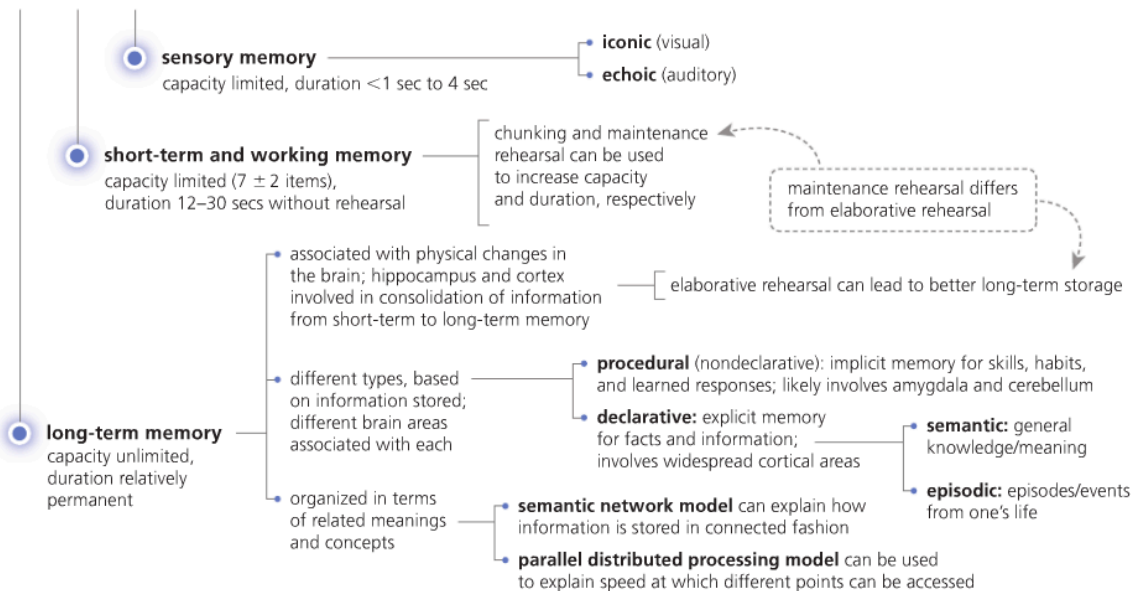


Figure 6.6 An Example of a Semantic Network

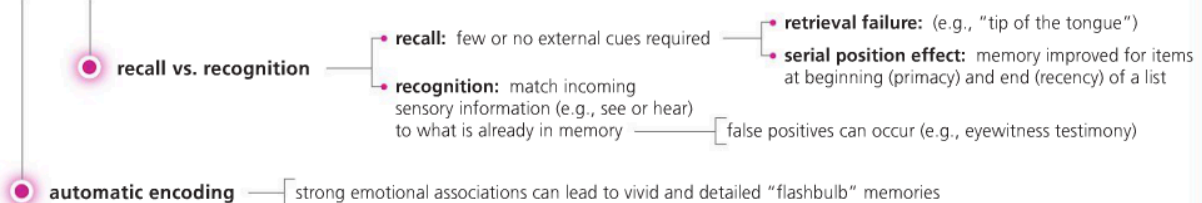
In the semantic network model of memory, concepts that are related in meaning are thought to be stored physically near each other in the brain. In this example, canary and ostrich are stored near the concept node for "bird," whereas shark and salmon are stored near "fish." But the fact that a canary is yellow is stored directly with that concept.

The Information-Processing Model

(proposes three stages that vary both in duration and capacity; information must be processed effectively at earlier stages before long-term storage occurs)

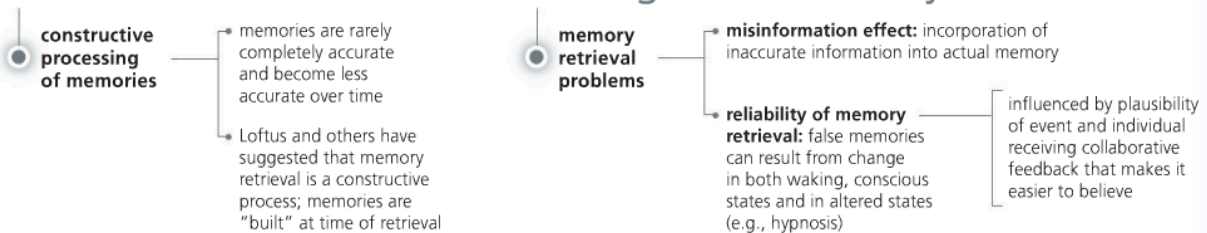


Retrieval of Long-Term Memories



(continued)

The Reconstructive Nature of Long-Term Memory



(continued)

The Reconstructive Nature of Long-Term Memory

constructive processing of memories

- memories are rarely completely accurate and become less accurate over time
- Loftus and others have suggested that memory retrieval is a constructive process; memories are "built" at time of retrieval

memory retrieval problems

- misinformation effect:** incorporation of inaccurate information into actual memory
- reliability of memory retrieval:** false memories can result from change in both waking, conscious states and in altered states (e.g., hypnosis)
 - influenced by plausibility of event and individual receiving collaborative feedback that makes it easier to believe

(continued)

Proactive Interference

French, learned **beforehand**, interferes proactively

Study French

Study Spanish

Spanish Test



Retroactive Interference

Spanish, learned **afterwards**, Interferes retroactively

Study French

Study Spanish

French Test



Table 6.1 Reasons for Forgetting

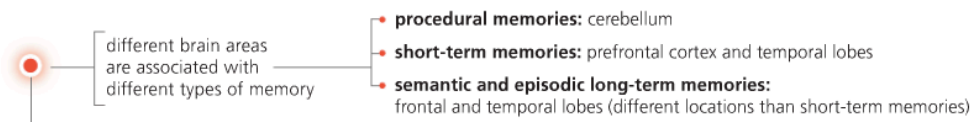
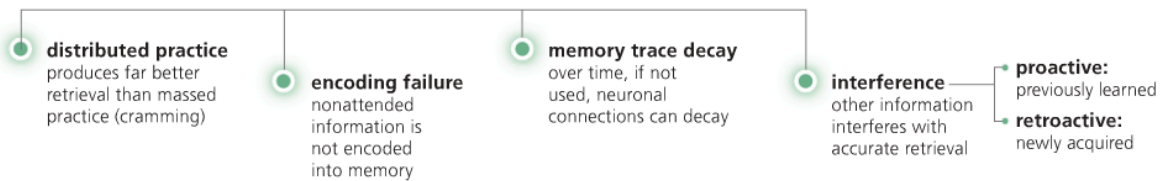
REASON	DESCRIPTION
Encoding Failure	The information is not attended to and fails to be encoded.
Decay or Disuse	Information that is not accessed decays from the storage system over time.
Proactive Interference	Older information already in memory interferes with the retrieval of newer information.
Retroactive Interference	Newer information interferes with the retrieval of older information.

6.10

6.11-12

Forgetting

(originally studied by Ebbinghaus (1913), research produced forgetting curve)



hippocampus plays a vital role in the formation of new declarative long-term memories

Memory and the Brain

