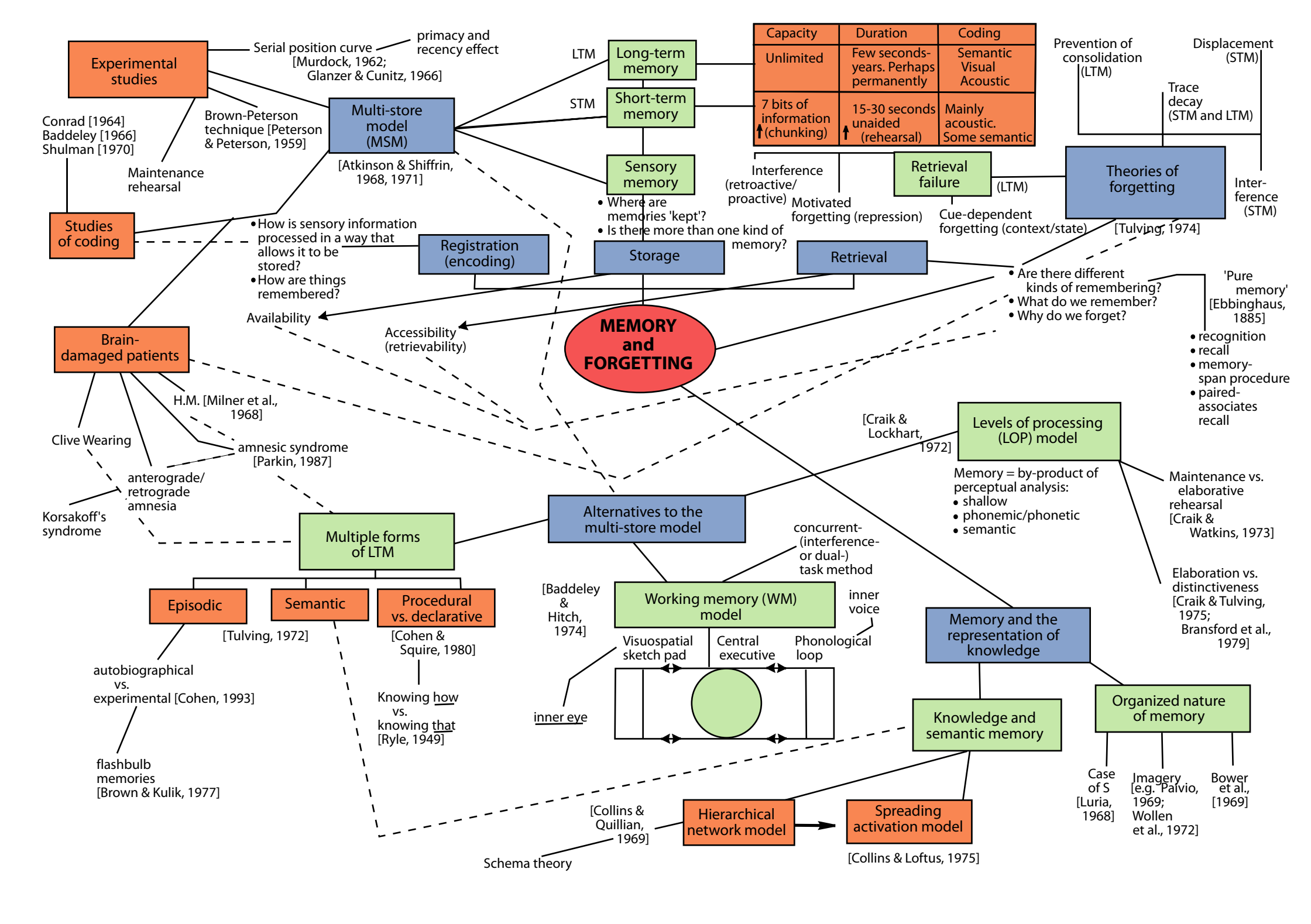
MEMORY and FORGETTING
Experimental studies
Serial position curve [Murdock, 1962; Glanzer & Cunitz, 1966]
primacy and recency effect
Brown-Peterson technique [Peterson & Peterson, 1959]
Maintenance rehearsal
Conrad [1964] Baddeley [1966] Shulman [1970]
Studies of coding
Multi-store model (MSM)
[Atkinson & Shiffrin, 1968, 1971]
LTM
STM
Long-term memory
Short-term memory
Sensory memory
Capacity
Duration
Coding
Unlimited
Few seconds-years. Perhaps permanently
Semantic Visual Acoustic
7 bits of information (chunking)
15-30 seconds unaided (rehearsal)
Mainly acoustic. Some semantic
Prevention of consolidation (LTM)
Displacement (STM)
Trace decay (STM and LTM)
Interference (retroactive/ proactive)
Motivated forgetting (repression)
Retrieval failure
(LTM)
Cue-dependent forgetting (context/state)
Theories of forgetting
Inter-ference (STM)
[Tulving, 1974]
• Where are memories 'kept'?
• Is there more than one kind of memory?
• How is sensory information processed in a way that allows it to be stored?
• How are things remembered?
Registration (encoding)
Storage
Retrieval
Availability
Accessibility (retrievability)
• Are there different kinds of remembering?
• What do we remember?
• Why do we forget?
'Pure memory' [Ebbinghaus, 1885]
• recognition
• recall
• memory-span procedure
• paired-associates recall
Brain-damaged patients
H.M. [Milner et al., 1968]
Clive Wearing
amnesic syndrome [Parkin, 1987]
anterograde/ retrograde amnesia
Korsakoff's syndrome
[Craik & Lockhart, 1972]
Levels of processing (LOP) model
Memory = by-product of perceptual analysis:
• shallow
• phonemic/phonetic
• semantic
Maintenance vs. elaborative rehearsal [Craik & Watkins, 1973]
Elaboration vs. distinctiveness [Craik & Tulving, 1975; Bransford et al., 1979]
Alternatives to the multi-store model
Multiple forms of LTM
Episodic
Semantic
Procedural vs. declarative
[Tulving, 1972]
[Cohen & Squire, 1980]
autobiographical vs. experimental [Cohen, 1993]
flashbulb memories [Brown & Kulik, 1977]
Knowing how vs. knowing that [Ryle, 1949]
concurrent- (interference- or dual-) task method
[Baddeley & Hitch, 1974]
Working memory (WM) model
inner voice
Visuospatial sketch pad
Central executive
Phonological loop
inner eye
Memory and the representation of knowledge
Knowledge and semantic memory
Organized nature of memory
Case of S [Luria, 1968]
Imagery [e.g. Paivio, 1969; Wollen et al., 1972]
Bower et al., [1969]
[Collins & Quillian, 1969]
Hierarchical network model
Spreading activation model
[Collins & Loftus, 1975]
Schema theory