Memory

Memory tasks
Memory types
Memory organization
Errors and biases
Advice

Memory tasks

- Recognition: identifying a named object as something previously encountered or belonging to a certain category
- Recall: Using cues to retrieve stored information
  - Automatic
  - Conscious
- Reconstruction: Using cues + generic knowledge to build a plausible narrative

Memory types

- Episodic
- Semantic
- “Flashbulb” memories
- Long-term memory
  - Your mental “hard drive”
- Working memory
  - Your mental “RAM”
  - The magical 7 +/- 2

Survey questions that involve memory

- Objective information
  - References to current information versus information from the past
  - Events at any time versus some time relative to the interview
  - Recall of specific events versus inferences
    - Inference more likely when recall of specific information is difficult
- Evaluations
  - Retrieval of “filed” opinions
  - Construction of new opinion based on retrieved cognitions

Memory organization

- Ebbinghaus: storehouse metaphor for memory
- Bartlett: memory is a representation or reconstruction of past experience
  - Memories emphasize, sometimes exaggerate the distinctive features of the event or stimulus
  - “Smoothing” and “sharpening” of edges
  - “Repressed” and implanted memories
- Spreading activation
- Schema theory
  - Scripts
  - Generic memories vs. specific memories
  - Interference among similar events
- Narratives, sequences of events, structure personal memories
- Online vs. memory based evaluation

Reconstructive memory

- Elizabeth Loftus: the unreliability of eyewitness testimony
  - Recall of past events can be altered by leading questions.
  - Confidence in memory uncorrelated with accuracy.
  - Memories can be “manufactured” or “implanted” by suggestion.
  - Implications for “repressed memory syndrome”.
- Ross: cognitive and motivational reasons for mistakes in temporal judgments
  - Implicit theories of stability and change
  - Self-image maintenance

More on reconstruction…

- Michael Ross: the effect of lay theories on "recall" of behaviors
  - Attitude consistency study: Subjects who believed that people become more conservative as they age recall themselves as having more liberal attitudes during college years than they actually had.
  - Smoker's diary study: Former smokers who went back to their habit "recalled" feeling especially tense or stressed out when they took up smoking again. Diaries indicated no sudden increase in tension or stress.
  - Conclusion: our memories are combinations of stored information and current expectations and suggestions.

Heuristics

- Availability: judgments of frequency are biased by the ease of retrieval of specific instances
- Representativeness: judgments of category membership influenced by resemblance between stimulus and "typical" category member
- Anchoring and adjustment: quantitative estimates sometimes biased by initial starting point

Biases and errors

- Accessibility bias: judgments are unduly influenced by whatever happens to be in working memory
  - Priming studies
  - Carryover effects in surveys
  - Automatic vs. controlled retrieval
- Time boundary errors
  - Forward telescoping: misremembering events as having taken place more recently than they really did
  - Backward telescoping: mistakenly remembering events as having happened longer ago than they really did

Remember this…

- Length of the elapsed time increases difficulty in recall
- Fewer events recalled per time period as length of reference period grows
- Recall can be improved by using appropriate retrieval cues (e.g. major life events)
- Use of personally meaningful boundary points to recall nearby events
- More time to think equals better recall
  - Unless it changes the recall strategy to something less effective
- Tailor the time boundaries to the frequency of the event: longer boundaries for less frequent events
- Provide temporal landmarks

Advice

- Longer items provide more time to recall
- Use sequencing to help structure recall
- Prompts for specific details of an event to improve recall
- When recalling lists of events, start with the most recent one
- Decompose broader categories into subcategories
  - E.g., visits to specific kinds of health-care providers