



# Memory 5

2 Slides from Monday's Lecture  
More on Intrusion Errors  
Misinformation Effects:  
Eye-witness testimony

# Chapter Test 2 – Friday

- Material taken from
  - Gleitman Chapter 8
  - Schacter Chapter (Norton Reader)
  - 60 Minutes piece on Eye Witness Testimony
  - NY Times video essay on children's testimony
  - Zaps #2-#10
  - Memory lectures
- Procedures just like Chapter Test 1
  - **Bring your ID**
  - Pencils
  - F-288 ScanTron form



## Retrieval Monitoring to Avoid Intrusion Errors

- Processes associated with the frontal lobe monitor feelings of familiarity and initiate searches to associate them with specific memories
  - Patients with frontal lobe deficits are more susceptible to source confusion errors

# Distinctiveness Heuristic

- Distinctiveness heuristic: requiring specific recollections of distinctive details of an experience before concluding it is *remembered*
- This strategy has been shown to help older adults and those with frontal lobe damage avoid false recognitions
- This strategy is less helpful for those with failing memories

## DVD Illustrating intrusions due to Source Confusion and Binding Errors

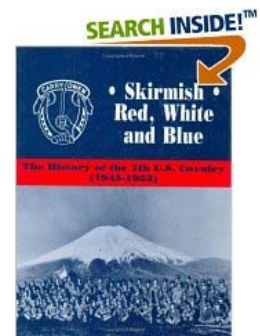
- Part 1 - Illustrates that intrusion errors can happen even under close to ideal viewing/memory conditions and over fairly short delays
- Part 2 – Memory for events requires binding information stored in various areas of the brain.
  - This binding process can fail
  - “Source” is one kind of information
- Part 3 – Describes a PET study using the DRM paradigm. Activations in the auditory cortex were found to distinguish true recollections from false alarms
- “This is what happened” vs. “This is what I remember”



- Are you aware of ever having been convinced that you saw something only to learn that your “memory” came from the questions or comments of friends?
- A. Yes, on many occasions
- B. Yes, but only once or twice
- C. No, never that I am aware of

## No Gun Ri and the Saga of Edward Daily

- Edward Daily admitted to Associated Press reporters his role in the atrocity at the South Korean hamlet of No Gun Ri, saying he had slaughtered civilians on orders from his commanders and was still haunted by the sound of "little kids screaming."
- Mr. Daily's confession, his presence at No Gun Ri, and 3 books he wrote all appear to be largely invented or imagined
- Mr. Daily spent most of the war as a mechanic and clerk behind the front lines





## Seeming Reality of Suggested Memories: The Saga of Edward Daily

- So embedded is Mr. Daily in the memories of some veterans that they still find it difficult to believe he was not with them at No Gun Ri
- Said one: “I know that Daily was there. I know that. I know that.”
- Another believed for years that Mr. Daily had rescued him on the battlefield -- until a buddy pointed out that he would not have been able to recall anything immediately after being pummeled by a concussion grenade.
- It now appears that these and many other “memories” were created in discussions with Mr. Daily and had no basis in reality.



# Misinformation

## Examples of Negative Impact

- Misinformation is theoretically interesting and worrisome
  - Leading questions and comments during questioning can lead eyewitness to
    - Believe that they have seen things they did not see
    - Forget that they have seen things that they did see
    - Inflate their certainty concerning reported details
  - Suggestive psychotherapeutic procedures may foster the creation of false memories
  - Aggressive interviewing of preschool children can result in distorted memories of alleged abuses by teachers and others

# Misinformation and Eye Witnesses

## ■ Elizabeth Loftus

- Suggestive questioning can
  - add elements to a memory that were not part of the original episode
  - overwrite existing information from an episode with new information
  - even create new episodes that have not been experienced





## Research by Gary Wells: Suggestions Affect Eye-Witnesses

- Problems occur because of
  - Encouraging eye-witnesses to “think” about identifications
  - Showing multiple suspects simultaneously in a line-up
  - Providing “feedback” about choices
  - Failing to emphasize that the suspect may not actually be in the line-up
- These problems matter because juries believe confident eye witnesses
  - Confidence and accuracy are not strongly related



- Eye witness accounts are often critical to identify and obtain convictions of criminals.

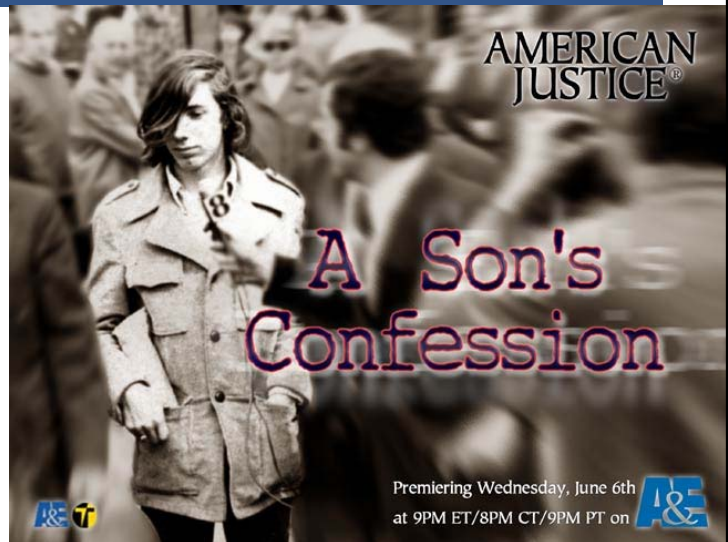
Given what you know of their advantages and disadvantages, do you feel that this is appropriate?

- A. Definitely Yes
- B. Yes, with some reservations
- C. No, with some reservations
- D. Definitely No

# False Confessions

## Ultimate Misinformation

- Peter Reilly
  - Finds mother murdered
  - Denies involvement
  - Confesses
  - Later exculpated
- Distinctiveness heuristic
- Interrogative Misinformation



## Eye Witnesses: Trading More Information and False Information

- Questioners have competing goals
- Hypnosis – Successes, but increases inaccurate recall
- Cognitive interview – Witnesses are asked
  1. Try to report everything about the relevant incident
  2. Try to reinstate mentally the context or setting in which the incident occurred
  3. Try to recall events in different temporal orders
  4. Try to take different perspectives on an event



## Misinformation in Young Children: Source Confusions

- Episodic memory is less developed in young children and this makes them particularly vulnerable to source confusions and Misinformation
  - Their most reliable answers are their initial answers to *open-ended* questions
  - They easily confuse an event with later recollections of that event or details mentioned in earlier questions about the event

## Misinformation in Young Children: Social Pressures

- Young children's recollections are easily and dramatically influenced by social pressures: i.e., rewards, praise/disapproval, repetition of questions, invitations to imagine what "might" have happened
- Manny-the-Clown study of the effects of the suggestive questioning of preschoolers

Age (Years)	Condition	
	Social Incentive	Control
5 – 6	50%	10%
3	81%	31%







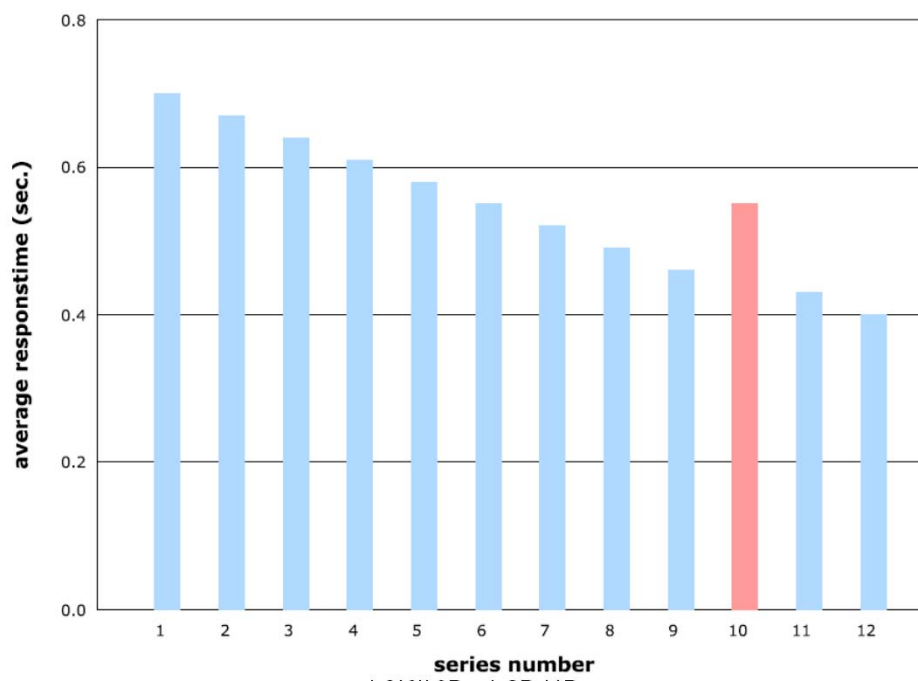
- Summary question: Which of the following two statements is accurate?
- i. Leading questions can change or even supersede existing memories.
  - ii. Memory changes due to leading questions are less likely to occur for children than for adults.
- A. Both (i) and (ii) are true
- B. (i) is true and (ii) is false
- C. (i) is false and (ii) is true
- D. Both (i) and (ii) are false





- Improvement on the Serial Response Task in the Implicit Memory Zap probably depends most on \_\_\_\_\_.
- A. declarative memory
- B. episodic memory
- C. priming
- D. procedural memory
- E. semantic memory

# Data: Implicit Memory Zap



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# Looking Ahead

- For Friday
  - Memory Chapter Test
- For Monday
  - Gleitman: Ch. 9, pp. 341-348
  - Zap #11: Mental Scanning
  - Zap #12: Mental Rotation 2-D
- Coffee after class at Phoenix Grill?

