Human Cognitive Processes: psyc 345

Ch. 8 Everyday memory

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(Q1) What kinds of events from their lives are people most likely to remember?

(Q2) Is there something special about memory for extraordinary events like the 9/11 terrorist attacks?

(Q3) What properties of the memory system make it both highly functional and also prone to error?

(Q4) Why is eyewitness testimony often cited as the cause of wrongful convictions?

Autobiographical memory

• Memory over the life span

Why do we have the reminiscence bump?

Some explanations

<table>
<thead>
<tr>
<th>Table 7.1</th>
<th>Explanations for the Reminiscence Bump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation</td>
<td>Basic Characteristic</td>
</tr>
<tr>
<td>Life narrative</td>
<td>Period of assuming person's life identity.</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Encoding is better during periods of rapid change.</td>
</tr>
<tr>
<td>Cultural life script</td>
<td>Culturally shared expectations structure recall.</td>
</tr>
</tbody>
</table>

Caption: Percentage of memories from different ages, recalled by a 55-year-old, showing the reminiscence bump. (Reprinted from Journal of Memory and Language, 39, R.W. Schrauf & D.C. Rubin, “Bilingual Autobiographical Memory in Older Adult Immigrants: A Test of Cognitive Explanations of the Reminiscence Bump and the Linguistic Encoding of Memories,” pp. 437-457, Fig. 1. Copyright © 1998 with permission from Elsevier. |

Fig. 7-5, p. 242

(Q2) Is there something special about memory for extraordinary events like the 9/11 terrorist attacks?

Flush bulb memories

- We tend to remember important, shocking, and stunning events more vividly like a mental photography.
  - 9/11 attack
  - Kennedy assassination
  - M. L. King Jr. assassination.

- → flush bulb memories

Fig. 7-6, p. 243

WE WILL NEVER FORGET SEPTEMBER 11, 2001

The explosion of the space shuttle Challenger

Fig. 7-7, p. 245

- Are flashbulb memories really accurate?

- Repeated recall experiments
  - Let Ss recall the special event repeatedly at different times after the event.
  - e.g., 3 days later, 10 months later, 5 years later.
  - Test the consistence of their recall
Example: the Challenger explosion

- A day after the explosion
  - I was in my religion class and some people walked in and started talking about it. I didn’t know any details except that it had exploded and the ….

- 2 ½ years later
  - When I first heard about the explosion I was sitting in my freshman dorm room with my roommate, and we were watching TV. ….

Flashbulb memories decay just as regular memories

Schmock et al. (2000)
O. J. Simpson murder trial verdict
Response at 3 days:
Response at 12 months

A large number of inaccurate responses at 12 months.

Talarico and Rubin’s (2003) flashbulb memory experiment: memories of 9/11 vs. memories of an everyday event

- (Q3) What properties of the memory system make it both highly functional and also prone to error?

The constructive nature of memory

- Memories are not accurate records of what happened but construction of what might have happened.

Educated guesses about high school grades

- Bahrick et al. 1996
- Memories of one’s high school grades
  - 89% of A grades were remembered accurately.
  - 29% of D grades were remembered accurately.
Making inferences

• Constructing memories
  – making inferences based on one’s experience and knowledge

Demo 1: Read the following sentences

• The children’s snowman vanished when the temperature reached 80.
• The flimsy shelf weakened under the weight of the books.
• The absent-minded professor didn’t have his car keys.
• The karate champion hit the cinder block.
• The new baby stayed awake all night.

Fill in the blank with the words that were in the sentence you just read.

• The flimsy shelf _____ under the weight of the books.
• The children’s snowman _____ when the temperature reached 80.
• The absent-minded professor _____ his car keys.
• The new baby _____ all night.
• The karate champion _____ the cinder block.

Most common errors

• Vanished → melted
• Weakened → collapsed
• Didn’t have → lost
• Hit → broke, smashed
• Stayed awake → cried

Demo 2:

• Group 1 (Group 2 has to close their eyes):
  Read the following sentence

• John was trying to fix the birdhouse. He was pounding the nail when his father came out to watch him and help him do the work.

• Pragmatic inference
  – We make inferences based on what we already knew.
Demo 2:

• Group 2 (Group 1 has to close their eyes):
• Read the following sentence

• John was trying to fix the birdhouse. He was looking for the nail when his father came out to watch him and help him do the work.

• Question:
• Circle the words that appeared in the sentence you just read.

• saw, hammer, mother, dog, nail

Demo 3: try to remember the following words

• Bet
• Rest
• Awake
• Tired
• Dream
• Wake
• Night
• Blanket
• Doze
• Slumber
• Snore
• Pillow
• Peace
• Yawn
• Drowsy

• Write down as many words as you can remember.

• How many of you included “sleep” in your remembered list?

• Your inferential process created false memories

• Coglab
  – False memories

• false memory line-up studies
  – http://www.psychology.iastate.edu/~glwells/th eeeyewitnesstest.html
Why construction?

- The advantages / disadvantages of construction
- An example of photographic memory (5:18)
  - http://www.youtube.com/watch?v=GlNiAqYN6ZQ
- What happens if you remember everything?
  - You can't forget. You are filled with unimportant infor.

(Q4) Why is eyewitness testimony often cited as the cause of wrongful convictions?

Memory can be modified or created by suggestion

- The misinformation effect
  - A person’s memory for an event is modified by things that happen after the event has occurred.

Loftus & Palmer 1974

- Ss watched films of a car crash and were asked either
  - (1) How fast were the cars going when they smashed into each other?
  - Or
  - (2) How fast were the cars going when they hit each other?

- Ss saw the same films but
- Group (1) estimated as
  - 41 miles per hour
- Group (2) estimated as
  - 34 miles per hour
- Ss were also asked “Did you see any broken glass?”
  - 32 % in Group (1) → yes
  - 14 % in Group (2) → yes
Creating false memories for early events in people’s lives

• Planting false memories
• Parents accused by their daughter as molesters (9:54) (4:18)
  – http://www.youtube.com/watch?v=NhZjkcaCkzk
  – http://www.youtube.com/watch?v=RsXoVYDL_gS&NR=1
• More about false memories (6:41)
  – http://www.youtube.com/watch?v=crRysq8aE

Eyewitness identification

• Eye witness testimony (false memories) 13:01
  – http://www.youtube.com/watch?v=97DSyF_Z3Do&NR=1
• How false memories occur in eye witness testimony? 1:44
  – http://www.youtube.com/watch?v=P3ldO66qrbo&NR=1