Presupposition

- Propositions whose truth is taken for granted in the utterance of a linguistic expression
  - It’s too bad Nader lost the election.

Existence Presuppositions

- The movie on Cinemax is rated X.
- I’ve coached Jack’s children.

Factive Presuppositions

- Jan knows that Taylor has a 42 inch vertical leap.
- Jan regrets that Taylor has a 42 inch vertical leap.
- Jan forgot that Taylor has a 42 inch vertical leap.
- Jan is glad that Taylor has a 42 inch vertical leap.

Connotative Presuppositions

- Involve words used in particular circumstances
  - Presuppose those circumstances
- Murder
  - Killing intentional
- Assassinate
  - Target has political power

Blame vs. Criticize

- Ralph was blamed/criticized for B
- Both imply
  - Ralph did B
  - B is bad
- Blamed
  - Presupposes
  - B is bad
  - Asserts
  - Ralph did B
- Criticized
  - Presupposes
  - Ralph did B
  - Asserts
  - B is bad
Properties of Presupposition

- Content is taken for granted
- Still there if you negate the main verb
  - He regretted going to the concert the night before the quiz.
  - He didn’t regret going to the concert the night before the quiz.
- Can’t be denied without contradiction
  - He regretted going to the concert, but he didn’t go to the concert. (huh?)
- Can be relative to an assumed world
  - I dreamed the earth was flat, and a lot of people were glad when Columbus fell off the edge.

Presupposition & Memory for Events

- Loftus initiated research on real-world memory
  - Began with study of impact of question phrasing
- Loftus & Zanni (1975)
  - Did you see the broken headlight?
  - Did you see a broken headlight?

Presupposition & Surveys

- Do you get headaches frequently? If so, how often?
  - 2.2/week
- Do you get headaches occasionally? If so how often?
  - .71/week

What causes these effects?

- Questions facilitate experimenter demand effects
  - Hear question about “the” headlight and infer that there must have been a headlight, even though you don’t remember seeing one
- Question alters participants’ memory for events
  - Misleading information gets combined with the original information and results in a different memory for what happened

Loftus & Palmer (1974)

- Showed people movie of a car accident
- About how fast were the cars going when they
  - hit each other?
    - 8 mph
  - smashed into each other?
    - 10.5 mph

1 week later… Did you see any broken glass?

- (film contained no broken glass)
- "smashed" people more likely than "hit" people to say YES!
- Loftus & Palmer argued that question caused people to reinterpret accident and brought about a permanent transformation of their memory for the accident
Loftus 1975: False presuppositions & memory

- Was the leader of the 4 demonstrators male?
- Was the leader of the 12 demonstrators male?
- (there were 8)
- 1 week later:
  - How many demonstrators did you see entering the room?

Loftus (1975)

- Watch movie about car traveling along a country road
- How fast was the car going while traveling along the country road?
- How fast was the car going when it passed the barn while traveling along the country road?

A week later…

- Do you remember seeing a barn?
- People who received the first version of the question almost always said “no”
- People who received the misleading version of the question much more likely to falsely remember seeing a barn!

Loftus, Miller & Burns (1978)

- Subjects viewed series of 30 slides, answered 20 questions about them
  - Did another car pass the red Datsun while it was stopped at the:
    - Stop sign?
    - Yield sign?
- Forced choice recognition test
  - Stop Group: 75% correct
  - Yield Group: 41% correct
  - Lower than chance!
- Exposure to misleading information in questions altered the responses to later questions

Memory for Color

- Slide showed red car passing green car
- Did the blue car that drove past the accident have a ski rack on the roof?
- Did the car that drove past the accident have a ski rack on the roof?
- Answers to questions influenced by the way earlier statements and questions had been phrased.
  - Misled subjects chose bluer shade
- Memory for true color seems to have blended with the color implied by the misleading question

Loftus, 1977

Misinformation Effects

- No hesitation, no lack of confidence
- No effects when people realize info is false while reading it
  - Was the car that drove past the accident blue? (no subsequent misinformation effects)
- People who process misinformation carefully can ignore it
  - Tousignant, Hall, and Loftus (1986)
  - Subjects watch an event, read a misleading text about it, then do recognition test
  - Slow, careful readers:
    - Point out misinformation when it occurs
    - Not subject to subsequent misinformation effects
What causes misinformation effects?

Loftus
- Substitution Hypothesis
  - Later information overwrites established information
  - Consequences for memory:
    - Difficulty discriminating original event and subsequent information about it
    - Original trace is overwritten by later information
  - Controversial because most psychologists believe long-term memories are stored “forever” – not overwritten

McCloskey/Zaragoza
- Biased Guessing
  - Misleading info affects behavior when subjects unable to remember event
  - Doesn’t affect original memory

Lindsay/Johnson
- Blended Memory
  - Misleading info gets combined with original memory (doesn’t completely overwrite it)

Logic of Biased Guessing Account

Control Group
- 50% Remember
  - Answer correctly
- 50% Forget
  - 25% Guess Right
  - 25% Guess Wrong

Experimental Group
- 50% Remember
  - Answer correctly
- 50% Forget Original but remember something about the misinformation
  - 20% Guess Right
  - 30% Guess Wrong

Loftus, Miller & Burns (1978)

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Modified Recognition Test

McCloskey & Zaragoza (1985)

Predictions

Loftus
- Control subjects should be more accurate than misled subjects because wrench will overwrite the hammer in memory
- Misled subjects more likely to have to guess randomly between the two pictures

McCloskey & Zaragoza’s Biased Guessing account
- Misleading information will have no effect on performance
- This because, misleading info works by biasing subjects to choose the picture consistent with the misleading information (and neither picture qualifies)
- In fact, McCloskey & Zaragoza found similar performance in experimental and control groups

Zaragoza, McCloskey, Jamis

- “Loftus” Condition: What was on the desk?
- Cued Recall Condition: What brand of soft drink was on the desk?
- Biased Guessing
  - original memory intact, and question phrasing doesn’t bias guessing based on misinformation, so
  - control and experimental groups perform equivalently in cued recall
- Substitution
  - original memory overwritten, so
  - experimental group should perform worse than controls in cued recall
- Equivalent performance of control & experimental groups under cued recall condition
Lindsay/Johnson

• Reverse Misinformation Effect
  – Misleading information presented before the pictures also leads to misinformation effects
• Substitution Hypothesis predicts memory for pictures will overwrite memory for misleading questions
• RME consistent w/idea that people form a blended memory of pictures and of misleading information presupposed in questions asked of them

Take-Home Messages

• Misleading questions affect memory because both processes – understanding the questions and the encoding and retrieval of information – involves frames and schemas
• Schema-based reconstructive memory also explains why
  – Memory for verbal communication retains the gist of its meaning
  – Memory for pictures retains meaningful interpretation of picture
  – Memory for meaning lasts longer than for physical details

Take-Home Messages

• Schemas large, complex units of knowledge that encode typical properties of instances of general categories
  – Enable us to infer unseen info from what is seen
  – Lead us to ‘remember’ things we haven’t seen

In a nutshell...

• Comprehension an active process of integrating incoming information with knowledge stored in LTM
• Representation of knowledge something we’re still working on…
  – Features
  – Propositions
  – Frames, Scripts, Schemas
  – MOPs, TOPs, TAU
  – ???