Frame Semantics

Language, Mind, and Culture
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What is a frame?

• Structured representation of concept
  – Causal, temporal, intentional relationships
  – Attributes and values
  – Default values
• Also referred to as:
  – script, scenario, scene, cultural model, cognitive model, idealized cognitive model, domain, schema, experiential gestalt
• Frame semantics
  – Word meanings are defined relative to frames
  – Contrasts with truth conditional semantics in which meaning is defined by necessary and sufficient conditions

Knuckle

• How to define by features?
• Knuckle part of finger
• Finger part of hand
• Hand part of arm
• Finger-hand-arm part of body
• Understanding relationship between knuckle and other body parts is crucial for understanding the meaning of this concept

Friday

• Essential feature: fifth day of the week?
  – Week only has meaning in terms of its constituent days
  – Day only has meaning in terms of earth’s movement around sun
• Defined against background of frames for Day and Week
• Note that Week is a culturally constructed concept
  – Nature only has alternation of light and dark

Framing Friday

Framenet Project

• Project at UCB to specify frames needed to understand language
  http://framenet.icsi.berkeley.edu/
Competition Frame

- **Elements**
  - Competition, participants, place, prize, rank, score, and venue
- **People (Participants) participate in an organized rule-governed activity (Competition) in order to achieve some advantageous outcome. Rank and Score are different criteria by which the degree of achievement of the advantageous outcome is judged.**
- **Elements connected by events**
  - Lose, win, defeat, come in, play, etc.

Frames help listeners infer information

- If I tell you: “I lost the game.”
- You know:
  - There was another participant
  - I was engaged in rule-governed activity
  - In a particular place and venue
  - Activity had potentially advantageous outcome for me
  - I did not achieve my goal

Characteristics of Frames

- Frames are evoked by words
  - The teacher called on John to answer the question.
  - Evokes Classroom frame
  - John is the value of Student in the Classroom frame
- Some words profile particular elements of frames
  - Teacher profiles one element of the Classroom frame

Frames and Word Meaning

- **Commercial Event Frame (Fillmore)**
  - Elements: buyer, seller, money, goods
  - Events: transfer of money from buyer to seller; followed by transfer of goods from seller to buyer
- **Different verbs focus on particular aspects of the frame**
  - Buy: buyer and goods “I bought a car (from him).”
  - Sell: seller and goods “He sold his car (to me).”
  - Pay: buyer and money “I paid $1000 (for the car).”
  - Spend: buyer and money “I spent $1000 (on the car).”
  - Cost: goods and money “The car cost $1000.”
  - Charge: seller and money “He charged $1000 (for the car).”
Frames and Negation

- Frames provide alternative ways of understanding or construing the “same” objective situation
  - Stingy vs. Thrifty
- Can account for apparently bizarre cases of negation
  - “He’s not stingy; he’s thrifty!”

Frames and Definitions

- A bachelor is an unmarried man.

Frames and Definitions

- A bachelor is an unmarried man.
- Defined with respect to frame for average male life cycle
  - Start Career 20s
  - Married 20s or 30s
  - Have Kids 30s
  - Retire 60s
  - Die 70s
- Remember: frames are often idealized
Frames and Prototypes

- Breakfast: defined against frame for cycle of meals in the course of the day
  - Breakfast is:
    1. Meal after a period of sleep
    2. Meal eaten early in the day
    3. Meal with a special menu
- Pull all-nighter and eat eggs toast and coffee in the morning?
- Get up in morning and eat cheesecake and scotch first thing?
- Go to IHOP at 4pm and have eggs, toast, and coffee?
- Prototypical breakfast is when actual scenario matches the idealized model of sleeping through the night, waking, and eating eggs, toast, and coffee

Mother

- Woman who gave birth to child?
- Woman who takes care of child?
- Birth Model
  - Birth mother
- Genetic Model
  - Surrogate mother
- Nurturance Model
  - Adoptive mother, foster mother
- Marital Model
  - Stepmother
  
  (Lakoff, 1987)

Summary

- Frames are evoked when we understand words
- Some words highlight particular parts of a frame
- Frames evoke a particular perspective on a situation
- Frames suggest a particular history in a concept
- Frames often assume larger cultural frames
- Frames are structured representations of causal and relational information about objects, scenes, and events
- Knowledge is represented in an idealized form in frames
- Cultural behavior often involves negotiating over when to apply particular frames