

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.

Competition Frame: Elements

- **Competition:** name of competition
 - Joe lost the **Democratic primary**
- **Participant 1:** identifies first or only participant in the competition
 - Joe won the lottery
 - Joe defeated Leslie at tennis
- **Participant 2:** identifies the second participant in the competition
 - Joe defeated **Leslie** at tennis
- **Participants**
 - The **Yankees** won the World Series
- **Place:** where the event takes place
 - John's 3-0 win at **Wimbledon** surprised the crowd
- **Prize:** the prize won in a competition
 - John won a **bronze medal**.
- **Rank:** ranked results of a competition
 - John came in **third**
- **Score:** the score in the game
 - The Yankees won the game **2-0**
 - The Yankees won the game by **2 runs**
- **Venue:** the venue of the competition
 - The Padres will play in **PETCO Park**.

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

Characteristics of Frames

- Frames impose perspective on situation
 - John spent four hours on land.
 - John spent four hours on the ground.
- Frames provide important history
 - A woman marries a man. The man dies.
 - Widow
- Frames often presume larger cultural frames
- Frames are often idealized cases

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
- Nurture 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