

## Semantics – The Meaning of It All

### I. Semantic Relationships Among Words

- A. **synonyms**: have the same meaning in some or all contexts (though they may have different subcategorization requirements, etc.). Ex: give/donate, snatch/grab, gargantuan/big
- B. **antonyms**: have the opposite meaning in some or all contexts (in addition to having different subcategorization requirements, etc.) Ex: dark/light, in/out, left/right, right/wrong
- C. **polysemy**: having 2 or more *related* meanings. Ex: glare = “shine intensely”, “stare angrily”...so as to cause an unpleasant sensation in the viewer of the glare.
- D. **homophony**: having 2 or more *distinct* meanings. In effect, two separate words which happen to share the same phonological form. Hence, “homo” (same), “phon-“ (sound). Ex: club = “blunt weapon”, “social organization”. [rajt] = “correct”, “compose (an essay)”
- E. **lexical ambiguity**: when a single word’s exact meaning is unknown outside of context. Words which have polysemy or homophony are subject to this kind of ambiguity. Ex: “club” = ????. “He joined the SCA club.” = “social organization”
- F. **connotation**: the set of associations a word can evoke. Not necessarily its meaning. Ex: “winter” → cold, snow, hot chocolate, skiing, black ice, icicles,...
- G. **denotation (referents)** the set of entities in the world that a word refers to. These entities do not necessarily have to be real. Ex: “winter” has a denotation of the season between fall and spring. Ex: “unicorn” has a denotation of a horse with the horn in the middle of its forehead.
- H. **intension**: inherent concept which an expression evokes. Ex: US President → strong, capable leader of the United States of America
- I. **extension**: the set of entities an expression picks out in the world. May not necessarily line up with the intension. Ex: US President → George W. Bush

### II. Semantic Relationships Among Sentences

- A. **paraphrase**: a sentence with the same meaning or the same **truth conditions**, such that when only when one sentence is true is the other sentence true, and vice versa. Ex: “Jareth promised Sarah a crystal.” ↔ “Jareth promised a crystal to Sarah.”
- B. **entailment**: If the truth of sentence A guarantees the truth of sentence B, sentence A **entails** sentence B. Ex: “Jareth was disgusted with every goblin’s stupidity.” → “Jareth was disgusted with every *blue* goblin’s stupidity.”
- C. **contradiction**: If sentence A implies sentence B is false, sentence A **contradicts** sentence B. Ex: “Peter Pan cut off Hook’s right hand.” *contradicts* “Hook still has both hands.”  
(Note: If A contradicts B, then B contradicts A)

### III. Semantic Decomposition

- A. Trying to break up (“decompose”) words into features, the way we can do in phonology. Ex: “girl” → [+human, -male, -adult,...]
- B. The Problem: How do we know which features are the right ones? How do we know that the features we pick out will always apply when we use that word? Ex: An elderly man talking about an elderly lady he just met. “Wow – what a girl!” Is [-adult] still applicable here?

- C. One Idea: Try to just get the “fundamental” component which doesn’t change no matter what the context is
- D. Fundamental components example – what really basic verbs mean
- a. “go” ≈ CHANGE
    - i. (positional) Sarah *went* from the Bog Eternal Stench to the Junk Heaps.
    - ii. (possessional) The peach *went* to Sarah.
    - iii. (identificational) Jareth *went* from being a villain to being a tragic hero.
  - b. “see” ≈ use sensory organ to “comprehend” something
    - i. person with normal vision → use eyes to comprehend object
    - ii. blind person → use hands to comprehend object
    - iii. “Oh – I see!” → said when using mind to comprehend something

#### IV. The Conceptual System

- A. **fuzzy concepts**: no clear-cut boundary for when something is an example of that concept  
Ex: “beautiful”, “graceful”, “tall” → Where is the cut-off point for any of these? You must be X feet Y inches tall to be “tall”?
- B. **prototypes**: things which appear to be better exemplars of a particular category. They can be thought of as satisfying more of the compositional features which generally hold whenever that category is used.  
Ex: A 6’ 7” person is a better exemplar of “tall” than a 5’ 9” person.  
Ex: A robin is a better exemplar of “bird” than a penguin is.
- C. **graded membership**: the fact that some exemplars (especially the prototypes) are better than other exemplars, even though all exemplars technically belong to the category.  
Ex: A robin is better than a hawk, which is better than a penguin for membership in the category “bird”.
- D. **metaphor**: understanding one concept in terms of another. We use these all the time without thinking about it – not just in poetry.  
Ex: “time” as a commodity (like money) → *waste* time, *spend* time, *invest* time  
Ex: spatial orientation for psychological/physical states of the mind/body → He *fell* into a deep depression. His spirits *sank*. That *boosted* my spirits. Her health is *declining*.
- E. **lexicalization**: encoding concepts into words.  
Ex: light activity → glimmer, gleam, glint, glitter, shimmer, shine, sparkle, glare, flash, flare, glow  
*Note*: There is much cross-linguistic variation for how concepts are encoded. This is why it is very rare to be able to translate word-for-word from one language to another.  
Ex: English vs. Spanish motion verbs.  
English: The crystal rolled into the cave. [roll = move+roll, into]  
Spanish: The crystal entered into the cave rolling. [enter = move+into, rolling]
- F. **grammaticalization**: a concept which is lexicalized as an affix or a *non-lexical* category.  
Ex: “the” ≈ unique, “the crystal” → only one crystal and we know which one it is  
Ex: “-ed” = happened in the past, “disappeared” → disappearing happened in the past

## V. Sentence Interpretation

- A. **principle of compositionality**: the meaning of a sentence (or phrase) = the meaning of its component parts + the manner in which they are arranged in syntactic structure.  
 Ex: Sarah refused Jareth's offer. = 'Sarah' + 'refuse+past-tense' + 'Jareth+possessive' + 'offer' + NP-V-NP syntactic structure.
- B. **constructional meaning**: structural patterns carry meaning by *themselves*  
 Ex: "caused-motion" construction: NP-V-NP-PP  
 Jareth pushed/pulled/squeezed/forced/glared the goblin out of the room.  
 [X causes Y to go somewhere], X = 'Jareth', Y = 'the goblin', somewhere = 'out of the room'
- C. **structural ambiguity**: when component words can be combined in more than one way  
 Ex: "dashing pirates and rogues"  
 = dashing pirates & dashing rogues OR dashing pirates & plain old rogues  
 Ex: "Alice answered the cat with a wicked grin."  
 = Alice answered the cat, who was grinning wickedly at the time. (*cat with a wicked grin*)  
 OR  
 = Alice answered the cat by merely grinning wickedly at it. (*answered with a wicked grin*)

## VI. Thematic Roles

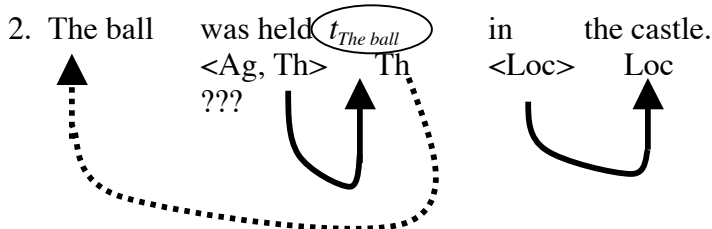
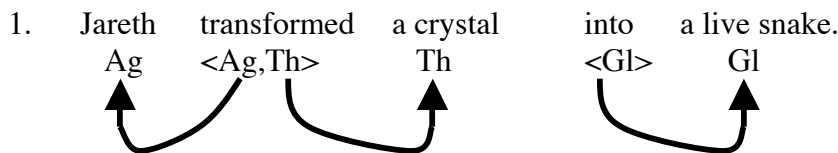
- A. Thematic roles categorize the relation between a sentence's parts and the event it describes.  
 B. Thematic roles are generally assigned **to NPs** in the sentence.  
 C. Thematic roles can be assigned **by a Verb or Preposition** in the sentence. Assignment happens based on the position of the NP in the **underlying structure**, before any movement/transformation takes place.  
 D. Thematic Roles:
- Agent (Ag)**: Performer of the action
  - Theme (Th)**: Thing undergoing the action
  - Source (Src)**: starting point for movement (using spatial metaphors, if necessary)
  - Goal (Gl)**: endpoint for movement (using spatial metaphors, if necessary)
  - Location (Loc)**: place where an action occurs

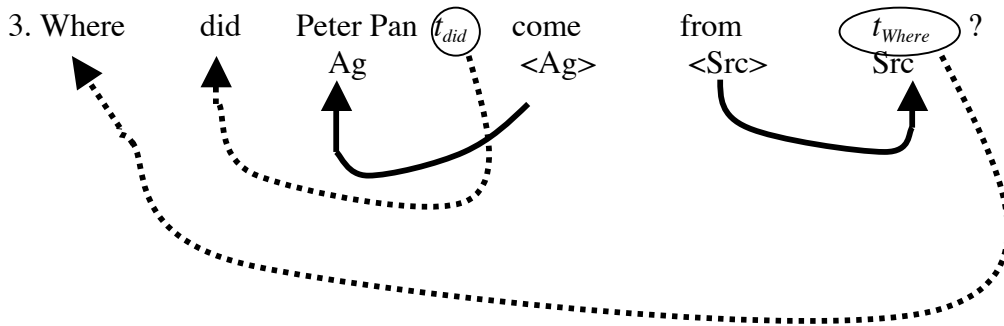
**Note**: These can be trickier to assign than you think, so be careful.

Ex: Lily sneezed.

→ Is Lily performing the action (Ag) or the thing undergoing the action (Th)?

- E. Examples of thematic role assignment ( $\theta$ -role assignment) in sentences.





F. Examples of what roles verbs assign.

1. walk → <Ag>
2. to → <Gl>
3. from → <Src>
4. at → <Loc>
5. mesmerize → <Ag, Th>

VII. Pragmatics

- A. **pragmatics**: background attitudes and beliefs, understanding of the context, knowledge of how language works, etc...pretty much everything else that goes into having a regular conversation with another member of the human race.
- B. **world knowledge**: one piece of background knowledge which helps with sentence interpretation  
 Ex: The judge denied the prisoner's request because he was *cautious/dangerous*.  
*cautious* → "he"="the judge"  
*dangerous* → "he" = "the prisoner"
- C. **presupposition**: assumption or belief implied by the use of a particular word  
 Ex: "regret" → Sarah later regretted finding Toby.  
 Did Sarah find Toby? Yes.  
 (**presupposed**)  
 Ex: "say" → Sarah said she found Toby.  
 Did Sarah find Toby? Maybe. (based on how honest we think Sarah is)  
 (**not presupposed**)  
 Ex: He stopped pillaging the countryside.  
 (**presupposed**: At one point, he *was* pillaging the countryside.)
- D. **setting**: physical environment in which something is uttered. Used to help make sense of the sentence. **Deictic** words like *this*, *that*, *here*, and *there* make use of the current setting in order to be understood.  
 Ex: Sarah ate the peach *here* and promptly fell asleep.
- E. **discourse**: connected series of utterances during conversation. Often, pronouns and deictic words will be **discourse-linked** - the object to which they refer will have previously been mentioned in the discourse.  
 Ex: A spoiled girl wished *her* brother away to the Labyrinth. She had a very interesting time *there*, attempting to rescue *him* from the Goblin King. Unfortunately for the king, *she* defeated *him* at the very last moment.

- F. **old vs. new information:** **Old** information is knowledge already available while **new** information is knowledge introduced at the time of the utterance.  
Ex: A spoiled girl → we have just now heard about this spoiled girl  
Ex: *The* spoiled girl → we have already heard about or know which spoiled girl we're talking about, and so we can refer back to her

## VIII. Conversations

- A. **conversational implicature:** information implied but not actually uttered.  
Ex: "Do you want to go out tonight?"  
"I have to wash my hair." ← implied "No".
- B. **Cooperative Principle:** a participant in a conversation will try to make a contribution appropriate to the conversation. When this is not followed, strange things occur.  
Ex: "Do you like peaches?"  
"My cat's breath smells like cat food." ← has nothing to do with the question asked
- C. **Conversational Maxims:** things which ought to be followed in order to be cooperative. Note, however, that everyone doesn't always want to be perfectly cooperative.
- Maxim of Relation:** Be relevant.  
(Avoid non-sequiturs.)
  - Maxim of Quality:** Be true.  
(Don't lie....except perhaps white lies.)
  - Maxim of Quantity:** Give exactly the amount of information required.  
(Don't drag on and on about something.)  
Example of violation:  
"Do you know the time?"  
"It's 3:30 on a Sunday afternoon during the very glorious month of June in the year of the Monkey..."
  - Maxim of Manner:** Avoid ambiguity/obscurity – be brief and orderly.  
(Sarcasm and double entendres are not so good.)  
Example of violation:  
"Who is in charge here?"  
"Why, the queen's husband's father's grandson, of course."  
"...you mean the prince?"

## Exercises

### 1. The Queen's Choice

"Now, I give you fair warning," shouted the Queen, stamping on the ground as she spoke; "*either you or your head must be off*, and that in about half no time! Take your choice!"

- A) What is the difference in the meaning of *off* between "You must be *off*" and "Your head must be *off*"? (Try to restate what these sentences are saying without using "off". I was able to do it with various forms of "move".)
- B) Do these two meanings have a homophonous relation or a polysemous relation? Explain why you think so.
- C) What kind of ambiguity can *off* be said to display?

## 2. Lessons with the Gryphon

“I never heard of ‘Uglification,’ ” Alice ventured to say. “What is it?”

The Gryphon lifted up both its paws in surprise. “What! Never heard of uglifying!” it exclaimed. “You know what to beautify is, I suppose?”

“Yes,” said Alice doubtfully: “it means--to--make--anything-- prettier.”

“Well, then,” the Gryphon went on, “if you don't know what to uglify is, you ARE a simpleton.”

- A) Given what the gryphon has said, what does “uglify” mean?
- B) What kind of relation does “uglify” have to “beautify”?

## 3. The Frumious Bandersnatch

“Shun the frumious Bandersnatch.”

- A) What lexical category is *Bandersnatch*? What about *frumious*? How do you know? (You may want to state your answer in terms of non-lexical categories and what they specify in phrase structure.)
- B) What sort of phrase is “the frumious Bandersnatch”?
- C) What lexical category is “shun”?
- D) What construction is this sentence an example of? (Use your answers from B and C to help you.)
- E) What sort of meaning does this construction seem to carry on its own? (Hint: Is it asking something, demanding something, stating something...?)

## 4. Odd Circumstances

The sun was shining on the sea,  
Shining with all his might:  
He did his very best to make  
The billows smooth and bright --  
And this was odd, because it was  
The middle of the night.

What sort of relation do the underlined sentences have?

### 5. Humpty Dumpty and Alice

“So here's a question for you. How old did you say you were?”

Alice made a short calculation, and said “Seven years and six months.”

“Wrong!” Humpty Dumpty exclaimed triumphantly. “You never said a word like it!”

“I thought you meant ‘How old are you?’ ” Alice explained.

“If I'd meant that, I'd have said it,” said Humpty Dumpty.

**Alice made a mistake because she assumed the underlined sentences had what relation to each other?**

### 6. Structural Ambiguity of Dooooom™.

“Time flies like an arrow.”

One meaning this sentence can have is “Time flies in the same manner that an arrow flies.”

Find at least 2 additional meanings for “Time flies like an arrow.” (There are 4 more.)

*Hint: Think about all the different categories each word can belong to. For instance, “time” can be a noun, but it can also be a verb. It may also act as part of a compound.*

### 7. Thematic Role Assignment.

Assign thematic roles to the following sentences. Make sure to mark exactly what word is assigning what thematic role and which role is assigned to which word. See the examples in section VI.

- A) You are leading her towards the castle.
- B) Things will go from bad to worse.
- C) Where did Jareth go to after he gave the peach to Hoggle in the forest?
- D) Will this path lead to our certain destruction if we take it?

### 8. Alice's Banquet

“You look a little shy; let me introduce you to that leg of mutton,” said the Red Queen. “Alice -- Mutton; Mutton -- Alice.”

The leg of mutton got up in the dish and made a little bow to Alice; and Alice returned the bow, not knowing whether to be frightened or amused.

**Explain why this is a rather odd circumstance – both the queen introducing Alice to the mutton and the mutton making a little bow – in terms of *your own* world knowledge.**

### **9. The Mad Tea Party**

“Have some wine,” the March Hare said in an encouraging tone.

Alice looked all round the table, but there was nothing on it but tea. “I don't see any wine,” she remarked.

“There isn't any,” said the March Hare.

“Then it wasn't very civil of you to offer it,” said Alice angrily.

**Explain why Alice is quite irritated with the March Hare, in terms of presupposition.**

*Hint: What word did the March Hare use that made Alice think there was wine to be had?*

### **10. Alice and the Door to the Palace**

She was standing before an arched doorway over which were the words "QUEEN ALICE" in large letters.

Just then the door opened a little way, and a creature with a long beak put its head out for a moment and said “No admittance till the week after next!” and shut the door again with a bang.

Alice knocked and rang in vain for a long time, but at last, a very old Frog, who was sitting under a tree, got up and hobbled slowly towards her: he was dressed in bright yellow, and had enormous boots on.

“What is it, now?” the Frog said in a deep hoarse whisper.

Alice turned round, ready to find fault with anybody. ‘Where's the servant whose business it is to answer the door?’ she began angrily.

“Which door?” said the Frog.

Alice almost stamped with irritation at the slow drawl in which he spoke. “This door, of course!”

**Explain why Alice is so irritated with the Frog in terms of old information and new information.**

*Hint: Think what is already known to Alice and the Frog when they say the things they say.*

### **11. On Mustard: The Duchess's Conversation with Alice.**

“Oh, I know!” exclaimed Alice, who had not attended to this last remark, “it's a vegetable. It doesn't look like one, but it is.”

“And the moral of that is--"Be what you would seem to be"--or if you'd like it put more simply--"Never imagine yourself not to be otherwise than what it might appear to others that what you were or might have been was not otherwise than what you had been would have appeared to them to be otherwise.”

**Explain what Maxims of Conversation the Duchess has violated with her reply to Alice.**