



SEMANTICS



Quick review

- Derivational relations (e.g. causative verbs, agentive nouns)
- Lexical typology - cross-linguistic study of word meaning
 - Core vocabulary/universal lexemes
 - Polysemy
 - Color terms
- Sentence relations and truth



Today

- Necessary Truth, *A Priori* Truth, and Analyticity
- Presupposition



Necessary truth, a priori and analyticity

- Semanticists call a sentence's being true or false its **truth-value**
- The facts that would have to obtain in reality to make a sentence true or false, its **truth conditions**.



Necessary truth, a priori and analyticity

1. *The earth revolves around the sun*
2. *My father is my father*

- Sentence 1 expresses an **empirical** or **contingent** truth.
- It's truth depends upon the facts of the universe
- And it could've been false (if the universe had developed differently)

- Sentence 2 expresses a **necessary** truth
- It's truth depends upon its linguistic structure and cannot be false
- 2. *My father is my father*



Necessary truth, a priori and analyticity

1. *The earth revolves around the sun*
2. *My father is my father*

- Sentence 2 is also true ***a priori***.
- A priori truths are known to be true without empirical investigation (without observation)
- Sentence 1 was *discovered* to be true empirically and is hence true ***a posteriori***



Necessary truth, a priori and analyticity

1. *The earth revolves around the sun*
2. *My father is my father*

- Sentence 2 is also **analytic**.
- Analytic statements are those where the truth follows from the meaning relations within the sentence, regardless of any relationship with the world.
- Sentence 1 is **synthetic**.
- Synthetic are true because they accord with the facts of the world.



Necessary truth, a priori and analyticity

- These notions are closely linked, yet not quite identical.
- The *a priori/a posteriori* distinction is epistemological: it concerns the source of *what the speaker knows*.
- The necessary/contingent distinction is metaphysical, where we are philosophically questioning *the nature of reality*.
- The analytic/synthetic distinction is semantic. Analytic sentences are true because of the meaning of the words within them.



Sentence relations and Truth

- So far we've noted that truth relations helps explain certain semantic relations such as...

Sentence relations and Truth

- **Entailment**

Composite truth table for entailment

p		q
T	→	T
F	→	T or F
F	←	F
T or F	←	T

Sentence relations and Truth

- **Synonymy**

Composite truth table for synonymy

p		q
T	→	T
F	→	F
T	←	T
F	←	F

Sentence relations and Truth

- **Contradiction**

Contradiction

p		q
T	\rightarrow	F
F	\rightarrow	T
T	\leftarrow	F
F	\leftarrow	T

Presupposition

- *a. He's stopped jogging in the morning.*
- *b. He used to jog in the morning.*

- *a. I don't regret leaving London.*
- *b. I left London.*

- *a. John's brother has just got back from Texas.*
- *b. John has a brother.*

Presupposition

There are two main approaches to analyzing presupposition, a semantic and pragmatic

1 Presupposition as a truth relation (semantic)

- Step 1: If **p** (the presupposing sentence) is true then **q** (the presupposed sentence) is true.
- Step 2: If **p** is false, then **q** is still true.
- Step 3: If **q** is true, **p** could be either true or false.

p		q
T	→	T
F	→	T
T or F	←	T

Presupposition

Presupposition

p		q
T	→	T
F	→	T
T or F	←	T

For example:

- *John's brother has just got back from Texas.*
- *John has a brother.*
- If it is true that John's brother has come back from Texas, it must be true that John has a brother.
- Similarly, if it is false that John's brother has come back from Texas (if he is still there, for example), the presupposition that John has a brother still survives.
- Finally, if it is true that John has a brother, it doesn't tell us anything about whether he has come back from Texas or not: we just don't know.

Presupposition

Note the difference between presupposition and entailment:

Entailment

p		q
T	→	T
F	→	T or F
F	←	F
T or F	←	T

- a. I saw my father today.
- b. I saw someone today.

- a. I didn't see my father today.
- b. I saw someone today. **T/F**

Presupposition

p		q
T	→	T
F	→	T
T or F	←	T

- a. The mayor of Liverpool is in town.
- b. There is a mayor of Liverpool.

- a. The mayor of Liverpool isn't in town today.
- b. There is a mayor of Liverpool. **T**

Presupposition

- So it seems that viewing presupposition as a truth relation allows us to capture one interesting difference between the behavior of presupposition and entailment under negation.

Presupposition

1 Interactional approach to Presupposition (pragmatic)

- This approach is based on speaker intentions
- Consider:
 - a. John has a brother X.
 - b. X has come back from Texas.
- The speaker might judge that the listener knows a but not b, thus asserting:
- *John's brother has just got back from Texas.*

Presupposition failure

- One phenomenon which has traditionally caused problems for a truth relations approach but may be less problematic in an interactional approach is **presupposition failure**.
- a. The King of France is bald.
- b. There is a King of France.
- Since there is no King of France (b is false), what is the status of sentence a?
- Is it false or in a gray area, neither true nor false?
- In a truth-based approach, we need to
- add a line to our truth table, e.g.

A second truth table for presupposition

p		q
T	→	T
F	→	T
T or F	←	T
?(T or F)	←	F

Presupposition failure

- Bertrand Russell's famous solution was to analyze definite descriptions as complex expressions roughly equivalent to:
- The King of France is bald is true if and only if:
 - a. at least one thing is the king
 - b. at most one thing is the king
 - c. whatever is the king is bald.
- On this analysis, it follows that the sentence "The King of France is bald" is false because a is false.
- The cost however is a large discrepancy between the surface language and the semantic representation.
- Do we really want to say that the use of a definite NP is underlyingly a cluster of three statements?

Presupposition failure

- For an interactional approach, there is less of a problem.
- Such an approach would claim that a speaker's use of definite NPs is governed by conventions about the accessibility of the referents to the listener.
- For example, if one utters the sentence
- *The Queen of China is beautiful*
- One may say, not that the speaker has said something false, but rather that the speaker has made a mistake in presuming that there is such a person.



Exercises

- P. 106
- 4.1
- 4.2
- 4.5
- 4.6