# Meaning 3.2: Semantics 1 — Truth conditions and compositionality

May 15, 2020

Hello, world — semantics

(i) **Entailment**: Proposition *A* **entails** proposition *B* if the truth of *A* guarantees the truth of *B*.

(ii) **Implicature**: Proposition *A* is an **implicature** proposition *B* if *B* is inferred from *A* given the context, but *B* is not necessarily true.

(iii) **Presupposition**: A proposition *B* is a **presupposition** of proposition of *A* if proposition *B* is a precondition on the truth / falsity of *A*

Semantics as the interface between concepts and the world
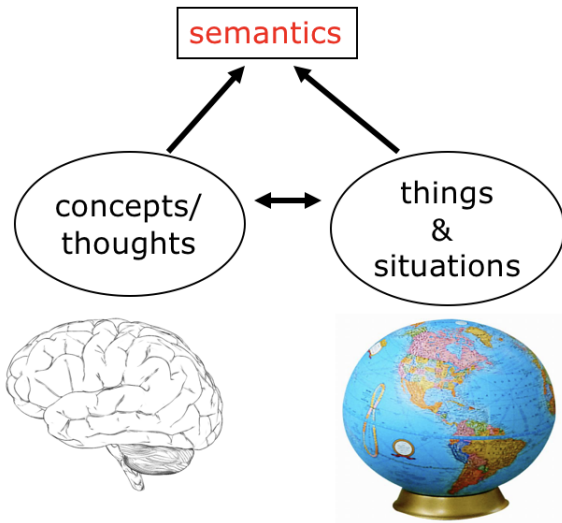
Sentence meaning as truths and falsities

Consider: *It's snowing outside.*

Question: Is it true or false?

Answer (?):

. In most circumstances, we can use our current world knowledge to find out whether it is true/false.

. Note, though, that we do not always whether a sentence is true or false: we are not omniscient.

. However, we still understand what they mean, or would/could mean, though.

A pikachu is surfing

Enter — truth conditions

Consider: *A pikachu is surfing.*

Note:

(i) Understanding the meaning of this sentence doesn't require much knowledge about pikachus.

(ii) We don't even have to believe they exist.

(iii) We don't even have to know whether the sentence is true or false.

(iv) But, it does require us knowing under which conditions it would be true or false; we call these **truth conditions**.

Truth conditions — more formally

Truth conditions: The conditions that must be met for a sentence to be true.

Example: The sentence *A pikachu is surfing* is true if and only if (iff) the following conditions are met:

(i) there is an individual that belongs to the kind 'pikachu'.

(ii) that pikachu is on a surfing board riding on the tides — i.e. surfing

(iii) the surfing is taking place right now.

Take-home — main assumption 1

Assumption 1: Meaning is truth-conditional.

Intuition: To understand the meaning of a sentence we need to understand the conditions under which it is true.

You can think of truth conditions as necessary conditions for the truth of the sentence. The meaning of a sentence will be the conjunction of all those necessary conditions; at that point, the conjunction of those necessary conditions will become the sufficient and necessary condition for that sentence's truth — note the 'iff' in the future.

Enter — compositionality

We know that the meaning of a whole sentence can be represented by the truth-conditions induced by its components.

It then becomes pretty natural for us to hypothesize that these components combine systematically.

Compositionality: The meaning of a sentence is determined by the meaning of its parts **and** by the way these parts combine (think attachment ambiguity).

A quick caveat — idioms

However, note that some phrases can lead to sentences which have meanings that are non-compositional; typically, this occurs with idiomatic expressions.

Consider: *Mariah spilled the beans*.

(i) non-compositional; no beans involved.   IDIOMATIC

(ii) compositional; there are some beans, and the beans were spilled.
                                                              LITERAL

Literal meaning is not memorizing

We see that to understand idiomatic meanings, we need to memorize the meaning of the chunk *spill the beans*.

For literal meaning, we only need to memorize the meanings of the words — not whole sentences.

Then, we need to learn how word meanings compose / are put together to form more complex meanings.

This reduction in information needed that we gain with compositionality is most saliently similar to what we did with syntax; however, it is more abstractly similar to what we have been doing throughout this quarter.

Take-home — main assumption 2

Assumption 2: Meaning is compositional.

Intuition: To understand the meaning of a sentence we need to understand the meaning of its parts which can combine; additionally, we need to know how they combine.

End of this video's material.