The scope and goals of semantics

LING-053 Semantics 1
UCSC
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• Semantics is the study of **the meaning of linguistic expressions**.

• The language could be a natural language, say English or Japanese, or an artificial language, say a computer programming language.

• In this class we are interested in the meaning of expressions of **natural languages**.
• Semantics is a study of **semantic competence**.

• One of the questions that we will address is: What do we know when we know the meaning of a linguistic expression?

• For example, take the following sentence:

  (1) You cannot refill the bottle with one hand.
• Probably you have never heard this sentence before. However you know what it means. In particular, you surely know the following:

1. The sentence is about the abilities of the speaker’s interlocutor (you);

2. It’s about a bottle which must be salient or unique in the context of utterance (the);

3. The sentence is negative, i.e. it denies that the interlocutor has a certain ability;

4. The bottle must have been filled at some point in the past (re-);

5. It’s not the bottle that has one hand.
• Meanings are intimately related to the structure of a sentence. The order of the words in a sentence reflects a structure.

(2) John does not drive a Ferrari.

(3) A Ferrari does not drive John.

• A crucial part of semantics is the study of the relation between the meaning and the form of a sentence.
• Consider the following pair:

(4) Jack is a responsible electrician.

(5) Jack is an electrician.

• Suppose you have never heard these two sentences. However, you know a lot about each of them and their relation.

• If you know that (4) is true, surely you know that (5) is true.
• An account of our semantic competence must explain the fact that our ability of producing and understanding sentences is **infinite**.

• A quote from the German logician Gottlob Frege:

> *It is astonishing what language can do. With a few syllables it can express an incalculable number of thoughts, so that even a thought grasped by a terrestrial being for the very first time can be put into a form of words which will be understood by someone to whom the thought is entirely new. This would be impossible, were we not able to distinguish parts in the thought corresponding to the parts of a sentence, so that the structure of the sentence serves as an image of the structure of the thought.*
• This is one of the most important features of language: semantic compositionality.

• **Semantic compositionality**: *The meaning of a sentence is determined by the meanings of its parts and by the ways in which those parts are assembled.*

• Semantics will:

  1. Account for the meanings of the *basic* elements of the language.

  2. Account for how the meanings of *complex* expressions are built up from the meanings of their parts. I.e. what the semantic modes of compositions are.
• In the type of semantics that we will be especially interested in, what is called formal semantics, semantics does not really tell us what meanings are.

• So, what is meaning?

  1. Usage?

  2. Inner cognitive representations?

  3. Objects in the world?
• Back to semantics. Semantics tells you what sentences mean.

• Now, if you know what a sentence mean you know when it is true and when it is false.

• Therefore, a very important part of semantics is concerned with providing the truth conditions for a sentence $S$, i.e. the conditions that the world must meet for the sentence to be uttered truthfully.