Natural language semantics

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August 27, 2014

A good place to begin is with the following quote from the German philosopher 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 human 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. ('Compound thoughts')

Instead of saying that it is astonishing what language can do, Frege could have said that it is astonishing what we can do with language.

Here, in particular, are two astonishing things we can do with language. The first concerns our knowledge of which sentences of our language are grammatical, and which are not.

Consider the following sentences, and ask yourself whether they are grammatical or not:

- John loves Jane.
- John loving Jane.
- When Fred eats food gets thrown.
- The horse raced past the barn fell.
- Mary gave the child the dog bit a bandaid.
- Few students ever take a course in semantics.
- Many students ever take a course in semantics.
- John is easy to please.
- John is eager to please.
- It is easy to please John.
- It is eager to please John.

There are a few items on the list that may have taken some thought; but for the most part you will have been able to easily categorize these sentences into grammatical ones on the one hand, and ungrammatical ones on the other. How did you manage to do this?

Suppose one said that when we learn English we simply memorize a list of sentences which are grammatical, and use this list to make judgements about grammaticality. What would be wrong with this idea?

A natural thought is that, instead, there are rules which determine whether or not a string of words is grammatical in English, and that when one learns to speak English, one gains some sort of implicit mastery of these rules. It has seemed to many that, were there not some rules of this sort, it would be impossible to gain the sort of grammatical knowledge that we have. One of the things that a syntactic theory does is to explain the rules which determine conditions of grammaticality for a language.

The first two sentences on our list might make the construction of this sort of theory look pretty easy. But the last six make it look pretty hard.

But our knowledge of language is not limited to our knowledge about which strings of words are grammatical and which are not. We also, it seems, know the *meanings* of sentences of our language. And, as above, this knowledge extends to knowledge of the meanings of sentences we have never heard. The following slightly extreme example, due to Josh Dever, makes the point:

> Having but recently exhumed the vicar's absurd nephew, the garrulous author of several bombastic political pamphlets slumped against a nearby statue commemorating the discovery of oxygen by the Danes, and wistfully contemplated a large wheel of pungent blue cheese.

What could explain our ability to know the meanings of novel sentences (or, at any rate, sentences which are novel to us)?

The following is an extremely natural answer: when we learn a language, we learn the meanings of the individual words of that language, and we also learn rules about how the meanings of complex expressions are built up out of the meanings of words. When we encounter a new sentence, we figure out what it means by using our knowledge of the meanings of the words in the sentence along with out knowledge of how the meanings of complex expressions are determined by the meanings of the words which make them up.

This explanation of our knowledge of meaning leads immediately to a pair of questions: What are the meanings of the words of English (or other natural languages)? And what are the rules which determine the meanings of complex expressions on the basis of the words of which they are made up?

To answer these questions is to give a *compositional semantic theory* for English. That is the sort of theory we will be trying to construct in this course.