

Lecture Notes on Semantic Ambiguity

December 7, 2008

1 Semantic Ambiguity

When we say that a sentence is **ambiguous**, we mean that the same string of words can be associated with more than one meaning. A familiar kind of ambiguity comes from the fact that individual *words* in a language can be ambiguous. For example, the English word *bank* has (at least) two unrelated meanings:

bank₁ A financial institution.

bank₂ The edge of a river.

Any sentence containing the word *bank* is potentially ambiguous, since there are two distinct meanings for this word. This kind of ambiguity is known as **lexical ambiguity**, since the ambiguity comes from two possible meanings for a single lexical item in the sentence.

There is another kind of ambiguity, however, that does not result from ambiguity in the meaning of the individual words that make up the sentence. For example, consider the sentence in (1).

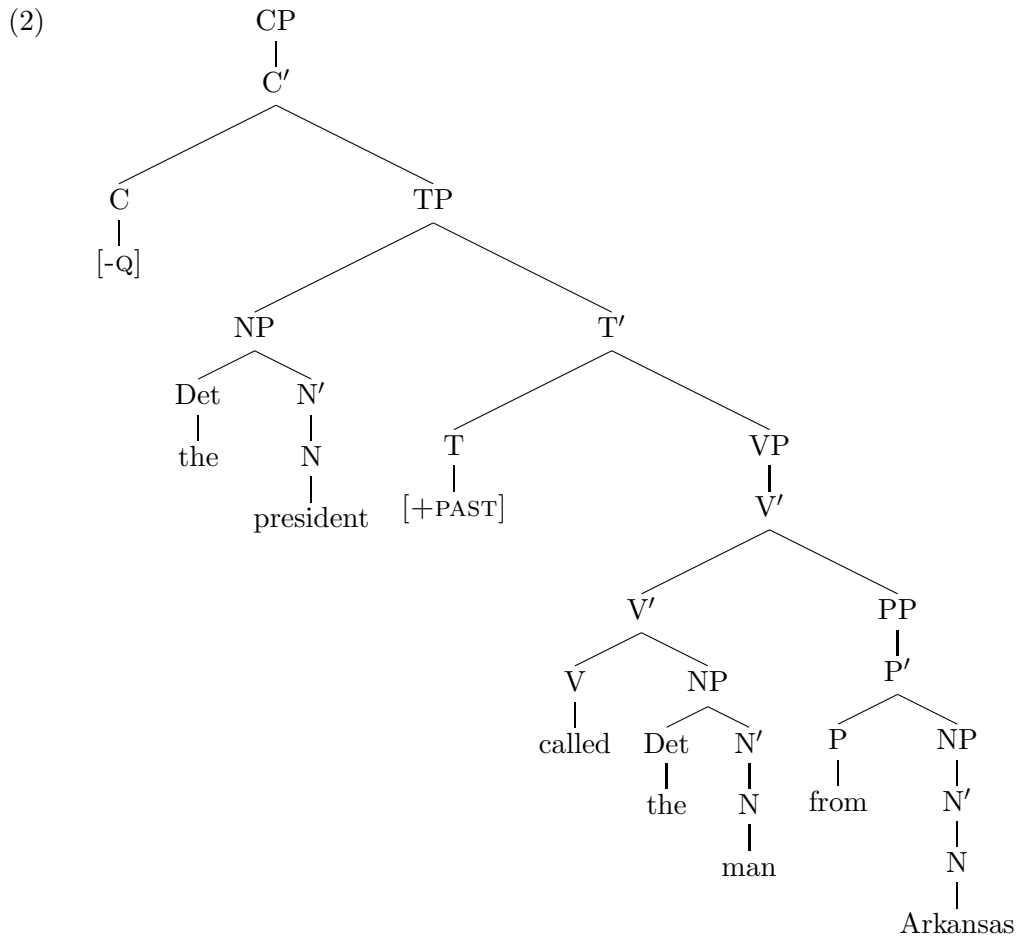
(1) The president called the man from Arkansas.

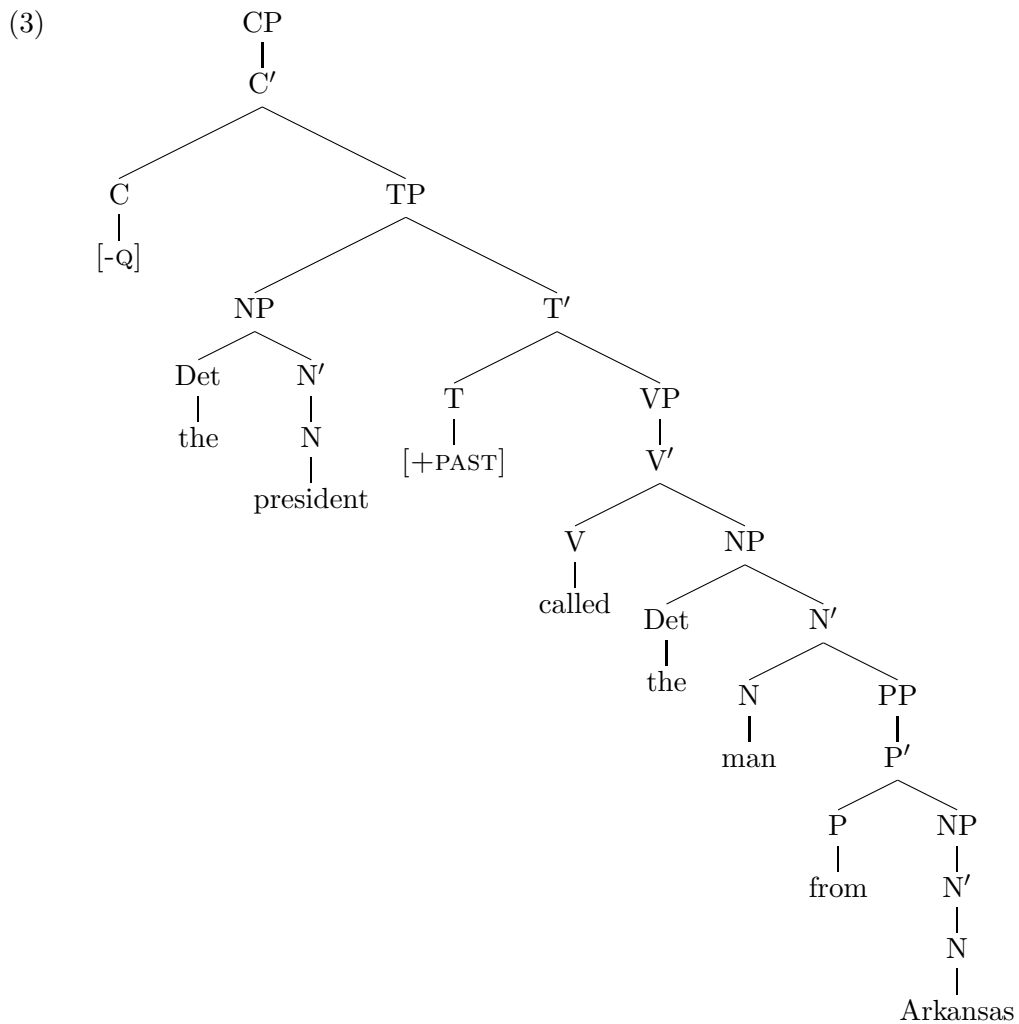
When we consider what a sentence means, we should ask ourselves what kind of situation the sentence describes. There are two distinct types of situations that the sentence in (1) can be used to describe:

1. The president makes a call from Arkansas to the man. We don't know the location of the man he calls.
2. The president calls the man. The man is from Arkansas. We do not know the location that the president makes the call from.

The ambiguity in this sentence is not due to lexical ambiguity. Even though each of the words in this sentence is unambiguous, the sentence as a whole has two possible meanings.

The kind of ambiguity illustrated in (1) is an example of what linguists call **structural ambiguity**. What this means is that there is more than one possible phrase structure tree for the sentence, and each of the possible phrase structure trees is associated with a different interpretation. When we analyze the syntactic structure of the sentence in (1) using our phrase structure rules, we find that there are two places that we can locate the PP *from Arkansas*. This leads to the two possible structures illustrated below.





The only difference between the structures in (2) and (3) is the position of the PP. In (3), the PP is inside of the NP, next to the N *man*. This gives us the NP *the man from Arkansas*. This NP gives us a meaning in which the man is described as being from Arkansas. Therefore, the structure in (3) has a meaning in which the president calls a man who is from Arkansas.

On the other hand, the structure in (2) has the PP attached to the V-bar. Remember that the head of the VP is the verb “to call”. When a PP attaches to a V-bar, it modifies the meaning of the verb that heads that V-bar. Therefore, the sentence in (2) describes a situation in which the call is being made from Arkansas.