

“If that’s a presupposition, I’m the King of France!”

Linguist 130A/230A Section

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1 What is a presupposition (and who is responsible for it?)

At an intuitive level, it’s common to think of the presuppositions of an utterance as those things that are taken for granted in making the utterance:

- (1) Give the Russian spy a drink with an umbrella.
 - a. *There’s a uniquely identifiable Russian spy*
 - b. *My addressee will understand who I mean to refer to by “the Russian spy”*
 - c. *There is at least one drink with an umbrella*
 - d. *My addressee is familiar with the concept of a drink-umbrella and I don’t need to be more specific to avoid having the Russian spy handed a drink and an umbrella.*
 - e. What else ...?

Since we’re currently in the business of sorting out “classes” (or types) of meanings,¹ we might like a slightly more formal notion of presupposition. Here are some definitions that have been tried out:

- (2) **A semantic view:**
 - a. (Strawson 1952) A statement A presupposes another statement B iff
 - i. If A is true, then B is true.
 - ii. If A is false, then B is true.
 - b. A sentence A presupposes another sentence B iff:
 - i. $A \vdash B$
 - ii. $\neg A \vdash B$

Example 1.1. The King of France.

The King of France is bald \rightsquigarrow *There is a King of France*

The King of France is not bald \rightsquigarrow *There is a King of France*

- (3) **Pragmatic views:**
 - a. An utterance A presupposes a proposition B iff A is appropriate only when B is mutually known by participants

¹The idea that there are lots of different ways of meaning things is central to pragmatics, and if you find this as fascinating as I do, I’d highly recommend checking out Grice’s 1957 “Meaning” – linked on the section website.

- b. A utterance A presupposes a proposition B iff, in uttering A , a speaker S is *acting as if* B is a part of the common ground.

Example 1.2. Jones and his wife.

Jones has stopped beating his wife \rightsquigarrow *Only appropriate if it is mutually known that Jones was beating his wife.*

Example 1.3. A tried-and-true excuse.

My dog ate my homework \rightsquigarrow *The speaker is acting as if it is common knowledge that he/she has a dog.*

Currently, the pragmatic view is in vogue: notice that, in many cases, while it might be pragmatically “odd” (or even uncooperative) to introduce new information via a presupposition (e.g. “My sister is picking me up from the airport,” if it’s unknown that the speaker has a sister), it’s also relatively easy to simply assimilate or *accommodate* the new information into a set of background assumptions to a discourse. The pragmatic view seems to allow for this. Nevertheless, the properties that prompted the semantic definitions seem to be relevant to presupposition in general, and we can use negation as a test for whether or not something is presupposed.

2 Projection tests: diagnosing presuppositions

One way that presuppositions seem to differ from entailments (and some other types of meaning) is in their *projection* behavior. Consider the following:

- (4) John’s sister is called Mary.
 - a. \vdash The person who is identifiable as John’s sister goes by the name Mary.
 - b. \rightsquigarrow John has a sister
- (5) It’s not the case that John’s sister is called Mary (or, more naturally: John’s sister is not called Mary.)
 - a. \nvdash The person who is identifiable as John’s sister goes by the name Mary.
 - b. \rightsquigarrow John has a sister.

So, while the entailed content doesn’t “project” through the negation, the presupposition (that John has a sister) is unaffected. It’s a fact about the world that the speaker is taking for granted in order to communicate some additional information – whether the information is that John’s sister is or is not called Mary, the speaker is still behaving as if she (and you) believe that John has a sister.

We can use a set of similar “projection” tests to try and diagnose something as presupposed (vs. entailed):

1. **Negation.** See above.

- (6) The King of France is bald \rightsquigarrow There is a King of France
- (7) The King of France is not bald \rightsquigarrow There is a King of France

2. **Questions/interrogatives.** If we turn a declarative statement into a question, its presuppositions persist (but its entailments become precisely what is being questioned)

(8) **Target sentence:** Jones has stopped beating his wife.

(9) Has Jones stopped beating his wife?

- a. Whether or not Jones is currently beating his wife is what is made “open” by this question
- b. The speaker, nevertheless, is acting as if the fact that Jones was beating his wife was common knowledge.

3. **Conditional statements.** When we conditionalize a statement S (i.e. stick an “if” in front of it), we achieve kind of the same effect as turning it into a question – we make its entailments open or unsettled in the discourse context. But, again, this doesn’t affect its presuppositions.

(10) **Target sentence:** My sister is picking me up from the airport.

(11) If my sister is picking me up from the airport, I’ll be at your house in time for dinner.

- a. It’s not settled whether or not my sister will pick me up from the airport.
- b. The speaker is treating the fact that she has a sister as common knowledge.

2.1 Exercises: applying the projection tests

1. George knows that he’s been receiving instructions from an evil alien intelligence.

Test: George has been receiving instructions from an evil alien intelligence.

2. Ed regrets doing a PhD in linguistics.

Test: Ed did a PhD in linguistics.

3. Only Hermione passed the test.

Test: No one else passed the test.

4. Even the chemistry students attended the meeting.

Test: It was unexpected that the chemistry students would attend the meeting.

Test: Someone other than the chemistry students attended the meeting.

5. Unfortunately, Sam has started smoking again.

Test: The speaker thinks smoking is a bad thing.

Test: Sam used to smoke.

Test: Sam stopped smoking.

6. Homer managed to solve the algebra problem.

Test: Homer solved the algebra problem.

7. Jessica forgot to take the dog for a walk.

Test: Jessica didn't take the dog for a walk.

8. Jessica forget that she took the dog for a walk.

Test: Jessica took the dog for a walk.

3 Presuppositional determiners and partial functions

As you might have noticed from the exercises in the previous section (or in class/from Chris's handout), certain words and constructions seem to naturally introduce presuppositional content (e.g. *know*, *realize*, *yet*). Determiners like *the* and *both* do this all the time! In class we talked about capturing this behavior with partial functions.

What do partial functions and presuppositions have to do with each other?

Both the semantic and pragmatic definitions of presupposition given in section 1 come back to the idea that *something goes wrong* in assigning meaning to a sentence whose presuppositions fail or are false. With our view of constructing meaning as function application, we can think of what is going wrong as two pieces failing to be the right sort to combine.

Example 3.1. We can't assign meaning to a potential QP “both running” because *running* is a verb and isn't the kind of thing that *both* wants as an argument; $\llbracket \text{running} \rrbracket$ is not in the domain of $\llbracket \text{both} \rrbracket$.

The same kind of thing happens with presuppositional determiners: they can only combine with NPs with certain properties.

Two vs. Both:

Remember the homework problem on “two” vs. “both”? We can use what we know about presuppositions to see what's going on here: *both*² is a function that isn't defined if the argument we give it has a size other than two, but *two* doesn't have this restriction.

$$(12) \quad \llbracket \text{both} \rrbracket(f) = \begin{cases} \lambda g(\{x : f(x) = T\} \subseteq \{x : g(x) = T\}) & \text{if } |\{x : f(x) = T\}| = 2 \\ \text{undefined} & \text{else} \end{cases}$$

On the other hand, we have:

$$(13) \quad \llbracket \text{two} \rrbracket(f) = \lambda g(|\{x : f(x) = T\} \cap \{x : g(x) = T\}| \geq 2)$$

This explains why it doesn't make sense to say “both dogs are outside” if your family has three dogs (even if only two of them are outside) – the function *both* is not defined for the set that *dogs* picks out in this context. On the other hand, “two dogs are outside” is totally interpretable (and is either true or false depending on the number of dogs outside).

Thought exercise:

Suppose instead that your family has two dogs. Then “Both dogs are outside” is fine – and is true or false depending on where the dogs are. But suddenly “Two dogs are outside” seems like a weird thing to say, even if both dogs are outside. Why? What do you think is happening here?

²**NB:** Assuming $f(x)$ is a real-valued function, notice how (12) is similar to:

$$f(x) = \begin{cases} \sqrt{x} & \text{if } x \geq 0 \\ \text{undefined} & \text{else} \end{cases}$$