

1. Identifying Presuppositions:

(1) The person who broke the typewriter was Sam.

Sentence (1) seems to entail the following sentences:

- (2) a. Someone broke the typewriter.
- b. Only one person broke the typewriter.
- c. Sam broke the typewriter.

However, we have a different feeling about the nature of these entailments. In particular (2)a and (2)b feel somewhat different from (2)c. But, how so?

There is a clear feeling (I think) that in “an ideal conversation”, (2)a and (2)b would already be “taken for granted” at the point in which (1) is uttered, and that (2)c would be taken to be the noteworthy piece of the conversation.

(3) We say that sentence S, presupposes p if p is taken for granted in every “ideal conversation” in which S is uttered.

Major problem: is it clear that we have reliable intuitions about how things work in an ideal conversation, given that so many of our conversations are far from ideal (as our discussion of accommodation has revealed).

Two fortunate facts:

- a. There are a few tests that allow us to identify presuppositions (with no reliance on our “theoretical” intuitions about the nature of ideal conversations).
- b. Presuppositions have characteristic projection properties.

2. Two Tests (from Kai’s handout)

Hey, wait a minute! (HWM)

See Paula’s handout.

What’s more! Furthermore... (WM, Percus 1998 lecture notes)

- (4) A. Sam broke the typewriter.
- B. #Yes, and furthermore, The person who broke the typewriter is Sam.
- B. Yes, and furthermore, Sam broke the typewriter alone.

If S is equivalent to p and S' and p is a presupposition, yes, and what’s more S (or yes, furthermore S) is a bad response to an utterance of S'.

3. The Problem

- (5) We say that a sentence S presupposes p , if
- p is taken for granted in utterances of S (as diagnosed by HWM, WM...)
 - p has special projection properties (to be specified).

Empirical Claim: If p is an entailment of S , p satisfied (a) iff p satisfied (b)
(Our two tests for presuppositions coincide.)

Challenge: To understand why the empirical claim might be right.

In other words, to understand:

- What type of semantic representation for S (together with principles of language use) leads to the pragmatic fact that p is taken for granted.
- To understand how the semantic representation of S (together with other principles of grammar and of language use) leads to the particular projection properties we will identify.

4. Stalnaker's Strategy

- (6) We say that a sentence S semantically presupposes p , if the denotation of S is a partial function, which is undefined in a world w , unless p is true in w .

Every conversational context could be said to be based on a set of shared presuppositions (Common Ground, CG), which could be characterized (with clear idealizations) as a set of possible worlds (Context Set, CS; henceforth, simply C).

The reason we utter a sentence S is to add its content to CG. This fails unless the presuppositions of S are true in every world in C .

$$(7) \quad \text{CCP}(S\{p\}) = \lambda C: C \subseteq p. C \cap \{w: S'(w)=1\}$$

Stalnaker asks us to imagine a procedure that for every world in C , w , needs to decide whether w stays in the updated context or not. If S' is false in w , the answer is *no*, if S' is true in w , the answer is *yes*. If S' is undefined in w , the procedure fails.

Does this help us in any way in the projection problem?

4.1. Negation, a semantic approach (from Heim and Kratzer, references?)

$$(8) \quad \text{neg}' = \lambda p_t. p = 0$$

Which is shorthand for:

$$(9) \quad \text{neg}' = \lambda p: p \in \{0,1\}. p = 0$$

which is the same as:

$$(10) \quad \text{neg}' = \lambda t. \begin{cases} 1 & \text{if } t=0 \\ 0 & \text{if } t=1 \\ \text{Undefined,} & \text{otherwise} \end{cases}$$

- (11) John doesn't admire the king of France.
 λw : there is a unique KoF in w . John admires the KoF

Hence negation is a "hole"

4.2. Conjunction and conditionals, a pragmatic approach

$$(12) \quad \text{and}' = \lambda t_1. \lambda t_2. t_1 = t_2$$

Conjunction should be a hole too, but it's a filter:

- (13) Moldavia is a monarchy and the King of Moldavia is powerful.
 λw : there is a unique KoM. Moldavia is a monarchy and the KoM is powerful.

Stalnaker, the two sentences are parsed separately (a matter of language use):

"Once a proposition has been asserted in a conversation, then (unless or until it is challenged) the speaker can reasonably take it for granted for the rest of the conversation. In particular, when a speaker says something of the form *A and B*, he may take it for granted that *A* (or at least that his audience recognizes that he accepts that *A*) after he has said it. The proposition that *A* will be added to the background of common assumptions before the speaker asserts that *B*. Now suppose that *B* expresses a proposition that would, for some reason, be inappropriate to assert except in a context where *A*, or something entailed by *A*, is presupposed. Even if *A* is not presupposed initially, one may still assert *A* and *B* since by the time one gets to saying that *B*, the context has shifted, and it is by then presupposed that *A*."

But. How general is this?

1. Problems with other connectives where a general incremental parse might be less obvious.

- (14) Either this house has no bathroom or the bathroom is well hidden.

2. Reversal of linear order, e.g. in conditionals (Heim 1990 discussed by Paula last week).
3. Embedding of conjunction

- (15) I have never met an academic who was an idiot and who knew that he was an idiot. (Schlenker 2006)

5. Heim's (1983) Strategy

Replace denotations we are accustomed to with CCPs

$C + S$ is Heim's notation for $CCP(S)(C)$

For atomic sentences, we assume lexical specification of presuppositions, e.g., by partial functions:

- (16) $C + S\{p\}$ is defined iff $C \subseteq p$, when defined
 $C + S\{p\} = C \cap \{w: S'(w)=1\}$

For complex sentences:

- (17) a. $C + \text{not } A = C - [C + A]$
b. $C + [A \& B] = [C + A] + B$
c. $C + [\text{If } A, \text{ then } B] = C + [\text{not } [A \& \text{not } B]]$
 $= C - [C + [A \& \text{not } B]] = C - [[C + A] + \text{not } B]$
 $= C - ([C + A] - [[C + A] + B])$

There's more to which we will probably return. Still need to discuss:

- a. the CCP of quantifiers,
- b. accommodation strategies and the way they might relate to CCPs (local vs. global accommodation).

6. Still not understood (Heim 1990):

Why not the following:

- (18) a. $C + \text{not } A = C - [W + A]$
b1. $C + [A \& B] = [C + B] + A$
b2. $C + [A \& B] = [C + B] \cap [C + A]$
c. $C + [\text{If } A, \text{ then } B] = [C - [C + A]] \cup [C + B]$, and more...

So, we have a way of stating the projection properties of various connectives within Heim's framework. But we can't predict the projection properties from the "classical" meanings of the connectives.

Is it reasonable to hope that we would be able to predict projection properties from the basic meanings of the connectives?