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Seminar on Presupposition
Heinrich Heine University
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Presuppositions & How to Spot Them

1 What is a presupposition?

1.1 Definitions

In *Über Sinn und Bedeutung*, Frege (1948) says that both (1) and (2) imply that the name *Kepler* denotes something:

- (1) Kepler died in misery.
- (2) Kepler did not die in misery.

But this implication is not part of the ordinary semantic content of the sentence, i.e., (1) does not *entail* the existence of Kepler.

One argument for this that Frege gives: If (1) *entailed* that the name *Kepler* denotes something, then the negation of (1) would not be (2) but rather (3):

- (3) Kepler did not die in misery, or else the name Kepler has no reference.

Recall: $\neg[P \wedge Q] \iff [\neg P \vee \neg Q]$

The idea that (3) is the negation of (1) is absurd.

Strawson (1950) argues for a presuppositional analysis of definite descriptions (*contra* Russell 1905). He says:

To say, “The king of France is wise” is, in some sense of “imply”, to *imply* that there is a king of France. But this is a very special and odd sense of “imply”. “Implies” in this sense is certainly not equivalent to “entails” (or “logically implies”). (Strawson, 1950, III)

According to Strawson (1950), it is neither true nor false that the king of France is wise, when there is no king of France:

Now suppose someone were in fact to say to you with a perfectly serious air: *The King of France is wise*. Would you say, *That's untrue*? I think it is quite certain that you would not. But suppose that he went on to ask you whether you thought that what he had just said was true, or was false; whether you agreed or disagreed with what he had just said. I think you would be inclined, with some hesitation, to say that you did not do either; that the question of whether his statement was true or false simply did not arise, because there was no such person as the King of France. You might, if he were obviously serious (had a dazed, astray-in-the-centuries look), say something like: *I'm afraid you must be under a misapprehension. France is not a monarchy. There is no King of France.*

The idea that 'The F is G' lacks a truth value when 'the F' fails to refer is called the *Frege-Strawson* analysis of definite descriptions.

The semantic concept of presupposition: *S* semantically presupposes *P* if and only if *P* is true whenever *S* is true or false. Kepler's existence is a *condition for the bivalence* of the statement "Kepler died in misery".

The pragmatic concept of presupposition: Presuppositions are assumptions that the speaker makes, and assumes that the hearer shares. "If *A* presupposes *B*, then *A* not only implies *B* but also implies that the truth of *B* is somehow taken for granted, treated as uncontroversial" (Chierchia and McConnell-Ginet, 1990, p. 28).

How Stalnaker (1978), in *Assertion*, defines presupposition:

Roughly speaking, the presuppositions of a speaker are the propositions whose truth he takes for granted as part of the background of the conversation. A proposition is presupposed if the speaker is disposed to act as if he assumes or believes that the proposition is true, and as if he assumes or believes that his audience assumes or believes that it is true as well. Presuppositions are what is taken by the speaker to be the COMMON GROUND of the participants in the conversation, what is treated as their COMMON KNOWLEDGE or MUTUAL KNOWLEDGE.

There is no conflict between the semantic and pragmatic concepts of presupposition (Karttunen, 1973), but it is worthwhile to think about how to reconcile them.

1.2 More examples of presuppositions

Definite descriptions presuppose existence and uniqueness:

- (4) a. The mathematician who proved Goldbach's Conjecture is a woman.
- b. Somebody proved Goldbach's Conjecture. [existence]
- c. Only one person proved Goldbach's Conjecture. [uniqueness]

Factive verbs presuppose their complements:

- (5) a. I regret that I didn't respond sooner.
- b. I didn't respond sooner.

Aspectual verbs presuppose their complements:

- (6) a. Sue stopped smoking.
- b. Sue smoked in the past.

Counterfactuals presuppose the falsehood of antecedent:

- (7) a. If the notice had said 'mine-field' in English as well as Welsh,
 we would never have lost poor Llewellyn.
- b. The notice did not say 'mine-field' in English.

Clefts:

- (8) a. It was Mary who won.
- b. Somebody won.

Wh- questions:

- (9) a. Who won?
- b. Somebody won.

2 Tests

Given that S implies P , in some sense of "imply", how can you tell whether the implication from S to P is a presupposition, an entailment, or an implicature?

Entailments. Chierchia and McConnell-Ginet (1990) give four alternative definitions for ‘A entails B’:

- Whenever A is true, B is true
- The information that B conveys is contained in the information that A conveys
- A situation describable by A must also be a situation describable by B
- *A and not B* is contradictory (can’t be true in any situation)

Examples of entailments:

- (10) Mary invited Fred and Jack. \models Mary invited Fred.
- (11) I got into MIT yesterday. \models I got into MIT.
- (12) There are three pens on the table. \models More than two pens are on the table.

Implicatures. Conversational inferences are ones that a hearer can make based on the assumption that the speaker is adhering to certain norms of conversation.

- (13) There are 2 pens on the table \rightsquigarrow No more than 2 pens are on the table.
- (14) You can have chicken or beef \rightsquigarrow You can’t have both.
- (15) Some of the students passed \rightsquigarrow Not all of the students passed.

The reasoning goes as follows: I assume that the speaker knows whether all of the students passed, and would have said that they all passed if in fact they had, because that is relevant. Therefore, they must not have.

2.1 Defeasibility/Cancellation.

An inference is *defeasible* if it can be denied.

Implicatures are defeasible:

- (16) a. Mary used to swim a mile daily.
b. Mary no longer swims a mile daily. [implicature of (16a)]
c. Mary used to swim a mile daily, and she still does.
d. Mary used to swim a mile daily. I wonder if she still does.

- (17) a. Joan likes some of her presents.
 b. Joan doesn't like all of her presents. [implicature of (17a)]
 c. Joan likes some of her presents, and (in fact) she likes all of her presents.
 d. Joan likes some of her presents. I wonder if she likes all of her presents.

Entailments are **not** defeasible:

- (18) a. Jane ate oatmeal for breakfast this morning.
 b. Jane ate breakfast this morning. [entailment of (18a)]
 c. #Jane ate oatmeal for breakfast this meaning, but/and (in fact) she didn't eat breakfast this morning.
 d. #Jane ate oatmeal for breakfast this morning. I wonder if she ate breakfast this morning.
- (19) a. Mary is an Italian violinist.
 b. Some Italian is a violinist. [entailment of (19a)]
 c. #Mary is an Italian violinist, but no Italian is a violinist.
 d. #Mary is an Italian violinist. I wonder if any Italians are violinists.

Presuppositions are **not** defeasible either, generally:¹

- (20) a. Mary stopped smoking.
 b. Mary smoked in the past. [presupposition of (20a)]
 c. #Mary stopped smoking, but she never smoked in the past.
 d. #Mary stopped smoking. I wonder if she smoked in the past.
- (21) a. After Hans painted the walls, Pete installed the cabinets.
 b. Hans painted the walls.
 c. #After Hans painted the walls, Pete installed the cabinets, and/but Hans did not paint the walls.
 d. #After Hans painted the walls, Pete installed the cabinets. I wonder if Hans painted the walls.

¹Except under negation: *Sue didn't stop smoking – She never smoked!*

- (22) a. Only Mary smokes.
 b. Mary smokes.
 c. Only Mary smokes, but Mary doesn't smoke.
 d. Only Mary smokes. I wonder if Mary smokes.

Summary:

	cancellable
Implicatures	yes
Entailments	no
Presuppositions	no

2.2 Reinforcement

To *reinforce* an inference is to say it explicitly in subsequent discourse.

Implicatures can be reinforced:

- (23) Mary used to swim a mile daily, and she still does.
 (24) Joan likes some of her presents, but she doesn't like all of her presents.

Entailments cannot be:

- (25) #Mary had oatmeal for breakfast this morning, and she had breakfast this morning.
 (26) #Mary is an Italian violinist, and some Italian is a violinist.

Presuppositions cannot be either:

- (27) #Mary stopped smoking, and she used to smoke.
 (28) #After Hans painted the walls, Pete installed the cabinets, and Hans painted the walls.
 (29) #Only Mary smokes, and Mary smokes.

Summary:

	cancellable	reinforceable
Implicatures	yes	yes
Entailments	no	no
Presuppositions	no	no

So far we have no tests for distinguishing entailments and presuppositions.

2.3 Projection

If sentence S implies I , then I *projects* across negation if the negation of S also implies I .

If sentence S implies I , then I *projects* across question formation if the yes/no question corresponding to S also implies I .

Presuppositions project. “If A presupposes B , then to assert A , deny A , wonder whether A , or suppose A – to express *any* of these attitudes toward A is generally to imply B , to suggest that B is true and, moreover, uncontroversially so. That is, considering A from almost any standpoint seems already to assume or presuppose the truth of B ; B is part of the background against [which] we (typically) consider A ” (C&MG, p. 28).

- (30) a. Joan regrets getting her Ph.D. in linguistics.
- b. Joan doesn’t regret getting her Ph.D. in linguistics.
- c. Does Joan regret getting her Ph.D. in linguistics?
- d. If Joan regrets getting her Ph.D. [in] linguistics, she should consider going back to graduate school in computer science.

All imply:

- (31) Joan got her Ph.D. in linguistics.

Another example:

- (32) a. All Mary’s lovers are French.
- b. It isn’t the case that all Mary’s lovers are French.
- c. Are all Mary’s lovers French?
- d. If all Mary’s lovers are French, she should study the language.

All imply:

- (33) Mary has (three or more?) lovers.

Entailments do not project:

- (34) a. Mary did not have oatmeal for breakfast this morning.
- b. Did Mary have oatmeal for breakfast this morning?
- c. If Mary had oatmeal for breakfast this morning, then...

These do not imply that Mary had breakfast this morning.

- (35) a. Mary is not an Italian violinist.
- b. Is Mary an Italian violinist?
- c. If Mary is an Italian violinist, then...

These do not imply that some Italian is a violinist.

Implicatures also do not project:

- (36) a. Mary didn't use to swim a mile daily.
- b. Did Mary use to swim a mile daily?
- c. If Mary used to swim a mile daily, then...

These do not imply that Mary does not currently swim a mile daily.

- (37) a. It is not true that Joan likes some of her presents.
- b. Does Joan like some of her presents?
- c. If Joan likes some of her presents, then...

These do not imply that Joan does not like all of her presents.

Summary:

	cancellable	reinforceable	project
Implicatures	yes	yes	no
Entailments	no	no	no
Presuppositions	no	no	yes

Exercise: Try the projection test with:

- (38) Mary stopped smoking.
[>> Mary used to smoke]
- (39) After Hans painted the walls, Pete installed the cabinets
[>> Hans painted the walls]
- (40) Only Mary smokes.
[>> Mary smokes]
- (41) Who won?²
[>> Somebody won]

²In the context of a general discussion about the difficulties of applying standard tests for presupposition, Beaver (2001, p. 18) asks: "What is the negation of a question? ('What is not the negation of a question' ?)"

2.4 *Hey, wait a minute!*

A presupposition doesn't already have to be known to all conversational participants in all cases. The following can be uttered felicitously to a reservations clerk who has no knowledge about your present or prior personal habits:

(42) I don't want to sit near the smoking section because I just stopped smoking.

“With no reason to suppose otherwise, the clerk can quite reasonably be expected to accept the passenger's presupposition as if it were already taken for granted and discourse should proceed unproblematic. What happens in such cases is called *accommodation*.”

More examples:

(43) A: Bill is very handsome.
B: Yes, and his wife is lovely, too.

(44) We regret that you cannot bring dogs inside.

However, you can refuse to accommodate, saying *Hey wait a minute!*

(45) A: Joan regrets getting her Ph.D. in linguistics.
B: Hey, wait a minute, I had no idea that Joan did her Ph.D. in linguistics.

(46) A: Sue stopped smoking.
B: Hey, wait a minute, I had no idea that Sue ever smoked.

Entailments... not completely clear:

(47) A: Mary is an Italian violinist.
B: ?Hey, wait a minute, I had no idea that Mary was Italian.

(48) A: All of the students were at the party.
B: Hey wait a minute, I didn't (even) know that **SOME** of the students were at the party.³

Implicatures... also not clear:

(49) A: Some of the students were at the party.
B: ?Hey wait a minute, I thought that all of the students were at the party.

³From lecture notes by Danny Fox.

Summary:

	cancellable	reinforceable	projection	HWM
Implicatures	yes	yes	no	?
Entailments	no	no	no	?
Presuppositions	no	no	yes	yes

Exercise: Apply the *Hey, wait a minute* test to these examples:

- (50) a. Obama has also invited Angela.
- b. Obama invited someone other than Angela.

- (51) a. Obama has invited Angela and Ben.
- b. Obama invited someone other than Angela.

2.5 Repeatability

If *S* implies *I*, then *I* is *repeatable* if *S* can be used felicitously following an utterance that entails *I*. [note: I am making up this term]

Presuppositions are repeatable:

- (52) Mary smokes, and only Mary smokes.

- (53) Someone broke a typewriter, and the person who broke a typewriter is Sam.

Entailments are not:

- (54) #Nobody but Mary smokes, and only Mary smokes.

- (55) #Sam broke a typewriter, and the person who broke a typewriter is Sam.

Implicatures are:

- (56) Sue no longer smokes, but she used to smoke.

- (57) Joan doesn't like all of her presents, but she likes some of them.

Summary:

	cancellable	reinforceable	projection	HWM	repeatable
Implicatures	yes	yes	no	?	yes
Entailments	no	no	no	?	no
Presuppositions	no	no	yes	yes	yes

Exercise: Apply the repeatability test to these examples:

- (58) a. The flying saucer came again.
b. The flying saucer has come sometime in the past.
- (59) a. The flying saucer came yesterday.
b. The flying saucer has come sometime in the past.

2.6 *because*

When S entails E and presupposes P , then the entailment E is targeted by *because*, not the presupposition P (Dretske, 1972).

Some sentences with multiple meaning components of different types:

- (60) a. Sue stopped smoking.
b. Sue used to smoke. [presupposition of (60a)]
c. Sue does not currently smoke. [entailment of (60a)]
- (61) a. Joan regrets getting her Ph.D. in linguistics.
b. Joan got her Ph.D. in linguistics. [presupposition of (61a)]
c. Joan regrets it. [entailment of (61a)]
- (62) a. Only Mary smokes.
b. Mary smokes. [presupposition of (62a)]
c. Nobody but Mary smokes. [entailment of (62a)]

Applying the tests:

- (63) Sue got fat because she stopped smoking.

(not because she used to smoke, because she no longer does)

- (64) Joan went back to school because she regrets getting her Ph.D. in linguistics.

(not because she got her Ph.D. in linguistics, because she regrets it)

An example from Beaver and Clark (2008):

(65) And aides and allies were instructed not to characterize Thursday’s vote as a victory or a defeat, even though many viewed it as a partial win, because only 31 Democrats voted for Hyde’s resolution.

“Here, the reason that the vote should not be characterized as a victory or a defeat is not that at least 31 Democrats voted for the resolution – those votes are reasons to characterize the vote as a victory – but rather that no more than the 31 Democrats did so.” (Coppock and Beaver, 2010)

2.7 Emotive factives

(66) Jim is glad that Sue stopped smoking.

(not that she used to smoke, that she no longer does)

(67) Joan’s advisor is disappointed that Joan regrets getting her Ph.D. in linguistics.

(not that she got her Ph.D. in linguistics, but that she regrets it)

Another example from Beaver and Clark (2008):

(68) I am disappointed that only 3 billion dollars will be paid against the approximately 480 billion dollar federal debt.

“What is disappointing to the speaker in (68) is not that at least three billion dollars were paid – that much is good – but rather that no more than those three billion were paid; in other words, the negative component, and not the positive component, is targeted by the emotive factive verb.” (Coppock and Beaver, 2010)

Exercise: Apply the emotive factive test to these examples:

(69) a. It was Henry who kissed Rosie.
b. Someone kissed Rosie.

(70) a. Henry kissed Rosie.
b. Someone kissed Rosie.

3 The projection problem

So far we have treated projection as a test. But it is also a problem: *How can we predict the presuppositions of a complex sentence from the presuppositions of its parts?*

Cumulative hypothesis: The presuppositions of a complex sentence are the logical sum of the presuppositions of its constituent sentences plus those that are associated with the main clause itself.

- (71) All of Jack's children are bald.
 >> Jack has children.
- (72) Bill does not know that all of Jack's children are bald.
 >> Jack has children.
- (73) Fred resents Zelda's infidelity.
 >> Zelda was unfaithful.
- (74) Fred no longer resents Zelda's infidelity.
 >> Zelda was unfaithful.
- (75) If Fred has stopped beating Zelda, then Fred no longer resents Zelda's infidelity.
 >> Zelda was unfaithful, and Fred has been beating Zelda.

Problem for the cumulative hypothesis:

- (76) If Jack has children, then all of Jack's children are bald.
 > Jack has children.
- (77) Bill ordered Fred to stop beating Zelda.
 > Fred has been beating Zelda.

Karttunen (1973): Plugs, holes, and filters: The antecedent of *if* is a filter, and *order* is a plug.

Towards deeper, more general explanations (and better empirical coverage): Gazdar (1979), Heim (1988), ...

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