

Week 1 - Introduction to Presuppositions: Empirical Data and Facts

Presupposition & Projection

A presupposition is a kind of inference that is backgrounded and taken for granted by the discourse participants to be true. Presuppositions exist at both a compositional semantics level and discourse pragmatics level (Kadmon 2001; Beaver 2001; Beaver & Geurts 2013 a.o.). Some random examples:

- (1) a. Gump was distracting Lily **again**.
Presupposition: Gump has distracted Lily before.
- b. Jisu **knows** that Joseph is a spy.
Presupposition: Joseph is a spy.
- c. Tim lost **his** ID card.
Presupposition: Tim has an ID card.
- d. **The** Chandler House cat has gone missing.
Presupposition: There exists a Chandler House cat.
- e. Jess likes beer **too**!.
Presupposition: There is someone else who also likes beer.

To understand semantic presuppositions we begin by considering the *multi-dimensionality* of natural language semantics. That is to say that a single sentence may convey different types of meaning at once:

- (2) Cathy is out running with Chelsea again.
 - a. Cathy is out running with Chelsea. (at-issue)
 - b. Cathy has gone out running with Chelsea in the past. (presupposition)

We take (2a) to be the asserted meaning of the expression and (2b) to be a fact that is taken for granted to be true. This is evident by the fact that we can respond to (3a) but not (3b) with (2).

- (3) a. What is Cathy doing right now?
b. What has Cathy done with Chelsea before?

One of the most, if not the most defining feature of semantic presuppositions is the ability for presupposed content to be projected when embedded under certain operators. For example, turning (2) into a polar question would question the truth of (2a), but not the truth of (2b) as the presupposition is not caught in the scope of the polar question operator in (4).

- (4) Is Cathy out running with Chelsea again?

Other non-veridical contexts (contexts in which the complement is not entailed) may be used to test for presupposition projection:

- (5) a. Cathy is not out running with Chelsea again.

- b. If Cathy is out running with Chelsea again, I will call her later.
- c. Cathy might be out running with Chelsea again.
- d. It seems as though Cathy is out running with Chelsea again.

Presupposition Failure

It is possible for presuppositions fail – The example below presupposes that there exists a ‘Chandler House cat’. As there is none in the actual world, the presupposition is considered undefined. This ‘reaction’ to a failed presupposition is often described as a *Hey wait a minute* kind of reaction.

- (6) #The Chandler House cat sleeps in the library.

The ‘projection problem for presuppositions’ is the problem of how to accurately describe the systematic projection patterns (and exceptions), and how to develop a theory that will account for them. We will go over a few theories in good detail in the upcoming weeks.

Plugs, Holes & Filters

Karttunen & Peters (1979) describes empirical facts about presupposition projection, dividing embedding operators into three groups: ‘holes’, ‘plugs’, and ‘filters’.

→ **Holes** are operators which "let presuppositions go through" (e.g., (5a-d) demonstrates operators that allow the presupposition to pass through).

→ **Plugs** are operators which "do not let presuppositions go through" (e.g., non-factive attitude predicates and verbs of ‘saying’:

- (7) Abdullah **believes** that Tim has stopped coming to Chandler House.

The idea is that the the clause embedded under *believe* has the presupposition that Tim used to come into Chandler House. However, it is not inherited by the whole sentence. That being said, the notion of presupposition ‘plugs’ has been described as weak and insufficient (Geurts 2009), due to the fact that these predicates can often have presuppositions ‘leaked’ based on expressions that are commitments of another agent. We will go into more detail on this another week.

→ **Filters** are operators that are considered a bit more complex; the core idea is that they would only sometimes allow the presupposition to project. Consider the following examples:

- (8) Yasu drinks **too** and Richard doesn’t like it.
- (9) If Yasu drinks **too**, then the bottle will be empty.
- (10) Richard is not in Chandler House and Yasu drinks **too**.
- (11) If the bottle is empty, then Yasu drinks **too**.

In these examples, the clause containing the presupposition that someone other than Yasu drinks is embedded under conjunction and conditionals but in difference positions (left-hand clause in (8) - (9) and right hand clause in (10) - (11). The presupposition projects as usual;

taken as a whole sentence, it still presupposes that someone other than Yasu also drinks. Now consider these examples using the same operators:

- (12) Richard drinks and Yasu drinks **too**.
(13) If Richard drinks, then Yasu drinks **too**.

In (12) - (13), the presupposition that someone else also drinks is **not** taken for granted, in fact, it is entailed that someone else drinks based on the first clause. In these environments, where the first conjunct or antecedent of a conditional entails a presupposition in the second conjunct or consequence of the conditional, the presupposition is blocked. Considering there is an environment for conjunctions and conditions that does allow for presuppositions to project and an environment that does allow presupposition rejection, Karttunen call these operators filters.

Sometimes the first clause (p) does not necessarily entail the second clause (q) yet the presupposition in q is still blocked:

- (14) If there is a depression, the president of General Motors will lose his job too.
From Kadmon (2001)

In (14), p does not entail q yet it does not take granted that someone besides the president of General Motors will lose their job. So why is it the case that the presupposition is blocked? It's because in context, it is assumed that during times of depression many people will lose their jobs. So, in this context, p does in fact entail q.

(14) has no presupposition projecting from q, but does have a presupposition that p entails q. In other words, (14) presupposes that if there is a depression, the president of General Motors will also lose his job. The same goes for (12) and (13).

Presupposition & Projection

We define presuppositions as being based on mutually agreed upon information in the common ground. However, suppose you hear (15) without knowing that Gump ever had any children, let alone a son.

- (15) Gump is attending his son's birthday party.

You would likely accept this sentence, assuming that Gump has a son and is now attending his birthday party. Based on the speaker's initial *Hey, wait a minute* reaction, we might think that is undefined. However, presuppositions can be **accommodated** by updating the hearer's beliefs with the presupposed content of the sentence, which will now appear in the common ground.

Where exactly accommodation happens is contentious. Dynamic accounts of presupposition take the idea that a singular, overall context set is updated to the next level: This approach introduces **local contexts** within a **global context** with presuppositions being able to be accommodated mid-way through a sentence:

- (16) (c_0) Maybe (c_1) Wilma thinks that (c_2 her husband is having an affair. From

Beaver & Geurts (2013)

In this example, the presupposition (That Wilma is married) can be accommodated globally at c_0 or locally at c_1 and c_2 . That is to say, if the presupposition is accommodated in c_1 , the sentence is read as “Maybe Wilma is married and she thinks that her husband is having an affair”. Global accommodation is preferred, as a generalised rule.

What about projection for a presupposition that fails?

(17) Boyan was eating lunch and (#)the Chandler House cat came to visit her.

Assuming there is no Chandler House cat in the common ground and we cannot accommodate the fact that one doesn't exist, how does this then project onto the first conjunct? Using **weak kleene** connectives we would predict the entire expression to inherit the undefined value of the failed presupposition. With **strong kleene** connectives, if the truth value of the expression is dependent on the truth value of the first conjunct. We will go into more detail on three-valued logic in future weeks.

Semantics or Pragmatics?

Stalnaker introduces a pragmatic notion of presuppositions (1970, 1973, 1974). The clearest cases of pragmatic presuppositions include the conditions for linguistic interaction (e.g., presupposing that the person you are talking to speaks the same language as you). In Stalnaker's formal model, all presuppositions are taken to be pragmatic, existing as mutual beliefs within the context set. Whether or not such a distinction between semantic and pragmatic presuppositions exists, and if the interaction between at-issue and presupposed content can be accounted for as either semantic or pragmatic, is another key debate within this topic.

Semantic presupposition:¹ A sentence S presupposes a proposition p if p must be true in order for S to have a truth-value (to be true or false).

Pragmatic presupposition: A use of sentence S in context C pragmatically presupposes p if p is backgrounded and taken for granted by the speaker in C .

Entailments, Implicatures & Conventional Implicatures

Presuppositions are not the only type of inference that sentences may have. While a sentence might have multiple implications, these implications are not the same.

- (18) a. What languages does Davide speak?
b. Davide speaks Italian, Spanish, Portuguese and Catalan.
 $\Rightarrow$ Davide speaks more than three languages.
 $\Rightarrow$ Davide does not speak Tegulu.

There is no situation in which (18-b) is false and the second implication that Davide speaks more than three languages is true. It is also the case that in every case where (18-b) is true,

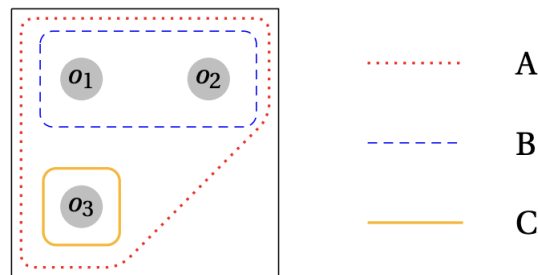
¹Both these definitions come from a handout by Partee, but yeah they're kind of contentious I suppose.

the implication that Davide speaks more than three languages is true. In other words, (18-b) **entails** the first implication:

Logical entailment holds between two sentences A and B when whenever A is true B is also true.

To disprove an entailment you have to find counter-examples i.e., situations where the premise(s) is/are true but the conclusion is not.

- (19) a. All C are A (From C&C, 2025)
 b. Some A are B
 c. Some C are B



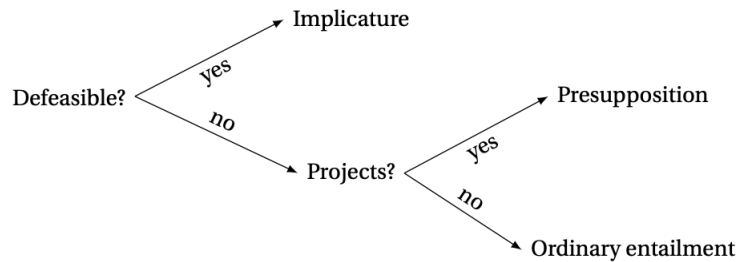
The figure above demonstrates a counter-example where all C are A, and some A are B, but no C are B, so the first two premises are true but the conclusion is not.

The second implication, that Davide does not speak Tegulu, is intuitively different. There is certainly a situation where (18-b) is as a proposition is true, but the inference that he doesn't speak Tegulu is false. The speaker could, for whatever reason, have just not mentioned it. This implication is a **conversational implicature** that arises from speaker norms (Grice 1975).

The difference between entailments and implicatures are captured by the fact that entailments are not **defeasible** or **reinforceable**.

- (20) a. Davide speaks Italian, Spanish, Portuguese and Catalan, but Davide does not speak more than three languages.
 b. Davide speaks Italian, Spanish, Portuguese and Catalan, and in fact Davide speaks more than three languages.
- (21) a. Davide speaks Italian, Spanish, Portuguese and Catalan, but Davide also speaks Telugu.
 b. Davide speaks Italian, Spanish, Portuguese and Catalan, in fact Davide does not speak Telugu.

(20-a) is contradictory and (20-b) is redundant, which means that this implication, that Davide speaks more than three languages, is an entailment. Conversely, (21-a) and (21-b) are not contradictory or redundant, so the fact that he doesn't speak Telugu is an implicature.



The final class of implications are **conventional implicatures** (CI). CIs are similar to presuppositions and implicatures but also kind of different; they are found in appositives, parentheticals, epithets and honourifics, and are argued to be in classifiers (McCready 2009; McCready 2010) and slurs (Davis & McCready 2020).

(22) I must kill this **damn** bug!

- a. I must kill this bug. (at issue)
- b. I don't like bugs. (conventionally implicated)

CIs are backgrounded, are not cancellable and (kind of) reinforceable and lexical. The differences between CIs and presuppositions come from the fact that CIs do not rely on the context/common ground, as the CI is encoded primarily in the word itself. As such, CIs will be able not fail or need to be accommodated like presuppositions. Moreover, CIs cannot be filtered like presuppositions.

(23) James, a swimmer, came to the party.

(24) #If James is a swimmer, then James, a swimmer, came to the party

What are we doing for the next few weeks?

Over time, many theories on how to account for not only the projection problem but also other quirks of presuppositions (provisio problem, strong and weak triggering etc.) have been proposed. We will go over the most popular ones in a lot of detail – from trivalent accounts (Peters 1979; Fox, 2008) to dynamic accounts (Heim 1983, Beaver 2001), and semantic accounts to pragmatic accounts (Stalnaker 1973; Schlenker 2008).

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