Semantic Theory
Lecture 8: Presuppositions

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Three levels of meaning

- **Assertions** (truth-conditions, entailment)
- **Presuppositions**
  The requirements that the context must satisfy for the utterance to be interpretable at all
- **Conversational Implicatures**
  Inferences that arise from observing or flouting the cooperative principle and conversational maxims

Entailment

- Entailment is a relation between sentences
  - Strictly speaking: a relation between *sentence meanings*
- A sentence A entails a sentence B (A ⊨ B) iff whenever A is true, then B must also be true.
- **Examples**

  (1) *John and Mary flunked* ⊨ *Mary flunked*

  (2) *John or Mary flunked* ⊨ *Someone flunked*

  (3) *John is an intelligent student* ⊨ *John is a student*

  (4) *Every student works* ⊨ *Every blond student works*

Entailment?

(1) *The mathematician who proved Goldbach's conjecture was a woman*
⊨? *Someone proved Goldbach's conjecture*

(2) *Mary loves her husband*
⊨? *Mary has a husband / is married*

(3) *It was Mary who broke the typewriter*
⊨? *Somebody broke the typewriter*

(4) *John kissed every girl at the party*
⊨? *Girls have been at the party*

(Examples (1), (3) from von Fintel)

Entailment vs. Presupposition

- **Entailment:**
  (1) *John and Mary flunked* ⊨ *Mary flunked*
  (2) *John and Mary did**n't** flunk* ⊭ *Mary flunked*
- **Presupposition:** both (3) and (4) seem to entail (5)
  (3) *The mathematician who proved Goldbach's conjecture was a woman*
  (4) *The mathematician who proved Goldbach's conjecture wasn't a woman*
  (5) *Someone proved Goldbach's conjecture*

Presuppositions

- **Basic idea:**
  A presupposition of a statement is a proposition that must be true in order for the statement to be interpretable (to make sense).
- **Slightly different view:**
  A presupposition is an implicit assumption about the world whose truth is taken for granted by the speaker.

(Russel, Montague)

Definite Descriptions

- *the*
  ↦ λFλGλx(∀y(F(y) ↔ x = y) ∧ G(x))
- *the chancellor*
  ↦ λGλx(∀y(chancellor'(y) ↔ x = y) ∧ G(x))
- *the chancellor decides*
  ↦ λx(∀y(chancellor'(y) ↔ x = y) ∧ decide'(x))
  - "there is exactly one chancellor, and he decides"

Definite Descriptions

- *It is not the case that the chancellor decides*
- **Compositional analysis** of the sentence leads to
  - ¬∃x(∀y(chancellor'(y) ↔ x = y) ∧ decide'(x))
  - "Either there is no chancellor, or more than one, or there is exactly one chancellor and he doesn't decide."
- **Correct representation** for the sentence:
  - ∃x(∀y(chancellor'(y) ↔ x = y) ∧ ¬decides'(x))
  - "There is exactly one chancellor, and he doesn't decide."

Presuppositions

- A sentence (containing a definite description) contains meaning information of two different types:
  - **Presupposition:** the requirements that the context must satisfy for the sentence to be interpretable at all.
  - **Assertion:** the claims that are made, based on the context.
- *The chancellor decides*
  - ∃x(∀y(chancellor'(y) ↔ x=y) ∧ decides'(x))
  - "There is exactly one chancellor, and he decides."

Presuppositions and Negation

- Negation only applies to the assertion.
- The presupposition isn't negated.
  - The presupposition is projected "upwards," outside of the usual rules of semantic composition.
- *It is not the case that the chancellor decides*
  - $\exists x(\forall y(\text{chancellor}'(y) \leftrightarrow x=y) \wedge \neg \text{decides}'(x))$
  - "There is exactly one chancellor, and he doesn't decide."
- Such a "survival" of negation (and other operators) is the standard test for presuppositions.

Presupposition Triggers

- **Definite noun phrases**

  (1) *The chancellor decides*
  ≫ *There is a chancellor (and she decides)*

  (2) *Mary loves her husband*
  ≫ *Mary has a husband (and she loves him)*

- **Quantifiers**

  (3) *John kissed every girl at the party*
  ≫ *Girls have been at the party*

[Notation: read "A ≫ B" as "A pressuposes B"]

Presupposition Triggers

- **Factive verbs** (regret, realize, being aware, …)

  (1) *John regrets that Pola is married*
  ≫ *Pola is married (and John regrets that)*

- **Implicative verbs** (manage to, forget to, …)

  (2) *John forgot to close the door*
  ≫ *John intended to close the door*

Presupposition Triggers

- **Aspect**

  (1) *John has stopped smoking*
  ≫ *John used to smoke (and he has stopped doing it)*

  (2) *John opened the window again*
  ≫ *John had already opened the window before* (repetetive)
  ≫ *The window was open before* (restitutive)

- **Appositions, non-restrictive relative clauses**

  (3) *John, (who is) a good friend of mine, studies CL.*
  ≫ *John is a good friend of mine (and he studies CL)*

Presupposition Triggers

- **It-Clefts**

  (1) *It was John who ate the cake.*
  ≫ *Somebody ate the cake (and it was John who did this)*

- **Sentence particles**

  (2) *Only John came to the party*
  ≫ *John came to the party (and nobody else did)*

Presupposition Projection

- Presuppositions “survive” not only negation, but also other kinds of embeddings

  (1) *The chancellor decides, or the states’ prime ministers are responsible for decisions*
  ≫ *There is a (exactly one) chancellor*

  (2) *John possibly regrets that Mary is married*
  ≫ *Mary is married*

  (3) *Mary believes that John has stopped smoking*
  ≫ *John used to smoke*

Presupposition Filtering

- There are contexts that can “neutralise” or filter some presuppositions: they block projection of these presuppositions.
  (1) *If John is out of town, then his wife is unhappy*
  ≫ *John has a wife / is married*
  (2) *If John is married, then his wife is unhappy*
  NOT ≫ *John is married*
  (3) *If John is married, then his daughter is unhappy*
  ≫ *John has a daughter*

Presupposition Cancellation

- In the context of negation, presuppositions can be overwritten or “cancelled” by explicitly claiming that they are false:
  (1) *John doesn’t regret that Mary is married. Mary has no husband, and John knows about that.*
  (2) *The king of France isn’t bald. France is a republic.*

Presupposition Projection

- **The projection problem** for presupposition is the task of stating and explaining the presuppositions of complex sentences in terms of the presuppositions of their parts.

Accommodation

- *My wife is a great cook.*
- Even if the fact that the speaker is married isn't given by the context, it can be accommodated unless an inconsistency arises.

Summary (Presuppositions)

- Presuppositions are triggered by a number of different words and linguistic constructions, including definite noun phrases.
- Presuppositions behave differently than assertions in semantics construction: They are typically projected unchanged, rather than used in functional application.
- Projected presuppositions can be filtered in the semantic composition process, and can be cancelled by contextual knowledge.

Conversational Implicatures

- Basic claim: there is a set of "guidelines" for effective and rational use of language:
  - A general cooperative principle
  - Plus four maxims of conversations
- **Conversational implicatures** are inferences that arise from observing or flouting these rules.

Conversational Implicatures

- **The Cooperative Principle:** Make your contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.
- **Four maxims of conversation:**
  - Quality, Quantity, Relevance, Manner

Maxims of Conversation

- **Maxim of quality:** Try to make your contribution one that is true, specifically:
  - do not say what you believe to be false
  - do not say that for which you lack evidence
- **Maxim of quantity:**
  - Make your contribution as informative as is required for the current purposes of the exchange
  - Do not make your contribution more informative than is required.

Maxims of Conversation

- **Maxim of relevance:** Make your contribution relevant
- **Maxim of manner:** Be perspicuous, specifically:
  - avoid obscurity
  - avoid ambiguity
  - be brief (avoid prolixity)
  - be orderly

An Example

- A: *I've just run out of petrol*
- B: *Oh, there's a garage just around the corner*
- Assuming that B's answer is relevant and informative, but not too informative (with useless information), it must connect to A's statement.

An Example

- A: *Where does Gerard live?*
- B: *Somewhere in the South of France*
- B's answer violates the maxim of quantity – it is less informative than required – but B adheres to the maxim of quality
  - Implicature: B does not know exactly where Gerard lives

Literature

- Stephen C. Levinson. Pragmatics. Cambridge University Press. 1983. Chapters 3, 4.