Semantic Theory
week 10 – Presuppositions

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Back to: Entailment

A sentence A entails a sentence B (A ⊨ B) iff whenever A is true, then B must also be true.

Entailment is a relation between the *propositions* expressed by the two sentences A and B:

(1) *John and Mary failed the test* ⊨ *Mary failed the test*

(2) *John or Mary failed the test* ⊨ *Someone failed the test*

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

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

More examples of entailment?

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

$\models^{?}$ *Someone proved Goldbach's conjecture*

(2) *Mary loves her husband*

$\models^{?}$ *Mary has a husband / is married*

(3) *It was Mary who broke the typewriter*

$\models^{?}$ *Somebody broke the typewriter*

(4) *John kissed every girl at the party*

$\models^{?}$ *There were girls at the party*

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

Entailment vs. Presupposition

Entailment:

(1) *John and Mary failed the test* ⊨ *Mary failed the test*

(2) *<u>It's not the case that</u> John and Mary failed the test* ⊭ *Mary failed the test*

Presupposition:

(3) *The mathematician who proved Goldbach's conjecture was a woman*

» *Someone proved Goldbach's conjecture*

(4) *<u>It's not the case that</u> the mathematician who proved Goldbach's conjecture was a woman*

» *Someone proved Goldbach's conjecture*

What are presuppositions?

"A *presupposition* of a statement is a proposition that must be true in order for the statement to be interpretable (to make sense) in the first place."

"A *presupposition* is an implicit assumption about the world whose truth is taken for granted by the speaker."

Back to: definite descriptions

(1) *The chancellor decides*

“there is exactly one chancellor, and (s)he decides”

$\mapsto \exists x(\forall y(\text{chancellor'}(y) \leftrightarrow x = y) \wedge \text{decide'}(x))$

the chancellor $\mapsto \lambda G \exists x(\forall y(\text{chancellor'}(y) \leftrightarrow x = y) \wedge G(x))$

the $\mapsto \lambda F \lambda G \exists x(\forall y(F(y) \leftrightarrow x = y) \wedge G(x))$

Definite descriptions and compositionality

(2) *It is not the case that the chancellor decides*

Compositional analysis of the sentence leads to:

$\neg\exists x(\forall y(\text{chancellor'}(y) \leftrightarrow x = y) \wedge \text{decide'}(x))$

⇝ "Either there is no chancellor, or more than one, or there is exactly one chancellor and she doesn't decide."

Correct representation for the sentence:

$\exists x(\forall y(\text{chancellor'}(y) \leftrightarrow x = y) \wedge \neg\text{decides'}(x))$

⇝ "There is exactly one chancellor, and she doesn't decide."

Two types of meaning information

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.

(1) *The chancellor decides*

$\exists x(\forall y(\text{chancellor}'(y) \leftrightarrow x=y) \wedge \text{decides}'(x))$

"There is exactly one chancellor, and she decides."

Presuppositions and Negation

(2) *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 she doesn't decide."

- Negation only affects the assertion, not the presupposition
- The presupposition is interpreted as if it were introduced outside the scope of the negation; this is called ***projection***
- We can use the property of projection to test for presuppositions.

Examples of presupposition triggers (1/3)

[Notation: “A » B” means “A pressuposes B”]

Definite descriptions

(1) *(It’s not the case that) the king of France is bald.*
» There is a unique king of France

(2) *Mary loves / doesn’t love her husband*
» Mary has a husband

(3) *(It’s not the case that) Mary’s brother bought a house*
» Mary has a brother

Quantifiers

(4) *John kissed / didn’t kiss every girl at the party*
» There were girls at the party

Examples of presupposition triggers (2/3)

Factive verbs (regret, realise, being aware, …)

(5) *John regrets that Pola is married*
» *Pola is married*

(6) *John realised that he was in debt*
» *John was in debt*

Implicative verbs (manage to, forget to, …)

(7) *John forgot to close the door*
» *John intended to close the door*

(8) *John managed to close the door*
» *John tried to close the door*

Examples of presupposition triggers (3/3)

Aspectual verbs and items

(9) *John has stopped smoking*
» *John used to smoke*

(10) *John opened the window again*
» *The window was open/The window was opened by John before*

It-Clefts

(11) *It was John who ate the cake*
» *Somebody ate the cake*

Sentence particles

(12) *Only John came to the party*
» *John came to the party*

Presupposition Projection

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

(1) *The chancellor decides or the states’ prime ministers decide*

» *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*

» ~~*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 that.*

(2) *It's not the case that the king of France is bald. France is a republic.*

The projection problem:
Under what conditions does a sentence containing a presupposition trigger inherit this presupposition?

→ Presuppositions and compositionality: how to explain the presuppositions complex sentences in terms of the presuppositions of their parts?

The Russell-Strawson debate

- *The king of France is bald*

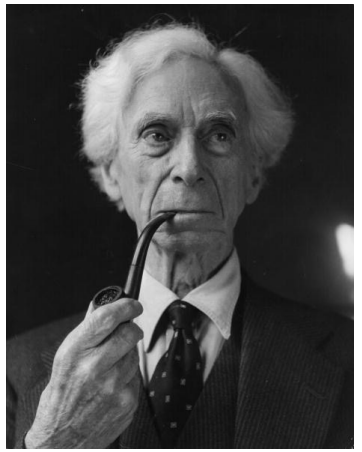
What truth-value should we assign to this sentence?

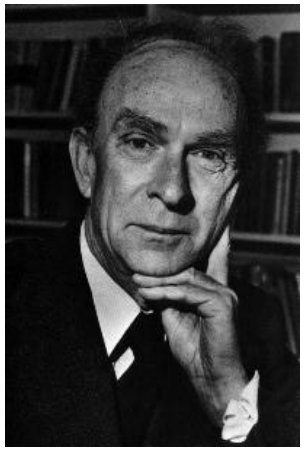
"False because there is no king of France"

Russell, B., 1905. "On Denoting," Mind

"**Undefined** because we cannot check whether the statement is true or false"

Strawson, P.F., 1950. "On Referring," Mind





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.