


Linguistics 288b


Semantics and Pragmatics III



ENTAILMENT

- Fixed truth relations between sentences which hold regardless of the empirical truth of the sentences
 - p. The gardener killed the plant.**
 - q. The plant is dead.**
- Whenever p is true, q is true (kill x entails x=dead)
- Whenever q is false, p is false (x = ¬dead entails x has not been killed)

Ling 288b 2




TRUTH TABLE

A sentence p entails a sentence q when the truth of the first (p) guarantees the truth of the second (q), and the falsity of the second (q) guarantees the falsity of the first (p).

p		q
T	⇒	T
F	⇒	T or F
F	⇐	F
T or F	⇐	T

Ling 288b 3




Example

p: I bought these shoes in Montreal.
q: I bought these shoes.

- Step 1:
 - If p (I bought these shoes in Montreal) is true, is q (I bought these shoes) automatically true?
 - Yes.
- Step 2:
 - If q (I bought these shoes) is false, is p (I bought these shoes in Montreal) also false?
 - Yes.
- Step 3:
 - Then p entails q


Ling 288b 4



LEXICAL ENTAILMENT

- Entailment is given by linguistic structure: part of the lexical meaning or the syntactic structure
- Lexical: entailed meaning is in some sense contained in the entailing meaning
 - kill/assassinate—die; dog—animal; 4—more than 3
 - I saw a dog today.
 - I saw an animal today.
 - He ate four cakes today.
 - He ate more than 3 cakes today.

Ling 288b 5



SYNTACTIC ENTAILMENT

- Modification, complementation
 - p: He walked to school slowly.
 - q: He walked to school.
 - r: He walked.
- p entails q and r; q entails r; but not vice versa
- Active—Passive
 - He ate the cake.
 - The cake was eaten by him.

Ling 288b 6

SYNONYMY

- Mutual entailment: p entails q and q entails p
 - p: **John is a bachelor.**
 - q: **John is unmarried and male.**
 - p: **Alice owns this book.**
 - q: **This book belongs to Alice.**
- Whenever p is true, q is true, and whenever q is false, p is false; and whenever q is true, p is true, and whenever p is false, q is false

Ling 288b

7

TRUTH TABLE FOR SYNONYMY

p		q
T	⇒	T
F	⇒	F
F	⇐	F
T	⇐	T

Ling 288b

8

CONTRADICTION

Opposite relation of synonymy

- p: **Alice owns this book.**
- q: **Alice does not own this book.**
- p: **John is a bachelor.**
- q: **John is married.**

p		q
T	⇔	F
F	⇔	T
T	⇐	F
F	⇐	T

Ling 288b

9

PRESUPPOSITION

- p: He stopped singing in the shower.
q: He used to sing in the shower.
- p: Her husband is a fool.
q: She has a husband.
- p: She regrets leaving Europe.
q: She left Europe.
- p: The photocopier in the French Department is broken again.
q?: The French Department has a photocopier.
q'?: The photocopier... has been broken before.

Ling 288b

10

Example

p: John's brother married a linguist.
q: John has a brother.

- If p (the presupposing sentence) is true then q (the presupposed sentence) is true.
- If p is false then q is still true.
 - p: **John's brother married a linguist.**
 - q: **John has a brother.**
 - ¬p: **John's brother didn't marry a linguist.**
 - q: **John has a brother.**
- p and ¬p entail q!

Ling 288b

11

ENTAILMENT VS. PRESUPPOSITION

- Entailment:
 - p: **The gardener killed the plant.**
 - q: **The plant is dead.**
 - ¬p: **The gardener did not kill the plant.**
 - p entails q, but ¬p does not entail q (q—T or F)
- Presupposition:
 - p: **He stopped singing in the shower.**
 - q: **He has in the past sung in the shower.**
 - ¬p: **He didn't stop singing in the shower.**
 - p entails q, and ¬p entails q (q—T)

Ling 288b

12

ENTAILMENT VS. PRESUPPOSITION

■ Entailment:

- p:** I ate caviar today.
- q:** I ate something today.
- ¬p:** I didn't eat caviar today.
- p entails q, but ¬p does not entail q (q—T or F)**

■ Presupposition:

- p:** The Principal of MIT is in town.
- q:** There is a Principal of MIT.
- ¬p:** The Principal of MIT is not town.
- p entails q, and ¬p entails q (q—T)**

Ling 288b

13

TRUTH RELATIONS

The gardener killed the plant. (p)
The plant is dead. (q)

John's brother married a linguist. (p)
John has a brother. (q)

ENTAILMENT	
p	q
T	⇒ T
F	⇒ T or F
F	⇐ F
T or F	⇐ T

PRESUPPOSITION	
p	q
T	⇒ T
F	⇒ T
T or F	⇐ T

Ling 288b

14

Quick homework

For each of the following pairs, indicate whether b. is best characterized as:

- an entailment of a.
 - a presupposition of a.
 - none of the above.
- (1) a. Ratsiraka returned to power.
b. Ratsiraka had been in power before.
- (2) a. Kim won the squash tournament last week.
b'. Kim won the squash tournament.
b''. There was a squash tournament last week.
b'''. Kim is a good squash player.

Ling 288b

15

... continued

- (3) a. Some of the students got As.
b. Not all of the students got As.
- (4) a. Mary's son is a teacher at MIT.
b'. Mary has a son.
b''. Mary's son is a teacher.
- (5) a. I have no siblings.
b. I'm an only child.
- (6) a. I am not an only child.
b. I have two siblings.

Ling 288b

16