Ling 110, Section 5 (Semantics I)
March 13, 2008.

Next Homework: 7.1, 7.2, 7.4, 7.11, 7.12, 7.14 due at 23:55 p.m. on Friday (TODAY!)
Announcements: Semantics quiz date has been changed to Wednesday, April 2nd

Introduction

What does it mean to understand a sentence?
For example, what does it mean to understand the following sentence?
John has three kids.

Entailment, Presupposition, and Implicature

Assertion—What the speaker is claiming to be true or false by uttering the sentence.

A. Entailment
i. Definition
A entails B if it is the case that whenever A is true, B is true.

ii. Test/Justification
If there is any situation where A can be true, and B might not be true, then A does NOT entail B.
If there is no such situation, then A entails B.
   Step 1. Assume that A is true.
   Step 2. Assume that B is NOT true.
   Step 3. Check for contradiction.
   → If there is a contradiction, then A entails B.
   If not, then A does not entail B.

iii. Practice
(1)  a. Every student has finished the homework.
    b. Every American student has finished the homework.

(2)  a. John saw two cats in the box.
    b. There were two cats in the box.

(3)  a. Bob likes the writers or the actors.
    b. Bob likes the writers.

(4)  a. Everyone who got at least three A’s must skip the next assignment.
    b. Everyone who got at least five A’s must skip the next assignment.
B. Presupposition
i. Definition
A presupposes B if it is the case that B must be taken for granted or assumed in order to interpret A.
Presupposition survives under negation, in questions, and in conditionals.

ii. Test/Justification
A presupposes B if it is inappropriate (odd, anomalous, out-of-place) to assert A without assuming that B is true.
The presupposition should survive in the following contexts:
   a. negation (‘not A’)  
   b. question (‘A?’)  
   c. conditionals (‘If A, then…’)

Example:
Does (5a) presuppose (5b)?
(5)  a. The king of France likes to play tennis.   
     b. There is a king of France.
(5a) definitely seems to assume (5b), but let’s test the presupposition in other contexts:
   c. The king of France doesn’t like to play tennis. (negation)  
   d. Does the king of France like to play tennis? (question)  
   e. If the king of France likes to play tennis, then we should build a court for him when he visits. (conditional)
(5c), (d), and (e) all still assume (5b) to be true. So (5a) must presuppose (5b).

iii. Some presupposition triggers
Cleft constructions
   a. It is John who likes climbing. → presupposes: “Someone likes climbing.”

Inherent in the lexical meaning of certain verbs
E.g., stop, know that, regret, forget to, scare…
   b. John stopped smoking. → presupposes: “John used to smoke.”
   c. John knows that Mary is pregnant → presupposes: “Mary is pregnant.”
   d. John regrets selling his car. → presupposes: “John sold his car.”
   e. John forgot to buy milk. → presupposes: “John was supposed to buy milk.”
   f. He didn’t scare John. → presupposes: “John is animate.”
   g. # He scared the piano.
iv. Presupposition cancellation

Presupposition allows exceptions—the presupposed statement can be denied or cancelled. Entailments, on the other hand, never allow exceptions. Presupposition cancellation often feels extremely odd, but it is not a total contradiction. Any attempt to cancel as entailment relation, however, results in logical contradiction (this is the definition of entailment).

(6)  a. The king of France is coming tomorrow.
    b. There is a king of France.
        \[ \rightarrow (6a) \text{ both entails and presupposes } (6b). \]

(7)  a. The king of France is not coming tomorrow.
    b. There is a king of France.
        \[ \rightarrow (7a) \text{ presupposes but does not entail } (7b). \]
    c. The king of France is not coming tomorrow, because in fact France has no king!

v. Practice

(8)  a. John realizes that Amy is a ghost.
    b. Amy is a ghost.
        \[ \rightarrow \text{ Does (a) presuppose (b)? } \]
        \[ \rightarrow \text{ Does (a) entail (b)? } \]
    c. John does not realize that Amy is a ghost.
        \[ \rightarrow \text{ Does (c) presuppose (b)? } \]
        \[ \rightarrow \text{ Does (c) entail (b)? } \]

(9)  a. It bothers John that Amy wants a baby.
    b. Amy wants a baby.
        \[ \rightarrow \text{ Does (a) presuppose (b)? } \]
        \[ \rightarrow \text{ Does (a) entail (b)? } \]
    c. It doesn’t bother John that Amy wants a baby.
        \[ \rightarrow \text{ Does (c) presuppose (b)? } \]
        \[ \rightarrow \text{ Does (c) entail (b)? } \]
C. Conversational Implicature

i. Definition

A (conversationally) implicates B if it is the case that uttering A in a certain conversational context systematically suggests, everything else being equal, that B is true. However, the implicature can be called off (i.e., cancelled).

ii. Implicature due to world knowledge

(10) Jess: If she’s so great why aren’t YOU taking her out?
    Harry: How many times do I have to tell you, we’re just friends.
    Jess: So you’re saying she’s not that attractive.

    (When Harry Met Sally)

iii. Implicature due to conversational principles

Which conversational maxim(s) seem to be responsible for the implicature in the examples below?

(11) a. John broke up with Amy and got a new girlfriend.
    b. John broke up with Amy. Afterwards, he got a new girlfriend.

(12) a. What on earth has happened to the roast beef?
    b. The dog is looking very happy.
    c. The dog ate the roast beef.
    d. The dog is looking happy, but I know that he didn’t eat it.

(13) a. John has two puppies.
    b. John has three puppies.
    c. Does John have two puppies? Yes, he has two puppies. In fact, he has 3.

(14) a. John: The cat is in the hamper or under the bed.”
    b. Bill: So, you don’t know where exactly the cat is.”

Reminder:
Grice’s Conversational Maxims:

Quality: Say only what you believe to be true.
Manner: Avoid obscurity and ambiguity: avoid unnecessary wordiness.
Relevance: Be relevant.
Quantity: Give no more or less information than necessary.

Conclusion

What does it mean to understand a sentence?

We know the meaning of a sentence:
• when we know under what circumstances it is true.
• when we know how semantic relations (entailments, presuppositions, implicatures, etc.)
  apply to it

This knowledge is:
• not explicitly taught
• consistent across speakers
• applicable to an infinite number of novel sentences
  (Compare: phonological and syntactic intuitions)

Any theory of semantics must at least be able to account for this kind of knowledge.