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24.910 Topics in Linguistic Theory: Propositional Attitudes
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Part I – Conversation and Common Ground (cont'd)

5. Further Applications

5.1. Semantics / pragmatics of questions

1. [examples of normal information-seeking questions]
2. Is it raining?
3. How are you?
4. Who's the governor of Iowa?

One standard view of the semantics of questions:

- The denotation of a question = the set of possible answers to the question (i.e., a set of propositions)
 - (2 {it's raining, it isn't raining}
 - (3 {The addressee is doing well, the addressee is doing okay, the addressee is doing terribly, ...}
 - (4 {Mitt Romney is the governor of Iowa, Barack Obama is the governor of Iowa, Chet Culver is the governor of Iowa, ...}
- Observations about questions:
 - The speaker believes that some member of the set is true [this seems to act like a presupposition]
 - The speaker believes that the addressee (might) know which one is true, and be willing to tell the speaker
- Formally, given a question Q which denotes set A
Asking Q does the following:
 - Adds to the common ground that (at least) one member of A is true [presupposition]
 - Invites the hearer to assert one of the members of Q
- Norm: For a speaker to appropriately ask question Q, where Q has the set of possible answers A, the following must hold:
 - the speaker can be expected to accept whichever assertion the hearer makes in response to the question
 - the hearers can be expected not to object to adding to the common ground the proposition that A has some member that's true
- Note: We don't have to add that the hearer should answer correctly, since this falls under the norm of assertion

5.2. (Indicative) Conditionals

5. If it's raining, I'll take an umbrella.

One way to think of this: the speaker temporarily adds the proposition that it's raining to the common ground, and proposes (in that new context) to add the proposition that the speaker will take an umbrella.

[After the assertion is over, the proposition that it's raining is taken back out of the common ground.]

Toy example:

- 6 worlds in context set:
 - w_1 : **Rain**; Speaker takes umbrella; Umbrella is blown inside-out
 - w_2 : **Rain**; Speaker takes umbrella; Umbrella is not blown inside-out
 - w_3 : **Rain**; Speaker does not take umbrella; Umbrella is not blown inside-out
 - w_4 : No rain; Speaker takes umbrella; Umbrella is blown inside-out
 - w_5 : No rain; Speaker takes umbrella; Umbrella is not blown inside-out
 - w_6 : No rain; Speaker does not take umbrella; Umbrella is not blown inside-out
- Step 1: Remove non-rain worlds (w_4, w_5, w_6) temporarily from the context set, giving the following temporary context set:
 - w_1 : **Rain**; Speaker takes umbrella; Umbrella is blown inside-out
 - w_2 : **Rain**; Speaker takes umbrella; Umbrella is not blown inside-out
 - w_3 : **Rain**; Speaker does not take umbrella; Umbrella is not blown inside-out
- Step 2: Proposes to remove from this derived context set all of the worlds where the speaker does not take an umbrella (namely, w_3).
- If the assertion is accepted, we get a new derived context set:
 - w_1 : **Rain**; Speaker takes umbrella; Umbrella is blown inside-out
 - w_2 : **Rain**; Speaker takes umbrella; Umbrella is not blown inside-out
- Add the non-rain worlds back in, giving the new context set:
 - w_1 : **Rain**; Speaker takes umbrella; Umbrella is blown inside-out
 - w_2 : **Rain**; Speaker takes umbrella; Umbrella is not blown inside-out
 - w_4 : No rain; Speaker takes umbrella; Umbrella is blown inside-out
 - w_5 : No rain; Speaker takes umbrella; Umbrella is not blown inside-out
 - w_6 : No rain; Speaker does not take umbrella; Umbrella is not blown inside-out
- Result [if conditional is accepted]: we've removed from the context set worlds where it's raining and the speaker doesn't take an umbrella

Note: This view of conditionals is highly influential but controversial, and many (perhaps most) linguistic semanticists take a different view.

5.3. Exclamations: *Ouch, oops, etc.*

One simple way to think of these: they are purely presuppositional – that is, add something to the common ground without giving the addressees a fair chance to reject it. (But in order to say one of these things, it must be the case that the hearers can be expected not to object to adding it to the common ground.)

On this view:

- *Ouch*: presupposes that something has caused the speaker pain [etc.]
- *Oops / Oh Sh*t! / etc.*: presupposes that the speaker has made a mistake

5.4. Expressive Content

Examples: *that bastard Sam*, nonrestrictive relative clauses (maybe), *the f**k-ing TV* (and variations), ...

6. That bastard Sam got a new job.
 - asserts that Sam got a new job
 - Adds to the common ground that the speaker thinks Sam is a bastard
7. Turn off the damn T.V.!
 - = imperative expressing ‘turn off the T.V.’
 - Adds to the common ground that the speaker has a negative attitude towards the T.V.

Two ways to think of these:

- They contain presuppositions about the speaker’s attitude (for example ‘the speaker thinks that Sam is a bastard’)
- They [??] put the speaker on record as wanting to add a “judgment” to the common ground (for example, ‘Sam is a bastard’) but presumes that the hearers will not accept it. (Perhaps it gives hearers an opportunity to accept it.)

5.5. Other conversational games: Guessing games

8. The prize might be in my right hand or it might be in my left hand. You have to guess!
 - Assume:
 - ‘Speaker believes the prize might be in their right hand’
≈ ‘it’s compatible with the speaker’s beliefs that the prize is in their right hand’
 - [and similarly for the left hand]
 - Also assume: If ‘the prize might be in the speaker’s right hand’ is added to the common ground, what happens is that the interlocutors simply check to make sure there are worlds in the context set where the prize is in the speaker’s right hand [and similarly for left]

Reason this kind of example is puzzling: Presumably the speaker knows what hand the prize is in, and so they can’t possibly believe both of these *might* statements.

One way to think of this situation: The norm of assertion is different for a clue-giver in a guessing game: In this case, to appropriately assert p, it must be the case that:

- Adding p to the common ground won’t rule out the correct answer
- Adding p to the common ground won’t give away the correct answer

Note: Suppose the prize is in fact in the speaker's right hand. Then:

- They can't assert *the prize is in my right hand* (even if they believe it to be true) because it will eliminate all the left-hand worlds (giving away the answer)
- They can't assert *the prize is in my left hand* because it will eliminate the actual world

5.6. More to think about ...

- Dismissive insults (*Screw you!*)
- "Conventional implicatures" [*but* → contrast]
- Conversational implicatures
- Relationship with Gricean maxims

5.7. [Assignment]

Discuss the naturally occurring conversations from your homework.

[Try to go through what happens to the common ground at each step.]

Part II – Presupposition

Readings:

- L. Karttunen (1973). Presuppositions of Compound Sentences. *Linguistic Inquiry* 4;2: 169-193.
- Stalnaker, R. 1974. Pragmatic Presupposition. Reprinted in R. Stalnaker, 1999, *Context and Content*, Oxford University Press.

6. Presupposition Projection

6.1. Core examples of presuppositions

For current purposes, take these to be representative examples of ‘presuppositions,’ where in each case (a) presupposes (b):

9. Existential presupposition for *all of A’s Bs*:
- a) All of Bill’s children are girls.
 - b) Bill has children.

[Note: Presupposition could be thought as related to the *all + of* construction and/or to a definite article implicit in the possessive]

10. Factivity presupposition for *A knows that p*:
- a) Bill doesn’t know that Pluto is a planet.
 - b) Pluto is a planet.
11. ‘Previously occurred’ presupposition of *stop, quit*, etc.
- a) Sue has stopped smoking cigars.
 - b) Sue used to smoke cigars

❖ Questions:

- [Empirical] Under what circumstances do presuppositions remain when the “(a)” sentences are embedded under other predicates, connectives, etc.?
- [Theoretical] How can we account for the projecting behavior of presuppositions?

❖ (Pretty Good) Tests for Presupposition

- Embedding under *might*: *It might be true that ...*
- Making into a question: *Is it really true that ...?*

Examples:

12. [Embed (9.a) / check if speaker committed to Bill having children (9.b)?]
- a) It might be true that all of Bill’s children are girls.
 - b) Is it really true that all of Bill’s children are girls?
13. [(10.a): check if speaker committed to Pluto being a planet]

- a) Bill might not know that Pluto is a planet.
 - b) Is it really true that Bill doesn't know Pluto is a planet?
14. [(11.a): check if speaker committed to Sue previously smoking cigars]
- a) Sue might have stopped smoking cigars.
 - b) Is it really true that Sue has stopped smoking cigars?

6.2. Examples of projected presuppositions

[Plus: the examples in 9-11 / 12-14]

15.

- a) Bill is surprised that Sue has stopped smoking cigars.
- b) Sue has managed to stop smoking cigars.
- c) Either Sue has stopped smoking cigars or Bill is mistaken.
- d) If Sue has stopped smoking cigars, Bill will be sad.
~> Sue previously smoked cigars.

[Note: Some of these also introduce additional presuppositions, but that's not part of what's projected]

6.3. Examples of blocked presuppositions

16.

- a) Bill said that Sue stopped smoking cigars (...but in fact she never smoked them in the first place.)
- b) Either Sue has stopped smoking cigars or she never did smoke them.
- c) If Sue ever smoked cigars, she has stopped smoking them.
~/> Sue previously smoked cigars.

6.4. Observations: Plugs, holes, and filters

- Verbs of saying (*say, claim, ...*) seem to generally block presuppositions from projecting [16.a]
[“**plugs**”]
- Factive verbs (*know, regret, be surprised that*) seem to generally allow presuppositions to project [(15.a)-(15.b)]
[“**holes**”]
- Conditionals, conjunction, and disjunction: depends on whether the presupposition is made explicit in one of the embedded parts. [(15.c)-(d) vs. (16.b)-(c)]
[“**filters**”]

7. Focus on Filters: Conjunction, Disjunction, and Conditionals

7.1. Conditionals

Looking in general at sentences of the form **if A then B**

- 7.1.1. *A and B logically independent*
 → All presuppositions of A and B are projected

Example:

17.

- a) Sue has stopped smoking cigars.
 ~> Sue previously smoked cigars.
 b) All of John's students will be happy.
 ~> John has students.

18. If Sue has stopped smoking cigars, all of John's students will be happy.
 ~> Sue previously smoked cigars
 ~> John has students

- 7.1.2. *A entails C; B presupposes C*
 → C is not projected (but other presuppositions are)

- ❖ **Simple Case: A is a presupposition of B (A = C)**
 → A is not projected

Example:

19.

- a) John has students.
 b) All of John's students will be happy.
 ~> John has students.

20. If John has students, all of them will be happy.
 OR ... they will all be happy.
 ~/> John has students

- ❖ **Case 2: A merely entails C, where C is a presupposition of B**
 → C is not projected

Example:

21.

- a) John has over 50 students
 [entails: John has students]
 b) None of John's students will be happy.
 ~> John has students.

22. If John has over 50 students, none of them will be happy.
~/> John has students

Note: (22) does seem to strongly suggest that John has *some* students (possibly less than 50), but I think this goes away in the “test” environments:

23. Is it really true that if John has over 50 students, none of them will be happy?

❖ **Other presuppositions are still projected:**

- 24.
- a) Bill has three students who have met John’s student.
~> John has a student
[entails: Bill has students]
 - b) All of Bill’s students will stop smoking cigars.
~> Bill has students
~> All of Bill’s students previously smoked cigars
25. If Bill has three students who have met John’s student, then all of Bill’s students will stop smoking cigars.
~/> Bill has students
~> John has a student
~> All of Bill’s students previously smoked cigars

❖ **Generalization (Karttunen, p. 178, no. 13):**

26. Given a sentence of the form **If A then B**:
- a) If A presupposes C, then S presupposes C
 - b) If B presupposes C, then S presuppose C unless A semantically entails C

7.2. Conjunction

7.2.1. *Unrelated conjuncts*

As with conditionals, all presuppositions are projected:

- 27.
- a) All of Jack’s children are girls.
~> Jack has children
 - b) All of Sue’s children are boys.
~> Sue has children
28. All of Jack’s children are girls and all of Sue’s children are boys.
~> Jack has children
~> Sue has children

7.2.2. 1^{st} conjunct entails presupposition of 2^{nd}

29.

- a) Bill has children.
- b) All of Bill's children are girls.
~> Bill has children.

An asymmetry:

30. Bill has children and all of his children are girls.
~/> Bill has children

31. # All of Bill's children are girls and he has children.
[K's claim: (31) does presuppose that Bill has children]

Evidence that (30) does not presuppose that Bill has children:

32. Q: Is it really true that Bill has children and they're all girls?
A₁: No, he has boys too.
A₂: No, he doesn't have any children.
A₃: # What do you mean? He doesn't HAVE any children!

Compare to (33):

33. Q: Is it really true that all of Bill's children are girls?
A₁: No, he has boys too.
A₂: What do you mean? He doesn't HAVE any children!

Observe: other presuppositions still projected:

34.

- a) Jack has five students again.
~> Jack has had five students in the past
[entails: Jack has students]
- b) All of Sue's children like Jack's students
~> Sue has children
~> Jack has students

35. Jack has five students again and all of Sue's children like Jack's students.
~> Jack has had five students in the past
~> Sue has children
~/> Jack has students

❖ **Generalization (Karttunen, p. 179, no. 17)**

36. Given a sentence of the form **A and B**:

- a) If A presupposes C, then S presupposes C
- b) If B presupposes C, then S presuppose C unless A semantically entails C

7.3. Disjunction

7.3.1. *Unrelated disjuncts*

Again, all presuppositions are projected:

37.

- a) All of Jack's children are girls.
~> Jack has children
- b) All of Sue's children are boys.
~> Sue has children

38. Either all of Jack's children are girls or all of Sue's children are boys.

- ~> Jack has children
- ~> Sue has children

7.3.2. *One disjunct contradicts the presupposition of the other disjunct*

[Karttunen tries to claim a similar asymmetry as for conjunction, but brings up examples that go against it in footnote 11]

39.

- a) Jack has no children.
[contradicts: Jack has children.]
- b) All of Jack's children are boys.
~> Jack has children

40. Either Jack has no children or all of his children are boys.

- ~/> Jack has children

41. Either all of Jack's children are boys or he has no children.

- ~/> Jack has children

7.4. Further complications

In some cases, "entailment" should be taken to be a broader relation:

[Background: Fred believes that all Mormons wear special "holy underwear"]

42. Either Geraldine is not a Mormon or she has given up wearing her holy underwear

- ~> If Geraldine is a Mormon, she wears / wore holy underwear

→ This is one argument for a more pragmatic view of presupposition

❖ **We'll continue next time with Stalnaker on presupposition...**
[plus other reading(s) to be announced]