

## Homework 7: Karttunen (1974)

**Read:** Karttunen (1974), *Presupposition and Linguistic Context*

1. On the first page, Karttunen defines “pragmatic presupposition” as a relation between a surface sentence A and a logical form L, which holds if A can only be felicitously uttered in contexts which entail L. What is a surface sentence? What is a logical form? What does it mean for a context to entail a logical form?
2. For example, suppose that the context contains the logical form corresponding to the sentence “Fred has at least one child”. For convenience, I will use single quotes to indicate that I am talking about logical forms, so this logical form is ‘Fred has at least one child’. Suppose further that the (surface) sentence *Fred’s children are bald* can only be uttered in contexts which entail ‘Fred has at least one child’. (i) Is the presupposition satisfied in this context? Why? (ii) What about a context that contains the logical forms ‘Mary is Fred’s daughter’ and ‘Bill is Fred’s son’? Why?
3. In (4), say what the following things stand for, in ordinary English (note that the  $-$  symbol stands for set complementation:
  - (a)  $P_{if\ A\ then\ B/X}$
  - (b)  $P_{A/X}$
  - (c)  $P_{B/X \cup A}$
  - (d)  $E_X$
  - (e)  $E_{X \cup A}$
  - (f)  $E_{X \cup A} - E_X$
  - (g)  $P_{B/X \cup A} - (E_{X \cup A} - E_X)$
  - (h)  $P_{A/X} \cup P_{B/X \cup A} - (E_{X \cup A} - E_X)$
4. The statement in (4) is equivalent to the filtering condition that Karttunen (1973) gives on p. 184:

Let S stand for any sentence of the form “If A then B”.

- (a) If A presupposes C, then S presupposes C.
- (b) If B presupposes C, then S presupposes C, unless there is some (possibly null) set X of assumed facts such that  $X \cup \{A\}$  semantically entails C.

This definition was motivated by the example, *If Geraldine is a mormon, then she has given up wearing her holy underwear*, which does **not** presuppose that Geraldine has holy underwear, assuming that mormons have holy underwear. Show that this fact is correctly captured by (4), using the following assumptions:

- The global context,  $X = \{ \text{'Mormons have holy underwear'} \}$
- Its entailments,  $E_X = \{ \text{'Mormons have holy underwear'} \}$
- The global context augmented with the antecedent,  $X \cup A = \{ \text{'Geraldine is a mormon'}, \text{'Mormons have holy underwear'} \}$
- The entailments of that,  $E_{X \cup A} = \{ \text{'Geraldine has holy underwear'}, \text{'Geraldine is a mormon'}, \text{'Mormons have holy underwear'} \}$
- The presuppositions of the consequent,  $P_{B/X \cup A} = \{ \text{'Geraldine has holy underwear'} \}$
- The presuppositions of the antecedent,  $P_{A/X} = \{ \}$

You will need to compute  $P_{A/X} \cup P_{B/X \cup A} - (E_{X \cup A} - E_X)$ .

5. Suppose that the context contains 'Mary is tired';  $X = \{ \text{'Mary is tired'} \}$ . Does context  $X$  satisfy the presuppositions of *Fred is tired, too*, according to (5) and (6), p. 184? Explain your reasoning; say what each of the variables in the rules corresponds to in this case.
6. Suppose the context contains no logical forms at all. (i) Does it satisfy the presuppositions of *If Mary is tired, then Fred is tired too*, according to (5) and (7)? Explain why, in the same way. (ii) Does it satisfy the presuppositions of *If Mary is blonde, then Fred is tired too*? Why?
7. Suppose the context  $X = \{ \text{'Mormons have holy underwear'} \}$ ,  $A = \text{Geraldine is a mormon}$ ,  $B = \text{she has given up wearing her holy underwear}$ . (i) Does  $X$  satisfy the presuppositions of *If A then B*? Explain.
8. Suppose the context  $X = \{ \}$  (the empty set), and  $A$  and  $B$  are defined as in the previous question. Does  $X$  satisfy the presuppositions of *If A then B*? Explain.
9. Extra credit: Explain why (11)  $P_B - (E_{X \cup A} - E_X) \subseteq E_X$  is equivalent to (14)  $P_B \subseteq E_{X \cup A}$ .
10. Karttunen proposes that all presuppositions have to be satisfied within their 'local context'. What is the local context for:
  - the consequent of a conditional?
  - the second conjunct in a conjunction?
  - the second disjunct in a disjunction?
  - the complement of a propositional attitude verb?
11. What contexts admit *Either Geraldine is not a mormon or she has given up wearing her holy underwear*? Explain.
12. How does presupposition accommodation work, according to Karttunen?