

The Proviso Problem

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Presupposition Reading Group

1 Presuppositions of conditionals

For a conditional sentence “If A, then B”, the presupposition of the antecedent clearly projects out (modulo local accommodation).

- (1) a. John will go to Paris again this summer.
b. If John goes to Paris again this summer, he'll go bankrupt.
⇒ John has been to Paris before
- (2) a. John's sister is in town.
b. If John's sister is in town, he won't show up today.
⇒ John has a sister
- (3) a. John divorced Mary.
b. If John divorced Mary, he is in trouble.
⇒ John and Mary were married

It's known that the presupposition of the consequent can be filtered ([Karttunen 1973, 1974](#)).

- (4) a. John will go to Paris again this summer.
b. If John has been to Paris before this summer, he will go there again.
- (5) a. Dave will invite John's sister, but not Bill's.
b. If John has a sister and Bill has a brother, Dave will invite John's sister, but not Bill's brother.
- (6) a. John divorced Mary at some point, but we don't know when.
b. If John was married to Mary, he divorced her at some point.

As Karttunen pointed out, however, the presupposition of the consequent appears to project out in other cases (see also [Gazdar 1979](#), [Van der Sandt 1992](#), [Geurts 1996, 1999](#)).

- (7) a. If Mary lives in Paris now, John will go there again this summer.
b. If Dave is organizing the party, he will invite John's sister, but not Bill's brother.
c. If John has moved to Europe, he divorced Mary at some point.

The theory of presupposition projection needs to account for both types of examples.

Note: [Karttunen 1973](#): p. 178 (unlike [Karttunen 1974](#)) says that the presupposition of the consequent projects out, unless the antecedent ‘semantically entails’ it. This is wrong. There are cases where the presupposition of the consequent gets filtered, without the antecedent entailing it.

- (8) a. If John has a sister, Dave will invite Bill's brother, but not John's sister.
 b. If John went to Paris last year, then he will go to France again.
 c. If Theo is a scuba diver, then he will bring his wet suit.
 (Geurts 1996: p. 271)
 d. If John has an exam today, Mary will notice that he is smoking more than usual.
 (Beaver 2001: p. 247)
- (9) a. John has a sister $\nVdash$ Bill has a brother and John has a sister
 b. John went to Paris last year $\nVdash$ John has been to France before (logically Paris need not be part of France)
 c. Theo is a scuba diver $\nVdash$ he has a wet suit
 d. John has an exam today $\nVdash$ he is smoking more than usual

Rather, it seems to be enough for the presupposition of the consequent to be filtered that it is somehow dependent, or perhaps follows reliably, from the truth of the antecedent (see Van Rooij 2007 and Schlenker 2011 for detailed proposals). But as we will see later, Mandelkern 2016a,b raised examples that suggest that an empirically adequate characterization of the condition for filtering remains elusive.

2 Conditional presuppositions and pragmatic strengthening

Some theories assign *conditional presuppositions* to all conditional sentences (Karttunen 1974, Heim 1983).

- (10) a. Suppose "A" asserts that a_A and presupposes that p_A ; "B" asserts that a_B and presupposes that p_B .
 b. Then "If A, then B" presupposes that p_A and $a_A \rightarrow p_B$.

This analysis predicts that all conditional sentences should have conditional presuppositions, when the consequent contains a presupposition trigger, so it fails to account for (9). The predicted presuppositions are conditional:

- (11) a. Mary lives in Paris now $\rightarrow$ John has been to Paris before
 b. Dave is organizing the party $\rightarrow$ John has a sister and Bill has a brother.
 c. John has moved to Europe $\rightarrow$ John and Mary were married

Geurts 1996, 1999 calls this problem the *proviso problem*, and uses it to argue against theories that always assign conditional presuppositions to all conditional sentences, and for the representational theory of presuppositions due to Van der Sandt 1992 and Geurts 1999. As Schlenker 2011 points out, however, the latter theory also suffers from version of the proviso problem (see his paper for details).

To account for the projection facts in such cases, the proponents of this analysis resort to an additional mechanism of pragmatic strengthening (Beaver 2001, von Stechow 2008, van Rooij 2007, Singh 2007, 2008). The rough idea is:

- (12) When the context doesn't entail the conditional presupposition $\phi \rightarrow \psi$:
 a. The semantic knowledge indicates the need for accommodation, whereby the resulting context will entail the conditional presupposition $\phi \rightarrow \psi$.
 b. Depending on the contents of ϕ and ψ , one might prefer to accommodate ψ , or even something stronger than ψ , rather than $\phi \rightarrow \psi$, if the resulting context is more 'natural'.

- (13) When the context already entails $\phi \rightarrow \psi$, there's nothing to do, but such contexts might normally entail ψ , or something stronger than ψ , depending on the contents of ϕ and ψ .

Consequently, one might feel that the sentence presupposes ψ , rather than $\phi \rightarrow \psi$.

For cases where that is not the case, it must be natural enough to just have $\phi \rightarrow \psi$, without also having ψ or something stronger.

2.1 Examples

- (14) If John went to Paris last year, John will go to France again this summer.

The predicted presupposition is:

- (15) John went to Paris last year $\rightarrow$ John has been to France before

In a context where it is common knowledge that Paris is part of France, (15) is already commonly known to be true. No need for accommodation.

Similarly, the predicted conditional presuppositions (17) of (16) are already commonly known to be true by virtue of logically true.

- (16) a. If John has a sister and Bill has a brother, Dave will invite John's sister, but not Bill's brother.
b. If John was married to Mary, he divorced her at some point.
- (17) a. John has a sister and Bill has a brother $\rightarrow$ John has a sister and Bill has a brother.
b. John was married to Mary $\rightarrow$ John was married to Mary

In some cases, the conditional presupposition is not guaranteed to be satisfied, but is natural to accommodate.

- (18) a. If Theo is a scuba diver, then he will bring his wet suit.
b. Theo is a scuba diver $\rightarrow$ Theo has a wet suit (Geurts 1996: p. 271)
- (19) a. If Jane takes a bath, Bill will be annoyed that there is no more hot water.
b. Jane takes a bath $\rightarrow$ there will be no more hot water (Beaver 2001: p. 246)
- (20) a. If John has an exam today, Mary will notice that he is smoking more than usual.
b. John has an exam today $\rightarrow$ he is smoking more than usual (Beaver 2001: p. 247)

Non-conditional presuppositions are analyzed as involving accommodation of a proposition stronger than the conditional presupposition.

- (21) If Mary lives in Paris now, John will go there again this summer.
a. Mary lives in Paris now $\rightarrow$ John has been to Paris before
b. John has been to Paris before
- (22) If Andrew flies to Paris, his sister will pick him up.
a. Andrew flies to Paris $\rightarrow$ Andrew has a sister
b. Andrew has a sister

In some cases strengthening to a stronger conditional presupposition is required.

- (23) If Theo is a scuba-diver and he wants to impress his girlfriend, he will bring his wet suit. (Geurts 1996: p. 272)
- a. (Theo is a scuba-diver and he wants to impress his girlfriend) $\rightarrow$ Theo has a wetsuit
 - b. Theo is a scuba-diver $\rightarrow$ Theo has a wetsuit

2.2 Other connectives

The same theories also assign conditional presuppositions to conjunctive and disjunctive sentences. It appears that non-conditional presuppositions arise in cases that are parallel to conditional sentences, suggesting that the same mechanism is behind all of them.

- (24)
- | | | |
|-----------------|---|--|
| a. If A, then B | $p_A \wedge (a_A \rightarrow p_B)$ | |
| b. A or B | $p_A \wedge (\neg a_A \rightarrow p_B)$ | or $p_B \wedge (\neg a_B \rightarrow p_A)$ |
| c. A and B | $p_A \wedge (a_A \rightarrow p_B)$ | |

2.2.1 Disjunction

- (25)
- a. Suppose “A” asserts that a_A and presupposes that p_A ; “B” asserts that a_B and presupposes that p_B .
 - b. Then “A or B” presupposes either
 - (i) that $p_A \wedge (\neg a_A \rightarrow p_B)$; or
 - (ii) that $p_B \wedge (\neg a_B \rightarrow p_A)$.

We’ll focus on (i) to save space.

- Examples with conditional presuppositions (including contextually trivial ones)

- (26)
- a. Either John has never been to Paris, or he will go to France again this summer.
 - b. Either John doesn’t have a sister, or Dave will invite Bill’s brother, but not John’s sister.
 - c. Either John was never married to Mary, or he divorced her at some point.
 - d. Either Theo is not a scuba diver, or he will bring his wet suit.
 - e. Either John doesn’t have an exam today, or Mary will notice that he is smoking more than usual.

- Examples with non-conditional presuppositions

- (27)
- a. Either Mary doesn’t live in Paris, or John will go there again this summer.
 - b. Either Dave is not organizing the party, or he will invite Bill’s brother, but not John’s sister.
 - c. Either John didn’t move to Europe, or he divorced Mary at some point.
 - d. Either Andrew won’t fly to Paris, or his sister will pick him up.

2.2.2 Conjunction

- (28)
- a. Suppose “A” asserts that a_A and presupposes that p_A ; “B” asserts that a_B and presupposes that p_B .

- b. Then “A and B” presupposes that p_A and $a_A \rightarrow p_B$.

Because “A and B” entails a_A , one should be able to conclude p_B from the assertion of “A and B” and its conditional presupposition $a_A \rightarrow p_B$ via Modus Ponens.

When “A and B” is in a non-veridical context that is also a presupposition hole, we should be able to see the conditional presupposition.

- Examples with conditional presuppositions (including contextually trivial ones)

- (29)
- I’m not sure/wonder if John has been to Paris before and will go to France again this summer.
 - I’m not sure/wonder if John has a sister and Dave will invite Bill’s brother, but not John’s sister.
 - I’m not sure/wonder if John was married to Mary but divorced her at some point.
 - I’m not sure/wonder if Theo is a scuba diver and will bring his wet suit.
 - I’m not sure/wonder if John has an exam today and Mary will notice that he is smoking more than usual.

- Examples with non-conditional presuppositions

- (30)
- I’m not sure/wonder if Mary lives in Paris and John will go there again this summer.
 - I’m not sure/wonder if Dave is organizing the party and he will invite Bill’s brother, but not John’s sister.
 - I’m not sure/wonder if John has moved to Europe and he divorced Mary at some point.
 - I’m not sure/wonder if Andrew will fly to Paris and his sister will pick him up.

3 Presuppositions that conditionals are true

Geurts 1996, 1999 argues that the mechanism of pragmatic strengthening overgenerates.

- (31) If Andrew flies to Paris, his sister will pick him up at the airport.
- Andrew will fly to Paris $\rightarrow$ Andrew has a sister
 - Andrew has a sister

Compare this to the conditional factive presupposition of (32).

- (32) Chris knows/is happy that if Andrew flies to Paris, he has a sister.

This sentence should have a factive presupposition that “If Andrew flies to Paris, he has a sister” is true. We’d expect pragmatic strengthening to apply to it, yielding a stronger presupposition that Andrew has a sister.

Heim 2006 provides a possible solution:

- A conditional in natural language triggers scalar inferences such as ‘conditional strengthening’ (von Stechow 2001, 2009).

- (33) If Andrew flies to Paris, he has a sister. $\rightsquigarrow \neg(\text{Andrew has a sister no matter what})$

Note: One could argue that this inference is responsible for why we never conclude 'B' from 'If A, then B', i.e., presupposition strengthening does not happen to the result of an assertion of a conditional.

- In a factive context, it should give rise to an anti-presuppositional counterpart of this:

- (34) Chris knows that if Andrew flies to Paris, he has a sister.
 $\rightsquigarrow \neg\text{CG}(\text{Andrew has a sister no matter what})$

With this anti-presupposition, one cannot accommodate that Andrew has a sister.

- Conditional presuppositions of conditionals and other constructions simply do not have such scalar inferences.

So [Geurts 1996, 1999](#) argument here might not be that strong.

4 Unexpected strengthening

[Mandelkern 2016a,b](#) present cases where strengthening does happen, even though the presupposition of the consequent depends on the antecedent.

- (35) Context: It is common ground that Smith has gone missing, and we don't know whether he is still alive. A detective enters and says:
- If the butler's clothes contain traces of Smith's blood, then it was the butler who killed Smith.
 - If the butler's clothes contain traces of Smith's blood, then we'll soon have Smith's murderer behind bars.

(adapted from [Mandelkern 2016a](#): p. 7, p. 11)

The detective's utterance presupposes that Smith is dead.

The predicted conditional presupposition is (36), which should be natural to accommodate without strengthening.

- (36) the butler's clothes contain traces of Smith's blood $\rightarrow$ someone killed Smith

Furthermore, the unconditional presupposition is observed even if it contradicts the common ground, yielding infelicity.

- (37) Context: It's common ground that Susie has disappeared. The detective says: We don't know where Susie is or even whether she's still alive. We need to examine her room.
- #If there are bloodstains in the room, then Susie's murderer did a sloppy job.
 - #If there are bloodstains in the room, then Susie's murderer is in prison as we speak. We picked up a notoriously sloppy serial murderer yesterday.

(adapted from [Mandelkern 2016a](#): p. 13)

If the mechanism of strengthening is really pragmatic in nature, why would it happen here? Other examples:

- (38) a. Is John in good health? Is he taking care of himself?
 b. I'm not sure, but we should be able to tell at dinner; if he's restricting his sugar intake, then his diabetes is under control.
 (Mandelkern 2016a: p. 12)
- (39) a. Why did some of the professors wear waterproof coats to work today?
 b. I don't know who did, and I can't tel you for all of them, but if Jack wore his waterproof coat to work today, then he's aware that it's raining out.
 (Mandelkern 2016a: p. 12)
- (40) a. What were the kids up to today?
 b. I don't know, but if they were playing baseball in the backyard earlier, then they're the ones who broke the dining room window.
 (Mandelkern 2016a: p. 13)
- (41) John was limping earlier; I don't know why. Maybe he has a stress fracture. I don't know if he plays any sports, but if he has a stress fracture, then he'll stop running cross-country now.
 (Mandelkern 2016b: p. 396)

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