

# The Proviso Problem

Matt Mandelkern, All Souls College, Oxford  
University College London, 2 February 2017

matthew.mandelkern@all-souls.ox.ac.uk

## 1 The Proviso Problem

According to most theories:

- (1) If  $p$  then  $q_r$ .  $\rightsquigarrow p \supset r$
- (2) Not  $p$  or  $q_r$ .  $\rightsquigarrow p \supset r$
- (3)  $p$  and  $q_r$ .  $\rightsquigarrow p \supset r$

There's a gap with what we tend to accommodate:

- (4) If Theo hates sonnets, then so does his wife. (Geurts, 1996)

In a null context, we'll generally accommodate (5), not just (6):

- (5) Theo has a wife.
- (6) Theo hates sonnets  $\supset$  Theo has a wife.

Likewise if (7) is uttered in a null context, we'll accommodate (8), not (9):

- (7) If the butler called in sick on Monday, then it was the butler who killed Smith.
- (8) Someone killed Smith.
- (9) The butler called in sick on Monday  $\supset$  Someone killed Smith.

- This is a problem specifically about *accommodation*:
  - Suppose  $\lceil p \supset q \rceil$  is already common ground. Then according to *c*-theories, nothing needs to be done. This seems exactly right:
    - (10) If Theo has a wife, his wife hates sonnets.
    - (11) What we know now is that, first, if the butler called in sick on Monday, then someone killed Smith. Second, if the butler called in sick on Monday, then it was the butler who killed Smith. But we haven't yet ascertained whether Smith is dead.

It's only when we have to accommodate that *c*-theories fall short:

- (12) What we know now is that if the butler called in sick on Monday, then it was the butler who killed Smith. ?? But we haven't yet ascertained whether Smith is dead.
- So from the pov of *c*-theories, the question is why, *when we must accommodate something*, we accommodate more than the presupposition.
- A problem equally for other connectives:

Including satisfaction theory, trivalent theories. Call the class of such theories *c-theories*. Main exception is DRT. Predictions about the presuppositions of conditionals depend on the details of the semantics of conditionals, but not so for predictions about disjunction or conjunction; so *pace* Pérez Carballo (2009), does not seem to be an important issue.

- (13) If Theo hates sonnets and his wife hates sonnets, we shouldn't get Theo a book of sonnets.
- (14) Either Theo doesn't hate sonnets, or he and his wife both hate sonnets.

In both cases, we'll accommodate 'Theo has a wife'.

- In some cases, the conditional predictions seem correct:

- (15) If Theo is a scuba-diver, he'll bring his wetsuit on vacation.

If it's not common ground that scuba-divers all have wet-suits *and* from (15) we only conclude that if Theo is a scuba-diver, he has a wetsuit, then this is a case where things seem to go as predicted.

Is it really the case that both these obtain?

- (16) If France is a monarchy, then the king of France is in hiding.

Likewise doesn't presuppose France has a king.

- A possibly related, possibly distinct set of issues: projection out of attitudes.

- Satisfaction theory predicts  $\lceil A \text{ [believes/wants] } q_r \rceil \rightsquigarrow \lceil A \text{ believes } r \rceil$
- Again, reasonable when there is no accommodation required:

- (17) John believes he owns a cello, and he believes his cello is upstairs.

- (18) John believes he owns a cello, and he wants his cello to be put upstairs.

- But when we must accommodate something, it looks like we accommodate not only  $\lceil A \text{ believes } r \rceil$  but also  $r$ :

See Karttunen 1973; Heim 1992; Sudo 2014.

- (19) John believes his cello is upstairs [?? but I have no idea whether he has a cello].  $\rightsquigarrow$  John has a cello.

- (20) John wants his cello to be put upstairs [?? but I have no idea whether he has a cello].  $\rightsquigarrow$  John has a cello.

*The Proviso Problem:* Accounting for the (sometimes/always)-observed discrepancy between *c*-theories' predicted *semantic presuppositions* versus observed *speaker accommodation*.

The name is due to Geurts (1996), but the problem has been known at least since Karttunen and Peters (1979).

## 2 Responses to the Proviso Problem

The existence of a systematic gap between predicted presuppositions and observed accommodation is not *necessarily* a problem. But we need a story that bridges this gap. Basic idea:

*Strengthening*: For pragmatic reasons, we sometimes accommodate strictly more than is presupposed.

Not meant to preclude that other, syntactic considerations play a role, as in Singh (2007) and Schlenker (2011).

A straightforward way of spelling this out:

*Plausibility*:

- a. When S asserts  $\lceil \text{If } p \text{ then } q_r \rceil$  (resp.  $\lceil \text{A believes } q_r \rceil$ ), her listener compares the relative plausibility of
  1. S is presupposing only  $p \supset r$  (resp. only  $\lceil \text{A believes } r \rceil$ ), versus
  2. S is presupposing  $r$  (resp.  $\lceil r \text{ and A believes } r \rceil$ ).
- b. S will conclude in favor of Option 2 iff she has pragmatic reason to think (it's common ground that) Option 2 is more plausible than Option 1.

Another approach, which can be seen as an elaboration or stand alone:

*Independence*: Someone who asserts 'If  $p$  then  $q_r$ ' is felt to presuppose  $r$  iff  $r$  is independent of  $p$ ; else she is felt to presuppose only  $p \supset r$ .

Hard to see how to generalize this to attitudes. Also quite hard to spell out the theoretical foundations of this; see my and Daniel's squib.

'Independent' gets cashed out differently in different implementations:

1. Probabilistic Independence:  $r$  independent of  $p$  just in case  $Pr_c(r) \approx Pr_c(r|p)$ , with  $Pr_c(\cdot)$  a contextual probability measure.
2. Contextual Independence:  $r$  is contextually independent of  $p$  in  $c$  iff for any  $x, y \in \{r, \bar{r}, p, \bar{p}\}$ , if  $x$  and  $y$  have non-empty intersection with  $c$ , they have non-empty intersection with one another.

See Schlenker (2011), who cites Singh (2006), and Lassiter (2012).

See van Rooij (2007).

### 3 Objection 1: Assertion

- Why don't we strengthen  $\lceil \text{If } p, q \rceil$  to  $q$  when we *assert* the former?
- Clearly something needs to be said here, but can see variety of things to say.
- Most simply: if you knew  $q$ , you would have asserted  $q$ .
- Need an account on which similar brevity-style reasoning doesn't apply to presupposed content.

### 4 Objection 2: Structure

- It's very plausible that we are always comparing different possible common grounds to figure out which one we are at. But we must say something more granular about what are we comparing.
- Partly this is because *Plausibility* is totally stipulative as it stands.
- More importantly, it misses lots of cases:
  - What about  $\lceil \text{If } p \text{ and } s, q_r \rceil$ ? Or  $\lceil \text{If } p, s \text{ and } q_r \rceil$ ?

- (21) If Theo is a scuba-diver and he wants to impress his girlfriend, he'll bring his wetsuit.
- (22) If Theo is a scuba-diver, then he'll want to impress his girlfriend, and so he'll bring his wetsuit.

If there is truly only conditional accommodation here, what we accommodate is definitely (23), not (24):

- (23) If Theo is a scuba-diver, he has a wetsuit.
- (24) If Theo is a scuba diver and he wants to impress his girlfriend, he has a wetsuit.

So even where there is conditional accommodation, we need a fine-tuned syntactic story that says what alternatives we are considering, and a strengthening story even to get conditional presuppositions.

- o Even harder when we insert attitudes:

- (25) Mark believes that if Theo likes sonnets, his wife does too.

Somehow we compare the possibility that the speaker is presupposing all possible combinations of:

- The speaker is presupposing (i) Mark believes that if Theo likes sonnets, he has a wife; or (ii) Mark believes that Theo has a wife;
- and (a) the speaker is presupposing nothing else; (b) the speaker is also presupposing that if Theo likes sonnets, he has a wife; (c) the speaker is presupposing that Theo has a wife

Quite complex from a simple example. Are we really doing this? If so, how do these alternatives get generated? And is the strongest possibility ((ii-c), which seems like the default) really the most plausible?

- o Worse when we have a complex conditional under an attitude in a conditional. . .

- (26) If Mark knows about Theo's obsessiveness about poetry and bizarre family life, then Mark will think that Theo's wife likes sonnets and his brother hates elegies, if Theo likes sonnets and hates elegies.

Somehow we pretty automatically conclude that Theo has a brother, even though the predicted presupposition is:

- (27) If Mark knows about Theo's obsessiveness about poetry and bizarre family life, then Mark believes that if Theo likes sonnets and hates elegies, then if Theo has a wife, he has a brother.

Schlenker proposes that we sometimes just ignore the rest of the structure when we calculate presuppositions, explaining why unconditional projection is easier. Maybe best account given cases like this.

## 5 Objection 3: Anaphors

Geurts (1996), attributed to van der Sandt:

- Candidates for anaphora generally need to be introduced by explicit NPs, not inferred material:

- (28) a. John has a wife; she is a lawyer.  
b. ?? John is married; she is a lawyer.

- Proviso cases pattern like (28-a), not (28-b):

- (29) a. If Theo hates sonnets, his wife does too. She definitely like elegies though.

- This seems to me like a good objection given a dynamic treatment of pronouns, but not given an e-type treatment.

## 6 Objection 4: Factives

- (30) a. Walter knows that if Theo hates sonnets, he has a wife.  
b. Walter knows that either Theo doesn't hate sonnets, or he has a wife.

- The puzzle: From the pov of c-theories, the factive presupposition of (30) is identical to the presupposition of 'If Theo hates sonnets, his wife does too.'

At least of (30-b), where the embedded clause is clearly a material conditional.

- So why does the presupposition get strengthened in the latter case but not the former?

- Heim (2006) the only serious attempt I know to answer this.

- Basic idea:  $\lceil \text{If } p, q \rceil$  implicates  $\lceil \text{Not: } q \text{ no matter what } \rceil$ .
- If we calculate implicatures locally,  $\lceil A \text{ knows if } p, q \rceil$  implicates:  $\lceil A \text{ doesn't know that } q \text{ no matter what } \rceil$ .
- If somehow we take A's explicitly ascribed knowledge to be a guide to what we should believe, this will block strengthening.
- We *can't* say: the implicature is calculated off the presupposition. Because then  $\lceil \text{If } p, q_r \rceil$  would also implicate  $\lceil \text{Not: } r \text{ no matter what } \rceil$ .

Very plausible intuitively.

But this is very woolly. I couldn't follow Heim's handout on this point. Von Rooij says some similarly vague things along these lines.

## 7 Objection 5: Dependent conditionals

*Independence* looks plausible for some examples. E.g. *Theo has a wife* is in a natural sense independent of *Theo hates sonnets*.

- But lots of cases where it's not, but we seem to strengthen anyway:

- (31) If the butler's clothes contain traces of Smith's blood, then it was the butler who killed Smith.

We'd generally accommodate that someone killed Smith, not (32):

These counterexamples clearly show a probabilistic approach to be wrong. Less clear that they show a contextual independence approach to be wrong. But that approach, when we look more carefully, just says that we always strengthen conditional presuppositions. Gazdar (1979); Geurts (1996, 1999); Mandelkern (2016b).

- (32) The butler's clothes contain traces of Smith's blood  $\supset$  Someone killed Smith.

The consequent of (32) depends on its antecedent, so *Independence* wrongly predicts the speaker of (31) will be felt to be presupposing just (32).

- Nor do more general considerations seem to help here. Compare:

- (33) The speaker is presupposing 'Someone killed Smith.'

- (34) The speaker is presupposing 'The butler's clothes contain traces of the victim's blood  $\supset$  Someone killed Smith.'

Do we have general reason to conclude in favor of the former over the latter?

- Suppose that it is common ground that Smith has disappeared, and a detective investigating the case asserts (31).
- Hard to see pragmatic pressure to make this assumption.
- For all we know before the detective's comment, it is open in the investigation whether Smith was murdered or has simply gone on the lam. Why should the detective's comment change this?

In such a case, it would be perfectly reasonable for the detective to say that he is going to test the butler's clothes for blood stains; if they are found, then that will tell in favor of the hypothesis that Smith was indeed murdered, and moreover that he was murdered by the butler.

- More cases:

- (35) a. How's John's health? Is he taking care of himself?  
 b. [I don't know, but we should be able to tell when we have dinner with him.] If he's restricting his sugar intake, then his diabetes is under control.
- (36) a. Why did some of the professors bring their umbrellas to work today?  
 b. I can't tell you for all of them, but if Jack brought his umbrella to work today, then he's aware that it's raining out.
- (37) 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.
- (38) a. What happened at the bank today?  
 b. If a bank guard was kidnapped, it was the Winter Hill gang that pulled off the bank robbery.

## 8 Objection 6: Difficulty of cancellation

If strengthening is pragmatic, it should be cancellable. It's not.

- Geurts gives examples of the form 'If p, q'. But not r.'

(39) ?? If the problem was difficult, then it wasn't Morton who solved it. But as a matter of fact the problem wasn't solved at all.

■ Perhaps unconvincing:

(40) ?? If the problem was difficult, then it was solved, but it wasn't Morton who solved it. But as a matter of fact the problem wasn't solved at all.

If satisfaction theory is right, then the 'unstrengthened' reading of (39) should be basically equivalent to (40). But (40) still is weird.

■ I think a more effective test is from sequences of the form  $\lceil$ If p, q $\rceil$ . But I don't know whether  $\lceil$ r $\rceil$  or order variants.

Mandelkern 2016b.

(41) [Common ground that Susie has disappeared. The detective:] We don't know whether Susie was murdered or has simply run away from home. We need to examine her room.

- a. If there are bloodstains in the room, then Susie was murdered, and Susie's murderer did a sloppy job.
- b. ?? If there are bloodstains in the room, then Susie's murderer did a sloppy job.

Intuitively incoherence of (41-b) is bc detective is presupposing that Susie was murdered, contrary to prior assertion. Appropriate response:

(42) Hey wait a minute! I thought that we didn't know whether Susie was murdered or not!

Hard to see how to account for this in the framework of *Strengthening*. *c*-theories say the semantic presupposition of (41-b) is:

(43) There are bloodstains in the room  $\supset$  Susie was murdered.

*Strengthening* says this *can* get strengthened to

(44) Susie was murdered.

through pragmatic pressures. Here we have strong pressure *not* to strengthen: only by doing so can we interpret the speaker as coherent.

■ I.e. there should be an interpretation of (41-b) on which it's roughly equivalent to (41-a), and so coherent. There seems not to be.

■ Another example:

(45) a. [Tim:] I haven't seen John in forever. I heard he has either diabetes or arthritis. Do you know whether whatever he has is under control?

- b. [Jason:] I'm not sure; I actually don't know what sickness he has, either. But we should be able to tell by what he eats tonight.
- (i) If he restricts his sugar intake, then he has diabetes, but it's under control.
- (ii) ?? If he restricts his sugar intake, then his diabetes is under control.

(45-b-ii) infelicitous; again bc Jason is felt to be presupposing what he has just said he doesn't know:

- (46) [Tim:] Wait a minute! So he does have diabetes? I thought you just said it might be arthritis?

Given strong pragmatic pressure to interpret Jason coherently, *Strengthening* should predict that (45-b-ii)'s presupposition isn't strengthened, and so we'll get a reading roughly equivalent to (46-a).

## 9 Conclusion and prospects

The proviso problem is a profound mess.

- I'm skeptical of the chances of a solution; I think nothing on the table works.
- The main alternative is to pursue a non-c-theory of presupposition: one that makes different predictions to begin with.
- Not a lot of options out there:
  - DRT: interesting, but has serious, perhaps insuperable, problems.
  - Rothschild (2015).
  - In Mandelkern 2016a I try to spell out a minimal variant on satisfaction theory which avoids proviso:
 

*Dissatisfaction theory:*

    - *Projection rule:*  $p$  presupposes  $r$  iff  $r$  is presupposed by some sub-constituent  $q$  of  $p$  and  $r$  is not entailed by  $q$ 's local context.
    - *Pragmatic rule:* Presuppositions are not-at-issue contents, not constraints on input contexts.
    - So take  $\lceil$ If  $p$ ,  $q_r$  $\rceil$  in  $c$ . If  $r$  is already entailed by  $p$  plus  $c$ , then we do nothing—matching the correct predictions of satisfaction theory here. But when  $r$  is not already entailed by  $p$  plus  $c$ , then  $r$  just projects up.
    - Likewise take  $\lceil$ S believes  $q_r$  $\rceil$ . If already cg that S believes  $r$ , no presupposition. But if not, we just project  $r$ .
  - I'm still sympathetic to that theory: quite simple variation on satisfaction theory that captures much of what's nice about the latter without proviso.
  - But turns out to be hard to formalize nicely when we include quantifiers.
- In sum: there is a lot left to do here.

Note further that (45-b-ii) addresses the question under discussion—by giving a (partial) way of finding out whether whatever is wrong with John is under control—and so its infelicity is not due to the fact that it fails to address the question under discussion.

I.e. we reject *Stalnaker's Bridge*

If we kept *Stalnaker's Bridge*, then even with our new projection rule, we'd still have Proviso. That's basically the situation for Karttunen 1973.

Then a question about where the presupposition  $\lceil$ S believes  $r$  $\rceil$  comes from; perhaps lexical?

The system in the paper is implausibly complex. I was trying to do with a static system there. But better might be to combine the approach there with Yasu's dynamic approach to bound presuppositions.



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