

# Local Blocking\*

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I wish to establish the following generalization: that *Maximize Presupposition!* (hf. MP) is checked for arbitrarily embedded sentences. By a general algorithm, it is easy to produce sentences which globally have no presuppositions at all, but which, assuming theories of interpretation that make reference to local contexts, do contain constituents that impose presuppositional constraints on local contexts. In such cases, we still find what appear to be violations of MP. Since many of these constituents occur in non-assertive positions (eg. relative clauses, complements of attitude predicates, conditionals of antecedents, disjuncts, etc), I suggest that such cases provide evidence that MP is a formal constraint that is checked in local contexts.

I will show how such a view can help derive certain generalizations that are otherwise quite puzzling, such as the apparent fact that when the additive particle *too* is possible in a parse, it is necessary (such as in VP-ellipsis contexts). I will also use local checking of MP to derive certain constraints on when you may and may not insert Fox's [2] exhaustive operator into a parse. Under a model of interpretation that employs local contexts, such constraints will fall out as local violations of MP.

I will conclude that MP is an instance of blind scalar implicature generation (a la Heim [7] and Magri [13]), with the proviso that it applies in local, embedded contexts.

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## 1 *Maximize Presupposition!*

- Heim [7]: if  $\phi$ ,  $\psi$  are alternatives, and  $\psi$  imposes stronger presuppositions on  $\phi$ , and  $\phi$ ,  $\psi$  are contextually equivalent, then one must use  $\psi$
1. {# A / The} sun is shining
  2. {# All / Both} of John's eyes are blue
- a pragmatic maxim
  - derivable from Gricean maxims? eg. preference for informativity? see important discussions of this point in Heim [7], Percus [14], Schlenker [15]
  - we will come back to this latter issue later
  - if it occurs in embedded, non-assertive positions, will be difficult to motivate pragmatically (cf. Schlenker's [16, 17] discussion of information update models of presupposition projection)

## 2 Global versus Local Checking

- can create sentences with no presuppositions globally, but impose local satisfaction requirements
3. Everyone with exactly two students assigned the same exercise to {both/ # all} of his students (Percus [14])
  4. If John has exactly two students and he assigned the same exercise to {both/ # all} of his students, then I'm sure he'll be happy
  5. (Either John has exactly two students and he assigned the same exercise to {both/ # all} of his students) or he doesn't have any students at all
  6. Mary believes that John has exactly two students and that he assigned the same exercise to {both/ # all} of his students

- the above sentences, in both their *both* and *all* variants, are (globally) non-presuppositional, according to standard theories of presupposition projection (eg. Heim [6])
- yet, they seem to suffer from the same kinds of violations of MP that we saw earlier
- Percus: define notion of one lexical item (LI) being ‘presuppositionally stronger’ than another
- given some such scale, a sentence  $\phi$  containing an LI  $\alpha$  will compete with sentences  $\psi$  containing presuppositionally stronger LIs  $\beta$  (substitute  $\alpha$  in  $\phi$  with  $\beta$  to generate  $\psi$ )
- Percus’ [14] MP: if  $\psi$  is felicitous in  $c$ , and  $\phi$  and  $\psi$  are contextually equivalent, then prefer  $\psi$  to  $\phi$
- seems like an adequate characterization of the facts, but difficult to motivate as a pragmatic principle
- if the information at the root is the same in both  $\phi$  and  $\psi$ , and, in particular, neither carries any stronger presuppositional requirement than the other, why should pragmatics care that embedded somewhere inside they contain LIs with differing ‘presuppositional strengths?’
- Schlenker [15]: consider again cases like (3)
- if we assume a dynamic system of interpretation, it makes sense to speak of the common belief at time  $t$ ,  $t'$ , etc.
- can say that at time  $t$ , even if it were uttered that, say, *John has exactly two students*, at later time  $t'$ , when interpreting *He assigned the same exercise to —*, there is a slight chance that one of the conversational partners might be distracted, and might forget what was common belief at time  $t$
- thus, at  $t'$ , there is a slight chance that it might not be common belief that John has exactly two students
- thus, by using the presuppositionally stronger continuation (with *both*), the speaker can re-establish by the end of the sentence that John has

exactly two children (by a general procedure, due to Stalnaker [19], where by presenting oneself as presupposing that  $p$  suffices for it to be common belief that  $p$ )

- I will adopt Schlenker’s suggestion that dynamic interpretation in local contexts might be helpful, but will not employ the complications of introducing uncertainty and distractions into the communicative model
- rather, I will stick with the idealization that information updates occur as intended
- once we adopt a dynamic framework, it becomes very natural to impose global, pragmatic constraints, within the local steps of the dynamic update
- I will assume that any time one is executing the CCP of  $\phi$  on  $\phi$ ’s local context  $c$ ,  $c + \phi$ , MP applies
- as a result, all of the above fall out as (local) violations of MP
- I give a tentative statement of MP here (to be modified)

**Local Checking of *Maximize Presupposition!*** Let  $S$  be a sentence uttered in context  $c$ , and let  $\phi$  be a constituent of  $S$  whose CCP will be executed on context  $c'$ . Then if  $\psi$  is an alternative to  $\phi$  (under some theory of alternatives)<sup>1</sup> with stronger presuppositional requirements than  $\phi$ , and  $c'$  entails  $\psi$ ’s presupposition, and  $c' + \phi = c' + \psi$ , then the update with  $\phi$  will result in infelicity.

- I will sharpen this statement after looking at some applications
- is this different in any way from Percus’ statement of MP?
- we can show that they differ in one particularly interesting way
- if we assume a dynamic model of interpretation (Heim [6]), along with local checking of MP, there are two necessary conditions on felicitous update: (i) each update operation must be defined in its local context, (ii) MP must be satisfied at each update step

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<sup>1</sup>I will generally assume that the alternatives are generated by Katzir’s [12] procedure for generating scalar alternatives.

- when both conditions are met, local MP checking and Percus' statement do not differ<sup>2</sup>
  - however, dynamic interpretation systems also allow for *local accommodation*, or accommodation quite generally
  - when a constituent's presupposition is not met in its local context, the presupposition can sometimes be accommodated
  - thus, we predict that there can be sentence's  $S$  with constituents  $\phi$  allowing both (eg.) a definite and indefinite article
  - Percus' statement does not allow for this
  - standard bridging cases, as well as certain instances of purely local accommodation, are cases of interest
7. John got arrested last night. {A(n) / the} officer at the scene was overly aggressive.
  8. You can either find {a / the} bathroom upstairs or there is no bathroom in the house

### 3 Using Local MP Checking

#### 3.1 On Obligatory *too*

- it has long been observed that *too* (among other discourse particles) is often obligatory (eg. Green [4, 5], Kaplan [10], Zeevat [20])
  - consider, as a special case, VP-ellipsis
9. John came to the store, and Bill did too
  10. # John came to the store, and Bill did

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<sup>2</sup>Let  $S$  be uttered in context  $c$ , and let  $\phi$  be a constituent embedded in  $S$ , and suppose  $+\phi$  is to be executed on local context  $c'$ , and that  $\psi$  is an alternative to  $\phi$  with weaker presuppositions. Then, by MP,  $\phi$  should be selected. If it is, and assuming nothing else goes wrong with the update,  $S$  will be felicitous. If it isn't, then we will have a violation of MP, resulting in infelicity.

- this falls out very naturally if we assume that the parse with *too* and the parse without are alternatives
- I am not sure how to ensure that this is so by using Katzir's alternatives
- let us assume that there is some way of getting *Bill did too* and *Bill did* to be alternatives
- assume with Heim [8] (following Kripke) that *too* is somehow anaphoric, something like *in addition to x*
- then the LF of (9) will be something like in (11)

11. John<sub>i</sub> came to the store, and Bill<sub>F</sub> did [come to the store] too<sub>i</sub>

- note that, globally, the sentence does not presuppose anything
- locally, + *Bill<sub>F</sub> came to the store too<sub>i</sub>* is defined iff John came to the store in each world in  $c + \text{John}_i \text{ came to the store}$ , which indeed holds
- since the parse with and without *too* are contextually equivalent, MP should rule out the parse without *too*, and force the one with
- this seems correct
- again, this explanation relies crucially on a local satisfaction requirement, whereas there is no such requirement on the global context

### 3.2 *only* versus *exh*

- I will assume with Fox [2] that implicatures are generated through the use of an exhaustive operator, *exh*, which is the same entry as for *only* except that whereas *exh*( $\phi$ ) asserts  $\phi$ , *only*( $\phi$ ) presupposes  $\phi$
- I will furthermore assume Fox's lexical entries for *only* and *exh*
- now, consider the following sentence

12. # John ate all of the cookies and he ate some of them

- why is it infelicitous?

- there are two ways of parsing the second sentence: with an *exh*, and without
- the parse with *exh* renders the second conjunct entirely vacuous, hence the infelicity
- the parse with *exh* results in inconsistency
- thus, either way, the sentence is bad
- what about the following variant?

13. # It's possible that John ate all of the cookies and it's possible that he ate some of them

- again, we have two ways of parsing the second conjunct: with an *exh* and without

14. M(all) and M(some)

15. M(all) and M(*exh*(some))

- in (14), the second conjunct is entirely vacuous, hence the infelicity
- in (15), there is no obvious difficulty
- in fact, by adding an overt *only*, the sentence becomes totally felicitous

16. It's possible that John ate all of the cookies and it's possible that he ate only some of them

- what's behind the contrast between (13) and (16)?
- first, we must consider presupposition projection in possibility sentences

17. It's possible that John loves his wife

- since Karttunen [11], it's been thought that (17) presupposes that John has a wife, i.e. that possibility modals are holes for presupposition
- however, the following seems to pose a challenge for that view

18. It's possible that John has a wife, and it's possible that he loves his wife

- it seems that it is both necessary and sufficient that a context entail  $MX$  to admit  $M(\phi\{X\})$ , i.e.  $M(\phi\{X\})$  presupposes  $MX$
- now, consider again the LFs in (14) and (15)
- the first conjunct in each is  $M(all)$
- the second conjunct in each is evaluated in context  $c'$ , where  $c' = c + M(all)$
- we have two competitors:  $M(only(some))$ , and  $M(some)$
- $M(only(some))$  has a non-trivial presupposition, viz.  $M(some)$
- $M(some)$  is non-presuppositional
- note that  $c' = c + M(all)$  entails  $M(some)$ , so that MP becomes relevant, and should therefore rule out LF (14), due to competition with LF (15)

### 3.3 Obviation of Hurford's Constraint by Scalar Implicature

- Hurford [9]: a disjunction is infelicitous if one entails the other

19. # John was born in Paris or in France
- Gazdar: can be rescued by local implicature<sup>3</sup>

20. John ate some of the cookies or he ate all of them

21. (John or Mary) or (Both John and Mary) [came to the party]
- Singh [18]: scalar implicature can save you from HC only for earlier disjuncts, not for later ones

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<sup>3</sup>Gazdar had no way of generating local implicatures, but one needs to get readings with local implicature. See Chierchia, Fox, Spector [1] for in-depth discussion.

- 21. # John ate all of the cookies or he ate some of them
- 22. # (Both John and Mary) or (John or Mary) [came to the party]
- if we follow Zimmerman [21] and Geurts [3], and treat disjunctions  $\phi \vee \psi$  as conjunctions of modals,  $M(\phi) \wedge M(\psi)$ , then, eg. (22) will have the following potential LFs:
  - 23. M(all) and M(some)
  - 24. M(all) and M(exh(some))
- the LF in 23 will violate informativity constraints
- the LF in 24 will, as we saw above, violate MP, due to competition with the LF in (25)
  - 25. M(all) and M(only(some))
- note, crucially, that  $M(all) \wedge M(only(some))$  does not, globally, presuppose anything (it presupposes  $M(all) \rightarrow M(some)$ , which is a tautology)
- but, locally, certain constraints are imposed

## 4 Further Consequences

- suggests a certain way to read dynamic semantics: that it doesn't make sense to ask what the presupposition of a sentence is, based on the presuppositions of its parts
- only important issue: local satisfaction
- all of our examples involved no global presuppositions, but rather purely local ones, generating the same kinds of MP violations that we saw in unembedded, indicative sentences
- also, suggests a story whereby implicature computation is local and obligatory
- $c + \phi$  is really an update that adds the strengthened meaning of  $\phi$ , obligatorily

- if one wants to get a weaker reading, one has to do some extra work to ‘cancel’ the implicature (now an obvious misnomer)
- try to derive this from a general preference for ‘stronger meanings,’ which get computed locally, and blindly
- sometimes, as with *all/both*, an implicature to the effect that the presupposition of the more presuppositionally loaded sentence (eg. the one with *both*) is not met in the local context
- results in a theory of ‘local oddness,’ where the oddness is oddness a la Magri [13]

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