Presuppositions: Ambiguity, Accommodation and Cancellation*

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- the assignment of presuppositions to logical forms is complicated by an apparent non-determinism in the assignment
- simplifying (and distorting slightly), presuppositions sometimes project, sometimes appear to be cancelled, and sometimes seem to get strengthened
- different approaches to presupposition have found different ways of dealing with the non-determinism
- DRT approaches appeal to an additional level of representation, with various transformational operations defined on this representation to account for the apparent multiplicity
- for them, non-determinism indicates a linguistic ambiguity
- in satisfaction theoretic approaches, there is a projection component, along with a global accommodation mechanism, and a cancellation mechanism (either local accommodation (e.g., Heim (1983)) or the insertion of an operator that converts presuppositions into assertions (e.g., Beaver and Krahmer (2001))
- after discussing some of the difficulties of these approaches, I will present an approach to capturing the multiplicity with a minimum of presupposition-specific machinery

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- the system makes use only of standard syntax (no additional levels of representation), and a bivalent semantics
- we then use tools developed by Schlenker (2008), Fox (2008), George (2008), and others, namely, reasoning over possible 'continuations' of a sentence at some point in left-right parsing, to generate a predictive projection theory
- while employing continuations, we use a different reasoning to generate presuppositions
- in the general case, these will be weaker than standard systems
- for example, while conditionals will give rise to conditional presuppositions, DE operators in general will be plugs, modals will be filters, and what a quantifier projects will depend on the quantifier itself
- wherever these predictions seem too weak, we will argue that the weakness can be overcome by a general solution to the proviso problem (we follow the proposal of Singh (2008), Singh (2009))
- the resulting theory employs no cancellation mechanism; there is no local accommodation, no floating-A operator, no 'de jure' accommodation (Soames (1989))
- there is only syntax, bivalent semantics, the (predictive) projection component, and global accommodation

1 Non-determinism in Presupposition

- let T be a sentence that presupposes p, T_p, and let $A \rightsquigarrow q$ mean that sentence A implies proposition q
- in the propositional case (including propositional modal logic), when T_p is a subconstituent of sentence S, $S(T_p)$, there seem to two ways of interpreting $S(T_p)$: (i) either the sentence as a whole ends up implying $p \wedge S(T_p)$, which we'll call the 'Global Reading' of $S(T_p)$ or (ii) it ends up implying $S(p \wedge T_p)$, which we'll call the 'Local Reading'[1]

[1]The term 'reading' might be inappropriate, as there is debate as to whether these inferences are the output of the grammar or external systems. We will be more careful whenever relevant.

(1) $\neg T_p$

a. Global Reading: $\rightsquigarrow p \wedge \neg T_p$
John's sister isn't going to pick him up from the airport ($\rightsquigarrow$ that John has a sister and she isn't going to pick him up from the airport)

b. Local Reading: $\rightsquigarrow \neg(p \wedge T_p)$
John's sister isn't going to pick him up from the airport...he doesn't even have a sister! ($\rightsquigarrow$ that it's not the case that (John has a sister and she is going to pick him up from the airport))

(2) if S, then T_p

a. Global Reading: $\rightsquigarrow p \wedge (S \rightarrow T_p)$
If John flies to Toronto, his sister will pick him up from the airport ($\rightsquigarrow$ that John has a sister and if he flies to Toronto, she'll pick him up from the airport)

b. Local Reading: $\rightsquigarrow (S \rightarrow (p \wedge T_p))$
If John is a scuba diver, he'll bring his wetsuit ($\rightsquigarrow$ that if John is a scuba diver, he has a wetsuit and will bring it)

(3) $\Diamond T_p$

a. Global Reading: $\rightsquigarrow p \wedge \Diamond T_p$
John's sister might pick him up from the airport ($\rightsquigarrow$ that John has a sister and she might pick him up from the airport)

b. Local Reading: $\rightsquigarrow \Diamond(p \wedge T_p)$
He might have lost his dog (said while seeing a stranger whistling at the bushes, cf. Kay (1992)) ($\rightsquigarrow$ that it might be that (he has a dog and has lost it))

- note that the statement changes slightly when we turn to quantified sentences, $Q(A)(B_p)$[2]
- while the Local Reading (e.g., in (4b)) does indeed correspond to something like a conjunction of the presupposition (p) with the minimal sentence in which it occurs (B), $Q(A)(p \wedge B)$, the non-Local Reading (in (4a)) does not correspond to a conjunction of the embedded presupposition (p) and the truth-conditional content of the sentence as a whole ($p \wedge Q(A)(B_p)$)
- nevertheless, we will refer to this reading (for now) as the 'Global Reading'

[2]The LF should of course really be something more like $Q_C(A)\lambda x.B(x)_{Px}$ (where C is a domain restriction variable). I use the notation in the main text to simplify clutter, but the reader should bear in mind that $Q(A)(B_p)$ is a sloppy way of saying $Q_C(A)\lambda x.B(x)_{Px}$.

(4) No$(A)(B_p)$

a. Global Reading: $\rightsquigarrow$ Every A is p and No$(A)(B_p)$
No man in that room loves his wife ($\rightsquigarrow$ that every man in that room has a wife and no man in that room loves his wife)

b. Local Reading: $\rightsquigarrow$ No$(A)(p \wedge B)$
No man in that room loves his wife because no man in that room is even married! ($\rightsquigarrow$ that no man in that room is such that he has a wife and loves her)

- different theories of presupposition make sense of this non-determinism in different ways
- will briefly discuss two prominent approaches: (i) Variants of the satisfaction theory, and (ii) DRT

2 Ambiguity and Accommodation

2.1 DRT

- DRT approaches take the non-determinism to suggest the existence of a systematic, linguistic ambiguity
- specifically, in sentence $S(T_p)$, p is a formal object that can be moved around to various positions[3]
- these transformational operations generate (at least) two readings, one where p takes matrix scope, and one where p remains local to T_p
- the different scopes correspond exactly with the readings in (1)-(3) (we will return to quantified structures like (4) in the next section)
- that is, the representation corresponding to matrix scope gives rise to the Global Reading $p \wedge S(T_p)$ (as the literal meaning of the representation),

[3]The tranformations take place formally in discourse representation structures (DRSs), but the particular representation is irrelevant to anything we say here. See van der Sandt (1992), Zeevat (1992), Geurts (1999) for somewhat competing ideas about the right theory of transformations.

while the representation corresponding to local scope gives rise to the Local Reading $S(p \wedge T_p)$[4]

- there are also 'Intermediate Readings' that can be generated, where p takes scope at some constituent embedded in S but outside of T; we'll return to these a bit later

- the general prediction is that the attested space of presuppositional readings should correspond exactly with the different scope possibilities generated by the theory of transformations

2.1.1 Difficulties for the Approach

- there are four difficulties with the DRT approach that I'd like to mention here

- first, at a conceptual level, DRT analyses of presupposition have no way of distinguishing presuppositions from run of the mill entailments

- once a DRS is given to interpretation, the output is just some proposition, with nothing to separate the entailments into what is being asserted and what is being presupposed

- for example, recall (1a), *John's sister isn't going to pick him up from the airport*

- as noted earlier, this sentence (under the Global Reading) entails that John has a sister and that she isn't going to pick him up from the airport

- but under DRT, nothing tells us that John having a sister should be the presupposition of the sentence, while the assertion is that his sister isn't going to pick him up from the airport

- they're both (mere) entailments

[4]In DRT's terminology, we would call these 'Global Accommodation' and 'Local Accommodation,' respectively, but I will reserve the term 'accommodation' for the sense in which it has been used within the satisfaction theory, namely, an inference of adding a proposition to repair the context in a way that need not correspond to syntactic transormations in any sense.

- if there is indeed something to the idea that there is a distinguished presuppositional component of meaning (e.g., Frege (1892), Strawson (1950), Horn (1972), Heim and Kratzer (1998), von Fintel (2004b), and much other work), then this would seem to be a problematic feature of the system
- second, the transformational operations that move p around are unrelated to syntactic transformations as understood in the syntactic literature
- that is, the landing sites that are predicted by DRT's transformations are not motivated in any way by constraints on syntactic movement[5]
- if the space of transformations made correct predictions, the lack of any systematic relation to syntactic transformations would be little more than a question in need of an answer
- however, the proliferation of transformational operations does seem to overgenerate
- for example, in addition to the Local and Global reading of $S(T_p)$, DRT also allows for 'Intermediate Readings' that arise from p moving to positions that don't dominate T_p
- it is not surprising, therefore, that these intermediate readings have been questioned (e.g., Beaver (2001), Beaver (2004), von Fintel (2004a))
- for example, the following sentences do not allow for intermediate readings (where the intermediate reading in (5a) would involve adding p to the antecedent of the conditional, and to the restrictor of *every*, in (5b))

(5) a. If John flies to Toronto, his sister will pick him up from the airport
Intermediate Reading: If John has a sister and flies to Toronto, his sister will pick him up from the airport

b. Every man in that room loves his wife
Intermediate Reading: Every man in that room who has a wife loves her

[5]While the space of landing sites is motivated by certain relations to anaphora, the existence of a level of representation has been argued to be unnecessary for capturing the anaphoric data that motivated it (Rooth (1987)). Moreover, the identification of presuppositional and anaphoric phenomena breaks down in various cases, as discussed (for example) in Heim (1982).

- as far as I can tell, the lack of intermediate readings here is representative; we just don't find intermediate readings in these structures[6]
- thus, these non-canonical scoping operations lead to a problem of *overgeneration*
- however, there do seem to be cases of attested readings equivalent to what would be derived by 'intermediate accommodation,' such as the following from Geurts (1999)

(6) Maybe she has found out that her husband has been deceiving her
Intermediate Reading: Maybe she has a husband and she has found that he has been deceiving her

- Geurts (1999) points out that the intermediate reading is quite natural in a context where we see a woman displaying obvious signs of grief, a woman that neither of us know
- it seems, then, that some cases of intermediate accommodation are correct
- however, an unrestricted version of intermediate accommodation, as we saw above, leads right away into overgeneration problems
- this tension, which is the third difficulty I wished to discuss here, remains unresolved in DRT frameworks;[7] we will propose a way out of the dilemma in Section 3
- finally, for certain cases the scoping operations *undergenerate* by not giving rise to the desired readings
- for example, neither of DRT's available readings of (7) entails the universal inference that every man in that room has a wife

[6]Geurts and van der Sandt (1999) argue that quantified structures like *every man loves his wife* allow for an intermediate reading (that every man who has a wife loves her). However, as pointed out by Beaver (2001), Beaver (2004), and von Fintel (2004b), examples like the one provided are confounded with the issue of domain restriction. Once we make the domain of the restrictor fairly explicit, as in (5b), we lose the intermediate reading (see also Schlenker (2008), Chemla (2009a) for further discussion). As far as I know, there is no evidence that the intermediate reading for conditionals has been attested. Beaver and Geurts (2010) seems to agree with this assessment.

[7]See e.g., the overview paper Beaver and Geurts (2010).

- however, the experimental results of Chemla (2009a) teach us that the universal inference in (7) is as strong as it is in (5b) (see also Schlenker (2010))

(7) No man in that room loves his wife
   a. Intermediate Reading: No man in that room who has a wife loves her
   b. Local Reading: No man in that room has a wife and loves her

2.2 The Satisfaction Theory

- while DRT hoped to make sense of the non-determinism by introducing representational ambiguities generated by transformational operations, the satisfaction theory[8] accounts for the non-determinism by appealing to three different mechanisms: (i) A projection component that assigns to any LF a unique presupposition, (ii) 'Global Accommodation,' a process of updating the context c when c does not entail the sentence's projected presupposition (i.e., the projected presupposition assigned by (i)),[9] (iii) A mechanism of presupposition cancellation, either 'local accommodation' (in context change frameworks, e.g., Heim (1983)), or the insertion of a silent operator, the so-called 'floating-A' operator of Beaver and Krahmer (2001), which converts presuppositions into entailments

- let's see how these mechanisms apply to capture the dual readings of our sentences above

- negation and modals are predicted to be 'holes' (Karttunen (1973)) as far as projection is concerned, thereby accounting for the 'Global Readings' of these sentences in (1) and (3)

- their Local Readings are generated by cancellation, say, through either local accommodation, or generating a parse $\neg A(T_p)$

[8] I include as instances of the satisfaction theory those theories of projection that: (i) Assign a unique presupposition to any LF, (ii) Incorporate a rule of conversation that allows a speaker to use an LF ϕ in context c only of the projected presupposition of ϕ (as assigned by (i)) is entailed by c. This would include (as I understand them) theories like Karttunen (1974), Stalnaker (1974), Heim (1983), Beaver (2001), Beaver and Krahmer (2001), Schlenker (2008), Fox (2008), Schlenker (2009), Chemla (2009b), among others.

[9] Accommodation is a repair mechanism, activated in order to satisfy the use condition from Footnote 8 (see Karttunen (1974), Stalnaker (1974), Lewis (1979)).

- conditionals, on the other hand, are predicted to project a conditional presupposition (the 'Local Reading' in (2)), with the 'Global Reading' arising from presupposition accommodation
- that is, when faced with the need to accommodate some proposition, satisfaction theories allow the accommodated proposition to asymmetrically entail the projected presuppostion, so that, in response to 'if S, then T_p', the hearer may accommodate p instead of $S \rightarrow p$
- because of this, the accommodation mechanism is non-trivial, in that it is not restricted to the *prima facie* simplest possible repair, viz. accommodation of the projected presupposition itself
- indeed, approaches to the proviso problem that aim to extend beyond the case of conditional presuppositions (e.g., Singh (2008), Singh (2009), Schlenker (2010)) suggest that making sense of the non-triviality involves structural considerations, which suggests a larger linguistic role in the accommodation process
- finally, with respect to the quantified sentence in (7), it is predicted to project the universal inference found by Chemla (2009a), hence accounting for the Global Reading, with the Local Reading in (b) arising from local accommodation/the insertion of the A-operator at the nuclear scope

2.2.1 Difficulties with the Approach

- there are two main difficulties I would like to discuss here
- first, concerning cancellation through use of an A-operator, it is not clear why A should be employed only in complex sentences
- in atomic sentences, presuppositions are never cancelled (see e.g., Beaver and Geurts (2010))
- therefore, variants of the satisfaction theory either have to explain this syntactic restriction, or adopt a theory with local contexts so that local accommodation would be the mechanism responsible for cancellation[10]

[10] In atomic sentences, local accommodation is equivalent to global accommodation, so the non-cancellability of presuppositions in atomic sentences requires no further explanation.

- second, we have three components (projection, accommodation, cancellation) to take care of the facts, neither of which seems to be deducible from the other
- one would prefer, if possible, reducing this apparatus
- assuming that projection is the bedrock of any theory of presupposition, it would be good if we could eliminate at least one of non-trivial accommodation or cancellation
- but as it stands, we seem to need to reference both
- we need cancellation to deal with, say, cancellation under negation and modals (e.g., (1b),(3b))
- and we need (non-trivial) accommodation to deal with the proviso problem (e.g., (2a))
- or do we?
- what if, following the DRT intuition, all instances of the proviso problem could be resolved as issues of scope, but that the scoping mechanism derived from the theory of syntax and the syntax-semantics interface[11]
- e.g., (2) could then be resolved as an instance of the embedded DP either taking narrow scope (in which case the resulting LF projects only a conditional $S \rightarrow p$), or wide scope (in which case the resulting LF projects p)
- if this could be achieved, then the resulting theory of presupposition would be much simplified, for it would then reduce to just a projection component, plus a cancellation mechanism
- Schlenker (2010) (cf. his examples (27) and (28), repeated below as (8)) teaches us that this will not work, and that scoping mechanisms cannot take the place of a non-trivial accommodation mechanism

[11]Danny Fox suggested this idea to Roni Katzir and myself in the context of a different paper. See Heim (1992) for the earliest suggestion along these lines, and for an initial attempt at developing such an approach extending beyond DP triggers.

(8) a. Among each of these ten students, everyone who takes my test will realize that he is incompetent
$\rightsquigarrow$ Each of these ten students is incompetent

b. Among each of these ten students, no one who takes my test will realize that he is incompetent
$\rightsquigarrow$ Each of these ten students is incompetent

(9) a. Among my ten best friends, everyone who is smart has stopped smoking
$\rightsquigarrow$ Each of my ten best friends used to smoke

b. Among my ten best friends, nobody who is smart has stopped smoking
$\rightsquigarrow$ Each of my ten best friends used to smoke

- the strongest presupposition that satisfaction theories can project here is that each of my ten best friends who is smart used to smoke (or that every one of the students who takes the test is incompetent)
- given the bound variable reading, scoping will not help here[12]
- thus we still need recourse to a non-trivial accommodation mechanism
- overall, then, the satisfaction theory seems to be a package deal: buying its projection theory forces one to buy one of its cancellation mechanisms as well as some non-trivial accommodation mechanism

2.3 Brief Summary and Looking Ahead

- we have seen that there are difficulties with both DRT and satisfaction theoretic approaches to capturing the non-determinism
- in the following, I will outline an alternative approach
- we will assume a standard syntax, and bivalent semantics (no partiality or trivalent values)
- there is no additional level of representation (i.e., the only object of interest is the given LF, and there is no DRS or anything of the sort), and all scope is determined by syntax-semantics interface principles

[12] Schlenker (2010) points out that DRT's looser scoping possibilities don't help here either.

- on top of this semantics, we will define a pragmatic presupposition projection mechanism, building on the insights of Schlenker (2008), Fox (2008), George (2008), and others, that presupposition projection is determined by incremental reasoning over possible continuations of sentences
- our main difference will be the nature of this reasoning
- this will define a projection mechanism
- on top of this, we will add an accommodation mechanism, building on the approach to the proviso problem developed in Singh (2008), Singh (2009)
- crucially, there will be no cancellation mechanism, i.e., there is no need to appeal to a floating A operator, and no need to appeal to local accommodation

3 Presupposition Projection and Accommodation

3.1 Projection: Incremental Commitments

3.1.1 The Intuition

- the main intuition I wish to pursue is that the 'Local Reading' in each of the above sentences is somehow basic
- that is, the Local Reading entails the projected presupposition of the sentence
- unlike DRT, we do not want this to come out as a mere entailment of the assertion; rather, we want to squeeze out a presuppositional requirement
- in general, this will make our projection mechanism very weak
- for example, negation, *no* (DE operators, in general, as we will see) will all be plugs for presupposition
- will argue that the 'Global Reading' always arises due to a general solution to the proviso problem
- here is how we propose to generate a presupposition out of the Local Reading

- we will use tools developed by Schlenker (2008), Fox (2008), George (2008), and others, namely, reasoning over continuations of the sentence at some point in left-right parsing, but we ask a different question
- at the point of encountering the trigger, we ask: what is the minimal information the speaker is now committed to, without considering how the sentence ends?
- e.g., suppose S is a sentence containing sentence T, with T presupposing p, $S(T_p)$
- at the point that T_p is encountered, following Schlenker (2008), we reason about an alternative, related sentence, $S([p \wedge T]/[T_p])$, which is, in some sense, how the sentence 'wants' to be articulated
- one norm governing the assertion of S is that the speaker should be committed to the truth of S
- the system exploits this pragmatic fact and, at the point of encountering the trigger, tries to compute what the speaker is committed to no matter how the sentence continues
- that is, it reasons that the speaker is committed to there being some 'continuation' of sentence $S([p \wedge T]/[T_p])$ at the point 'p and' that ends in truth
- we will identify this existential commitment with the presupposition of $S(T_p)$

3.1.2 The System Defined

- we follow Fox (2008)'s definition of the continuation of a sentence at some point

(10) **Continuations** S' is a continuation of S at point A if S' can be derived from S by replacement of constituents that follow A[13]

- now, suppose $S(T_p)$ is the assertion, and let $S^* = S([p \wedge T/T_p])$
- the projection mechanism is defined by reasoning as follows: there is a continuation of S^* at 'and' that is true

[13] Y follows A if all the terminals of Y are pronounced after all the terminals of A.

(11) **Presupposition Projection** There is some true sentence that can be derived by replacing any number of constituents following 'p and' in S^*

- focusing for now on the special case where T_p is a final constituent in $S(T_p)$, the statement becomes the following (as a consequence of (10) and (11)

(12) **Presupposition Projection when T_p is Final** The presupposition of $S(T_p)$ is that $\exists T'(S(p \wedge T'))$

- as we will see, in many cases, we reconstruct standard results (e.g., conditionals give rise to conditional presuppositions, universal quantifiers project universal presuppositions), but in other cases, we get drastically different results (e.g., negation and the antecedent of conditionals will be plugs, not holes, modals will be filters, not holes)

- we will argue that when an operator is not a hole (as a matter of projection), its hole-like behaviour will arise through accommodation, i.e., through a general solution to the proviso problem

- we work through some examples to give a feel for the system

(13) a. If John is tall, his dog must be a pug
Presupposition: If John is tall, he has a dog
We get this by proving the following equivalence: there is some T', such that if John is tall then he has a dog and T' iff if John is tall then he has a dog
Proof: The 'if' direction is trivial. For the 'only if' direction, take T' to be any tautology

b. No man in that room loves his wife
Presupposition: The sentence is presuppositionless
We get this by proving the following equivalence: there is some T', such that no man in that room has a wife and T' iff TAUTOLOGY
Proof: The 'if' direction holds trivially. For the 'only if' direction, let T' be any contradiction (e.g., no man in that room has a wife and is tall and not tall)

3.1.3 Some Further Predictions

- we focus on sentences containing a single presupposition trigger in the final constituent

- let S be a sentence containing T_p, $S(T_p)$
- we want to know: what is the presupposition of $S(T_p)$, $\pi(S(T_p))$?

(14) Theory of Presupposition Projection: $\pi(S(T_p)) = \exists T'(S(p \wedge T'))$[14]

(15) Some Further Predictions:

a. $\pi(\Diamond T_p) = \exists T' \Diamond(p \wedge T')$ iff $\Diamond p$[15]
b. $\pi(\neg T_p) = \exists T'(\neg(p \wedge T'))$ iff TAUTOLOGY[16]
c. π(Every A T_P) = $\exists T'$(Every $A(p \wedge T')$) iff Every A P[17]
d. π(At least three A T_p) = $\exists T'$(At least three $A(p \wedge T')$) iff At least three A p[18]
e. π(At most three A T_p) = $\exists T'$(At most three $A(p \wedge T')$) iff TAUTOLOGY[19]
f. π(Some A T_p) = $\exists T'$(Some A $(p \wedge T')$) iff Some A p[20]

- more generally, we predict that all downward monotone operators are plugs (e.g., $\perp$ will serve as the required witness here), while upward monotone operators $Op(A, T_p)$ presuppose $Op(A, p)$ (use $\top$ as witness)

3.2 Presupposition Accommodation: Weak Presuppositions and the Proviso Problem

- the above system generally predicts very weak presuppositions
- specifically, it predicts all the Local Readings of all the sentences we have seen so far
- how do we get the Global Readings?
- through a general solution to the proviso problem
- we follow Singh (2008), Singh (2009)[21]

[14] Again, this follows as a consequence of (10), (11), and the assumption that T_p is final in S.
[15] The 'if' direction is trivial. For the 'only if' direction, let T' be any tautology.
[16] Proof: Again, the 'if' direction is trivial. For 'only if,' take T' to be any contradiction.
[17] Proof: The 'if' direction is trivial. For the 'only if' direction, let T' be any tautology.
[18] Take T' to be any tautology.
[19] Take T' to be any contradiction.
[20] Again, we take T' to be any tautology.
[21] See Schlenker (2010) for a very interesting recent proposal. I will not compare the two here.

- very roughly, the idea is that if S is the asserted sentence, in deciding what to accommodate, we generate a candidate set of 'potential accommodations'
- these are the presuppositions of the alternatives used to generate the scalar implicatures of S
- since these objects are around, might as well make use of them

(16) **Alternatives** If S is the asserted sentence, we use $A(S) = \{S' : S'$ an alternative of S for purposes of implicature computation$\}$ to generate potential accommodations

- here we borrow Katzir (2007)'s theory of $A(S)$, which we can take to be roughly: sub-consituents of S, and scalar replacements using similar items from the lexicon
- this set of alternatives has been argued to give rise to potential implicatures
- we suggest that it also gives rise to potential accommodations
- specifically, the set of potential accommodations is generated by forming the set consisting of all the (projected) presuppositions of all the members of $A(S)$

(17) **Potential Accommodations** The set of potential accommodations in response to S, $P(S)$, is generated by taking the presuppositions of each member of $A(S)$: $P(S) = \{\pi(S') : S' \in A(S)\}$

- with this, we can show how the stronger presuppositions can be derived for a few, representative cases
- for now, we can assume that the selection algorithm determining which potential accommodations become actual is trivial, namely, we accommodate the conjunction of each proposition in $P(S)$[22]
- thus, the Local/Global ambiguity will follow from the single decision of whether or not we strengthen the projected presupposition through our accommodation mechanism (much like we can decide to strengthen the assertion by either computing an implicature, or not)

[22]If we are right about the candidate set, this will probably not work in general, for reasons discussed in Singh (2008), Singh (2009).

(18) a. $S = \neg T_p$
$\pi(S) = \top$ (cf. (15b) above)
$A(S) = \{\neg T_p, T_p\}$
$P(S) = \{\pi(S') : S' \in A(S)\}$ = $\{p\}$[23]

b. S = if A, then T_p
$\pi(S) = A \rightarrow p$ (cf. (13a))
$A(S) = \{$ if A then $T_p, A, T_p, \neg A, \neg T_p\}$[24]
$P(S) = \{A \rightarrow p, p\}$

c. S= No A T_p
$\pi(S) = \top$ (cf. (13b))
$A(S) = \{$No A T_p, Some A T_p, Every A $T_p\}$
$P(S) = \{$Some A P, Every A $P\}$

- note that the Global Reading is derived by taking the conjunction of $P(S)$ in each case
- and note that we now have no need for an additional cancellation mechanism – the 'cancelled' reading is gotten in each case by our projection mechanism

3.2.1 Further Issues

- let's return to some of the data that seemed difficult for one theory or another
- e.g., recall Schlenker (2010)'s complex quantified sentences (8) and (9), repeated below

(19) a. Among my ten best friends, everyone who is smart has stopped smoking
$\rightsquigarrow$ Each of my ten best friends used to smoke

b. Among my ten best friends, nobody who is smart has stopped smoking
$\rightsquigarrow$ Each of my ten best friends used to smoke

- the crucial observation is that an alternative to each of these sentences is, *Among my ten best friends, everyone has stopped smoking*, which presupposes that every one of my ten best friends used to smoke

[23] To minimize clutter, I omit tautologies from $P(S)$.
[24] See Singh (2008, 2009) for details on how $A(S)$ is generated.

- recall also the puzzle about intermediate accommodation: why do we find it in some cases (e.g., embedding under the modal in (6)), but not others (e.g., into the restrictor from the scope in (5b) and (7))?

(20) a. Every/No man in that room loves his wife
* Every man in that room who has a wife loves her
b. She might have discovered that her husband is deceiving her
She might have a husband and have discovered that he's deceiving her

- one can show that in the quantificational case (20a), there is nothing in our framework that can generate the intermediate accommodation reading
- all that we can get are: (i) the Local Reading in each case: that every/no man in that room has a wife and and loves her, and (ii) for *no*, through accommodation, we can also get that every man in that room has a wife (through the presupposition of the alternative *Every man in that room loves his wife*)[25]
- nothing else is available
- in (20b), however, nothing in the syntax disallows the LF: [Might [her husband λx (she discovered that x is deceiving her)]][26]
- this parse generates the required reading (recall that for us, *might* is not a hole for presupposition)
- another question might arise at this point: why don't quantifiers like *at least three* project universally, for us?
- Chemla (2009a)'s data suggests that *at least three* does not behave like *every* and *no*; the tendency to project universally is much weaker
- our answer would be that *every* is not an alternative to *at least three*, which would make sense, given various arguments that the latter is not an operator (e.g., Krifka (1999) and others)

[25]For the *every* sentence in (20a), the local and global reading are equivalent.
[26]We adopt notation from Heim and Kratzer (1998).

- to the extent that we *do* get a univeral projection, the source of such an inference might follow from allowing *every* to sometimes become an alternative, since it has been made salient (under Chemla's methodology, subjects are asked whether a universal inference follows, thereby making such a structure salient)

- alternatively, they might be considering *At least n* for various 'n,' one of which would be equivalent to *every*

- but it seems that for non-logical operators, the tendency to strengthen presuppositions in the above way is not as strong

- however, if we are right about our projection mechanism, then the general tendency to prefer the 'Global Reading' when logical operators are involved might be teaching us that there is a general preference to compute the accommodation (much like there seems to be a general tendency to compute implicatures)

- since the Global Reading in each case entails the Local Reading, this might follow from a general preference for Stronger Meanings when the option is available, and can be determined based on logical strength alone

- the appeal to stronger meanings as a way to capture the well-known preference for 'global accommodation' has an established pedigree, but there are many problems (e.g., Heim (1983), van der Sandt (1992), Blutner (2000), Geurts (2000), Beaver and Zeevat (2007), Beaver and Geurts (2010), and much other work)

- we might avoid some of the well-known problems given our restricted space of possibilities, and the further limitation to logical operators alone

- the limitation to logical operators in turn might make sense of the contrast between *no* and *at least three* from Chemla (2009a)

- Chemla (2009a) does not, unfortunately, have any data on the behaviour of *some*, and its comparison with the indefinite article

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