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Two short notes on Schlenker's theory of presupposition projection*

The format of *Theoretical Linguistics* is particularly appropriate when one can identify contributions to linguistic theory that – when put in the limelight – are likely to push the field forward in important ways. With this goal in mind, I can't think of a better choice than Schlenker's target article, an article which proposes a completely original outlook on a problem that has troubled researchers for decades and – at least in the eyes of some practitioners – has resisted a satisfactory solution.

My goal for this commentary is very modest, namely to explain what I find remarkable about Schlenker's proposal. I will try to achieve this goal by discussing two of Schlenker's contributions. The first is the identification of a generalization that relates the presupposition of a sentence to what we might call the anti-presupposition of a closely related conjunctive sentence. Although this generalization is predicted by the competing theories that Schlenker considers – namely various versions of dynamic semantics – it suggests a totally new perspective on the problem.

The second contribution that I will discuss pertains to the main tool that Schlenker invokes in order to develop his perspective, namely quantification over possible continuations of a sentence at a particular point of sentence processing. I will point out that this new tool could also be used to revive a very old perspective on the problem, one which relies on the principles of various trivalent systems (namely, Strong Kleene or Supervaluation). Quantification over possible continuations can explain how principles of this sort can be modified to yield a predictive theory of presupposition projection (along lines investigated in Peters 1979, and Beaver and Krahmer 2001). It is not surprising that efforts along these lines have been made in response to Schlenker's paper (by Ben George), and I believe that a comparison of the resulting theory to Schlenker's own proposal is bound to yield fruitful results.

1. On the anti-presupposition of conjunctive sentences

Let C be a context of utterance in which the participants – speaker and addressee(s) – share the belief that a given sentence, S_1, is true. In C, an utterance of the conjunction S_1 *and* S_2 is quite odd.

(1) Example of a relevant Context: Mary just announced that she is pregnant.
Mary continues:
#I am pregnant and I plan to buy many toys for the child I hope to have.

An obvious line of explanation to pursue would be based on the observation that S_1 is redundant given what is already presupposed in C. In other words, one might suggest that

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conjunctive sentences have an anti-presupposition requirement; they are bad when the presuppositions of the context make one of the conjuncts redundant. But, what is the relevant notion of redundancy?

1.1. Global Redundancy

One might start by the suggestion that a sentence S_1 is redundant when it is conjoined with another sentence S_2 in a context C, if the whole conjunction is equivalent given (what is presupposed in) C to S_2; under such circumstances the whole conjunction would contribute exactly the same information that would be contributed by S_2 alone. Hence, S_1 can be dropped with no loss of information. This constraint would account straightforwardly for the oddness of (1). The participants in the conversation share the presupposition that S_1 is true, and given this presupposition, S_1 can be dropped from the conjunction with no loss of information.

This explanation sounds rather natural and can be generalized to all constructions that embed conjunctive sentences in the following way:

(2) Global Redundancy Condition
- a. A sentence that has the conjunction *p and q* as a sub-constituent, $\varphi(p \wedge q)$, is not assertable in C if either p or q is globally redundant in φ given C.
- b. A conjunct p (resp. q) is globally redundant in $\varphi(p \wedge q)$, if $\varphi(p \wedge q)$ conveys exactly the same information given C as $\varphi(q)$ (resp. $\varphi(p)$) [1,2]

But, there is a direct challenge for this line of explanation which comes from the contrast in (3).

(3)
- a. #Mary is expecting a daughter, and she is pregnant.
- b. Mary is pregnant, and she is expecting a daughter.

The oddness of (3)a is, of course, accounted for. The second conjunct is entailed by the first conjunct and could thus be dropped (in any context) with no loss of information. But why is the sentence acceptable when the order of the two conjuncts is reversed, (3)b? Shouldn't the sentence be ruled out because the first conjunct is entailed by the second conjunct and is thus redundant?

1.2. Dynamic Triviality

There is an account of this paradigm based on very famous proposals by Karttunen, Stalnaker, and Heim, which have been pursued and refined in various works that go under the label of *dynamic semantics*. The basic idea is that the role of a sentence is to

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[1] where $\varphi(y)$ is a sloppy way of stating the result of replacing the relevant occurrence of *p and q* in $\varphi(p \wedge q)$ with *y*. I hope that this sloppy notation with which I will continue (mainly to avoid the clutter that will come with precision) doesn't lead to confusion.

[2] The notion of redundancy can be generalized to non-conjunctive constructions as follows:

> A constituent, *x*, is globally redundant in $\varphi(Z)$, where Z has *x* and a distinct constituent *y* as constituents, if $\varphi(Z)$ conveys exactly the same information given C as $\varphi(y)$.

update presuppositions: i.e., to update a set of beliefs, namely the beliefs that people who participate in a conversation share, sometimes referred to as The Context Set or The Common Ground, henceforth just C. This idea is then accompanied by the additional assumption that the update is dynamic in ways that need to be made precise. Instead of assuming that a sentence updates the common ground C by simply adding the proposition it expresses to C, dynamic semantics views the update procedure for a complex sentence S as consisting of a sequence of intermediate updates determined by the constituent structure of S. Specifically, each lexical item is associated (by its lexical entry) with a particular update rule. For conjunction the rule states that S_1 *and* S_2 updates C in the following fashion: first C is updated by S_1 and then the result of this update is updated by S_2. For other lexical entries there are other lexical rules which I will not repeat here.

The global constraint on redundancy for conjunction can now be replaced with a dynamic constraint against triviality (van der Sandt 1992, with obvious roots in Stalnaker 1978). A conjunct is sometimes licensed even in cases where it could be dropped without loss of information. What is not allowed is for a conjunct (or for any sentential constituent) to be dynamically trivial. In other words, at every step of dynamic update, the set of beliefs that serves as input to the update cannot entail the constituent that updates this set of beliefs.

(4) Dynamic Triviality Condition: at every step of dynamic update, the set of beliefs that serves as input to the update cannot entail the constituent that updates this set of beliefs.

Thus (1) fails the requirement because the update by S_1 is trivial given the fact that S_1 is part of C even before the utterance takes place, and (3)a fails because the update by S_1 already entails S_2, leading to the result that update by S_2 is trivial. There is no problem with (3)b because none of the updates is trivial. Although S_1 would be trivial if updated after S_2, this is not the way the dynamic update works. The notion of triviality that dynamic update is sensitive to "sees" only the local environment of update, not the global environment in which a sentence is embedded.

1.3. Connection to presupposition projection

But, as the readers of this volume all know, the dynamic procedure was not stated in order to understand the conditions on the acceptability of conjunctive sentences. A major motivation was to understand the conditions on the acceptability of sentences that carry lexical presuppositions under various embeddings, i.e., in order to solve the problem of presupposition projection. The basic idea was that updating C with a sentence *S* that carries the lexical presupposition *p* is acceptable (i.e. defined) only if C entails *p*, i.e., only if update of C with *p* is trivial. [In other words, update by S satisfies dynamic-definability only if update by *p* would violate dynamic-triviality, a point to which we will return.] This ended up deriving core facts about presupposition projection by stating an update procedure for various embedding contexts, i.e., adding statements for various operators, e.g., conditionals, quantifiers, embedding verbs, and the like, that look somewhat similar to what was stated above for conjunction.

To avoid clutter it is common to identify a context C with the set of worlds compatible with the beliefs of the participants in the conversation. The evaluation of a sentence, φ, begins with C, and ends up modifying it so that it includes only worlds compatible with φ. But the update is done in local steps, so that each sentential embedding of φ updates a *local context*, a set of worlds derived by earlier steps of the update. The presuppositions of φ are the requirement imposed on C contributed by the various sentences embedded under φ that have lexical presuppositions. Each such sentence imposes requirements on its local context and the cumulative result of all these requirements is the presupposition of the sentence.

1.4. Criticism

What was achieved, however, crucially depended on rather specific lexical choices that determined the nature of the dynamic update procedure. Of course, every semantic system must specify the semantic properties of lexical items, but – as pointed out by Soames (1989), Heim (1990),[3] and stressed by Schlenker – in a dynamic system, different lexical choices yield the same truth conditions and differ only in the predictions they make for presupposition projection. Thus, if one cannot justify these choices, one cannot understand why the facts are the way they are. Furthermore, as Schlenker points out, no general statement is offered that would derive the particular lexical choices that one needs to make on a case by case basis. This means that there is no general theory of presupposition projection, only a vocabulary with which one could state different theories. This, of course, leads to an unpleasantly easy state of affairs for the practitioner: when one encounters new lexical items, one appears to be free to define the appropriate update procedure, i.e. the one that would derive the observable facts about presupposition projection.[4]

1.5. Schlenker's Generalization

In response to this state of affairs, Schlenker asks us to meditate on the following prediction that is made under the assumptions of the dynamic framework that we stated above.

(5) Schlenker's Generalization: Let S_p be a sentence that has p as a lexical presupposition. A sentence, φ, that has S_p as a constituent, $\varphi(S_p)$, is not assertable in a context C if $\varphi(p \wedge S_p)$ is assertable in C.[5]

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[3] attributing the observation to a letter she received from Mats Rooth in 1986

[4] It is, in principle, possible that facts about presupposition projection need to be stipulated in this way, and if this turns out to be the case, it would be a rather sad state of affairs. We will, of course, want to claim that this is not the case the moment we are able to eliminate the stipulations in favor of a general statement.

[5] I suspect that, at the end of the day, the generalization should be revised as follows:

(i) Schlenker's Generalization: Let S_p be a sentence that has p as a lexical presupposition. A sentence, φ, that has S_p as a constituent, $\varphi(S_p)$, is not assertable in a context C if $\varphi(p \wedge S_p)$ satisfies the relevant redundancy condition.

To understand that the prediction is made, it is sufficient to know that the local context for S_p in $\varphi(S_p)$ is always going to be identical to the local context for p in $\varphi(p \wedge S_p)$.[6] If $\varphi(p \wedge S_p)$ is assertable in C, it follows, by the dynamic triviality condition, that p is not trivial at its local context, but this means, by the dynamic definability condition, that update by S_p is going to fail in this context.

Schlenker invests much effort to establish this generalization, which, on the face of it, could serve to bolster the dynamic framework. However, given the observation made in 1.4., he suggests that we consider another strategy. Suppose that we could come up with a truly predictive statement of the redundancy condition that would tell us when a conjunction of the form $\varphi(p \wedge S_p)$ is assertable. If that was achievable, then the generalization in (5) would give us a predictive theory of presupposition projection.

1.6. Incremental Redundancy

The global redundancy condition discussed in section 1.1. was truly predictive but wrong. Could it be corrected? The condition stated that a sentence S_1 is redundant when it is conjoined with another sentence S_2 in a context C if the whole conjunction is equivalent given C to S_2. This condition turned out to be too strong in that it ruled out a conjunction of the form S_1 *and* S_2 when S_2 contributes more information than S_1, as in (3)b. So what is the relevant factor that would distinguish (3)b from (1) and (3)a, which were correctly ruled out by the redundancy condition?

Schlenker suggests that the relevant factor is whether or not redundancy can be identified at the point in left to right parsing at which it is encountered. In (1) and (3)a the answer is yes and in (3)b the answer is no. To implement this idea we will define the set of possible continuations for a sentence at a particular point in left to right parsing. We will then say that a constituent can be identified as redundant at the point at which it is encountered if it is redundant in all of the continuations of the sentence at that point.[7] Let φ be a sentence and α a sub-constituent of φ. The set of continuations of φ at point α is the set of sentences that can be derived from φ by replacing constituents that follow α (in the linearization of φ) with alternative constituents.[8] With this at hand, we can define an incremental redundancy condition as follows:

(6) Incremental Redundancy

As pointed out to me by Benjamin Spector and Emanuel Chemla, there might be independent factors that make $\varphi(p \wedge S_p)$ unassertable, which are irrelevant for the generalization. See Beaver (this volume).

[6] This, in turn, follows from the format for specifying lexical entries together with the lexical entry for conjunction.

[7] Schlenker's definition of continuation involves quantification over the terminal symbols of a syntax that he defines, symbols that include left and right parentheses. I chose to present the same idea with a slightly different implementation, since I think it is conceptually more transparent (see note 8).

However, as pointed out by Schlenker (p.c.) the two implementations do not derive exactly the same set of continuations (even when differences in notation are factored out). For Schlenker, the set of continuations for the first conjunct in a conjunction all contain the word *and*, whereas for me, they can contain other coordinators. I hope that this difference doesn't affect the overall result.

[8] This set is plausibly the set of sentences that are consistent with the predicted representation for the sentence when α is encountered, if parsing (i.e. the prediction) is to be successful.

a. A sentence, $\varphi(p\wedge q)$, is not assertable in C if either p or q is incrementally redundant in φ given C.
b. A conjunct p is incrementally redundant in $\varphi(p\wedge q)$ [or $\varphi(q\wedge p)$] if it is globally redundant given C in all $\varphi' \in$ CONT(p, φ).
c. A conjunct p (resp. q) is globally redundant in $\varphi(p\wedge q)$, if $\varphi(p\wedge q)$ conveys exactly the same information given C as $\varphi(q)$ (resp. $\varphi(p)$).[9]
d. $\varphi' \in$CONT(α,φ) iff
    1. $\varphi'=\varphi$ or
    2. $\exists\Psi\ \exists\beta'[\Psi = \varphi[\beta/\beta']$, β is pronounced after α in φ, and $\varphi' \in$CONT(α,Ψ)][10]

(1) is bad because for every continuation of the sentence at the point of the first conjunct, the first conjunct is redundant, and the same is true for (3)a at the point of the second conjunct. (3)b is OK, although the first conjunct is (globally) redundant, since there are continuations that do not make it redundant, hence it is not incrementally redundant.

Schlenker shows that (6) – under certain assumptions – makes exactly the same prediction as dynamic triviality under the original versions of dynamic semantics developed by Heim (1983), extending an earlier proposal by Karttunen 1974. But clearly (6) is a better theory of the assertability of conjunctive sentences than what we get from dynamic semantics, since the latter depends on specific lexical entries that could have been defined to yield different results. And, if this evaluation is correct, the combination of (6) and (5) appears to be a better theory of presupposition projection. Of course, other motivations for dynamic semantics have been proposed over the years, most notably the account it provided for donkey anaphora along the lines of Kamp and Heim. So there is still work to do in comparing the two approaches, work that in my view is likely to push our field forward in important ways (see Schlenker, 2008). Finally, it is important to note that I have presented only one version of Schlenker's proposal, the one that is in factual agreement with the versions of dynamic semantics that he considers. Schlenker also raises the possibility that the condition in (6) needs to be modified in favor of a more global theory, and if he is right, then the facts are quite different from what they have been assumed to be. I will not take a position on whether these more radical speculations might be correct. (See Beaver, this volume, for relevant observations.)

2. A general method of converting global into incremental constraints

Let's focus again on the contrast between (3)a and (3)b.

(3) a. #Mary is expecting a daughter, and she is pregnant.
    b. Mary is pregnant, and she is expecting a daughter.

[9] See note 2.
[10] Where $\varphi[\beta/\beta']$ is the result of replacing the relevant occurrence of β in φ with β'. (6)d is, of course, just a fancy way of saying that $\varphi' \in$CONT(α,φ) iff it is obtained from φ by replacing any number of φ-constituents pronounced after alpha.

Both sentences violate the global redundancy condition, but only (3)a is unacceptable. The reason for this is that only for (3)a does global redundancy entail incremental redundancy. To see this, it is sufficient to notice that the constituent that is redundant in (3)a is a final constituent, from which it follows that there are no continuations to consider in computing incremental redundancy (other than the sentence itself). In other words, final constituents have a property that could be very useful for the researcher: they obliterate the difference between global and incremental constraints.

Suppose we come up with a constraint that restricts the distribution of certain constituents with reference to the global environment in which they occur. Suppose, further, that the constraint is fairly natural, but makes obviously correct predictions only for final constituents. If that is the case, it might be useful to consider incremental versions of the constraint. I think that this strategy might turn out to be useful in other domains, but in the next section I will illustrate how it might be used to revive an old theory of presupposition projection, one that is based on trivalent systems.[11] The theory is the one presented in Peters (1979), revived and further developed in Beaver and Krahmer (2001), and finally recently reformulated in connection to Schlenker's paper, by George (2008). My point, which is already present in George's work, will be that Schlenker's new tool (quantification over continuations) helps us understand the sense in which these theories are truly predictive.

3. Incremental Trivalent Systems

In a two valued logic, every proposition is either true or false, whereas in trivalent systems a proposition can have a third value, #. As was suggested by van Fraassen (1966) and many researchers since, one might try to use this property to develop a theory of presupposition projection. Sentences will express trivalent propositions, i.e. objects that at a given point of evaluation can be true, false, or have the third value, #. To derive the fact that certain presuppositions will be required in a context, we would follow Beaver and Krahmer (2001), and introduce an assertability condition (much like the one proposed in Stalnaker (1978) in a bivalent system with partiality). This condition will result in a presuppositional requirement determined by the trivalent proposition that the sentence denotes, namely the presupposition that the proposition does not receive the third value.

(7) Assertability Condition for Trivalent Systems

A sentence S is assertable in C only if $\forall w \in C$ [S is true in w or S is false in w].

Will we end up with a good predictive theory of presupposition projection? The answer depends on whether or not we can develop a predictive trivalent semantics for natural language, one which, together with (7), will derive the appropriate facts about presupposition projection.

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[11] Benjamin Spector and I have found this strategy useful in accounting for the distribution of embedded implicatures: among others for the fact that these implicatures cannot be globally redundant when they appear on final constituents (see Singh, in press).

When will we say that our trivalent semantics is predictive? In section 1.4., we reviewed the Soames/Heim/Schlenker argument that the dynamic systems are not predictive. The argument was not that lexical items needed to be specified – after all every semantic system needs to provide lexical entries for lexical items. The argument was, rather, that new and very specific statements needed to be attached to lexical items in order to derive the way they project the presuppositions of the elements they combine with.

More specifically, it seems that any system that incorporates presuppositions must contain two types of stipulations, namely the type of stipulations associated with lexical items in a classical system (i.e., a bivalent system with no presupposition) and new lexical stipulations associated with presupposition triggers. What we should demand is that these stipulations, together with a predictive general statement, will suffice to derive the presupposition facts.

So we will start with the unavoidable stipulations – various lexical items will be presupposition triggers; they will have the property that the minimal proposition denoting expressions that they contain will receive the third value, #, under certain circumstances. The problem which we would like to solve in a predictive fashion is the following: given the stipulations of presupposition triggers and classical bivalent stipulations (i.e. classical lexical entries), we would like a general statement that would tell us what trivalent propositions sentences denote.

To appreciate the problem it is useful to start with simple questions that arise when we extend bivalent propositional logic to a trivalent system. Consider what needs to be stipulated in a bivalent lexical entry for a two place propositional function. There are four cases that need to be considered, since each of the arguments of the function can receive two values (from now on, 1 and 0). Once we move to a trivalent system, there are 9 cases to consider, i.e. 5 cases in addition to those that have been specified for the bivalent system. So the question we would like to answer is whether there is a general statement that will tell us how to extend the bivalent 2X2 matrix to a trivalent 3X3 matrix.

And, of course, there is such a general statement. More accurately, there are various competing statements that yield competing trivalent systems. The question to ask is whether any of these derives the correct facts about presupposition projection. For the case of exposition, I will discuss the Strong Kleene system, but, I think, the same point could be made with reference to Supervaluation.[12]

To understand how things work, it is useful to think of the system as being underlyingly bivalent. What I have in mind is that at every point of evaluation, w, every instance of # should be thought of as either 1 or 0; it's just that we are not told which one it is. If we can determine the truth value of a sentence in w ignoring all instances of #, the sentence will receive that value. So, if one of two conjuncts receives the value 0, we don't need to know the value of the other conjunct to determine the value of the conjunction. We thus derive the following 3X3 matrix for conjunction:

(8)

$\wedge$	1	0	#
1	1	0	#

[12] I think that incremental versions of the two systems will turn out to be identical. See Schlenker 2008, theorem 36.

0	0	0	0
#	#	0	#

Can a system that uses this trivalent entry derive the correct projection properties? We all know the reason for thinking that it can't, namely that presuppositions do not project symmetrically out of the first and second conjunct:

(9) a. France is a monarchy and the king of France is bald.
b. #The king of France is bald and France is a monarchy

The fact that (9)a has no presuppositions is accounted for straightforwardly. The problem is with (9)b, but let's start with the good case. (9)a is a conjunction of two sentences the first of which contains no presupposition trigger, hence never receives the third value. The second conjunct receives the third value whenever France has no (unique) king, i.e., whenever the first conjunct is false. But whenever one of the conjuncts if false, the whole conjunction is false; the truth value of the other conjunct is just irrelevant. In other words, whenever the presupposition of the second conjunct are not met, the first conjunct will be false and will ensure that the sentence receive a bivalent truth value.

So a sentence of the form $p \wedge S_p$ has no presuppositions, and, more generally, a sentence of the form $S_1 \wedge S_p$, where S_1 has no presuppositions of its own, receives the presupposition that whenever p is false, the truth value of S_p is irrelevant for determining the truth value of the conjunction, i.e. S_1 is false. So (by contraposition), the presupposition of $S_1 \wedge S_p$ is the material implication $S_1 \rightarrow p$, which I take to be correct.[13]

But the problem is that the account makes no reference to ordering, as the symmetric truth table in (8) indicates.[14] The problem generalizes to all connectives, which are assumed to be asymmetric (though Schlenker's discussion of disjunction makes it clear that there are open questions here). For each connective, we get the right result as long as we limit ourselves to cases where a presupposition trigger appears only on the argument of the connective that is pronounced last.

This is reminiscent of our discussion of the contrast in (3) in the previous section. Here, too, we can deal with the problem by introducing an incremental version of the relevant mechanism. Specifically, let's continue to assume that at every point of evaluation, w, every instance of # is thought of as either 1 or 0, and that we are just not told which one it is. But assume that we are allowed to ignore an instance of #, only if we can determine the value of the sentence based on what we've encountered at the point of sentence processing at which # is encountered, i.e., only if we can determine the value of the sentence ignoring # for every continuation at the point of the constituent that receives the value #.

Under this assumption we will have a simple account of the oddness of (9)b (though see note 12), and more generally of the presuppositions of sentences of the form $S_p \wedge S_1$. Such sentences will receive the value # whenever the presupposition of the first sentence is not met (since there will be continuations for which we won't be able to

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[13] I am assuming here that a solution to the proviso problem discussed in Geurts (1996) is within reach (see Beaver 2001, 2006, von Fintel 2006, Heim 2006, Pérez Carballo 2007, Singh 2007).

[14] Given Schlenker's redundancy condition more work needs to be done to show that Strong Kleene is insufficient. See Beaver (this volume) for pertinent discussion.

determine a truth value). Such sentences will, therefore, have p as a presupposition (along with the presupposition that if S_p is true, the presupposition of S_1 must be met).

So we should use this general principle to yield incremental versions of the Strong Kleene truth tables. And what we will get are precisely the truth tables that one finds in Peters (1979). But in order to make the analogy with Schlenker's redundancy condition even more transparent, we might incorporate the principles of incremental Strong Kleene into an assertability condition. Specifically, assume that the system is totally bivalent and that every S_p receives the value 1 iff $p\&S_p$ is true (as in Schlenker's setup). We could now introduce the following assertability condition, which will have the same result as Peters trivalent truth tables.[15]

(10) A sentence, φ, that has S_p as a constituent, $\varphi(S_p)$, is assertable in a context C only if $\forall w \in C$

([p is false in w] $\rightarrow$ S_p is incrementally irrelevant for the value of φ in w).

(11) a. q, which is a constituent in φ, is globally irrelevant to the value of φ in w iff $\varphi(q)$ receives the same value in w as $\varphi(\neg q)$.

b. q, which is a constituent in φ, is incrementally irrelevant to the value of φ in w, iff q is globally irrelevant to the value of φ' in w for every $\varphi' \in CONT(q, \varphi)$.

We have limited ourselves to a discussion of a language that can be described with a propositional logic. So we clearly don't yet have a theory of presupposition projection. In order to turn this sketchy discussion into a theory, we would need, at the very least, to define relevance for constituents that contain free variables (or for functions from various types of individuals to truth values). I imagine that this will require a four place relation of relevance (q is relevant to the value of φ in w given a sequence of individuals), but I haven't been able to work this out.[16] Still, I hope that the strategy is clear. I will stop here and mention again this extremely interesting new paper by Ben George.

References

Beaver, David I. 2001. *Presupposition and Assertion in Dynamic Semantics*. Stanford University: CSLI

Beaver, David. 2006. The Proviso Problem: Comments on von Fintel. Paper presented at *OSU Accommodation Workshop*.

Beaver, David , and Krahmer, Emiel. 2001. A partial account of presupposition projection. *Journal of Logic, Language and Information* 10.

Beaver, David. This volume. As brief as possible (but no briefer).

[15] Though note that one strategy is compositional and the other isn't. George (2008) develops the compositional approach. See Schlenker 2008 where the two types of approaches are compared.

[16] In my 2007 Pragmatics class at MIT I thought I had worked it out but Alejandro Pérez Carballo discovered a bug that I have been unable to get rid of.

George, Benjamin. 2008. Predicting Presupposition Projection: Some alternatives in the strong Kleene tradition. UCLA, http://semanticsarchive.net/Archive/DY0YTgxN/.

Geurts, Bart. 1996. Local Satisfaction Guaranteed: A Presupposition Theory and its Problems. *Linguistics and Philosophy* 19:259-294.

von Fintel, Kai. 2006. What is Presupposition Accommodation, Again?, m.s.: MIT.

van Fraassen, Bas. 1966. Singular Terms, Truth-value gaps, and Free Logic. *Journal of Philosophy* 63:481-495.Heim, Irene. 1983. On the Projection Problem for Presuppositions. *WCCFL* 2:114-125.

Heim, Irene. 1990. Presupposition Projection. In *Presupposition, Lexical Meaning and Discourse Processes: Workshop Reader*, ed. Rob van der Sandt: University of Nijmegen.

Heim, Irene. 2006. A note on the proviso problem. Handout from Milan Meeting, Gargnano.

Karttunen, Lauri. 1974. Presupposition and Linguistic Context. *Theoretical Linguistics* 1:181-193.

Pérez Carballo, Alejandro. 2007. A first shot at the proviso problem: MIT.

Peters, Stanely. 1979. A Truth-Conditional Formulation of Karttunen's Account of Presupposition. *Synthese* 40:301-316.

van der Sandt, Rob. 1992. Presupposition Projection as Anaphora Resolution. *Journal of Semantics* 9:333-377.

Schlenker, Philippe. 2008. Local Contexts: Institut Jean-Nicod and NYU, http://schlenke.free.fr/Local_Contexts.pdf.

Singh, Raj. 2007. Formal alternatives as a solution to the proviso problem. *Proceedings of SALT 17*.

Singh, Raj. to appear. On the Interpretation of Disjunction: Asymmetric, Incremental, and Eager for Inconsistency. *Linguistics and Philosophy*.

Soames, Scott. 1989. Presupposition. In *Handbook of Philosophical Logic, Vol. 4*, eds. Dov Gabbay and Franz Guenthner, 553-616. Dordrecht: Reidel.

Stalnaker, Robert. 1978. Assertion. In *Syntax and Semantics 9*, ed. Peter Cole, 315-322. New York: Academic Press.