

Supplements Within a Unidimensional Semantics II: Epistemic Status and Projection^{*}

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Potts (2005, 2007) has claimed that Grice's 'conventional implicatures' offer a powerful argument in favor of a multidimensional semantics, one in which certain expressions fail to interact scopally with various operators because their meaning is located in a separate dimension. Focusing on Non-Restrictive Relative Clauses (= NRRs), we explore an alternative to Potts's bidimensional account. In our analysis, (1) NRRs can be syntactically attached with matrix scope, despite their appearance in embedded positions; (2) NRRs can in some cases be syntactically attached within the scope of other operators (whether attitudinal or not), in which case they semantically interact with them; (3) NRRs are semantically conjoined with the rest of the sentence, but (4) they are subject to a pragmatic rule that requires that their content be relatively easy to accommodate ('Translucency') – hence some non-trivial projection facts for NRRs that do not have matrix scope. In Schlenker (to appear), we focused on (1)-(2), which pertain to the scopal behavior of NRRs. After summarizing some arguments that suggest that NRRs can sometimes have semantic scope under other operators, we concentrate on (3)-(4) and argue that in some such cases NRRs give rise to 'projection patterns' that are reminiscent of presupposition projection. But since their epistemic status is very different from that of presuppositions (Potts 2005), we cannot claim that supplements must be entailed by their local context (i.e. that they are locally trivial) given a context set C . Rather, we will suggest that if an NRR is uttered in a global context C , it should be possible to add to C uncontroversial assumptions to obtain a context C^+ in which the NRR is 'locally trivial'. This accounts both for the epistemic difference between supplements and presuppositions, and for the similarity in (some of) their projection patterns.

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1. The possibility of narrow scope¹

Wang et al. 2005 and Amaral et al. 2007 gave examples of Non-Restrictive Relative Clauses (henceforth ‘NRRs’) that are interpreted within the scope of attitude verbs. But these examples were re-analyzed in terms of a discourse operation of perspectival shift by Harris and Potts 2009a – which made them compatible with the claim that NRRs are ‘scopeless’. In Schlenker (to appear), we argued that Non-Restrictive Relative Clauses can be syntactically attached to any node of propositional type that dominates their surface position. McCawley 1988 can be understood as suggesting that NRRs always have matrix scope; we tried to show that both high and low attachment are in fact instantiated. High attachment accounts for a variety of cases in which NRRs fail to interact scopally with other operators (Potts 2005). For the present argument, what matters is that there are also cases in which NRRs have narrow semantic scope, since we wish to argue that in some of these cases non-trivial patterns of projection arise.

Proving this is usually difficult if one accepts the hypothesis that the *wh*-relativizer of a NRR can have the semantics of an E-type pronoun. This hypothesis, developed by Del Gobbo 2003, is certainly compatible with a bidimensional approach, and it was in fact implemented in great detail in Nouwen 2006. The difficulty is that E-type pronouns that have wide scope can often ‘imitate’ the behavior of variables that are bound under other operators. Thus despite initial appearances an example such as (1)a cannot show that NRRs may scope under a quantifier, because the control sentence in (1)b doesn’t sound too bad, and suggests that some semantic or pragmatic mechanism (call it ‘quantificational subordination’) allows the pronouns in the second sentence to be interpreted *as if* they had scope under the universal quantifier in the first sentence.

- (1) a. On Mother’s day, every little boy calls his mother, who tells him she loves him.
 b. On Mother’s day, every little boy calls his mother. She tells him that she loves him.

Furthermore, cases of embedding under attitude operators were taken by Harris and Potts 2009a to be explained by a pragmatic mechanism of ‘perspectival shift’, which is available even when no attitude operator is present. Thus their subjects accepted to attribute to the agent (= Sid, rather than the speaker) the content of the supplement *a complete waste of time* in examples such as (2)a, which involves an attitude verb, but also in (2)b, which doesn’t.²

¹ This section shares some material with Section 3 of Schlenker (to appear). The data introduced in Section 1.2. are new, however.

² Some examples of ‘unembedded’ perspectival shift in Harris and Potts 2009a are not so clearly unembedded. For instance they take (i)b to involve an unembedded NRR, but *refuse* might well be an attitude verb.

- (i) I am increasingly worried about my roommate. She seems to be growing paranoid.
 a. The other day, she told me that we need to watch out for the mailman, a possible government spy.
 b. The other day, she refused to talk with the mailman, a possible government spy.

- (2) My brother Sid hates school.
a. He says that he puts off his homework, a complete waste of time, to the last minute.
b. He puts off his homework, a complete waste of time, to the last minute.

Special care is thus needed to show that a NRR can indeed take narrow scope.

1.1 NRRs in the Subjunctive

In Schlenker (to appear), we showed that NRRs can appear in French with a dependent mood, the subjunctive, which gives rise to very sharp judgments of ungrammaticality unless it is syntactically embedded under an expression that licenses it. In (3)a, both subjunctive conjuncts are in the scope of *conceivable*, which is a licenser. In (3)b, the second conjunct appears as a separate sentence, and the result is sharply ungrammatical. Importantly, (3)c shows that this is a case in which ‘modal subordination’ is possible – but it requires a different mood (an epistemic future, or a conditional).

- (3) Context: There was incident at school.
a. Il est concevable que Jean ait appelé sa mère, et qu’elle ait appelé son avocat.
It is conceivable that Jean has-subj called his mother, and that she has-subj called her lawyer.
b. **Il est concevable que Jean ait appelé sa mère. Elle ait appelé son avocat.
It is conceivable that Jean has-subj called his mother. She has-subj called her lawyer.
c. Il est concevable que Jean ait appelé sa mère. Elle aura / aurait appelé son avocat.
It is conceivable that Jean has-subj called his mother. She will-have / would-have called her lawyer

With this background in mind, the paradigm in (4) shows two things.

- (i) First, subjunctive NRRs are possible if they are embedded under the right modal operator (by contrast, subjunctive independent clauses are impossible).
(ii) Second, subjunctive NRRs are interpreted within the scope of the modal operator (unlike independent clauses or NRRs in other moods). In particular, (4)a does not yield an inference that *if Jean had called his mother / Anne, she would have called her lawyer*, contrary to (4)b’, which does trigger this inference.

- (4) Context: There was incident at school.³
a. Il est concevable que Jean ait appelé sa mère / Anne, qui ait appelé son avocat.
It’s conceivable that Jean has-sub called his mother / Anne, who had-subj called her lawyer.
 \neq If Jean had called his mother / Anne, she would have called her lawyer.
b. **Il est concevable que Jean ait appelé sa mère / Anne. Elle ait appelé son avocat.
It’s conceivable that Jean has-sub called his mother. She had-subj called her lawyer.

³ Thanks to B. Spector for discussion of this and related examples.

a'. Il est concevable que Jean ait appelé sa mère, qui aurait appelé son avocat.
It's conceivable that Jean has-subj called his mother, who would have called her lawyer.

=> If Jean had called his mother, she would have called her lawyer.

b'. Il est concevable que Jean ait appelé sa mère. Elle aurait appelé son avocat.
It's conceivable that Jean has-subj called his mother. She would have called her lawyer.

=> If Jean had called his mother, she would have called her lawyer.

It can be checked that this pattern can be replicated with non-subject NRRs – a necessary precaution, since French subject NRRs often display a peculiar behavior.

- (5) a. Suppose que Jean ait épousé Anne, à qui il ait fait des enfants.
Suppose Jean had-subj married Anne, to whom he had-subj given her children.
≠> Jean has children
- b. ** Suppose que Jean ait épousé Anne. Il lui ait fait des enfants.
Suppose Jean had-subj married Anne. He had-subj given her children.

1.2 NRRs with Sequence of Tense

Here we provide a new argument with the same logic, this time in English. As is well-known, a 'sequence of tense' rule allows English past tense features to remain uninterpreted if they are embedded under a past tense attitude verb (e.g. Abusch 1997). This is for instance the case of *were* in (6), which makes reference to a future event but bears past tense features.

- (6) John decided yesterday that tomorrow he would tell his mother that they were having their last meal together. (slightly modified from Abusch 1997)

Importantly, it is only when a verb is interpreted in the scope of an attitude operator that its past tense features can remain uninterpreted. This property of sequence of tense can then be used to force a NRR to be interpreted with narrow scope, as is done in (7)b.

- (7) *Situation:* John is in London and he is about to go to California to meet his girlfriend Ann. He is planning to marry her there but his parents don't know it.
- a. John decided yesterday that tomorrow he would tell his parents that he was in Vegas with Ann and that she was about to become his wife.
- b. John decided yesterday that tomorrow he would tell his parents that he was in Vegas with Ann, who was about to become his wife.
- c. #John decided yesterday that tomorrow he would tell his parents that he was in Vegas with Ann. She was about to become his wife.
- d. John decided yesterday that tomorrow he would tell his parents that he was in Vegas with Ann, who is about to become his wife.⁴

⁴ For one native speaker I consulted, examples such as (7)b become less acceptable if the NRR is not sentence-final, as in (i) below. For two other speakers, a clear difference remains between (i)a (which is acceptable) and (i)b (which is incoherent given the situation).

(7)b has several important properties for the present discussion.

-It patterns like (7)a, and unlike (7)c, in allowing the past tense of *was about to become of his wife* to refer to an event that holds in the speaker's future. In this case, the NRR displays very different interpretive possibilities from an independent clause.

-The NRR is interpreted within the scope of the attitude verb. In other words, (7)b attributes to John the decision to tell his parents something like: 'I am in Vegas in Ann, who is about to become my wife'. Things are different with (7)d, where the NRR can be read outside the scope of the attitude verb (here we only attribute to John a claim of the form: 'Ann is about to become my wife'). I believe similar data hold for some French speakers who accept counterparts of (7)a.⁵

Potts and Harris 2009a take examples such as (2)b to suggest that "non-speaker-oriented readings of appositives arise even outside of embedded contexts, thereby calling into question any account of such readings that depends on semantic mechanisms". They conclude that "we should look to the discourse, rather than to the logical forms, to determine how these constructions are understood". In other words, the impression that the NRR in (7)b is interpreted within the scope of the attitude operator is in their view an illusion; in fact, a perspective-shifting operation in discourse is responsible for the observed truth conditions. But if so, why does this discourse operation not apply in the same way to the independent clause in (7)c? One possibility would be that the sequence of tense rule by which past tense features can remain uninterpreted is purely structural. The idea could be that the rule does not require that the deleted features appear on a time variable that is bound by the past tense attitude operator, but only that they appear *in the syntactic scope* of this operator (without necessarily being semantically dependent on it).

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- (i) *Situation:* John is in London and he is about to go to California to meet his girlfriend Ann.
a. (?/#) John decided yesterday that tomorrow he would tell his parents that he was in Vegas and that Ann, who was with him there, was about to become his wife.
b. # John decided yesterday that tomorrow he would tell his parents that he was in Vegas and that Ann was about to become his wife. She was with him there.

⁵ Some of my informant didn't accept counterparts of (7)a, but I do not know whether this is because of a dialectal difference or because they 'garden-pathed' on some other reading. For me and other informants who accept (i)a, the contrast between (i)a and (i)b is similar to that between (7)b and (7)c (the examples in (i)a-b are parallel to (i)a-b of the preceding footnote).

- (i) *Situation:* Jean is in Paris and he is about to go to California to meet his girlfriend Ann.
a. (?) Jean a décidé hier que demain il annoncerait à ses parents qu'il était à Las Vegas et qu'Ann, qui y était avec lui, était sur le point de devenir son épouse.
b. # Jean a décidé hier que demain il annoncerait à ses parents qu'il était à Las Vegas et qu'Ann était sur le point de devenir son épouse. Elle y était avec lui.

It can also be checked that (i)b is indeed deviant for tense reasons, since (ii) is fine.

- (ii) Jean a décidé hier qu'aujourd'hui il annoncera à ses parents qu'il est à Las Vegas et qu'Ann est sur le point de devenir son épouse. Elle y est avec lui.

Jean decided yesterday that today he will tell his parents that he is in Vegas and that Ann is about to become his wife. She is there with him.

This analysis would explain why the past tense features of *was about* can remain uninterpreted in (7)b but not in (7)c. However it would make incorrect predictions in other cases: in (8)a we would predict that the features of underlined *was* could remain uninterpreted even though the corresponding time variable is dependent on *believe*, not *told*; this would predict a reading equivalent to (8)b. But such a reading is unavailable: it is only when a past tense is ‘bound’ by a past tense operator that its features can remain uninterpreted (e.g. Abusch 1997, Stechow 2003).

- (8) *Situation*: John is in London with Mary, but yesterday he was in Vegas with Ann.
 a. I believe John told his parents yesterday that the woman who was with him was about to become his wife.
 b. I believe John told his parents yesterday that the woman who is with him was about to become his wife.

2. Projection Patterns

Having seen that NRRs can sometimes be interpreted within the scope of other operators, it remains to see how they semantically interact with them. Here we would like to suggest that in at least some cases we obtain inferences that are formally analogous to presupposition projection. (For expediency, we discuss the behavior of French NRRs, but we do not mean to imply that with respect to these facts their English counterparts are different).

2.1 Presupposition Projection

We start by considering three examples of presupposition projection in complex sentences: if we underline the presupposition of an elementary clause or predicate, *p and qq'* presupposes that *if p, q* (the question test is crucial in this case, since the simple assertion also entails *qq'*, which is stronger); *p or qq'* presupposes that *if not p, q*, and the same facts arguably hold of *qq' or p*; and *[no P] QQ'* presupposes that *[every P] Q* (similar data hold in French).⁶

- (9) *p and qq'* presupposes that *if p, q*
 Will you really accept this job and let your family know that you're going to be working for a thug?
 => If you accept this job, you're going to be working for a thug.
 ≠> You're going to be working for a thug.

⁶ This presentation is a simplification. There is a theoretical and empirical debate in the literature about the availability of conditional presuppositions in conjunctions and disjunctions. Dynamic semantics predicts conditional inferences (e.g. Heim 1983 and Beaver 2001); DRT predicts unconditional ones (van der Sandt 1992 and Geurts 1999). The facts are also disputed: proponents of dynamic semantics grant that in many cases conditional presuppositions are strengthened into unconditional ones, but believe that conditional presuppositions are nonetheless found in some examples (e.g. Beaver 2001). (Thanks to D. Rothschild for help with these examples).

- (10) *p* or *qq'* and *qq'* or *p* presupposes that *if (not p), q*
a. Either I turn down the job, or I'll have to let my family know that I'm going to be working for a thug.
b. (?) Either I'll have to let my family know that I'm going to be working for a thug, or I turn down the job.
=> If I don't turn down the job, I'm going to be working for a thug
≠> I'm going to be working for a thug
- (11) *[no P] QQ'* presupposes that *[every P] Q*
a. None of these students knows that he is incompetent
b. Does none of these students know that he is incompetent?
=> Each of these students is incompetent.

2.2 Supplement Projection

Similar inferences are obtained with some NRRs in French.

- (12) Supplement projection in conjunctions
a. Sarkozy vient d'assassiner sa femme, et le Président, qui va devoir être jugé, est sur le point de démissionner.
Sarkozy has just murdered his wife, and the President, who will have to be tried, is about to resign.
b. Est-il vrai que Sarkozy vient d'assassiner sa femme, et que le Président, qui va devoir être jugé, est sur le point de démissionner?
Is it true that Sarkozy has just murdered his wife, and that the President, who will have to be tried, is about to resign?
≠> Sarkozy will have to be tried.
=> If Sarkozy murdered his wife, he will have to be tried.
- (13) Supplement projection in disjunctions
a. Tu ne vas pas épouser Jean, ou ta mère, qui sera furieuse, te déshériterà.
You will not marry Jean, or your mother, who will be furious, will disown you.
b. Est-il vrai que tu ne vas pas épouser Jean, ou que ta mère, qui sera furieuse, te déshériterà?
Is it true that you will not marry Jean, or that your mother, who will be furious, will disown you?
=> If you marry Jean, your mother will be furious
c. (?) Ta mère, qui sera furieuse, te déshériterà, ou alors tu n'épouseras pas Jean.
Your mother, who will be furious, will disown you, or you will not marry Jean.
=> If you marry Jean, your mother will be furious
d. ? Est-il vrai que tu que ta mère, qui sera furieuse, te déshériterà, ou alors que tu n'épouseras pas Jean?
Is it true that your mother, who will be furious, will disown you, or that you will not marry Jean?
=> If you marry Jean, your mother will be furious

- (14) Supplement projection under [no X]
Aucun de mes amis ne parle à sa mère, dont il est pourtant proche, de sa vie sentimentale.
None of my friends tell his mother, who he is however close to, about his love life.
=> Each of my friends is close to his mother.

2.3 A Wide Scope Analysis?

The data from Section 1 show that *some* NRRs are interpreted in the semantic scope of other operators (in Schlenker (to appear), we argued following McCawley 1988 that in other cases NRRs are syntactically attached at the matrix level even though they appear to be embedded). Section 2.2. shows that *some* NRRs give rise to non-trivial projection facts. But it remains conceivable that these NRRs have wide semantic scope. The key observation is that there are mechanisms of modal subordination in discourse that make it possible for independent clauses to be interpreted *as if* they were embedded under some operators. An example is given in (15), in which the second sentence is most naturally read with modal subordination (see e.g. Roberts 1989): it is understood that *if Sarkozy murdered his wife*, he won't stay in prison for long.

- (15) Si Sarkozy a assassiné sa femme, il sera condamné. Mais il ne restera pas longtemps en prison.
If Sarkozy murdered his wife, he will be condemned. But he won't stay long in prison.

Similar mechanisms are available in some of our examples. Thus in (16), which should serve as a control for (15)a, it is (to some extent) possible to understand the second sentence as meaning: *If you marry Sam*, your mother will be furious.

- (16) Tu ne vas pas épouser Sam, ou ta mère te déshériterà. Elle sera furieuse.
You will not marry Sam, or your mother will disown you. She will be furious.

While a full assessment of this analysis would require a much longer discussion (and possibly some experimental data), I do not think it can work for all cases of projection.

• First, it seems to me that the appropriate control for (12)b does give rise to an inference that the President will have to be tried – unlike (12)b itself.

- (17) Est-il vrai que Sarkozy vient d'assassiner sa femme, et que le Président est sur le point de démissionner? Il va devoir être jugé.
Is it true that Sarkozy has just murdered his wife, and that the President is about to resign? He will have to be tried.
=>? Sarkozy will have to be tried.

• Second, the modal subordination reading obtained in (16) seems to become much harder when the order of the disjuncts is reversed, as is the case in (13)c-d.

- (18) a. Ta mère te déshériterà, ou alors tu n'épouseras pas Jean. Elle sera furieuse.
Your mother will disown you, or you will not marry Jean. She will be furious.
=>? Your mother will be furious
b. Est-il vrai que tu que ta mère te déshériterà, ou alors que tu n'épouseras pas

Supplements within a Unidimensional Semantics II: Projection

Jean? Elle sera furieuse.

Is it true that your mother will disown you, or that you will not marry Jean? She will be furious.

=>? Your mother will be furious

- Third, in the appropriate control of (14) a reading with quantificational subordination seems to me to be degraded (though not entirely impossible).

(19) ?? *Aucun de mes amis ne parle à sa mère de sa vie sentimentale. Il en est pourtant proche.*

None of my friends tell his mother about his love life. However he is close to her.

We leave for future work a deeper investigation of the ‘wide scope’ analysis of these readings. After we have reconsidered the epistemic difference between supplements and presuppositions, we develop in Section 4 an analysis of the projection data in which these NRRs have narrow scope.

3. Epistemic Status

An adequate theory of NRRs should derive at least three properties: (i) their contribution is not at issue (Potts 2005), (ii) it is generally non-trivial (Potts 2005), (iii) it should also be relatively uncontroversial.

3.1 The contribution of a NRR is not at issue (Potts 2005)

Potts 2005 shows that the contribution of a NRR is ‘not at issue’, in the sense that it cannot easily be targeted by a negation in discourse. In this respect, supplements behave like presuppositions and unlike mere conjuncts, as shown in (20).

- (20) a. Mary knows that Lance survived cancer. –No!
=> Lance survived cancer.
b. Lance, who is a cancer survivor, won the Tour de France. –No!
=> Lance survived cancer.
c. Lance survived cancer and won the Tour de France. –No!
≠> Lance survived cancer.

3.2 The contribution of a NRR is non-trivial (Potts 2005)

Potts 2005 argues that the content of NRRs must be non-trivial, unlike the content of presuppositions. The contrast in (21), which can be replicated in French, establishes this point.

- (21) a. Armstrong survived cancer. #Lance, who survived cancer, won the Tour de France (after Potts 2005)
b. Armstrong survived cancer. Mary knows he did (after Potts 2005)

3.3 The contribution of a NRR is non-controversial

Still, not any information can appear in a NRR. Given appropriate (and unlikely) circumstances, (22)a would be a natural thing to say: that Sarkozy is the commander in chief follows from the fact that he is the President, so the content of the NRR is not controversial; by contrast the information that he murdered his wife would be quite surprising indeed. (22)b distributes the information in the opposite way, and is correspondingly odd – unless the news is already out that Sarkozy murdered his wife, in which case the sentence becomes fine again.

- (22) a. Sarkozy, qui est le chef des armées, vient d’assassiner sa femme.
Sarkozy, who is the commander in chief, has just murdered his wife.
b. (#) Sarkozy, qui vient d’assassiner sa femme, est le chef des armées.
Sarkozy, who has just murdered his wife, is the commander in chief.

The same contrasts can be replicated in sentences in which part of the preceding material is crucial in making the NRR uncontroversial.

- (23) a. Est-il vrai que Sarkozy vient d’assassiner sa femme, que et le Président, qui va devoir être jugé, est sur le point de démissionner?
Is it true that Sarkozy just murdered his wife, and that the President, who will be tried, is about to resign?
=> If S. murdered his wife, he’ll be tried.
- b. (#) Est-il vrai que Sarkozy est sur le point de démissionner, et que le Président, qui vient d’assassiner sa femme, va être jugé?
Is it true that S. is about to resign and that the President, who has just murdered his wife, will be tried?

(23)a gives rise to the unsurprising inference that *if Sarkozy murdered his wife, he will be tried*. The question could typically be asked if it is *not* known that the President will be tried; although the content of the NRR would be very surprising on its own, the conditional inference is, by contrast, uncontroversial – which makes the NRR acceptable given the rules of projection we saw above. (23)b is entirely different; at best it should present as uncontroversial an inference that *if Sarkozy is about to resign, he has just murdered his wife*. But of course this inference is also quite surprising, which explains the deviance of the sentence (which becomes good again if the news is already out that Sarkozy has murdered his wife).

4. Proposal

4.1 Translucency

If a sentence *S* is felicitous in a context set *C*, its presuppositions are ‘transparent’, in the sense that they are entailed by their local contexts – they are thus locally trivial (i.e. their

contribution can be disregarded without affecting the truth conditions).⁷ As was mentioned above, supplements should *not* be locally trivial. But we will suggest that they should be ‘translucent’, in the sense that make a weak semantic contribution. More specifically, the requirement for a NRR uttered in a global context set C is that one could add some unsurprising assumptions to C to obtain a context set C^+ in which the NRR *is* locally trivial.

(24) Translucency

If an NRR is uttered in a global context set C , it should be possible to add to C unsurprising assumptions to obtain a context C^+ in which the NRR is ‘locally trivial’, i.e. entailed by its local context given C^+ .

It immediately follows from Translucency that the content of an unembedded NRR should be non-trivial and uncontroversial. The fact that it is not at issue can be accounted for if the addressee must first find a C^+ that makes the NRR trivial before processing further material. Thus (20)b can be given the following analysis: when the first sentence is heard, the original context set C is updated to C^+ so as to render the NRR trivial. Only then is the semantic effect of the rest of the sentence computed, *with respect to* C^+ . As a result, the interlocutor’s denial (*No!*) is naturally interpreted with respect to the context C^+ rather than C – and hence it cannot serve to reject the content of the NRR.

How can we account for the projection data? Despite the fact that the epistemic status of supplements is very different from that of presuppositions, both are subject to a condition of triviality in their local contexts. If the global context is C , a presupposition must *in simple cases* be trivial in its local context *given* C (we come back below to more complex cases). By contrast, a supplement should be *non-trivial* in its local context given C (this is the non-triviality condition); but it should be possible to add to C some unsurprising assumptions to get a new context set C^+ with respect to which the supplement *is* trivial in its local context.

To take an example, suppose that we are in a context set C and that I utter (12)a (‘Sarkozy has just murdered his wife, and the President, who will have to be tried, is about to resign.’). We must first check that given C *who will have to be tried*, where *who* refers to the President, is *not* trivial in its local context. The latter is just C incremented with the information that Sarkozy has just murdered his wife; let us call this context C [Sarkozy has just murdered his wife]. So the information that in such an event Sarkozy will be tried should not be trivial. But it should also be uncontroversial: it should be possible to add to C an assumption that makes the NRR locally trivial. This assumption may for instance be that *if someone – even the President – commits a murder, he must be tried*. So we compute C^+ , which is C incremented with this assumption. And we must check that the NRR is now trivial in its local context, namely in C^+ [Sarkozy has just murdered his wife]; this is of course the case by construction. Finally, if my interlocutor

⁷ One can attempt to develop a theory of presupposition projection on the basis of the sole assumption that the context should be such as to guarantee that a presupposition is ‘transparent’. See for instance Schlenker 2008, 2009 for two versions of such an attempt. The present analysis is consistent with this analysis (‘translucency’ and ‘transparency’ are closely related notions), but it is independent from it, which is why we use the more standard terminology of dynamic semantics to introduce our proposal.

replies *No!* to my assertion, it will be most natural to interpret it with respect to C^+ - which explains why the supplements is not usually targeted by such denials.

4.2. Comparison with informative presuppositions

We wrote above that ‘a presupposition must *in simple cases* be trivial in its local context’. The rider was necessary because there are well-studied cases in which presuppositions are in fact informative (Stalnaker 2002, Fintel 2006). These turn out to have very much the same effect as NRRs, but for different reasons. The key is that *it is sometime enough to present oneself as presupposing that p to guarantee that p is indeed common belief* (see Stalnaker 2002 for a derivation of this property from the logic of Common Belief, and Schlenker 2007 for an application to expressives). In fact, in some special cases some pragmatic constraints *force* a presupposition to be informative.

Consider the following examples, where the presupposition is triggered by a possessive or definite description.⁸

- (25) a. Alfredo Emilio Koch started his 1,300-acre vineyard and winery in the 1950’s and named it “La Juanita,” honoring his New Yorker wife, Mary Jane Bergen.⁹
 b. The stupid President will cause a disaster.
 c. The fantastic President will take us out of this quagmire.

The surprising thing is that the descriptions (*New Yorker wife, stupid President, fantastic President*) contain adjectives that are redundant, in the sense that they do not affect the denotation of the descriptions (on the assumption that Koch has only one wife, and that there is only one salient president in the domain of discourse). It can be ascertained that in other cases such redundancy leads to some amount of deviance (this presumably follows from a maxim of manner, *Be Brief*): (26)a and (27)a-b are all odd; (26)b is acceptable *if* it is not assumed that John may have two brothers (one blond, one not) – so that in this case the adjective *blond* does do semantic work after all.

- (26) a. #John's blond father has arrived
 b. John's blond brother has arrived (Ok if John has several brothers).
- (27) a. #The brown-haired president will cause a disaster.
 (Ok if there are several presidents in the context, one of whom is brown-haired).
 b. #The president from Texas will cause a disaster.
 (Ok if there are several presidents in the context, one of whom is from Texas).

So why are the examples in (25) acceptable? Presumably because the adjectives trigger an informative presupposition, i.e. a presupposition that can easily be accommodated – and is of interest to the conversation. In these very special cases, the mechanism of context update is similar to our analysis of supplements: starting from a context C , we modify it to C^+ (e.g. in the case of (25)a, the fact that the speaker presents himself as presupposing that his wife is a New Yorker is enough to add this proposition

⁸ See Schlenker 2004, 2007 for discussion. Note that (25)b-c are felicitous even if there is only one salient President – say that of the US

⁹<http://www.southernwines.com/vineyard.cfm?preview=162>

to C, yielding C^+). As a result, these informative presuppositions are also ‘not at issue’: if the addressee said *No!* after one of the examples in (25), we would typically understand him *not* to be denying the information contributed by the informative presupposition.

5. Open Problems

We end by listing some problems for future research.

- As was mentioned earlier, a competing analysis of some projection data could be developed in terms of wide scope NRRs and quantificational or modal anaphora. Further research is needed to decide this debate.
- Among narrow scope NRRs, some have the special epistemic status that one would expect given our analysis (this seems to be the case of our example with sequence of tense example in (7)b, which attributes to the agent a claim of the form: ‘I am in Vegas with Ann, who is about to become my wife’). But in other cases – notably those that involve the French subjunctive – it is very hard to see which epistemic difference, if any, there is between a narrow scope NRR and an independent conjunct. For reasons that might have to do with the semantics of the subjunctive, or with narrow semantic scope, the ‘supplemental’ nature of the NRR appears to be weakened or ‘bleached’. Why this should be is unclear.
- Even on the assumption that an NRR can, as claimed here, attach to any propositional node that dominates it, it seems clear that matrix attachment is preferred. Furthermore, in case of narrow attachment there appear to be ill-understood differences that depend on the surface position of the NRR (narrow attachment is easier when the NRR is sentence-final).
- We stated Translucency in such a way that the modified context C^+ must be obtained from C by the addition of ‘uncontroversial assumptions’. This raises at least two issues. First, can we find independent criteria for what counts as an ‘uncontroversial assumption’? Second, is the architecture we developed entirely correct? We argued that the NRR must have a weak semantic contribution relative to the original context C. A more subtle alternative, suggested by D. Pesetsky (p.c.), is that the NRR must make a weak contribution *compared to that of the rest of the sentence*. This would yield slightly different predictions, which should be investigated.

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Schlenker

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