An asymmetry in responses to questions and assertions in European French: the view from embedded yes/no particles

Jérémy Pasquereau
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1 Introduction

• European French has 3 Polar Response Particles: oui, non, si
• They are used in response to questions (1A) where they stand in for a full clause (compare B1 and B2)

(1) A: Est-ce que tu penses qu’Alexandre est arrivé ?
Do you think that Alexandre arrived ?
I think that he’s not arrived. lit. * I think that no.

• One of the main questions in the literature on PRPs (from Plantin 1982 to Holmberg 2015’s) has been question 1 (2)

(2) Question 1: Do PRPs involve ellipsis or are they pro-forms?

• The answer to this question is likely to differ from language to language (e.g. in English Holmberg 2013 vs. Krifka 2013)

• French provides hints that its PRPs involve elided structure (at least in some environments)
• Like finite clauses, French PRPs can be embedded under the complementizer que (1’)

(1’) A: Est-ce que tu penses qu’Alexandre est arrivé ?
Do you think that Alexandre arrived ?
B1: Je pense qu’il n’est pas arrivé. B2: Je pense que non.
I think that he NEG is NEG arrived I think that no
I think that he’s not arrived.
Int. I think Pierre is there.

• Note that fragments cannot be embedded (3)

Who is there I think that Pierre
Who’s there? Int. I think Pierre is there.

• And like finite clauses, French PRPs are used to respond to assertions too (4)

(4) A: Au fait, je pense qu’Alexandre est arrivé.
by_the_way I think that Alexandre is arrived
By the way, I think that Alexandre has arrived.
B1: Moi, je pense qu’il n’est pas arrivé.  
I think that he’s not arrived.

B2: Moi, je pense que non.  
I think not.

Perhaps, this is an indication that embedded PRPs do involve an elided finite clause (in my dissertation/the appendix of this handout I argue they do) but for now I will go ahead and just assume they do in order to focus on another question (5)

(5) Question 2: What do PRPs mean?

I focus on embedded PRPs: they are subject to a number of acceptability and felicity constraints that clauses/sentential pro-forms are seemingly not subject to and that reveal more about their syntax and semantics

Today, I focus on one such constraint:

**Summary**

<table>
<thead>
<tr>
<th>B</th>
<th>A: Est-ce que tu penses que p?</th>
<th>Je pense que p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Je pense que oui</td>
<td>✓</td>
<td>(1’B4)</td>
</tr>
<tr>
<td>Je pense que non</td>
<td>✓</td>
<td>(1’B2)</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
<td>(3’B4)</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
<td>(3B2)</td>
</tr>
</tbody>
</table>

**Goals of this presentation:**
- document a surprising pattern
- explore an explanation

The explored explanation in a few words: embedded PRPs mark the utterance they are in as non-given, i.e. as contrasting with the antecedent utterance: this is always satisfied in response to questions but in response to assertions, it is satisfied under specific conditions

**Roadmap**
- I’ll give some terminology, theoretical assumptions, and details about the methodology
- spend a good portion of time looking at PRP responses to assertions (i.e. not questions); I will propose an analysis of the felicity conditions of embedded PRPs in response to assertions
- Thirdly, we’ll see that the proposed analysis correctly predicts that in response to questions, PRP responses are not restricted
- Finally, I’ll list a number of issues that challenge the proposed explanation

### 2 Methodology and background notes

- The interpretation of PRPs is dependent on context, specifically on another sentence: the antecedent or XP_{ant}
- The response, B, in (6) is interpreted differently depending on its XP_{ant} in A1 or A2 (Roelofsen and Farkas, 2014)
A1: [Est-ce que [la porte est ouverte]ant ?]Uant
is it that the door is open

Is the door open?

A2: [Est-ce que [la porte est fermée]ant ?]Uant
is it that the door is closed

Is the door closed?

B: [Je pense que oui.]Uprp
I think that yes

(to A1) I think that the door is open.
(to A2) I think that the door is closed.

- I assume that French embedded PRPs are the spell-out of a head Pol which hosts different features.
- I assume for French that the antecedent at LF is copied next to the PRP: PolPprej

Structure of PRP responses

```
CP
  que
      PolP
          PRP[Pol:val] PoPprej
            ...
```

- When the TPprej is elided, the PRP is 'bare'; when it is pronounced, the PRP is 'clause-peripheral'.
- I call the utterance that contains XPant the 'antecedent utterance' or Uant, and the utterance that contains the PRP the 'PRP utterance' or UPRp.
- In my study of the felicity conditions of responses containing a PRP, I controlled for the factors in (9).

Parameters

- XPant level: matrix or embedded?
- Uant illocutionary force: question or assertion?
- Uant/UPRp sequence: dialogue or conjunction?
- Uant/UPRp relation: contrast or not?

- I have found that of these parameters, only two condition the acceptability of PRP responses: b. and d. (so for the sake of uniformity and brevity, I'll only consider examples with embedded antecedents (parameter a.) and with conjunction (parameter c.).)
- Also I use the phrase au fait 'by the way' to make sure that no question precedes the assertion antecedent (this is crucial to observe the acceptability contrasts we observe when PRPs are used to respond to assertions as opposed to questions).

3 Polar response particles as contrastive particles

- Remember the puzzle: we want to understand why in (11) the choice of PRPs is restricted while it is not in (12) (And the same restriction holds with non (10)).

1 # Au fait, Tom est sûr que Benjamin est venu et
by_the_way Tom is sure that Benjamin is come and/but
je suis sûr que oui aussi.
I am sure that yes/no too

Int. Tom is sure that Benjamin came and/but I'm sure he will (too).

1 A non response to an assertion is subject to the same contrast condition.

2. Au fait, Tom est sûr que Benjamin n’est pas venu et
by_the_way Tom is sure that Benjamin NEG is NEG come and
je suis sûr que non aussi.
I am sure that no too

Int. Tom is sure that Benjamin didn’t come and I’m sure of it too.

b. Au fait, Tom est sûr que Benjamin n’est pas venu et moi je suis sûr que si.
b. Au fait, Tom est sûr que Benjamin est venu et/mais
by_the_way Tom is sure that Benjamin is come and/but
je suis sûr que non.
I am sure that no
Tom is sure that Benjamin came and/but I’m sure he will not.

(12) Au fait, Tom se demande si Benjamin est venu et/mais
by_the_way Tom refl asks if Benjamin is come and/but
je suis sûr que oui/non.
I am sure that yes/no
Tom wonders whether Benjamin came but I’m sure he will / he won’t.

• Given the different behavior of PRPs in response to questions and assertions, we could consider two hypotheses (13)

(13) a. Hypothesis 1 (homophony approach): There exist two sets of PRPs, one set is used to respond to questions and the other set is used to respond to assertions; they both happen to be realized by the same string of phonemes in French.

b. Hypothesis 2 (unified approach): There is only one set of PRPs and it can be used to respond to both questions and assertions; asymmetries between the two stem from the interaction of the semantics of PRPs and the semantics of their environment.

• I argue that embedded PRPs in French can be given a unified treatment and that this pattern results from the interaction of the felicity conditions on their use and the illocutionary force of their antecedent

• First, we are going to look at PRP responses when they are not used to answer a question
  – I’ll dismiss two potential explanations of the unacceptability of examples like (11a)
  – I’ll propose a descriptive generalization after a systematic study of minimally different examples of (11a)
  – I’ll propose an analysis and show that it correctly predicts the examples we will have seen as well as many others

• Second, we’ll see that the proposed analysis correctly predicts that in response to questions, PRP responses are not restricted

3.1 Dismissing two non-starters: not about competition or ellipsis

• Note that oui in (14a) is not possible but the sentence-level proform en is

(14) a. #Au fait, Tom est sûr que Benjamin est venu et je suis sûr
by_the_way Tom is sure that Benjamin is come and I am sure
que oui aussi.
that yes too
Int. Tom is sure that Benjamin came and I’m sure of it too.

b. Au fait, Tom est sûr que Benjamin est venu et j’en suis
by_the_way Tom is sure that Benjamin is come and I of it am
sûr aussi.
sure too
Tom is sure that Benjamin came and I’m sure of it too.

• We could imagine that there is a competition rule such that if a pro-form can be used, then it must be used

• But this is not so since there are many examples where both oui and a sentence-level proform are possible (15)

(15) a. Au fait, Tom n’est pas sûr que Benjamin soit venu mais
by_the_way Tom NEG is NEG sure that Benjamin be_SUBJ come but
moi je suis sûr que oui.
me I am sure that yes
Tom is not sure that Benjamin came but I’m sure of it.

b. Au fait, Tom n’est pas sûr que Benjamin soit venu mais
by_the_way Tom NEG is NEG sure that Benjamin be_SUBJ come but
moi j’en suis sûr.
me I of it am sure
Tom is not sure that Benjamin came but I’m sure of it.

• It might also be thought that the reason (14a) is bad has to do with contrast conditions that are known to apply to other cases of ellipsis (Johnson, 2001) since I claim that bare PRPs come with an elided prejacent
• But this would predict that the non-elided version of (14a) is good but it is not (16) - for brevity I only use bare PRPs to illustrate my discussion

(16) #Au fait, Tom est sûr que Benjamin est venu et by_the_way Tom is sure that Benjamin is come and
je suis sûr que oui Benjamin est venu aussi.
I am sure that yes Benjamin is come too
Int. Tom is sure that Benjamin came and I’m sure that he did too.

• Now I look at what it is exactly that makes an embedded PRP bad in response to assertions

3.2 Conditions on $U_{PRP}$ in response to assertions
• I’m going to use (17) as the baseline example for this section: it is not acceptable and notice that $XP_{Ant}$ and oui-$XP_{prej}$ have the same denotation

(17) a. #Au fait, Tom est sûr que Benjamin est venu et by_the_way Tom is sure that Benjamin is come and
je suis sûr que oui Benjamin est venu aussi.
I am sure that yes Benjamin is come too
Int. Tom is sure that Benjamin came and I’m sure that he did too.

b. $[XP_{Ant}]$= Benjamin came

c. $[oui XP_{prej}]$= Benjamin came

• This example becomes good in (18): the embedded particle in the second conjunct is interpreted relative to the embedded clause in the first conjunct

(18) a. Au fait, Tom est sûr que Benjamin est venu et/mais by_the_way Tom is sure that Benjamin is come and/but
(moi) je suis sûr que non.
me I am sure that no
Tom is sure that Benjamin came but I’m sure that he did not.

b. $[XP_{Ant}]$= Benjamin came

c. $[non XP_{prej}]$= Benjamin did not come

• So we could posit the hypothesis that in order for a PRP to be felicitously used, it must be the case that $[XP_{Ant}] \neq [PRP XP_{prej}]$

• But look at (19): it is acceptable and yet $[XP_{Ant}] = [PRP XP_{prej}]$ just as in the unacceptable baseline example (17)

(19) a. Au fait Tom n’est pas sûr que Benjamin soit venu mais by_the_way Tom NEG is NEG sure that Benjamin be.SUBJ come but
moi je suis sûr que oui.
me I am sure that yes
Tom is not sure that Benjamin came but I’m sure of it.

b. $[XP_{Ant}]$= Benjamin came

c. $[oui XP_{prej}]$= Benjamin came

• What has changed though is the polarity of the embedding predicate

• So it looks like two things matter for embedded PRPs to be licensed in response to assertions:
  – The relation between $XP_{ant}$ and $PRP$, $XP_{prej}$
  – The relation between $U_{ant}$ and $U_{PRP}$

• So there are several moving parts that need to be inspected systematically:
  1. The polarity of the matrix predicate in the antecedent utterance
  2. The polarity of the embedded predicate (antecedent)
  3. The polarity of the matrix predicate in the 2nd conjunct/response
  4. The polarity of the clause that comes with bare oui, non, and si (i.e. its prejacent)

• I illustrate this with example (17) repeated in (20) where each frame indicates the locus of what will vary.
Let’s look at the summary of the $4^2$ variations in Table 3.1

Table 3.1: Summary table for PRPs with embedded assertions as antecedents

<table>
<thead>
<tr>
<th>Profile 1</th>
<th>Profile 2</th>
<th>PRP</th>
<th>acceptability</th>
<th>conjunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pol. 1</td>
<td>Pol. 2</td>
<td>Pol. 3</td>
<td>Pol. 4</td>
<td>oui</td>
</tr>
<tr>
<td>1</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>± oui/si</td>
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<td>6</td>
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<td>± oui/si</td>
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<tr>
<td>16</td>
<td>-</td>
<td>+</td>
<td>± oui/si</td>
<td>✓</td>
</tr>
</tbody>
</table>

The table shows that PRP responses to assertions are subject to the generalizations in (21)

(21) Generalizations governing the distribution of PRPs in response to assertions

- #Tom est sûr que Benjamin est venu
  Tom is sure that Benjamin is come
  et
  and
  et je suis sûr que oui il est venu (aussi).
  I am sure that yes he is come too
  Int. Tom is sure that Benjamin came and I’m sure that he did (too).

• Let’s look at the summary of the $4^2$ variations in Table 3.1

- About generalization A: whenever there’s non-identical profiles, two things become possible:
  – use of PRPs in response to assertions
  – use of mais ‘but’

• (About generalization B: I argue that embedded PRPs are global PPIs when they respond to assertions. I do not talk about this here.)

3.3 Deriving generalization A

- What is generalization A? Can we take it at face-value? No because example (22) breaks it but it is perfectly acceptable

(22) Au fait, peu de gens pensent que Marie va venir mais by_the_way few DE people think that Marie will come but
  Jean pense que oui ...
  Jean thinks that yes
  By the way, few people think that Marie will come but Jean thinks she will.
  a. [XP_{Ant}] = Marie will come
  b. [oui XP_{prej}] = Marie will come
  c. Profile 1 = profile 2 = + +

• Upshot:
  – it’s not enough for XP_{Ant} and XP_{prej} be different, we need to look at bigger constituents like U_{Ant} and U_{PRP}
  – it’s not enough for profiles to be different: i.e. the “syntactic” polarity value of each predicate is not what is relevant

• Intuition: the semantic value of U_{Ant} cannot entail the semantic value of U_{PRP} modulo DP identity
The hypothesis I propose to capture the distribution of embedded PRPs is

(23) **Hypothesis 2A (non-givenness):** In an utterance $U_{PRP}$, a sentence $S$ containing the sequence ‘…que PRP, p …’ in response to an utterance $U_{Ant}$ is felicitous only if \[ U_{Ant} \not\models \bigcup C \], where:

- $C$ is a set of alternative propositions of \[ S' \] obtained by replacing the focused DPs in $S'$ by contextually-relevant alternatives
- \[ S' = S \] without PRP

• Here’s how it works (24)

(24) a. #Au fait, Alexandra est sûre qu’il va aimer et Jean est sûr que oui.
    
    Int. By the way, Alexandra is sure that he’ll like it and Jean is sure that he will.

    - $U_{Ant}$: [w | Jean is sure that he will like it]
    - $C = \{\text{Jean is sure that he will like it, Alexandra is sure that he will like it}\}$

b. $U_{Ant} \not\models U_C$? Yes
    
    - $U_{Ant} = [w | \text{many people think in w that Marie will not come}]$
    - $U_C = [w | \text{Jean thinks in w that Marie will come or Marie thinks in w that Marie will come}]$

• Example (26) with non instead of oui is correctly predicted to be bad: with predicates like penser ‘think’ which come with an opinionatedness presupposition (neg-raising), $U_{Ant}$ entails that at least one person thinks that Marie will not come so $U_{Ant} \models U_C$

(26) a. #Au fait, peu de gens pensent que Marie va venir et/mais by_the_way few DE people think that Marie goes come and/but Jean pense que non.
    
    Jean thinks that no

    Int. By the way, few people think that Marie will come and/but Jean thinks she will not.

b. $U_{Ant} \not\models U_C$? No
    
    - $U_{Ant} = [w | \text{many people think in w that Marie will not come}]$
    - $U_C = [w | \text{Jean thinks in w that Marie will not come or Marie thinks in w that Marie will not come}]$

Now let’s look at non-neg-raising verbs, here again taking Generalization A at face-value would make incorrect predictions. With a non-neg-raising predicate, e.g. espérer ‘hope’ and the subject quantifier few, both embedded oui and non are possible (c.f. 27 and 28). This is predicted since the subject peu de gens ‘few people’ does not entail existence.

(27) a. Au fait, peu de gens espèrent que Marie va venir mais Jean by_the_way few DE people hope that Marie goes come but Jean espère que oui.
    
    Jean hopes that yes

    By the way, few people hope that Mary will come but Jean hopes she does.

b. $U_{Ant} \not\models U_C$? Yes
    
    - $U_{Ant} = [w | \text{few people hope in w that Marie will come}]$
    - $U_C = [w | \text{Jean hopes that Marie will come}]$
(28) a. Au fait, peu de gens espèrent que Marie va venir et Jean by_the_way few DE people hope that Marie goes come and Jean espère que non.
hopes that no
By the way, few people hope that Mary will come and Jean hopes she does not.

b. \([U_{ant}] \not\subseteq \cup C\) Yes
- \([U_{ant}] = \{ w \mid \text{few people hope in w that Marie will come} \} \)
- \(\cup C = \{ \text{Jean hopes in w that Marie will not come} \} \)

- Second it correctly predicts that the contrast requirement cannot be satisfied if two propositions contrast just in their DPs

(29) a. Au fait Jean croit que Jeannot vit à Londres mais Marc by_the_way Jean believes that Jeannot lives in London but Marc lui croit que Marco non.
him believes that Marco no
By the way, Jean thinks that Jeannot lives in London but Marc thinks that Marco does not.

b. \([U_{ant}] \not\subseteq \cup C\) Yes
- \([U_{ant}] = \{ w \mid \text{Jean believes in w that Jeannot lives in London} \} \)
- \(\cup C = \{ w \mid \text{Marc believes in w that Marco does not live in London or Jean believes in w that Jeannot does not live in London or in w that Marco does not live in London} \} \)

(30) a. #Au fait Jean croit que Jeannot vit à Londres et Marc lui by_the_way Jean believes that Jeannot lives in London but Marc him croit que Marco oui (aussi).
believes that Marco yes too
Int. By the way, Jean thinks that Jeannot lives in London and Marc thinks that Marco does too.

b. \([U_{ant}] \not\subseteq \cup C\) No
- \([U_{ant}] = \{ w \mid \text{Jean believes in w that Jeannot lives in London} \} \)
- \(\cup C = \{ w \mid \text{Marc lives in London or Jean believes in w that Jeannot lives in London or Marco lives in w that Jeannot lives in London or Jean believes in w that Marco lives in London} \} \)

- Third, it correctly predicts that non-entailment can be obtained if the embedding predicates in \(U_{ant}\) and \(U_{PRP}\) are on a Horn scale: e.g. \(<\text{think, be sure}>\)

(31) a. Au fait Tom pense qu’elle va venir mais Jean est sûr que by_the_way Tom thinks that she goes come but Jean is sure that oui.
yes
By the way, Tom (only) thinks that she will come but Jean is sure that she will.

b. \([U_{ant}] \not\subseteq \cup C\) Yes
- \([U_{ant}] = \{ w \mid \text{Tom thinks in w that she will come} \} \)
- \(\cup C = \{ w \mid \text{Jean is sure in w that she will come or Tom is sure in w that she will come} \} \)

- But be sure entails think, so this predicts that reversing the order of the conjuncts will not be acceptable and this is a good prediction. As you can verify, if Tom is sure that she will come, it follows that Tom thinks/believes that she will come, which is an alternative in C, therefore (32) is unacceptable.

(32) a. #Au fait Tom est sûr qu’elle va venir et/mais Jean pense by_the_way Tom is sure that she goes come and but Jean thinks que oui.
that yes
Int. By the way, Tom is sure that she will come and/but Jean thinks that she will.

b. \([U_{ant}] \not\subseteq \cup C\) No
- \([U_{ant}] = \{ w \mid \text{Tom is sure in w that she will come} \} \)
- \(\cup C = \{ w \mid \text{Jean thinks in w that she will come or Tom thinks in w that she will come} \} \)

3.4 Questions
- I assume that the denotation of a polar question is the set of its answers (Hamblin, 1973; Roelofsen and Farkas, 2014).

- Since the generalized union of the set C is a set of worlds, the entailment condition of hypothesis 2A can never be met, and therefore a PRP response in response to a question is always predicted to be felicitous.
(33) A: Est-ce que tu penses que Tom est venu ?
   Is it that you think that Tom is come
   Do you think that Tom came?

B: Je pense que oui.
   I think that yes
   I think that he did.
   \[ U_{Ant} \] \not\vdash UC? Yes
   - \[ U_{Ant} = \{ w \mid Tom came in w \}, \{ w \mid Tom did not come in w \} \]
   - UC = \{ w \mid Tom came in w or A came in w \}

- This predicts that a question embedding a PRP following an assertion should be good and I think this is correct

(34) A: Au fait Marie m’a dit qu’il allait pleuvoir demain.
   by_the_way Marie to.me has said that it went raining tomorrow
   By the way, Marie told me that it was going to rain tomorrow.
   Et toi est-ce que tu crois que oui (aussi) ?
   And you is it that you think that yes too
   Do you think that it’ll rain (too)?

- Finally this predicts that a question embedding a PRP following another question (not its answer) is not acceptable

(35) Context: A asks a question to B, then asks the same question to C.
   A: Est-ce que tu crois qu’il va pleuvoir demain ?
   is it that you think that it goes rain tomorrow
   Do you think it will rain tomorrow?
   # Et toi est-ce que tu crois que oui ?
   and you is it that you think that yes
   Int. And you, do you think that it’ll rain?

- I think here the form of the question makes a difference. If the second question (the one containing oui) is a rising declarative, the example seems to become better. I do not really know why.

(36) Context: A asks a question to B, then asks the same question to C.
   A: Est-ce que tu crois qu’il va pleuvoir demain ?
   is it that you think that it goes rain tomorrow
   Do you think it will rain tomorrow?
   Et toi tu crois que oui ?
   and you you think that yes
   And you, do you think that it’ll rain?

3.5 Summary
- The analysis I proposed accounts for the following data:
  1. all the data involving differences in profiles at the beginning
  2. cases where the conjunction mais ‘but’ is licensed but PRPs are not [not shown here]
  3. neg raising / non-neg raising asymmetry
  4. quantifiers that presuppose existence vs quantifiers that do not asymmetry (e.g. many vs. few) [partially shown here]
  5. scalar predicates like être sûr ‘be sure’ and penser ‘think’
  6. the observation that in response to questions, embedded PRPs are always felicitous
- But it does so at the cost of positing unheard of alternatives that abstract over focused DPs only (as opposed to any focused item as in Rooth 1992’s theory of focus interpretation).
- Moreover, the analysis as it is formulated in hypothesis 2A faces (too?) many empirical challenges

4 Challenges
- The analysis of anti-givenness that I gave in terms of the non-entailment condition faces a couple of challenges.

4.1 Challenge 1: Differences among factive predicates
- Let’s consider factive verbs. Since hypothesis 2A is about entailment, we expect factive verbs to interact with it since the use of a factive verb, e.g. know that p, entails that at least the speaker believes that p. Consider the acceptable example in (37).
(37) a. Au fait, Jean ne sait pas encore que Marie est arrivée mais
by_the_way Jean NEG knows NEG yet that Marie is arrived but
Jeanne sait que oui.
Jeanne knows that yes
By the way, Jean does not yet know that Marie has arrived but Jeanne
knows that she has.

b. $[U_{Ant}] \not\models \bigcup C$? Yes
   - $[U_{Ant}] = \{ w \mid \text{Jean does not know in } w \text{ that Marie has arrived} \}$
   - $\bigcup C = \{ w \mid \text{the speaker knows in } w \text{ that Marie arrived or Jean knows in } w \text{ that Marie arrived} \}$

- If $[U_{Ant}]$ is true, it follows that, at least, the speaker knows that Marie has arrived, and since the speaker is an individual, this is a plausible alternative in C.

- But this has the disastrous consequence of predicting that (37) is not acceptable.

- Moreover, not all factive verbs behave the same in allowing PRP embedding (39)\(^2\)

(39) a. #Au fait, Jean n’est pas content que Marie soit arrivée mais
by_the_way Jean is NEG happy NEG that Marie has arrived but
moi je suis content que oui.
me I am happy that yes
Int. By the way, Jean is not happy that Marie has arrived but I am happy that she has.

b. $[U_{Ant}] \not\models \bigcup C$? Yes
   - $[U_{Ant}] = \{ w \mid \text{Jean is not happy that Marie has arrived} \}$
   - $\bigcup C = \{ w \mid \text{the speaker knows in } w \text{ that Marie arrived or Jean knows in } w \text{ that Marie arrived} \}$

- Note that it is not that oui cannot be embedded ‘être content’ ‘be happy’ at all since this sequence is perfectly good as a response to a question (38).

(38) a. Je me demandais si vous alliez aimer ... je suis content que oui !
I REFL asked if you went like ... I am happy that yes
I was wondering whether you would like it ... I’m happy you did!

b. $[U_{Ant}] \not\models \bigcup C$? Yes
   - $[U_{Ant}] = \{ w \mid \text{you like it in } w \text{, } \{ w \mid \text{you don’t like it in } w \text{} \}$
   - $\bigcup C = \{ w \mid \text{Jean is happy in } w \text{ that Marie arrived or I am happy in } w \text{ that Marie arrived} \}$

- It therefore seems that factive verbs differ in one property that the non-entailment condition of our hypothesis is not sensitive to.

- I have ideas but not enough time at this point, ask me during the Q&A session.

4.2 Challenge 2: Non-entailment through tense difference

- Non-entailment can be achieved through a difference in the tense of the embedding verbs in $U_{Ant}$ and $U_{PRP}$.

- In (40), that Mary thought $p$ does not entail that she thinks $p$ now so hypothesis 2A incorrectly predicts that it is acceptable.

(40) a. #Au fait, elle pensait que Marie viendrait et/#mais elle pense
by_the_way she thought that Marie come.COND and/but she thinks
toujours que oui.
still that yes
Int. She thought that Marie would come and she still thinks she will.

b. $[U_{Ant}] \not\models \bigcup C$? Yes
   - $[U_{Ant}] = \{ w \mid x_i \text{ thought in } w \text{ that Marie will come} \}$
   - $\bigcup C = \{ w \mid x_i \text{ thinks in } w \text{ that Marie will come} \}$

- So clearly, hypothesis 2A which requires mere non-entailment is too weak\(^3\) since the felicity condition that embedded PRPs impose on the utterance they are part of cares not only about the satisfaction of non-entailment but also about the way non-entailment is achieved.

\(^2\)Note that (41a) and (41b), where non-entailment is satisfied through a change in the polarity of the PRPs or of the embedding predicate, are good.

(41) a. Au fait, elle pensait que Marie viendrait et/#mais maintenant elle
by_the_way she thought that Marie come.COND and/but now she
pense que non.
de demandais ask asked if you went like ... I am happy that yes
I was wondering whether you would like it ... I’m happy you did!

b. Au fait, elle ne pensait pas que Marie viendrait et/#mais maintenant
by_the_way she NEG thought NEG that Marie come.COND and/but now
elle pense que oui.
she thinks that yes
She didn’t think that Marie would come and/but now she thinks she will.
4.3 Challenge 3: Non-entailment through adverbs

- According to hypothesis 2A, only NPs/DPs can be abstracted over for alternatives to be calculated.
- This has the unfortunate consequence of predicting that the unacceptable example (42a) is acceptable since sometimes hope that p does not entail always hope that p

(42) a. #Au fait, Marie espère parfois que Tom échoue mais Laura espère à chaque fois que oui.

\[ [U_{Ant}] \not\models \cup C \quad \text{Yes} \]
- \[ [U_{Ant}] = \{ w \mid \text{Marie sometimes hopes in } w \text{ that Tom fails} \} \]
- \[ \cup C = \{ w \mid \text{Tom always hopes in } w \text{ that Tom fails or Marie always hopes } \text{in } w \text{ that Tom fails} \} \]

- This sentence becomes good only once the polarity of the PRP has been changed (43).

(43) Au fait, Marie espère parfois que Tom échoue mais Laura espère à chaque fois que non.

\[ \text{Sometimes Marie hopes for Tom to fail but Laura hopes for him to not fail every time.} \]

- This challenge is particularly mysterious as, from a certain angle, these examples are very similar to the examples with the verbs être sûr ‘be sure’ and penser ‘think’ (31 and 32): the adverbs, like the verbs, can be ordered on a Horn scale, e.g. <hope sometimes, hope every time>

5 Conclusion

- I have presented a new empirical discovery: embedded PRPs in French are subject to a contrast condition when they respond to an assertion but seemingly not when they respond to questions
- I have argued that in fact embedded PRPs in French can be analyzed as always requiring that the utterance they are in contrast with the utterance that their antecedent is in – when the antecedent is a question, the contrast condition is just always satisfied
- I have explored an explanation of the contrast condition that can handle a relatively large set of data point (I have not presented all of them here though)
- But this explanation faces a number of challenges
- One way to look at the intuition I have tried to make more precise as hypothesis 2A is that embedded PRPs are rather paradoxical elements
  - On the one hand, PRPs mark the clause in their scope, a.k.a. their prejacent, as being given modulo specific polarity value (this is necessarily so with embedded bare PRPs since in that case the elided clause must be recoverable, hence given in the context).
  - On the other hand, embedded PRPs require that the utterance they are not be given.

(44) \[ \ldots \text{que PRP } \framebox{P} \text{ given } \text{not given} \]

- Using embedded PRPs thus requires satisfying these two somewhat paradoxical requirements.
- Thoughts for the future:
  - PRPs are often taken to be the way focussed polarity is expressed (Holmberg, 2013)
  - I wonder to what extent the environments that license the use of embedded PRPs in French license cases of polarity focus, e.g. verum focus in English, bien in French
  - Is the following good?

(45) a. By the way, few people think that Mary went to the store but/and I think that she DID go.

b. By the way, few people think that Mary went to the store but/and I think that she did NOT go.

- Depending on what we find, this could have consequences for proposed analyses of verum focus like (Gutzmann et al., 2017)
Appendices

A. Do embedded bare response particles involve ellipsis?

- First some terminology: in French response particles occur in three ‘shapes’: bare, with fragments, and with a full clause.
Another example of the effect of finiteness is provided by raising verbs. The verb paraître ‘seem’ can appear in two constructions. In construction 1, the subject does not raise and the complement of the verb is a finite clause. Polarity particles can be embedded in the latter construction as B2 shows.

\[(50)\]  A: Léa souffre ?
Léa hurts
Is Léa in pain?

B1: Il paraît qu'elle souffre.
It seems that she hurts
It seems that she's in pain.

B2: * Elle paraît souffrir.
She seems to hurt.INF

B3: * Elle paraît qu'elle souffre.
she seems that she

B4: * Elle paraît oui.
she seems yes

But in construction 2, the subject raises and the complement of the verb can only be non-finite. As B3 and B4 in (51) show, a response particle cannot be embedded there.

\[(51)\]  A: Léa souffre ?
Léa hurts
Is Léa in pain?

B1: elle paraît souffrir.
it seems hurt.INF
She seems to be in pain.

B2: * Elle paraît qu'elle souffre.
she seems that she

B3: * Elle paraît oui.
she seems yes

B4: * Elle paraît que oui.
she seems that yes

A.2 Argument 2: Obviation

- There is a phenomenon in French known as obviation which refers to the ban that certain embedding verbs, all assigning subjunctive, impose on an embedded pronominal subject against its being coreferent with the matrix subject.

- For instance (52a) is fine but (52b) is not. The only thing that has changed though is the embedding verb, therefore I will say that espérer is –obviation whereas souhaiter is a +obviation verb.

- The only way to make coreference acceptable with +obviation verbs is for the embedded clause to be non-finite as in (52c)

\[(52)\]  a. J'espère que je jouerai demain.
I hope that I play.FUT tomorrow
I hope I will play tomorrow.

b. *Je souhaite que je joue demain.
I SOUHAITER that I play.SUBJ tomorrow
Int. I want to play tomorrow.

c. Je souhaite jouer demain.
I SOUHAITER play.INF tomorrow
I want to play tomorrow.
• If embedded bare response particles come with an elided finite clause, we expect them to show the same sensitivity to obviation that full clauses do. On the other hand, if they behave like proforms, we should not see any effect: the sentence-level proform *it* is not sensitive to obviation (53).

> (53) A: Tu vas jouer demain ?
>     You are going to play tomorrow?
>     
> B1: Je le souhaite.
>         I want to.
>     
> B2: Je l’espère.
>         I hope.

• Interestingly, obviation effects obtain with response particles when the subject in the antecedent is the same as the matrix subject of the embedding verb (52b). This is expected if PolParts come with a full clause at some level of representation. Interestingly, no such effect occurs when the antecedent is picked up by a proform (52c).

> (54) A: Tu vas aller à leur mariage ?
>     Are you going to their wedding?
>     
> B1: *Je souhaite/ aimerais bien que j’y aille.
>         I would like that I go.SUBJ
>         Int. I want/ would like him to go.
>     
> B2: *Je souhaite/ aimerais bien que oui.
>     B3: Je le souhaite/ aimerais bien.

• Obviation does not occur in two cases: if the subjects do not corefer (55) and if the embedding verb is -obviation (56).

> (55) A: Tom va aller à leur mariage ?
>     Tom goes go to their wedding
>     Is Tom going to their wedding?
>     
> B1: Je souhaite/ aimerais bien qu’il y aille.
>         Int. I want/ would like that he there go.SUBJ
>         I want/ would like him to go.
>     
> B2: Je souhaite/ aimerais bien que oui.
>     B3: Je le souhaite/ aimerais bien.

> (56) A: Tu vas aller à leur mariage ?
>     you go go to their wedding
>     Are you going to their wedding?
>     
> B1: J’espère que j’irai.
>         I hope that I go.FUT
>         I hope to go.
>     
> B2: J’espère que oui.
>     B3: Je l’espère.

A.3 Argument 3: Antilogophoricity effect

• If bare response particles involve ellipsis, we expect that if the elided constituent contains an antilogophoric element bound by the subject, the sentence will be unacceptable (57B1).

• This is what we find (57B2).

> (57) A: Tu crois que Marie aime cet imbécile ?
>     you think that Marie loves this idiot
>     Do you think that Marie loves this idiot?
>     
> B1: *Il pense qu’elle aime cet imbécile, C’est évident.
>         He thinks that she loves this idiot it is obvious
>     
>         He thinks that yes it is obvious
A.4 Argument 4: The interpretation of embedded non

- In response to a negative question ¬p?, answering with non asserts the questioned proposition ¬p without negating it (keeping pronunciation and the position of negation constant (Holmberg, 2013; Goodhue and Wagner, tted) as the responses in (58B1) and (58B2) show.

(58) A: Est -ce qu’ ils n’ ont pas été au travail à l’heure cette année? Have they not shown up for work on time this year?

B1: Je crois que non. I believe that no
I believe that they have not shown up for work on time this year.

B2: Je crois que Tom non mais Marie oui. I believe that Tom no but Marie yes
I believe that Tom has not shown up for work on time this year but Marie has.

- The next question is exactly the same except that the adverb souvent ‘frequently’ has been added: notice that now answering with non asserts the negation of the questioned proposition ¬p.

(59) A: Est -ce qu’ ils n’ ont souvent pas été au travail à l’heure cette année? Have they frequently not shown up for work on time this year?

B1: Je crois que (Tom) oui. I believe that (Tom) yes
I believe that they have (Tom has) not shown up for work on time this year.

B2: Je crois que (Tom) non. I believe that (Tom) no
Int. I believe that they have (Tom has) frequently not shown up for work on time this year.

B3: Je crois que (Tom) non. I believe that Tom no
I believe that they have (Tom has) not frequently not shown up for work on time this year.

- As summarized in table A.1, why does non negate the questioned proposition in examples (59) but not in (58)?

<table>
<thead>
<tr>
<th>No-scope bearing operator</th>
<th>Scope-bearing operator = souvent</th>
</tr>
</thead>
<tbody>
<tr>
<td>¬p</td>
<td>¬svtf</td>
</tr>
</tbody>
</table>

Table A.1: Meaning of non/oui as a function the scope-bearing operators it contains

- The interpretation of embedded non is governed by the generalization in (60).

(60) Generalization about the interpretation of non

a. if ¬ is the outermost scope-bearing operator in the prejacent, non does not contribute negation

b. if ¬ is NOT the outermost scope-bearing operator in the prejacent, non contributes negation

- I argue that this is because embedded non wants to establish a concord dependency with clausal negation in its prejacent.7

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4This data point was first noticed in English in Holmberg 2013. Similar patterns were reported in Brasoveanu et al. 2013.

5This concord dependency is subject to intervention by any scope-bearing operator. When intervention occurs, non is interpreted as negation.
• Crucially this generalization and analysis depend on the presence of syntactic structure in the syntax of embedded *non*. 