

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

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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 ?
is it that you think that Alexandre is arrived
Do you think that Alexandre arrived ?

B1: Il n' est pas arrivé. B2: Non.
he NEG is NEG arrived no
He's not arrived. No / He has not arrived.

- 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)

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- 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 ?
is it that you think that Alexandre is arrived
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. I think not.
*lit. * I think that no.*

- Note that fragments cannot be embedded (3)

(3) A: Qui est là ? B: * Je pense que Pierre.
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.
 me I think that he NEG is NEG arrived
I think that he's not arrived.

B2: Moi, je pense que non.
 me I think that no
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:

KEY CONTRAST:

In response to the assertion in (3'A), it is possible to respond positively with the full clause in B1 but not with the PRP in B2

(3') 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: Je pense qu' il est arrivé (aussi). B2: #Je pense que oui (aussi).
 I think that he is arrived too I think that yes too
I think that he's arrived too. Int. I think so too.

Note that in response to a question (1''A), both positive responses are fine

(1'') A: Est- ce que tu penses qu' Alexandre est arrivé ?
 is it that you think that Alexandre is arrived
Do you think that Alexandre arrived ?

B3: Je pense qu' il est arrivé. B4: Je pense que oui.
 I think that he is arrived I think that yes
I think that he's arrived. I think that he's arrived.

Why is B2 bad in response to (3')?

- This is this puzzle – summarized in (6) – that I want to talk about today

(6) Summary

B:	A:	Est-ce que tu penses que p?	Je pense que p
Je pense que oui \bar{p}		✓ (1''B4)	✗ (3'B4)
Je pense que non $\Rightarrow \bar{p}$		✓ (1'B2)	✓ (3B2)

- 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

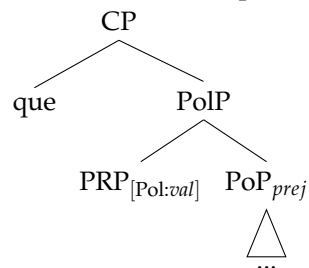
2 Methodology and background notes

- 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)

- (7) A1: [Est- ce que [la porte est ouverte]_{ant} ?]_{U_{ant}}
 is it that the door is open
Is the door open?
- A2: [Est- ce que [la porte est fermée]_{ant} ?]_{U_{ant}}
 is it that the door is closed
Is the door closed?
- B: [Je pense que oui.]_{U_{PRP}}
 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: Pol_{prej}

(8) Structure of PRP responses



- When the TP_{prej} is elided, the PRP is 'bare'; when it is pronounced, the PRP is 'clause-peripheral'
- I call the utterance that contains XP_{ant} the 'antecedent utterance' or U_{Ant}, and the utterance that contains the PRP the 'PRP utterance' or U_{PRP}.
- In my study of the felicity conditions of responses containing a PRP, I controlled for the factors in (9)

(9) Parameters

- XP_{ant} level: matrix or embedded?
- U_{ant} illocutionary force: question or assertion?
- U_{ant}/U_{PRP} sequence: dialogue or conjunction?
- U_{ant}/U_{PRP} 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

- (11) a. #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).

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

- (10) a. #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 preadjacent

- 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 aussi.

I am sure that yes too

Int. Tom is sure that Benjamin came and I'm sure of it too.

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

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

- 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. $[[XP_{Ant}]] = \text{Benjamin came}$

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

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

- But look at (19): it is acceptable and yet $[[XP_{Ant}]] = [[PRP \text{ } XP_{prej}]]$ 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. $[[XP_{Ant}]] = \text{Benjamin came}$

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

- 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 preadjacent)
- I illustrate this with example (17) repeated in (20) where each frame indicates the locus of what will vary.

- (20) #Tom est₁ sûr que Benjamin est₂ venu
 Tom is sure that Benjamin is come
 et
 and
 je suis₃ sûr que oui il est₄ 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).
- } Profile 1
 } Conjunction
 } Profile 2

- Let's look at the summary of the 4² variations in table 3.1

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

	Profile 1		Profile 2		PRP	acceptability	conjunction
	Pol. 1	Pol. 2	Pol. 3	Pol. 4			
1	+	+	+	+	oui	✗	et
2	+	+	+	-	non	✓	et/mais
3	+	+	-	+	oui	✗	mais
4	+	+	-	-	non	✗	mais
5	+	-	+	+	oui/si	✓	et/mais
6	+	-	+	-	non	✗	et
7	+	-	-	+	oui/si	✗	mais
8	+	-	-	-	non	✗	mais
9	-	+	+	+	oui/si	✓	et/mais
10	-	+	+	-	non	✓	mais
11	-	+	-	+	oui	✗	et
12	-	+	-	-	non	✗	et/mais
13	-	-	+	+	oui/si	✓	et/mais
14	-	-	+	-	non	✓	et/mais
15	-	-	-	+	oui/si	✗	et/mais
16	-	-	-	-	non	✗	et

- 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

Generalization A: profile 1 ≠ profile 2

Generalization B: no '-' in Pol. 3 / third column

- 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 goes 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. $[[XP_{Ant}]] = \text{Marie will come}$

b. $[[oui XP_{prej}]] = \text{Marie will come}$

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).

(23) Hypothesis 2A (non-giveness): 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 $\llbracket U_{Ant} \rrbracket \not\models UC$, where:
 - C is a set of alternative propositions of $\llbracket S' \rrbracket$ obtained by replacing the focused DPs in S' by contextually-relevant alternatives
 - $\llbracket S' \rrbracket = \llbracket S \rrbracket$ without PRP

- Here’s how it works (24)

(24) a. #Au fait, Alexandra est sûre qu’ il va aimer et Jean est sûr
 by_the_way Alexandra is sure that he goes like and Jean is sure
 que oui.
 that yes

Int. By the way, Alexandra is sure that he’ll like it and Jean is sure that he will.

- b. $\llbracket U_{Ant} \rrbracket \not\models UC$? No
 - $\llbracket U_{Ant} \rrbracket$: {w | Alexandra is sure in w that he will like it}
 - U_{PRP} : Jean_{CT} est sûr que oui.
 - S' = Jean_{CT} est sûr qu’ il va aimer.
 - C = {Jean is sure that he will like it, Alexandra is sure that he will like it}
 - UC = {w | Jean is sure in w that he will like it or Alexandra is sure in w that he will like it}

- Advantages of hypothesis 2A: it explains all the examples that generalization A explains (see table 3.1), and more ...
- First it correctly predicts that the contrast requirement is not about syntactic polarity but about semantic polarity (25)

(25) 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 oui.
 Jean thinks that yes

By the way, few people think that Marie will come and/but Jean thinks she will.

- b. $\llbracket U_{Ant} \rrbracket \not\models UC$? Yes
 - $\llbracket U_{Ant} \rrbracket$ = {w | many people think in w that Marie will not come }
 - UC = {w | 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), $\llbracket U_{Ant} \rrbracket$ entails that at least one person thinks that Marie will not come so $\llbracket U_{Ant} \rrbracket \models UC$

(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. $\llbracket U_{Ant} \rrbracket \not\models UC$? No
 - $\llbracket U_{Ant} \rrbracket$ = {w | many people think in w that Marie will not come }
 - UC = {w | 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 sujet 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.
 hopes that yes

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

- b. $\llbracket U_{Ant} \rrbracket \not\models UC$? Yes
 - $\llbracket U_{Ant} \rrbracket$ = {w | few people hope in w that Marie will come }
 - UC = {w | 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
- $\llbracket U_{Ant} \rrbracket = \{w \mid \text{few people hope in } w \text{ that Marie will come} \}$
- $UC = \{\text{Jean hopes in } w \text{ that Marie will not come} \}$

- 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
- $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Jean believes in } w \text{ that Jeannot lives in London} \}$
- $UC = \{w \mid \text{Marc believes in } w \text{ that Marco does not live in London or Jean believes in } w \text{ that Jeannot does not live in London or Marc believes in } w \text{ that Jeannot does not live in London or Jean believes in } w \text{ that Marco does not live in London} \}$

- (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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ No
- $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Jean believes in } w \text{ that Jeannot lives in London} \}$
- $UC = \{w \mid \text{Marc believes in } w \text{ that Marco lives in London or Jean believes in } w \text{ that Jeannot lives in London or Marc believes in } w \text{ that Jeannot lives in London or Jean believes in } w \text{ that Marco lives in London} \}$

- 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. *<think, be sure>*

- (31) a. Au fait, Tom pense qu' elle va venir mais Jean_F 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
- $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Tom thinks in } w \text{ that she will come} \}$
- $UC = \{w \mid \text{Jean is sure in } w \text{ that she will come or Tom is sure in } w \text{ that she will come} \}$

- 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ No
- $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Tom is sure in } w \text{ that she will come} \}$
- $UC = \{w \mid \text{Jean thinks in } w \text{ that she will come or Tom thinks in } w \text{ that she will come} \}$

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.

$\llbracket U_{Anti} \rrbracket \neq \cup C? \text{ Yes}$
 $-\llbracket U_{Anti} \rrbracket = \{ \{w \mid \text{Tom came in } w \}, \{w \mid \text{Tom did not come in } w \} \}$
 $-\cup C = \{w \mid \text{Tom came in } w \text{ or } A \text{ came in } w \}$

- 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
 - $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Jean does not know in } w \text{ that Marie has arrived}\}$
 - $UC = \{w \mid \text{the speaker knows in } w \text{ that Marie arrived or Jean knows in } w \text{ that Marie arrived}\}$

- If $\llbracket U_{Ant} \rrbracket$ 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
 - $\llbracket U_{Ant} \rrbracket = \{w \mid \text{Jean is not happy that Marie has arrived}\}$

²Note 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
 - $\llbracket U_{Ant} \rrbracket = \{w \mid \text{you like it in } w\}, \{w \mid \text{you don't like it in } w\}$
 - $UC = \{w \mid \text{Jean is happy in } w \text{ that Marie arrived or I am happy in } w \text{ that Marie arrived}\}$

- $UC = \{w \mid \text{Jean is happy in } w \text{ that Marie arrived or I am happy that Marie arrived}\}$

- 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. $\llbracket U_{Ant} \rrbracket \not\equiv UC?$ Yes
 - $\llbracket U_{Ant} \rrbracket = \{w \mid x_i \text{ thought in } w \text{ that Marie will come}\}$
 - $UC = \{w \mid x_i \text{ thinks in } w \text{ that Marie will come}\}$

- So clearly, hypothesis 2A which requires mere non-entailment is too weak³ 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.

³Note that (41a) and (41b), where non-entailment is satisfied through a change in the polarity of the PRP or of the embedding predicate, are good.

(41) a. Au fait, elle pensait que Marie viendrait et/maintenant elle
 by_the_way she thought that Marie come.COND and/but now she
 pense que non.
 thinks that no
She thought that Marie would come and/but now she thinks she will not.

- b. Au fait, elle ne pensait pas que Marie viendrait et/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
by_the_way Marie hopes sometimes that Tom fail.SUBJ but Laura
espère à chaque fois que oui.
hopes at each time that yes

Int. Sometimes Marie hopes for Tom to fail but Laura hopes so every time.

- b. $\llbracket U_{Anti} \rrbracket \not\subseteq \cup C$? Yes
 - $\llbracket U_{Anti} \rrbracket = \{w \mid \text{Marie sometimes hopes in } w \text{ that Tom fails}\}$
 - $\cup C = \{w \mid \text{Tom always hopes in } w \text{ that Tom fails or Marie always hopes in } w \text{ that Tom fails}\}$

- 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
by_the_way Marie hopes sometimes that Tom fail.SUBJ but Laura hopes
à chaque fois que non.
at each time that no

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 preja-cent, as being given modulo specific polarity value (this is necessarily so with embedded bare PRPs since in that case the elided clause must be re-coverable, hence given in the context).

- On the other hand, embedded PRPs require that the utterance they are in not be given.

(44) ...que

PRP	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>p</td></tr></table>	p
p		

 given 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)

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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

(46) A: Ils vont venir ?
 they go come
Are they going to come?

B1: Je pense que oui. Bare
 I think that yes
I think that they will.

B2: Je pense que Tom oui. Fragment-edge

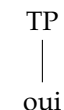
B3: Je pense que oui, ils vont venir. Clause-edge

- Some accounts analyze response particles as having an elidable full clause as their sister (47) while another analyzes them as being purely anaphoric sentential proforms (48).

(47) Ellipsis analysis



(48) Proform analysis



Under the ellipsis analysis, bare response particles are the result of full TP ellipsis, polarity fragments the result of movement to a position higher than the response particle. Finally polarity-marked full clauses are the spell-out of the sister TP.

A.1 Argument 1: Non-finiteness

- If *oui* is a proform, we expect it to behave like other proforms in French.
- Sentence-level proforms (e.g. *le, en, y*) are not sensitive to whether a predicate embeds finite or non-finite clauses but response particles are.
- No verb, which may only take an infinitival complement (e.g. *s'efforcer* ‘strive’ in 49, cf B1 and B2), may embed a response particle (B3). However such verbs can occur with a sentence-level proform (B4).

(49) A: Il va finir son assiette ?
 he goes finish his plate
He's going to finish his plate?

B1: Il va s' efforcer de terminer.
 he goes REFL strive to finish
He's going to strive to finish.

B2: *Il va s' efforcer qu' il termine.
 he goes REFL strive that he finishes

B3: *Il va s' efforcer que oui.
 he goes REFL strive that yes

B4: Il va s' y efforcer.
 he goes REFL to.it strive
He's going to strive to.

- 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: Il paraît que oui.
 it seems that yes
It seems that she's in pain.

- 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 *le 'it'* is not sensitive to obviation (53).

(53) A: Tu vas jouer demain ?
 you go play tomorrow
You are going to play tomorrow?

B1: Je le souhaite.
 I it SOUHAITE
I want to.

B2: Je l' espère.
 I it hope
I hope to.

- 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 ?
 you go go to their wedding
Are you going to their wedding?

B1: *Je souhaite/ aimerais bien que j' y aille.
 I SOUHAITER/ would like that I there go.SUBJ
Int. I want/would like 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).
- In both cases, response particles embedding becomes possible which is exactly what is predicted if bare response particles in those examples have an elided full clause.

(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.
 I SOUHAITER/ 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_i ?
 you think that Marie loves this idiot
Do you think that Marie loves this idiot?

B1: *Il_i pense qu' elle aime cet imbécile_i. C' est évident.
 he thinks that she loves this idiot it is obvious

B2: *Il_i pense que oui. C' est évident.
 he thinks that yes it is obvious

B3: Il_i le pense. C' est évident.
 he it thinks it is obvious
He thinks so, it's obvious.

B4: Je pense que oui. C' est évident.
 I think that yes it is obvious
I think that Marie does, it's obvious.

A.4 Argument 4: The interpretation of embedded *non*

- In response to a negative question $\neg p?$, answering with *non* asserts the questioned proposition $\neg p$ 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 ?
 is it that they NEG have NEG been at work on time this year
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 $\neg p$ ⁴

(59) A: Est -ce qu' ils n' ont souvent pas été au travail à l'heure cette
 is it that they NEG have frequently NEG been at work on time this
 année ?
 year
Have they frequently not shown up for work on time this year?

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

B1: Je crois que (Tom) oui⁶.
 I believe that (Tom) yes
I believe that they have (Tom has) frequently 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)?

		$\neg p$?
No-scope bearing operator	(58)	$\neg p$	
Scope-bearing operator = souvent	(59)	\neg sv \neg	

Table A.1: Meaning of *no/non* 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*

- if \neg is the outermost scope-bearing operator in the prejacent, *non* does not contribute negation
- if \neg 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

⁷This 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*.