Unfortunate questions: evaluative adverbs in questions in French

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This paper examines the semantic properties of evaluative adverbs, such as unfortunately, in question environments in French. We take Bonami and Godard's (2008) analysis for malheureusement (‘unfortunately’) in declarative sentences, where such propositional adverbs are analyzed as ancillary commitments, and extend it to a broader array of data, including polar and wh-questions. In a nutshell, we argue that malheureusement can take as input a set of propositions, which triggers an indifference interpretation of the sort that characterizes unconditional sentences. We also show that evaluatives may take a proposition as argument when they occur in polar questions, the only restriction occurring in negative polar questions, where biases are decisive in making the sentence acceptable.

1 Introduction

1 Parts of this paper have been presented at the Logisch- semantisches Kolloquium at the University of Frankfurt, at the Gilf seminar at Universitat Pompeu Fabra, and the conference Going Romance 2009. We are very grateful for the comments and hints. We are also indebted to an anonymous reviewer and to Isabelle Aubert and Alexandre Fauchère for their native judgments. The remaining mistakes are all our own.
This paper examines the semantic properties of evaluative adverbs, such as unfortunately or strangely. These adverbs have received some attention in recent semantic literature (Bonami and Godard 2008, Jayez and Rossari 2004, Potts 2005), due to their peculiar semantic behavior. For instance, some languages, like French, allow evaluative adverbs in questions. However, the evaluative does not have the expected reading in a semantics of questions as sets of propositions. The meaning of question (1a) cannot be a set of propositions such as the one in (1b) or, in other words, cannot be paraphrased as in (1c). By contrast, other sentential adverbs do have the expected interpretation, as shown in (2).

(1)  
   a. Qui est malheureusement venu ?
      ‘Who unfortunately came?’
   b. {unfortunately, Anne came; unfortunately, Peter came;
       unfortunately, Al came, ... } 
   c. Who is the $x$ such that it is unfortunate that $x$ came? 

(2)  
   a. Qui est certainement venu ?
      ‘Who came for sure?’
   b. {Anne came for sure, Peter came for sure, Al came for sure, ... } 

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2 This is not uncontroversial (Ernst, 2009). Not all evaluative adverbs are equally acceptable in questions, as noted in Jayez and Rossari (2004). We focus on malheureusement as an example of a fully acceptable adverb. We thank an anonymous reviewer for this observation.
c. Who is the \( x \) such that it is for sure that \( x \) came?

Questions with evaluative adverbs can be used in scenarios like the following: two friends organized a party, which had to be canceled at the last minute and not all the guests were aware of this fact. In this scenario, one of the organizers can ask (1), or (3) if he wants to ask specifically about Anne.

(3) Est-ce que Anne est malheureusement venue ?

‘Did Anne unfortunately come?’

This peculiar semantic behavior can be explained once it is assumed that these adverbs do not contribute to the truth-conditional tier of meaning, but to the use-conditional level of meaning. The goal of this paper is to provide an account of the semantics of evaluative adverbs, both in declarative and interrogative sentences. This paper is structured as follows: section 2 provides some background and presents the main data points, section 3 contains our analysis, and section 4 concludes.

2 Background: data and previous work

In this section we provide the formal background for the analysis we present in
section 3, as well as a review of the previous literature on evaluatives in French, and the data that remains to be accounted for.

2.1 Two-tiered semantics

In order to account for the phenomenon we address, we make use of the formal tools of possible worlds semantics, but extend the model to include parallel dimensions of meaning. In line with Potts (2005) and current works on the interactions between levels of meaning, we assume that there is one domain where truth-conditional content is composed, and another one where use-conditional meaning is conveyed.

In Potts (2005), two dimensions are considered: the at-issue dimension and the conventionally-implicated (CI) dimension. The former corresponds to the regular asserted meaning, whereas the latter includes lexical items that compose with lexical items from the at-issue tier and return a truth-value at another dimension. The expressions that contribute at the CI tier include epithets (such as damn in (4)), appositions, honorifics and non-restrictive relative clauses.

(4) The damn machine is not working properly.

   a. At-issue tier: The machine is not working properly.
   
   b. CI tier: The speaker has a negative attitude towards the machine.
In this article, we adopt a further interpretation of Potts's model, designed by Gutzmann (2008) to account for the behavior of modal particles in German as well as force operators. Instead of having an at-issue domain and a CI domain, the dimensions are divided according to the kind of meaning that is contributed to discourse. What roughly corresponds to the at-issue level is the T-C tier, whereas the domain that roughly corresponds to the CI level is called U-C tier. In adopting this alternative model we attempt to capture the fact that force operators, such as QUESTION and ASSERT (cf. Krifka, 1995), apply to truth-conditional expressions and return a speech act. Speech acts can be characterized as being felicitous or infelicitous, but truth has nothing to do with them. Both in the T-C and the U-C tier, the modes of composition consist of function application and predicate modification, but whereas in the T-C tier the propositional meaning has a truth-value, the U-C tier derives a use-conditional value. As a consequence of this, the addressee can judge and deny the truth-conditional meaning of (4) and use (5a). By contrast, use-conditional meaning cannot be denied directly, but only indirectly, as shown in (5b) and (5c).

(5)  

  a. No, that's not true, it's working perfectly.
  
  b. # No, that's not true. I/You like this machine.
  
  c. Come on, this machine is not that bad. You just need to get used to it.
In a nutshell, our logic is extended to include use-values \((u)\) along with truth values \((t)\), and besides regular function application, which composes lexical items that belong to the T-C tier, hybrid application composes lexical items that return a \(u\) value at the U-C tier. This way it becomes clear that the two tiers are independent in that they contribute different sorts of content (truth- vs. use-conditional), but they do interact with each other.

Hybrid composition is responsible for the composition of two kinds of expressions in this article: force operators and evaluatives. Here, we briefly address the former, since the latter are the object of study of the rest of the paper. \textsc{assert} is of type \(<<s,t>,u>\) (which we translate as \(<p,u>\)). This means that the force operator applies to a proposition (which has been parsed at the T-C tier) at the U-C tier, and returns a value of type \(u\) (i.e., “felicitous” or “infelicitous”, depending on whether the conditions described for it are satisfied or not.). \textsc{question}, on the other hand, applies to a set of propositions \(\pi\), so its type is \(<<s,t>,t>,u>\) (which we translate as \(<\pi,u>\)). Yes/no questions and \textsc{wh}-questions are not generated identically. While \textsc{wh}-questions denote a set \(\pi\), yes-no questions do not. Instead, they are generated by the combination of a question operator \(Q\), of type \(<<s,t>,<s,t>,t>>\), and the pronounced proposition \(p\), which yields a set of propositions. That is, yes-no questions are propositions that undergo an additional step before being able to feed \textsc{question}. This difference between types of questions is crucial for our analysis, as will be seen shortly. We assume the following paraphrases for \textsc{assert} and \textsc{question}:
• ASSERT: I want \( p \) to become common ground.

• QUESTION: I want the addressee to make the true \( p \) in \( \pi \) common ground.

To conclude, it is allowed for an utterance to contribute more than one use-conditional meaning. In particular, in this paper we will observe how evaluatives and force operators coincide at the U-C tier, and the effects these two have in the overall meaning of the utterance.

2.2 Bonami & Godard (2008)

Bonami & Godard (2008) present a proposal for evaluative adverbs in assertions. According to them, parentethical adverbs (as opposed to other types of adverbs, such as modal or manner adverbs) are ancillary commitments, which means that they have a special behavior in dialogue and do not contribute to the main content of the sentence. An evaluative adverb takes as argument a proposition \( p \) and conveys that if \( p \) holds, then it is unfortunate that this is so.

(6) a. Anne est malheureusement venue.

b. Main assertion: come(Anne)

c. Ancillary commitment: come(Anne) \( \rightarrow \) unfortunate(come(Anne))

They analyze the occurrence of these evaluatives by means of a model of a dialogue gameboard. A dialogue gameboard consists of: (i) the question under
discussion (QUD), (ii) the common ground (CG), and (iii) the commitment set (CMT), a set of propositions participants are publicly committed to.

\[
\begin{align*}
(7) \quad (8)
\begin{array}{ccc}
\{cmt \equiv C\} & \{cmt \equiv \{p\} \cup C\} & \{cmt \equiv \{p, eval(p)\} \cup C\} \\
\{cg \equiv G\} & \{cg \equiv G\} & \{cg \equiv G\} \\
\{qud \equiv Q\} & \{qud \equiv< p? > \oplus Q\} & \{qud \equiv< p? > \oplus Q\}
\end{array}
\end{align*}
\]

(7) represents the speaker's gameboard when asserting \( p \): the proposition \( p \) is added to the speaker's commitments and \( p? \) is added to the QUD, which allows the addressee to accept it or reject it. (8) represents the speaker's gameboard when uttering an ancillary commitment. The speaker puts the evaluative in his own commitments without it entering the QUD. The addressee cannot reject or accept \( eval(p) \) by the usual means, but only the assertion \( p \).

2.2.1 Properties of evaluative adverbs

Bonami & Godard argue that evaluative adverbs do not contribute to the main content of the sentence, based on the following properties:

1. They cannot be semantically embedded: the truth conditions of (9a) are the same as the ones of (9b), and not the ones of (9c). Moreover, note that sentence (9a) does not presuppose that Paul visits Anne. Bonami & Godard’s analysis
predicts this lack of presupposition, since the adverb is located at the consequent of a conditional (see (6c)).

(9)  
  a. Si Paul, malheureusement, va voir Anne, elle sera furieuse.  
      ‘If Paul, unfortunately, visits Anne, she will be furious.’
  b. Si Paul va voir Anne, elle sera furieuse.  
      ‘If Paul visits Anne, she will be furious.’
  c. S’il est malheureux que Paul va voir Anne, elle sera furieuse.  
      ‘If it is unfortunate that Paul visits Anne, she will be furious.’

Note also that (9c) shows that the semantic behavior of adjectives and adverbs is not parallel. The adjective *malheureux* (‘unfortunate’) does contribute to the main content of the sentence, as opposed to the adverb *malheureusement*.

2. They cannot be challenged or negated by other discourse participants in the usual way, in a behavior which is parallel to the one of epithets (see (4)).

(10)  
  a. Paul a malheureusement perdu l’élection.  
      ‘Paul unfortunately lost the elections.’
  b. # C’est faux, je trouve que c’est une très bonne nouvelle !  
      ‘That’s not true, I think it is very good news!’
  c. C’est vrai, mais moi, je trouve que c’est une très bonne nouvelle !
‘Yes, it’s true, but personally I think this is great news!’

As for who acts as the judge of the side comment, evaluative adverbs can be attributed both to the speaker and the referent of the subject; (11) can be followed by either of the continuations in (12):

(11) Anne told me that Peter had, unfortunately, lost the elections.

(12) a. When I told her how sad I was, she said she thought it was good news that he had lost.

b. I personally think that it is good news that he has lost.

The fact that sentence b is a possible continuation is a counterexample to the claim found in Potts (2005) that all conventionally implicated items (Bonami and Godard’s ancillary commitments) are speaker oriented. In later work (Potts, 2007), he acknowledges the possibility that participants other than the speaker can act as judges of the side comment.

2.2.2 Negation and prosodically integrated adverbs

Bonami & Godard make an important distinction between incidental and prosodically integrated adverbs. The former are preceded and followed by a prosodic break (represented by a comma in writing), while no such breaks
occur with the latter.

(13)  
a. Malheureusement, Paul s'est comporté comme un idiot.  
‘Unfortunately, Paul behaved like an idiot.’  
b. Paul s'est malheureusement comporté comme un idiot.  
‘Paul unfortunately behaved like an idiot.’

According to Bonami & Godard, whether an adverb is incidental or not has important consequences for scopal relations. Particularly relevant for our purposes is that prosodically integrated (that is, nonincidental) adverbs can only take scope to their right: if negation precedes the evaluative adverb, the argument of the adverb can only be $p$ and not $\neg p$. The unacceptability of negative assertions, such as (14), follows from an incongruence between the main assertion and the ancillary commitment: the speaker is asserting that a proposition is false and, at the same time, using it in the antecedent of a conditional, as if it were possible that the proposition is true, thus ignoring what he has just asserted.

(14)  
# Anne n'est pas malheureusement venue.  
‘Anne did not unfortunately come.’

(15)  
a. Main assertion: $\neg$come(Anne)  
b. Ancillary commitment: come(Anne) $\rightarrow$ unfortunate(come(Anne))
This meaning is, of course, not a logical contradiction. In fact, it can be expressed by means of a counterfactual structure, as shown in (16a). Nevertheless, such a counterfactual structure is necessary in order to make the discourse acceptable. If missing, the discourse becomes incoherent or, following Bonami & Godard's terminology, incongruent, as (16b) and (16c) show. Thus, (14), (16b) and (16c) are unacceptable for the same reason: an assertion is made and is, at the same time, ignored by another meaning component in the discourse, the ancillary commitment in the case of (14) and the following assertions in the case of (16b) and (16c).

(16) a. Anne did not come to the party. If Anne had come, I'm sure it would have been a lot of fun.

b. # Anne did not come to the party. If Anne came, I'm sure it was fun.

c. # Anne is not tall. If Anne is tall, she will be a great basketball player.

Incidental adverbs, preceded and followed by a prosodic break, are not subject to this scope restriction, and can take scope over other operators, such as negation, as (17) shows:
(17) a. Malheureusement, Anne n'est pas venue.
   
b. Anne n'est pas venue, malheureusement.

2.2.3 *Questions and prosodically integrated adverbs*

As noted by Bonami & Godard, evaluative adverbs in questions are acceptable only when they occur between the auxiliary and the main verb. However, it is not the case that all types of questions are acceptable. Negative questions are generally not allowed, as shown in (18).³

(18) a. % Est-ce que Anne n'est pas malheureusement venue ?
   ‘Didn't Anne unfortunately come?’
   
b. # Qui n'est pas malheureusement venu ?
   ‘Who unfortunately did not come?’

Our goal in the next section is to give a unified analysis of evaluative adverbs both in declaratives and questions and see how negation interacts with different clause types.

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³ We use % to indicate that the sentence is unacceptable out of the blue. See section 3.4 for an analysis of these sentences and a class of acceptable negative questions.
3 Analysis

Our analysis adopts the main ideas presented in Bonami & Godard for evaluative adverbs and extends them to provide a unitary account of evaluatives in declarative and interrogative sentences in French. Our proposal is that a sentence with an evaluative adverb conveys meaning both at the T-C and the U-C tiers of meaning. We thus treat Bonami and Godard’s ancillary commitments as use-conditional items.

(19) shows the basic schema we propose for the semantics of evaluative adverbs in French. In a nutshell, our proposal is that they can take either a proposition or a set of propositions as their argument.

\[ \text{(19) a. T-C tier: } p \text{ or } \pi \text{ (a proposition or a set thereof)} \]

\[ \text{b. U-C tier: } \text{FORCE OPERATOR}(p \text{ or } \pi) \land \forall w' \in f_c(w) \forall^*.p(w') \rightarrow \text{UNFORTUNATE}(p(w')) \]

Broadly speaking, the T-C tier contains either a proposition or a set of propositions, depending on the clause type; that is, depending on whether the adverb occurs in an assertion or in a question. In addition, the U-C tier contains a force operator that applies to the sentence at the T-C tier, plus the contribution
of *malheureusement* applied to $p$ or $\pi$. We take *malheureusement* to have a flexible type, it is either $<p, u>$ or $<\pi, u>$, depending on the type of sentence that we find at T-C tier: that is, it can either take a proposition $p$ or a set of propositions $\pi$ as argument. In both cases, the semantics of *malheureusement* introduces a predicate UNFORTUNATE that applies to a proposition to convey that, given the circumstances, it is unfortunate that $p$ holds. Note that the adverb contributes semantically only at one of the two levels of meaning conveyed: only at the U-C tier and not at the T-C tier. Therefore, it does not modify the propositions in the set $\pi$ as would be the case were the adverb a sentential operator of type $<t,t>$.

In the following subsections, we show how this schema can be applied to declarative sentences and different types of questions (*wh*-questions, yes/no questions and negative questions).

3.1 *Declarative sentences*

The application of the schema presented above to declarative sentences, such as the one in (20), is straightforward. In a declarative with an evaluative, the speaker is conveying two meanings at the same time. On the one hand, he is asserting that Anne came and, on the other hand, he is commenting that if Anne came, given the circumstances, it is unfortunate that she did. As Bonami & Godard point out, assuming that speakers are committed to the truth of obvious
entailments of their commitments, by modus ponens, the speaker must also be committed to (22).

(20) Anne est malheureusement venue.
    ‘Anne unfortunately came’.

(21) a. T-C tier: \( p = \text{Anne came} \)
    b. U-C tier: \( \text{ASSERT}(p) \& \forall w' \in \cap f_c(w)[p(w') \rightarrow \text{UNFORTUNATE}(p(w')) \), where \( p \) is the proposition in the T-C tier, \( \text{ASSERT} \) is a sentence mood operator of type \( <p, u> \) and \( u \) stands for ‘use-conditional’.

(22) It is unfortunate that Anne came.

3.2 Wh-questions

The same schema of (19) applied to \( wh \)-interrogatives yields somewhat different semantics. However, meaning is again conveyed at two different dimensions: the standard question denotation (consisting of a set of propositions) is conveyed at the T-C tier, while at the U-C tier it is conveyed that no matter which propositions of the set are true, the speaker finds it unfortunate that they are true.

Consider (1), repeated below as (23). The speaker is doing two things simultaneously. On the one hand, he is asking the question ‘who came?’, the
semantics of which can be represented by a set of propositions, as in (24a). On the other hand, he is making the comment that no matter which of the propositions of the set are true, it will be unfortunate that they are true, given the circumstances ((24b)). That is, at the U-C tier there is universal quantification over all the propositions contained in the question denotation.

(23) Qui est malheureusement venu ?

‘Who unfortunately came?’

(24) a. T-C tier: Who came? = {Anne came, Peter came, Joe came, …}

b. U-C tier: \( \text{QUESTION}(\pi) \land \forall w' \in \cap \pi (w) \forall p \in \pi. [p(w') \rightarrow \text{UNFORTUNATE}(p(w'))] \), where \( \pi \) is a set of propositions generated by the \( w\)-interrogative, \( \text{QUESTION} \) is a sentence mood operator of type \( <\pi, u> \) and \( u \) stands for ‘use-conditional’.

The meaning conveyed at the U-C tier is very reminiscent of the semantics of unconditional constructions, illustrated in (25) (Rawlins, 2009).

(25) Whoever comes to the party, it will be fun.

Inspired by Rawlin's proposal, we claim that there is an indifference implication that arises from the combination of universal quantification over a set of propositions (which triggers exhaustivity) and the restriction of the
quantification domain to the set of worlds compatible with a conversational background (which triggers non-triviality). These conditions make sure that all the propositions in the set are taken into account, and that if the proposition in the antecedent is false, then the conditional is not trivially true.

3.3 Yes/no-questions

The semantics we obtain for yes/no questions is quite different from the semantics obtained for wh-interrogatives. For instance, the meaning of the question in (3), repeated below as (26), can be decomposed as in (27): the speaker asks whether Anne came, and comments that, if she came, that would be unfortunate.

(26)  Est-ce que Anne est malheureusement venue ?

‘Did Anne unfortunately come?’

(27)  a. T-C tier: Did Anne come? = \{Anne came, Anne did not come\}

b. U-C tier: \text{QUESTION}(Q(p)) \& \forall w' \in \cap f_c(w)[p(w') \Rightarrow \text{UNFORTUNATE}(p(w'))], where \(Q\) is of type \(\langle p, \pi \rangle\).

As previously mentioned, yes-no questions are generated by applying a question function \(Q\) to a proposition \(p\) (corresponding to the sentence pronounced in the question). Given that, \(p\) will be the only proposition present
at the antecedent of the conditional, as opposed to *wh*-questions, which denote sets of propositions, and in which there is quantification over all propositions in the set. The prediction, then, is that a sentence like (26) does not raise the indifference implication present in *wh*-questions. That is, since \( p \) (i.e., ‘that Anne came’) is the only proposition present at the antecedent of the conditional, our prediction is that sentence (26) should have the interpretation in (28a) and not the one in (28b).

\[
\begin{align*}
(28) & \quad \text{a. If Anne came, it is unfortunate that she came.} \\
 & \quad \text{b. Whatever Anne did (coming or not), it is unfortunate that she did so.}
\end{align*}
\]

This prediction is borne out: this question can only be used if the speaker thinks that if Anne came, it is unfortunate that she did; but not if the speaker thinks that if Anne did not come, it is unfortunate that she did not come.

### 3.4 Negative questions

Negative questions provide an interesting set of data to test our analysis of evaluative adverbs. As mentioned before, negative questions are generally not allowed (cf. (29)). However, there is one interesting exception, not mentioned before in the literature, which follows from our analysis once the role of bias is
taken into account (see section 3.4.1, example (36)).

(29)  a. # Qui n'est pas malheureusement venu ?
      ‘Who unfortunately did not come?’

      b. # Est-ce que Anne n'est pas malheureusement venue ?
      ‘Didn't Anne unfortunately come?’

Our line of explanation follows Bonami & Godard's account for the ungrammaticality of negative assertions: since evaluative adverbs can only take scope to their right, the proposition at the T-C tier will contain the negation operator, while the proposition in the conditional at the U-C tier will not. This difference may create an incongruent meaning which leads to unacceptability. First we examine negative wh-questions and then we turn to negative yes/no questions.

The meanings at the T-C tier and U-C tier are similar to the ones presented for positive wh-questions, with an important difference in the T-C tier. The T-C meaning of negative wh-questions is a set of proposition of the shape ‘x did not come’, as shown in (30a). Simultaneously, at the U-C tier, the universal in the conditional is quantifying over a different set of propositions, namely those derived from the positive question ‘who came?’ (see (30b)).

(30)  a. T-C tier: Who did not come? = \{ Anne did not come, Peter did not
come, …}

b. U-C tier: $\text{QUESTION}(\pi) \& \forall w' \in \cap_{f()} \forall p \in \pi^*, [p(w') \rightarrow UNFORTUNATE(p'(w'))]$, where $\pi^*$ is $\pi$ without negation.

These two meanings do not constitute a logical contradiction, but, as we shall see, they are conversationally incongruent. The incongruence stems from the fact that the two simultaneous meanings expressed by this sentence do not share the same goal in the conversation, but rather go in different directions. On the one hand, the speaker is commenting something about the people who came to the party, while simultaneously asking the opposite question; that is, who did not come to the party. This incongruence can also be seen if these two meanings are expressed by means of two separate utterances as in (31a), while the discourse becomes fully felicitous if both utterances are about either the people who came to the party (31b) or about the people who did not (31c).

(31) a. ??/# Who did not come to the canceled party? If Peter came, it is unfortunate that he did, since he has a long commute to go home.

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4 Sentence (31a) is not completely unacceptable, but, as opposed to (31b) and (31c), is odd from a discursive point of view. Moreover, there are reasons to believe that meanings expressed consecutively at the T-C tier, concatenated meanings, pose fewer restrictions than meanings expressed simultaneously at two different tiers, piled meanings (Castroviejo and Mayol, 2009). In the latter, context is updated simultaneously for all involved meanings, while in the former context is updated clause by clause and there is more room for corrections and clarifications. If so, it is no surprise that the piled version of (30a), (29a), is unacceptable, while (31a), the concatenated version, can be interpreted if we accommodate for the incoherence and allow the speakers to change their discourse goal.
b. Who came to the canceled party? If Peter came, it is unfortunate that he did, since he has a long commute to go home.

c. Who did not come to yesterday's party? If Peter did not come, it is unfortunate that he did not, since it was a great party.

Therefore, our analysis correctly predicts that negative \textit{wh}-questions should be unacceptable. By contrast, our analysis does not give the same results for negative yes/no-questions: in other words, the two meanings we derive are not conversationally incongruent. In order to see that, consider the question in (18a), repeated below in (32), which is unacceptable out of the blue. The T-C tier contains the usual question denotation for yes/no questions: i.e., the speaker is wondering whether Anne came (or did not). Simultaneously, at the U-C tier the speaker is commenting that if she did come, this is unfortunate. Unlike \textit{wh}-questions, here the question and the comment share the same conversational goal and do not go in different directions. These meanings, then, should form a coherent discourse if expressed in two consecutive utterances. This is indeed the case, as shown in (33).

(32) a. \text{\% Est-ce que Anne n'est pas malheureusement venue ?}

\text{‘Didn't Anne unfortunately come?’}

b. T-C tier: \text{Did Anne not come?} = \{\text{Anne came, Anne did not come}\}
c. U-C tier: $\text{QUESTION}(Q(p)) \land \forall w' \in \cap f_c(w)[p(w') \rightarrow \\
\text{UNFORTUNATE}(p(w'))]$, where $p = \text{‘Anne came’}$.

(33) Did Anne (not) come to the canceled party? If she did, it is
unfortunate, since she has a long commute to go home.

3.4.1 The role of bias

Thus far our analysis does not predict that negative yes/no questions should be
unacceptable. However, it can be argued that we have been assuming too naive
a semantics for negative yes/no questions, as denoting a simple set of two
propositions ($\{p, \neg p\}$). It is well known that some negative yes/no questions are
non-neutral and involve biases (Romero & Han 2004, Büring & Gunlogson
2001). In particular, this applies to negative yes/no questions in English with
preposed negation, and it has been proposed that they have a more complex
semantics, as we shall see shortly.

As first pointed out by Ladd (1981), negative yes/no questions with preposed
negation are ambiguous between two interpretations: in one interpretation, the
speaker is double-checking the negation of the proposition, $\neg p$, while in the
other interpretation he is double-checking the positive proposition $p$. Positive
polarity items, such as too, are only compatible with the former interpretation,
which we call interpretation $p$, while negative polarity items, such as either,
are only compatible with the latter interpretation, which we call interpretation $\neg p$.

(34) and (35) illustrate this contrast. In discourse (34), the negative question is
used by the speaker to double-check the proposition ‘that Anne is not coming’, while in discourse (35), the negative question is used by the speaker to double-check the proposition ‘that Anne is coming’.

(34) Interpretation $p$:
   a. John won't be able to make it to dinner. So there won't be any phonologists.
   b. So, isn't Anne coming either?
   c. # So, isn't Anne coming too?

(35) Interpretation $\neg p$:
   a. At dinner I'd like to talk to some phonologist. Other that John, do you know if someone else is coming?
   b. Isn't that postdoc from UB, Anne, coming too?
   c. # Isn't that postdoc from UB, Anne, coming either?

Once this ambiguity is taken into account and negative yes/no questions with evaluative adverbs are presented in context, the following contrast emerges: our informants still find negative yes/no questions with interpretation $\neg p$ unacceptable ((36a)), while they accept negative yes/no questions with interpretation $p$ ((36b)).

(36) a. # Anne n'est-elle pas non plus malheureusement venue?
b. Anne n’est-elle pas malheureusement venue aussi?

In the remaining of this section, we briefly present Romero & Han’s main points. In particular, we adopt their intuitive paraphrase for the VERUM operator, and their account for the interaction between VERUM and negation.\(^5\)

Romero & Han propose that negative yes/no questions contribute an epistemic operator, which they call VERUM. This operator can arise from different linguistic realizations: for instance, it can be realized through really, as in (37), or polarity focus, as in (38).

(37) Does John really drink?

(38) a. Peter doesn’t think Kimiko went to the Himalayas.

b. She DID go to the Himalayas.

The denotation of VERUM is given in (39), where \(Epi_x(w)\) is the set of worlds that conform to \(x\)'s knowledge in \(w\), \(Con_x(w')\) is the set of worlds where all the conversational goals of \(x\) in \(w'\) are fulfilled and where \(CG_{x''}\) is the common ground that the speaker assumes in \(w''\) to be true. In a nutshell, VERUM is used to assert “that the speaker is certain that \(p\) should be added to the common ground” (Romero & Han 2004).

\(^5\) For a critical view on their analysis and a multi-dimensional counterproposal, we address the reader to Gutzman & Castroviejo (t.a.). For the sake of simplicity and for the purposes of this paper, where our concern is the interaction of VERUM with negation, we stick to Romero & Han.
Romero & Han analyze Ladd's ambiguity as a true scopal ambiguity between two operators: VERUM and negation. In interpretation $\neg p$, VERUM scopes over negation, while in interpretation $p$, negation scopes over VERUM. As a consequence of this scopal difference, the denotation of a question with interpretation $\neg p$ will be different from the denotation of a question with interpretation $p$.

In interpretation $\neg p$, with VERUM scoping over negation, we obtain the set represented in (40a). That is, the speaker is asking whether it is for sure that Anne is not coming. By contrast, in interpretation $p$, with negation scoping over VERUM, we obtain the set represented in (40b). That is, the speaker is asking whether it is for sure that Anne is coming.

(40)  

\begin{enumerate}
  \item \{it is for sure that Anne is not coming, it is not for sure that Anne is not coming\}
  \item \{it is for sure that Anne is coming, it is not for sure that Anne is not coming\}
\end{enumerate}

Therefore, the T-C meaning of negative yes/no questions is ambiguous: it can be either of the shape of (40a) or of the shape of (40b). Furthermore, there is
another important difference between the two readings. Although both interpretations have a positive epistemic implicature (the speaker believed that \( p \) was the case), their “intent”, which depends on the pronounced cell of the partition, is different. A question with a \( \neg p \) reading is only felicitous in a contradiction scenario: that is, when the speaker has received some contextual evidence that \( \neg p \) is the case (Büring and Gunlogson, 2000). This is not the case for sentences with a \( p \) reading. Keeping these differences in mind, let us return to the French evaluative adverbs (cf. the contrast in (36)) and see how the acceptability of questions with a \( p \) reading and the unacceptability of questions with a \( \neg p \) can be explained.

Negative questions with \( p \) interpretation do not present any incongruence between the asserted and the U-C meaning. The goal of the speaker's question is to double-check the positive proposition \( p \) (i.e., ‘that Anne is coming’), which is the proposition he believes to be true. This goal is coherent with reasoning about \( p \) by placing it in a conditional and considering it possible that \( p \) is true. By contrast, negative questions with interpretation \( \neg p \) present the conversational incongruence we have seen before. The goal of the speaker's question is to double-check the negative proposition \( \neg p \), since he has received some evidence that \( \neg p \) is the case. This goal is incoherent with reasoning about \( p \) by placing it in a conditional. The contrast is summarized in Table 1.
To sum up, the contrast in (36) can be accounted for once we take into consideration the different denotations and biases associated with the two interpretations of negatives yes/no questions.

### 4 Conclusions

We have provided an analysis for evaluative adverbs in French, which convey meaning at the U-C tier, in several clause types. Our proposal can be summarized as follows:

1. Evaluative adverbs in French can take as argument either a proposition or a set of propositions. As a consequence, they can appear both in declarative and interrogative sentences.

2. The combination of the semantics of evaluative adverbs and the semantics of *wh*-questions yields an indifference interpretation reminiscent of the semantics of unconditionals. This interpretation is absent in declaratives and yes/no questions.
3. Negative assertions, like negative questions, are generally not allowed when negation precedes the adverb, because the meaning conveyed at the T-C level is incongruent with the meaning conveyed at the U-C level. An exception to this claim is the case of negative yes/no questions with a p interpretation.

5 References


