

**Evaluative adverbs in questions:
a comparison between French and Catalan***

Laia Mayol
Universitat Pompeu Fabra

Elena Castroviejo
ILLA, CCHS-CSIC

1 Introduction

This paper examines the distribution of evaluative adverbs, such as *unfortunately*, in two related languages, French and Catalan.¹ We aim to study and compare *malheureusement* (French) and *per desgràcia* (Catalan) in questions. Unlike previous studies, we claim that both languages allow evaluatives in questions, although Catalan poses more restrictions than French. We present our analysis of *malheureusement*, and we determine the conditions that make it possible for *per desgràcia* to occur in questions.

Below is the relevant contrast we are interested in. The sentences in (1) illustrate the distribution of *malheureusement*. We can see that the evaluative adverb is acceptable in declaratives and questions.

- (1)
- a. Marie est *malheureusement* venue.
‘Mary unfortunately came’²
 - b. Qui est *malheureusement* venu ?
‘Who unfortunately came?’
 - c. Est-ce que Marie est *malheureusement* venue ?
‘Did Mary unfortunately come?’

On the other hand, *per desgràcia* seems more restricted: the evaluative is not accepted in most interrogative sentences (except for confirmatory questions).

- (2)
- a. *Per desgràcia*, la Maria ha vingut.
‘Unfortunately, Mary came.’
 - b. #Qui ha vingut, *per desgràcia*?
‘Who came, unfortunately?’
 - c. ??Que ha vingut, la Maria, *per desgràcia*?
‘Did Mary, unfortunately, come?’

*We thank our informants, Isabelle Aubert, Alexandre Fauchère and Valentine Hacquard, for their native judgments, and the audiences of CLS 46 and the CLT seminar for their valuable comments. We are of course responsible for any remaining mistakes.

¹Please note that a more comprehensive analysis of this data has been published in Mayol and Castroviejo (2013).

²From now on, all the English translations are literal translations from French and Catalan.

- d. Oi que ha vingut, la Maria, *per desgràcia*?
'Isn't it true that Mary came, unfortunately?'

In a nutshell, we support the idea that evaluatives do not contribute to the main content of the sentence; they are what we call *use-conditional* terms. Additionally, we claim that *malheureusement* has a flexible type: it can either take as argument a proposition or a set of propositions. That is why it can occur in a declarative sentence or an interrogative. In contrast, *per desgràcia* can only be applied to a proposition toward which the speaker is biased.

The paper is organized as follows: we first introduce the main puzzles illustrated by French, namely why can *malheureusement* occur in questions and what does it mean? Then, we provide the formalism that we assume throughout this paper as well as a previous analysis of *malheureusement* in declarative sentences. Section 4 is devoted to our analysis of *malheureusement* in questions. In section 5, we focus on Catalan: we highlight the basic differences between *malheureusement* and *per desgràcia*, and we analyze the contexts that allow *per desgràcia* in questions. Section 6 concludes.

2 French Data

This section collects data from Bonami *et al.* (2004), Bonami and Godard (2008) and Jayez and Rossari (2004), where it becomes clear that *malheureusement* ('unfortunately') is grammatical both in declaratives and, unlike English, in interrogatives.

- (3) a. Marie est malheureusement venue.
'Mary unfortunately came'
b. Qui est malheureusement venu ?
'Who unfortunately came?'

In the sentences in (3), *malheureusement* is syntactically located between the auxiliary and the verb (we assume T-to-C movement of the auxiliary and adjunction of the evaluative to TP), and it is prosodically integrated. This configuration makes (3-b) available. Note that if the evaluative was in the periphery of the sentence and prosodically disintegrated, then it would not be acceptable in an interrogative ((4)).

- (4) *Malheureusement, qui est venu ?
'Unfortunately, who left?'

In this paper we are not only interested in the fact that evaluatives in French can occur in questions. What we want to examine is the meaning of an interrogative with *malheureusement*.³ Interestingly, a question with an evaluative has an unexpected

³We leave aside the echoic or quotative reading that is available in any language.

meaning, different from other sentential adverbs. In particular, given a semantics of questions as sets of propositions (Hamblin 1973, Karttunen 1977), the evaluative is not interpreted inside each one of the propositions that constitute the denotation of the *wh*-interrogative. In order to see this, let us compare this evaluative with a different kind of sentential adverb, namely the modal *probablement* ('probably'). Imagine the following scenario: I know that Anne and Betty probably came, and I know that Charles and David did not come. The question in (5-a), which contains *probablement*, can be paraphrased as in (5-b), and the set that the question denotes is the one represented in (5-c). Even more importantly, (5-a) would be answered truthfully as in (5-d).

- (5) a. Qui est probablement venu ?
 'Who has probably come?'
 b. Who is the x such that it is likely that x came?
 c. {Anne probably came, Betty probably came, Charles probably came}
 d. Anne and Betty.

If we attempt to interchange *probablement* with *malheureusement*, the parallel scenario does not give us the expected result. Imagine that we like Anne and Betty, and we deeply dislike Charles and David. They all came to the party. If someone happens to ask (6-a), the paraphrase would not be (6-b), and the representation of this paraphrase would not be the set in (6-c). Not only this, even if it is clear that we are not happy that Charles and David came, this does not make (6-d) a good answer to the question in (6-a).

- (6) a. Qui est malheureusement venu ?
 # Who is the x such that it is unfortunate that x came?
 c. # {Unfortunately, Anne came, Unfortunately, Betty came, Unfortunately, Charles came}
 d. # Charles and David.

Instead, (6-a) would be felicitous in a scenario such as 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. We might also want to ask the following polar question, if we want to inquire specifically about Mary.

- (7) Est-ce que Marie est malheureusement venue ?
 'Did Mary unfortunately come?'

The conclusion that we can reach at this point is that evaluative adverbs are not as well behaved as modal adverbs. They should be analyzed differently.

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- (i) Who "unfortunately came"?

3 Background

Below we lay out the main tools we need to account for the interpretation of evaluative adverbs in French and Catalan. First, we sketch the multi-dimensional semantic model that formalizes the contribution and interaction of evaluative adverbs. Second, we present a previous analysis of *malheureusement* in declarative sentences.

3.1 Multi-dimensional semantic model

Along with Potts (2005) and Gutzmann (2008), we assume that the meaning conveyed by linguistic expressions can be composed in two different domains (or tiers). At the truth-conditional tier (henceforth T-C tier), the truth-conditional meaning is composed. The output is a truth value t ($\{\text{true, false}\}$) and it corresponds to Potts's at-issue meaning, the one that can be denied by the addressee. On the other hand, we have the use-conditional tier (from now on U-C tier). Here, the output is a use value (of type u , which corresponds to $\{\text{felicitous, infelicitous}\}$) rather than a truth value. This meaning cannot be denied by direct means; it is speaker-oriented and does not contribute to the main content of the sentence. In this tier, use-conditional terms combine with at-issue meaning to return a use value.

A prototypical example of a use-conditional item is the expressive *damn* in an example like (8).

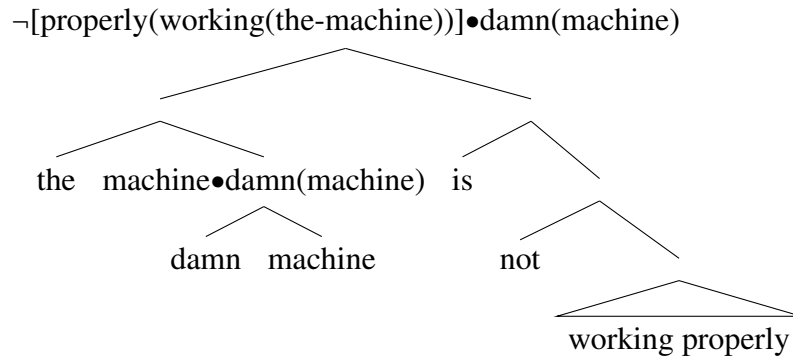
- (8) This *damn* machine is not working properly.
- a. T-C tier: The machine is not working properly.
 - b. U-C tier: The speaker has a negative attitude toward the machine.

Roughly, the proposal is that the meaning that is truth-conditional is the one we obtain if we remove *damn* from the equation. What *damn* does is inform the addressee that the speaker holds a negative attitude toward the machine, but this meaning is conveyed independently of the at-issue content. One way to test this is by denying the entire sentence, as in (9).

- (9)
- 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 (9-a), we negate only the truth-conditional meaning. (9-b) shows that we fail to deny the use-conditional meaning. And (9-c) illustrates a property that is common to all use-conditional terms: they can be denied by indirect means.

In this multi-dimensional semantic model, apart from function application, we also need hybrid application, which composes lexical items that return a u value at the U-C tier. The two levels are separated by a new notational tool, a bullet, as can be seen in (10): above the bullet is the composition of truth-conditional items, and below is the composition between a use-conditional and a truth-conditional item, which yields a use value.



(10)

The U-C tier also contains force operators, such as QUESTION and ASSERT (cf. Krifka 1995), which apply to truth-conditional expressions and return a speech act, at the U-C tier. In (11) we offer the type and an informal paraphrase (inspired by Truckenbrodt 2006) of these force operators:

- (11) a. ASSERT: Type $\langle\langle s, t \rangle, u\rangle$; for short, type $\langle p, u \rangle$
 I want p to become common ground.
 b. QUESTION: Type $\langle\langle\langle s, t \rangle, t \rangle, u\rangle$; for short, type $\langle \pi, u \rangle$
 I want the addressee to make the true p in π common ground.

Note that QUESTION takes a set of propositions π . However, we propose that *wh*-questions and yes/no questions are not generated identically. While *wh*-questions denote a set π , yes/no questions arise differently. In a yes/no question, we assume that an operator Q applies to a proposition to yield the set $\{p, \neg p\}$. In French this operator can be overtly or covertly realized. In embedded yes/no questions, it is overtly realized as *si* ('whether'); in matrix yes/no questions it can either be overt (*est-ce que*) or null (when the polar question is on the surface identical to a declarative). Q has the following semantics:

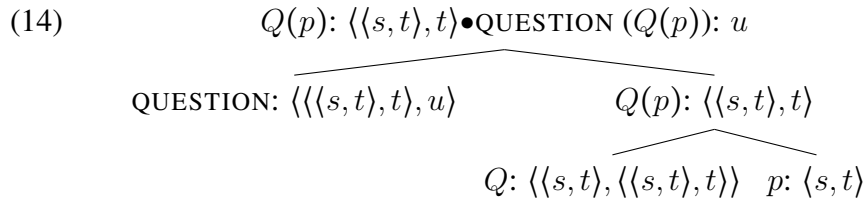
(12) $[[Q]] = \lambda p. \{p, \neg p\}$

That is, Q takes a proposition p and yields a set of two propositions, $\{p, \neg p\}$. We call this proposition p the 'underlying proposition', and it is the member of the set that has the polarity of the pronounced sentence.

The composition of both *wh* and polar questions can be seen in (13) and (14), respectively.

(13) $\pi: \langle\langle s, t \rangle, t \rangle \bullet \text{QUESTION}(\pi): u$

QUESTION: $\langle\langle\langle s, t \rangle, t \rangle, u\rangle$ $\pi: \langle\langle s, t \rangle, t \rangle$



3.2 Bonami and Godard 2008: main claims

Bonami and Godard (2008) propose an analysis for *malheureusement* in which the evaluative adverb takes as argument a proposition p and it conveys that if p holds, then it is unfortunate that this is so (cf. (15)).

(15) came(Mary) → UNFORTUNATE(came(Mary))

This meaning is not expressed as part of the main assertion that the sentence performs. Bonami and Godard call this kind of meaning an ‘ancillary commitment’. Being ancillary commitments, the content in (15) cannot be judged to be true or false by the interlocutors in a dialogue. Consider the utterance in (16) and the possible replies in (17).

(16) Paul a malheureusement perdu l’élection.
 ‘Paul unfortunately lost the election.’

- (17) a. Non, c’est pas vrai.
 ‘No, it’s not true.’
 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, but I personally think it is very good news.’

Observe that (17-a) denies the content of the main assertion. If, on the contrary, we want to deny the content expressed by the evaluative, we cannot just do it by direct means. This is shown in (17-b). However, indirect denials, as the one in (17-c), do manage to cancel the ancillary commitment.

Another property of evaluative adverbs pointed out by Bonami and Godard is that they are not factive. They argue—against López and Morant (2002) and Mata (2007) a.o.— that *malheureusement* does not presuppose the truth of its argument. Compare the behavior of the presupposition trigger *savoir* (‘know’) and *malheureusement*.

- (18) (Jayez and Rossari 2004)
- a. Est-ce que tu sais que Marie a raté son examen? → Mary failed.
‘Do you know that Mary failed her exam?’
 - b. Est-ce que, malheureusement, Marie aurait raté son examen? ↯ Mary failed.
‘Would Mary have, unfortunately, failed her exam?’

The complement of *savoir* is a presupposed proposition, because *savoir* is a factive verb. Hence, that Mary failed is treated as common ground (i.e., as a fact) when the sentence in (18-a) is uttered. By contrast, (18-b) does not have this requirement. *Malheureusement* occurs in a polar question, and the speaker casts doubts on the truth of Mary failing the exam. Hence, it cannot be treated as common ground. This would be unexpected were *malheureusement* factive.

Additional evidence for this claim comes from compound sentences. Since Karttunen (1973), we know that the presuppositions of the antecedent of a conditional always project.

- (19) (Bonami and Godard 2008)
- Si Paul es malheureusement en retard, le patron sera furieux.
‘If Paul is, unfortunately, late, his boss will be furious.’

If *malheureusement* were factive, then, we would expect the presuppositions of the antecedent of the conditional to be also presuppositions of the entire complex sentence. However, note that we can follow (20) by saying: “Thank God he’ll probably not be late,” which rules out the possibility that the proposition that *malheureusement* takes as argument is true.

4 Proposal

We propose two different schemata to account for the semantic composition of *malheureusement* in assertions and in polar and *wh*-questions. Bonami and Godard (2008)’s ancillary commitments are use-conditional expressions in our model, so we propose that the content of evaluative adverbs is at the U-C tier.

Although it might seem counterintuitive at first sight, assertions and polar questions go hand in hand. (20) shows that the evaluative adverb takes a proposition *p* as argument, even if the T-C tier has different content in both sentence types.

- (20) Assertions and polar questions
- a. T-C tier: *p* or *Q(p)* (a proposition or a set of propositions, depending on the clause type)
 - b. U-C tier: FORCE OPERATOR(*p* or *Q(p)*) & *p* → EVALUATIVE(*p*).

Also, observe that the force operator appears at the U-C tier. If we have ASSERT,

then the argument is p , and if we have QUESTION, then its input needs to be of type π . Hence, the question operator Q combines with the underlying proposition p to obtain the set $\{p, \neg p\}$.

A different schema applies to evaluative adverbs in *wh*-questions. The key feature is the different input of *malheureusement*. This time, instead of taking a proposition as argument, it takes a set of propositions π . Finally, QUESTION is the force operator that takes the set π denoted by the *wh*-clause.

- (21) *Wh*-questions
- a. T-C tier: π (a set of propositions)
 - b. U-C tier: QUESTION (π) & $\forall p \in \pi [p \rightarrow \text{EVALUATIVE}(p)]$.

4.1 Assertions

Take the example in (22). In (23) we adapt Bonami and Godard (2008)'s analysis to our slightly-modified model.

- (22) Marie est malheureusement venue.
- (23) a. T-C tier: p : came(Mary).
 b. U-C tier: ASSERT (came(Mary)) & came(Mary) \rightarrow UNFORTUNATE (came(Mary))

Note also that in declarative sentences such as (22), the content conveyed at the two tiers constitutes two premises that have as a conclusion that it is unfortunate that p . Consider (24).

- (24) Mary came.
If Mary came, then it is unfortunate that she did.
 \therefore It is unfortunate that Mary came.

That is, if we only looked at this particular context (and ignored questions), we might be led to think that evaluatives are factive.

4.2 Wh-questions

Evaluative adverbs in *wh*-questions have a different effect in the overall meaning of the utterance. As we show with the informal paraphrases in (25), at the T-C tier we have a set of propositions π . Then, at the U-C tier, instead of feeding the evaluative a proposition, we feed *malheureusement* the set π .

- (25) a. T-C tier: standard question denotation (i.e., the set of propositions π .)
 b. U-C tier: QUESTION (π) & "no matter which propositions in π are true, it is unfortunate that they are."

As we pointed out in section 2, the scenario in which *malheureusement* can occur within a *wh*-interrogative is one where the speaker wants to convey that no matter

which propositions in the set are true, she finds that it is unfortunate that these hold. In other words, *wh*-questions with *malheureusement* are the combination of a question and an unconditional sentence (Rawlins 2008), which yield an indifference interpretation:

- (26) Qui est malheureusement venu à la fête ?
 a. Who came to the party?
 b. Whoever came, it was unfortunate that s/he did.

This is represented formally below, where we can see that we have universal quantification over the set of propositions denoted by the *wh*-clause.⁴

- (27) a. T-C tier: {Anne came, Peter came, Joe came, ... }
 $\lambda p. \exists x. [p = \lambda w. [\mathbf{came}(x)(w) \& \mathbf{to-party}(x)(w)]]$.
 b. U-C tier: QUESTION (π) & $\forall p \in \pi [p \rightarrow \mathbf{UNFORTUNATE}(p)]$

A final remark about this analysis: we entertain a semantics for *wh*-questions as sets of possible answers—i.e., à la Hamblin (1973) rather than Karttunen (1977). Nevertheless, we do not count “nobody came” as a possible answer. This is ruled out by positing existential quantification over the variable *x* above. We follow Eilam and Lai (2009) in claiming that the status of this existential is not a presupposition, but rather a bias. As we will see shortly, this amounts to saying that the speaker believes it is more plausible than not that there is an *x* that came. Notice that if “nobody came” were considered by the speaker as a possible answer, then we could be expressing that if nobody came, then it is unfortunate that nobody came. This is of course undesired. If nobody came to the party that was canceled at the very last minute, then this would be considered a fortunate state of affairs.

4.3 Yes/no questions

Yes/no questions with EAs have somewhat different semantics than *wh*-questions. The main difference is that we do not find the indifference interpretation we have just seen. In other words, the question in (28), receives the interpretation in (28-a) and not the one in (28-b).

- (28) Est-ce que Marie est malheureusement venue ?
 ‘Did Mary unfortunately come?’
 a. U-C tier: “If Mary came, it is unfortunate that she did.”
 b. U-C tier: # “Whatever Mary did, what she did is unfortunate.”

⁴As a matter of fact, we also need to add the restriction of the domain of quantification to make the propositions compatible with a conversational background. This avoids triviality, as Rawlins (2008) points out. For the sake of simplicity, and because it is not our purpose here to delve into the details of *wh*-questions with evaluatives in French, we ignore this complication.

The correct interpretation is achieved by eliminating universal quantification from the conditional at the U-C tier. By contrast, the EA takes only a single proposition, and not a set of propositions. This single proposition, p , is available because it is the underlying proposition, the same that applies to Q to yield a set of propositions.

- (29) a. T-C tier: {Mary came, Mary did not come}
 b. U-C tier: QUESTION ($Q(p)$) & $p \rightarrow$ UNFORTUNATE(p), where Q is of type $\langle p, \pi \rangle$.

5 Catalan

5.1 Data

We turn now to Catalan, which shows quite a different distribution of EAs in questions. In fact, previous works claim that EAs are always unacceptable in questions in Catalan (see, for instance, Mata 2007). EAs are indeed unacceptable in most questions, such as the *wh*-question in (30) and the polar question in (31):⁵

- (30) a. Scenario: Two friends, Anne and Betty, organize a party. Before the party starts, Anne receives a call from work and needs to leave the party. Three hours later, Anne calls Betty and asks:
 b. #Qui ha hagut de marxar, per desgràcia?
 ‘Who had to leave, unfortunately?’
- (31) a. Scenario: Two friends, Anne and Betty, invite Mary for dinner. Before the dinner starts, Anne receives a call from work and needs to leave. Three hours later, Anne calls Betty and asks:
 b. ??Que ja ha hagut de marxar, per desgràcia, la Maria?
 ‘Did Mary, unfortunately, have to go already?’

However, it is possible to find fully acceptable questions with EAs, such as, for instance, the confirmatory questions in (32):

- (32) a. Oi que aquesta situació, per sort, ha canviat?
 ‘Isn’t it true that this situation fortunately changed?’
 b. Oi que la Maria, per desgràcia, ha hagut de marxar?
 ‘Isn’t it true that Mary, unfortunately, had to go?’

Even polar questions and *wh*-questions can be acceptable with EAs in some special circumstances. A slight change in context renders the question in (31) acceptable, as shown in (33).

- (33) a. Scenario: Two friends, Anne and Betty, invite Mary for dinner. Before the dinner starts, Anne receives a call from work and needs to

⁵(30) is slightly better than (31), but neither is fully acceptable.

leave the dinner. Three hours later, Anne arrives home and sees there's no one in the living room, other than Betty. She asks:

- b. Ostres, que ja ha hagut de marxar, per desgràcia, la Maria?
'Gosh, did Mary unfortunately have to go already?'

Finally, (34) and (35) illustrate two acceptable *wh*-questions with EAs.

- (34) a. Scenario: the speaker is the quizmaster of "Who wants to be a millionaire?"
b. Quin corredor català va perdre, per desgràcia, la final dels 100 metres de Barcelona 92?
'Which Catalan athlete unfortunately lost the 100 meters final in Barcelona's 1992 games?'
- (35) a. Scenario: the addressee had previously told the speaker about this annoying friend of Mary who showed up at the party and ruined it by making inappropriate jokes. The speaker knows which friend of Mary this is, but has forgotten his name.
b. Quin era aquell amic de la Maria que va venir, per desgràcia, a la festa?
'Which was this friend of Mary who unfortunately came to the party?'

The next section provides an account of these differences and we analyze what it takes for an EA to appear in questions in Catalan.

5.2 Proposal

In this section we determine where the basic differences between French and Catalan lie. On the one hand, in Catalan, evaluatives do not have a flexible type. In particular, *per desgràcia* ('unfortunately') cannot take π as argument, but only p . Moreover, for evaluative adverbs to appear in questions, the speaker needs to be biased toward a particular proposition p . Below is a preliminary representation of this idea.

- (36) U-C tier: FORCE OPERATOR(ϕ) & $p \rightarrow$ UNFORTUNATE(p),
where the speaker has to be biased toward p .

We have mentioned in the previous section the notion of bias, but now it is time to delve into it. We assume the following definition from Eilam and Lai (2009) (the adverb in square brackets is ours).

- (37) "Bias is a state in which the speaker believes that the probability that a proposition is true is greater than the probability that it is false, but this belief is not [necessarily] shared by the hearer."

To put this more formally, we adopt Davis *et al.* (2007)'s proposal for evidentials, which is based on a probability function called *credence*. Imagine a function $C_{A,c}$ (i.e., the credence of agent A in context c) that maps any proposition p into A 's degree of belief in p in context c . The result could be something along the lines of (38).

- (38) a. $C_{A,c}(p) = 1 \rightsquigarrow A$ fully believes p .
 b. $C_{A,c}(p) = 0.5 \rightsquigarrow A$ is unbiased about p .
 c. $C_{A,c}(p) = 0.98 \rightsquigarrow A$ strongly suspects p .
 d. $C_{A,c}(p) = 0 \rightsquigarrow A$ disbelieves p .

Now we are able to translate (36) into a more formal expression:

- (39) U-C tier: FORCE OPERATOR(ϕ) & $p \rightarrow$ UNFORTUNATE(p), where $C_{sp,c}(p) > 0.5$.

Clearly, this restricts the interrogative contexts in which they occur to confirmatory questions, biased yes/no questions and *wh*-questions in which either the speaker manifestly knows the answer or there is a presupposed proposition.

Consequently, questions where credence is manifestly 0.5 (such as alternative yes/no interrogatives) cannot include *per desgràcia*.

- (40) #Que ha perdut el tren, per desgràcia, en Joan o no?
 'Did John unfortunately miss his train or not?'

On the other hand, confirmatory questions, where credence is almost 1, are very suitable contexts for the occurrence of the evaluative adverb. We can distinguish them in Catalan because they are headed by polarity items (*no*, *oi* 'isn't it'), nouns (*veritat* 'truth') or particles (*eh* 'huh') (Prieto and Rigau 2007, Hernanz and Rigau 2006).

- (41) a. Oi que la Maria ha vingut, per desgràcia?
 b. Eh que la Maria ha vingut, per desgràcia?
 'Isn't it true that Mary has come to the party, unfortunately?'

Additionally, *per desgràcia* can occur in positive and negative biased questions. A positive biased question is one where the speaker believed $\neg p$, but has received some new evidence and expects p to be the true answer, as in (42) or (33), repeated below as (43) (note that the particular context of (33) is crucial in order to explain the acceptability of the question).

- (42) Que us n'aneu? Jo em pensava que dinaríem junts.
 'Are you leaving? I thought we might have lunch together.'
 (43) Ostres, que ja ha hagut de marxar, per desgràcia, la Maria?
 'Gosh, did Mary unfortunately have to go already?'

Negative biased questions come in two types (cf. Romero and Han 2004, Ladd 1981, and Büring and Gunlogson 2000 for the details). What matters for our purposes is that both types allow for *per desgràcia*, as predicted by our theory.

In the first type, *per desgràcia* takes as argument $\neg p$, and conveys that if $\neg p$, then it is unfortunate that $\neg p$. For instance:

- (44) [You are waiting at the train station for Peter and Mary to arrive. When the train comes, only Peter gets off.]
 Oh, que no ha pogut venir, per desgràcia, la Maria?
 ‘Oh, couldn’t Mary, unfortunately, come?’

In the second type, the evaluative applies to p , and conveys that if p , then it is unfortunate that p . Consider the example in (45).

- (45) Que no vindrà, també, per desgràcia, la mala bèstia de la Maria?
 ‘Isn’t this bitch Mary also going to come, unfortunately?’

A third kind of question where *per desgràcia* can freely occur is exam questions. That is, when it is common ground that the speaker knows the true proposition in the set π . This corresponds to the quizmaster scenario.

- (46) a. Scenario: the speaker is the quizmaster of “Who wants to be a millionaire?”
 b. Quin corredor català va perdre, per desgràcia, la final dels 100 metres de Barcelona 92?

Since it is common knowledge that the audience takes the quizmaster to know the true answer, the evaluative can be interpreted as taking the true answer p as argument (cf. (47)).

- (47) a. Presupposition: $\exists p \in \pi [C_{Sp,c}(p) = 1]$
 b. U-C tier: QUESTION(π) & $p \rightarrow$ UNFORTUNATE(p)

Finally, there is a fourth situation where *per desgràcia* occurs within a question but can take p as argument, namely, when it is part of a presupposition. Consider the three examples in (48).

- (48) a. Quin era aquell amic de la Maria que va venir, per desgràcia, a la festa?
 ‘Who was that friend of Mary’s who unfortunately came to the party?’
 b. Saps que la Maria va venir, per desgràcia, a la festa?
 ‘Do you know that Mary unfortunately came to the party?’
 c. Qui és que, per desgràcia, va venir a la festa?
 ‘Who is it that unfortunately came to the party?’

Example (48-a) is a *wh*-interrogative that contains a relative clause that modifies a definite noun phrase. That is, the existence of an individual that is a friend of Mary and who came to the party is presupposed. Hence, the evaluative can convey that if this individual came to the party, this is unfortunate.

- (49) a. Presupposition: $\exists x[\text{friend}(x, \text{Mary}) \wedge \text{came}(x)]$
b. $\text{came}(x) \rightarrow \text{UNFORTUNATE}(\text{came}(x))$ (cf. (48-a))

In (48-b), *per desgràcia* appears inside a proposition that is selected by the factive verb *saber* ('know'). The proposition *Mary came to the party* is the one that the evaluative takes as argument.

- (50) a. Presupposition: $\text{came}(\text{Mary})$
b. $\text{came}(\text{Mary}) \rightarrow \text{UNFORTUNATE}(\text{came}(\text{Mary}))$ (cf. (48-b))

To conclude, (48-c) is an instance of a clefted question. This kind of interrogative is one where the existence of an *x* is presupposed. Again, the evaluative adverb applies to the proposition *x came to the party*.

- (51) a. Presupposition: $\exists x [\text{came}(x)]$
b. $\text{came}(x) \rightarrow \text{UNFORTUNATE}(\text{came}(x))$ (cf. (48-b))

Summing up, in all these scenarios, *per desgràcia* applies to one proposition (i.e., not a set) to which the speaker has a certain degree of commitment.

6 Conclusions

We have proposed that evaluative adverbs contribute meaning at the use-conditional dimension of meaning and appear at the consequent of a conditional. In French, evaluative adverbs can take either *p* or π , and, as a consequence, freely appear in declaratives and questions. In Catalan, evaluative adverbs can only take a single proposition *p* and, as a consequence, they basically occur in declaratives. However, they can also occur in questions if the speaker is biased toward a particular proposition in the denotation of the question: i.e., in confirmatory questions, biased yes/no questions, exam questions and questions with presupposed content.

References

- Bonami, O., and D. Godard. 2008. Lexical semantics and pragmatics of evaluative verbs. In *Adverbs and Adjectives: Syntax, Semantics and Discourse*, ed. by L. McNally and C. Kennedy, 274–304. OUP.

- , ——, and B. Kampers-Manhe. 2004. Adverb classification. In *Handbook of French semantics*, ed. by F. Corbin and H. de Swart, 143–184, Stanford. CSLI Publications.
- Büring, D., and C. Gunlogson, 2000. Aren't positive and negative polar questions the same? UCSC/UCLA.
- Davis, C., C. Potts, and M. Speas. 2007. The pragmatic values of evidential sentences. In *Proceedings of the 17th Conference on Semantics and Linguistic Theory*, ed. by Masayuki Gibson and Tova Friedman, 71–88. Ithaca, NY: CLC Publications.
- Eilam, A., and C. Lai. 2009. Sorting out the implications of questions. Universitat Autònoma de Barcelona. Talk at CONSOLE XVIII.
- Gutzmann, D., 2008. On the interaction between modal particles and sentence mood in German. MA Thesis, Universität Mainz.
- Hamblin, C.L. 1973. Questions in montague grammar. *Foundations of Language* 10.41–53.
- Hernanz, M.L., and Gemma Rigau. 2006. Variación dialectal y periferia izquierda. In *Essays in Honour of Professor Eguzkitza*. UPV-EHU.
- Jayez, J., and C. Rossari. 2004. Parentheticals as conventional implicatures. In *Handbook of French semantics*, ed. by F. Corbin and H. de Swart, 211–229, Stanford. CSLI Publications.
- Karttunen, L. 1973. Presuppositions of compound sentences. *Linguistic Inquiry* 4.169–193.
- 1977. Syntax and semantics of questions. *Linguistics and Philosophy* 1.3–44.
- Krifka, M. 1995. The semantics and pragmatics of polarity items. *Linguistic Analysis* 25.209–257.
- Ladd, R. 1981. A first look at the semantics and pragmatics of negative questions and tag questions. In *Proceedings of 17th CLS*.
- López, Á., and R. Morant. 2002. L'adverbi. In *Gramàtica del Català Contemporani*, ed. by J. Solà, J. Mascaró, M. R. Lloret, and M. Pérez Saldanya, chapter 8, 1517–1589. Barcelona: Empúries.
- Mata, M. 2007. Els adverbis d'acte de parla i el *modus* oracional. *Llengua i Literatura* 18.285–315.
- Mayol, L., and E. Castroviejo. 2013. (Non-)integrated evaluative adverbs in questions: a cross-Romance study. *Language* 89.195–230.
- Potts, C. 2005. *The Logic of Conventional Implicatures*. Oxford Studies in Theoretical Linguistics. Oxford: Oxford University Press.
- Prieto, P., and G. Rigau. 2007. The syntax-prosody interface: Catalan interrogative sentences headed by 'que'. *Journal of Portuguese Linguistics* 6.29–59.
- Rawlins, K. 2008. Unifying unconditionals and *if*-conditionals. In *Proceedings of SALT XVIII. eLanguage*, ed. by T. Friedman and S. Ito, 583–600.
- Romero, M., and C. Han. 2004. On negative *Yes/No* questions. *Linguistics and Philosophy* 27.609–658.
- Truckenbrodt, Hubert. 2006. On the semantic motivation of syntactic verb movement to *c* in German. *Theoretical Linguistics* 32.497–544.

Laia Mayol

Universitat Pompeu Fabra (UPF)
Dpt. de Traducció i Ciències del Llenguatge
Roc Boronat 138, 08018 Barcelona
laia.mayol@upf.edu
<http://laiamayol.wordpress.com/>

Elena Castroviejo

Spanish National Research Council (ILLA, CCHS-CSIC)
Instituto de Lengua, Literatura y Antropología
Albasanz 26-28, 28037 Madrid
elena.castroviejo@cchs.csic.es
<http://elena-castroviejo-miro.cat>