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Anna Kocher

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1 Introduction

In this thesis I investigate the structure and interpretation of constructions in Catalan in which a complementizer appears in apparently unembedded root clauses. Typically, Catalan *que* functions as a finite complementizer and heads different types of subordinate clauses. This is exemplified in the data in 1.

- (1) a. Sempre hi ha algú que perd.
always CL.LOC have.AUX somebody that loses
‘There is always somebody who loses.’¹
- b. Qui que digui això ment.
who that says.SUBJ this lies
‘Whoever says this lies.’ (Hirschbühler and Rivero, 1983, 507)
- c. La versió oficial de la policia afirma que devien morir ofegats al riu.
the version official of the police confirms that must have die drowned in+the river
‘The official version of the police confirms that they must have died drowning in the river.’
- d. Es clar que entre una cosa i l’altra no semblava haver -hi cap relació.
is clear that between one thing and the other not seemed have CL.LOC no relation
‘It is clear that there seemed to be no relation between one thing and the other.’

As shown above, *que* can embed different types of clauses. In 1a *que* embeds a relative clause modifying the relative head *algú* ‘somebody’. In 1b *que* follows the wh-pronoun *qui* and forms the head of a headed free relative. In 1c the complementizer follows the verb of saying *afirmar* ‘confirm’ and introduces a clause that is the grammatical object of this verb. Finally, in 1d the matrix clause expresses an evaluation over an embedded clause headed by *que*.

Based on the data above *que* qualifies as the default complementizer in Catalan. It can embed different types of clauses, relatives in 1a and 1b and finite declaratives 1c and 1d. The syntactic relation of the subordinate with the respective matrix clause also varies. In 1a and 1b, as mentioned above, the complementizer heads a relative clause that modifies a relative head, syntactically it is closely linked to the relative DP. In 1c and 1d the declarative clause introduced by *que* is directly selected by the verb. The English complementizer *that* is equally productive. However it is not uncommon to have complementizers with a more restricted distribution. For instance, standard German *dass* is excluded in relative clauses.

Apart from the contexts mentioned above, *que* can also form part of complex conjunctions by hosting a preposition in its specifier. This is a productive pattern observed frequently across Romance languages. Some of these complex conjunctions grammaticalized and are interpreted as a single lexeme rather than two distinct elements.

- (2) a. Aquest cop fa gairebé tres anys que no es veien: des d’abans que ella
this time make almost three years that not CL.REFL see since of before that she
es divorciés.
CL.REFL divorced

¹If not indicated differently, the Catalan data are either taken from the caWaC corpus (Ljubešić and Toral 2014) or from a self compiled corpus consisting of contemporary literary texts.

‘This time it’s almost three years that they don’t see each other: since before she divorced him.’

- b. Com que no tenia res a fer, va acceptar.
 how that not had anything to do PST accept
 ‘Since he didn’t have anything to do, he accepted.’

In the present study I want to focus on cases where the complementizer heads root clause² and does not occur in the typical subordinate contexts sketched above. In order to refer to this type of constructions I coin the term *root clause complementation*.

- (3) a. A: Què fa la Tecla? B: Què m’ has preguntat? A: Que què fa la Tecla?
 what does the Tecla what CL.1S have asked QUE what does the Tecla
 ‘A: What does Tecla do? B: What did you say? A: (I said) what does Tecla do?’
 b. Vinga, home! Que és el final.
 come on man QUE is the final
 ‘Come on, man! It’s the final.’
 c. Segur que és aquesta, la solució.
 sure QUE is this the solution
 ‘Surely this is the solution.’
 d. Un altre whisky, si us plau. Que sigui doble.
 a other whisky please QUE be.SUBJ double
 ‘Another whisky, please. Make it a double.’
 e. Que tens pressa?
 QUE have stress
 ‘Are you stressed out?’

In Catalan root clauses *que* appears in different clause types and superficially can be associated with different functions. In (3a) it introduces a wh-question, which is a direct repetition or quote of a previous utterance. In (3b) and (3c) *que* heads declaratives. In the latter example an epistemic modifier precedes the complementizer. In both of these cases the presence of the complementizers adds discourse pragmatic meaning. In (3d) the clause headed by the complementizers is a jussive or optative. In this construction *que* is obligatory. Finally, (3e) is a polar question headed by *que*, which once again contributes discourse pragmatic meaning.

Lately, these types of phenomena have gained considerable attention in linguistic literature. (Hummel 2000, Gutiérrez-Rexach 2001, Ocampo 2006, Hill 2007a, Lupşa 2011, Cruschina 2013, Radford 2013, Cruschina and Remberger 2014). The recent interest in root clause complementation is related to the more general interest in the left periphery that has grown in importance over the last decades (cf. Rizzi 1997, 2001, 2002, 2004, 2013). The study of the linguistic elements populating this area, their properties and the restrictions they are subject to, is particularly interesting since the phenomena go beyond pure syntactic constraints. In the left periphery syntax interacts with discourse, information structure and pragmatics. Therefore this investigation will hopefully help to gain further insight into these interfaces.

²In the present paper, in line with Emonds (1970, 2004) the term *root clause* will be used to refer to both main clauses as well as the type of apparently embedded clauses that exhibit root clause properties.

In the first part of this thesis (section 2) I present a detailed study focusing on the interpretation of root clause complementizers in polar questions. In section 2.1, I offer a description of the characteristics of root clause complementizers in polar questions. I evaluate the previous analyses proposed for this type of construction in section 2.2 and develop an alternative analysis in 2.3. I tested the predictions of my analysis in an acceptability judgment experiment, that is presented and analyzed statistically in section 2.4. In the second part (sections 3, 4 and 5), I adopt a broader perspective and cover the structure and interpretation of the other root clause complementation constructions. Section 3 describes some very general properties of the constructions and their distribution in different clause types. Based on these properties, I propose a typology in section 4 and argue that there are only three different types of root clause complementation constructions. I discuss the relevant analyses from the literature in section 4.1 and motivate some modifications that finally lead to the development of my own analyses which are presented in detail in section 5.

2 *Que* in Polar Questions

This section deals with the functions of *que* in polar questions (PQ) (cf. 4).

- (4) (Que) hi es la Lola?
 QUE here is the Lola
 ‘Is Lola here?’

I will present some syntactic properties of the construction. Then I will discuss the analysis proposed by Rigau and Prieto (2005) and Prieto and Rigau (2007), which are to my knowledge the only extensive studies of Catalan PQs headed by *que*. Based on Sudo (2013), I will try to systematize possible pragmatic factors interacting in the licensing of *que* in PQ and develop my own analysis. In particular I will associate the licensing of *que* with the presence and absence of evidential and epistemic biases in the context. In section 2.4 I will outline an acceptability judgment experiment on the pragmatic conditions involved. Finally I will present the results of my experiment and discuss how they relate to my hypotheses.

2.1 The Phenomenon

The phenomenon under investigation is exemplified in 5a). As stated above, PQs in Catalan are sometimes headed by *que*. Wh-questions, however, do not permit this type *que*, hence the ungrammaticality of 5b).

- (5) a. Que plou?
 QUE rains
 ‘Does it rain?’
 b. *Que d’on ets?
 QUE from where are
 ‘Where are you from?’

Note however that there is a possible context where 5b) is grammatical, namely in the case when the wh-question is reported.

- (6) A: D’on ets? B: Què has dit? A: Que d’on ets?
 from where are what have said QUE from where are
 ‘A: Where are you from? B: What did you say? A: (I said) where are you from?’

Here *que* functions as what some authors termed reportative or quotative markers (cf. for instance Etxepare 2008, Demonte and Fernández Soriano 2009). I argue that this constitutes a different type of *que* that will be discussed in greater detail in section 5.1.

Que occupies a position in the left periphery of the PQ. I adopt the cartographic framework (cf. Rizzi (1997, 2001, 2004, 2013). In this approach (prototypical) complementizers that embed subordinate clauses are generally assumed in the highest (Force) or lowest (Fin) projection.

- (7) [**Force** [Top* [Int [Top* [Foc [Mod* [Top* [**Fin** [IP]]]]]]]]]

Some authors argue that elements that are homophonous with complementizer but express a different function can occupy also other positions apart from Force and Fin (cf. for instance Roussou 2000, 2010, Gutiérrez-Rexach 2001, Brovotto 2002, Rodríguez-Ramalle 2003, Demonte and Fernández Soriano 2009, Villa-García 2012a,b).

Prieto and Rigau (2007) suggest that *que* in PQs occupy a low projection in the functional field. This seems tenable since it can be preceded by topics. This would be unaccounted for, if *que* were assumed in a high projection such as Force, since topics, other than hanging topics, do not appear external to the CP.

- (8) [Context: Marta finds a bag of oranges in the kitchen. She asks her roommate:]

[_{TopP} Les taronges [_{αP} que ... [_{IP} les vas comprar tu?]]]
 the oranges QUE them PST buy you
 ‘The oranges, did you buy them?’

In the context of the example 8) *les taronges* ‘the oranges’ are established as a topic. This is syntactically encoded via clitic left dislocation. The topicalized DP is dislocated to the left periphery and it is resumed by the clitic *les*. Within the cartographic framework, the position attributed to the topicalized phrase is _{TopP}. The fact that this phrase can be followed by *que* suggests that the complementizer is merged in a relatively low position. In Prieto and Rigau (2007) the projection hosting *que* is identified with _{FinP}. However, there are data that could possibly challenge the proposal of Prieto and Rigau.

- (9) [Context: Marta finds a bag of oranges in the kitchen. She asks her roommate:]

[_{αP} Que [_{TopP} les taronges ... [_{IP} les vas comprar tu?]]]
 QUE the oranges them PST buy you
 ‘The oranges, did you buy them?’

My investigation showed that in the same context as in 8) speakers also accept 9), where the clitic left dislocated topic follows *que*. In the face of these data, if one wanted to maintain the analysis proposed by Prieto and Rigau (2007), one would have to argue in favor of a topic position that is either assumed IP internal or in a functional field above the IP (note that similar claims have been made for vP in order to account for right dislocation cf. Belletti 2004). I, however, will propose a different solution in section 5.4. *Que* in PQs is in fact merged in _{FinP} but it moves up the left periphery and lands in a higher projection.

2.2 Previous Analyses

The fact that *que* can appear in Catalan PQs was mentioned in a number of articles (cf. Rigau 1984, Mascaró i Pons 1986, Cuenca 1997, Prieto 1997, 2002, Payrató 2002, Celadrán et al. 2005, Hernanz and Rigau 2006). However, so far the only extensive studies that I am familiar with were conducted by Rigau and Prieto (2005) and Prieto and Rigau (2007). In this section I will present the main points of their analysis.

The argumentation is driven by the authors’ claim that there is significant dialectal variation concerning the presence and absence of the complementizer in PQs. They distinguish biased and neutral PQs. In Rossellonese, Northern Central Catalan and Valencian the presence of *que* is restricted to biased

questions. For the authors these types of PQs have an anti-expectational, confirmatory, or rhetorical reading.

- (10) *Que vindràs a Barcelona?* No em pensava pas que ens acompanyessis.
 QUE will come to B. not me thought NEG that us accompany
 ‘Are you coming to Barcelona? I didn’t think you were coming with us.’
 (Prieto and Rigau 2007, 15)

According to Prieto and Rigau (2007), in (10) *que* is licensed because in the following statement the speaker claims that the fact that the hearer is going to Barcelona was not part of his or her prior beliefs, the resulting interpretation is anti-expectational or mirative.

By confirmatory questions Prieto and Rigau understand a type of tag question where the speaker has a strong bias towards a positive answer. The confirmatory questions Prieto and Rigau (2007) discuss are always marked by particles. Depending on the dialect different particles are employed.

- (11) *Oi / Eh / Veritat / No / Fa / Es ver que vindràs?*
 PARTICLE QUE will come
 ‘You’re coming, aren’t you?’ (Prieto and Rigau 2007, 17)

When appearing in the left periphery the particle and *que* are always adjacent. The particles can also appear in the right periphery. According to the authors, in this case *que* is not licensed. I however found counter evidence for this claim in my literary corpus. In example (12) both a left peripheral *que* and a right peripheral *oi* are present.

- (12) *Que és en alemany, oi?*
 QUE is in german PARTICLE
 ‘It’s in German, isn’t it?’

Another type of PQs that is grouped among the biased contexts in Prieto and Rigau (2007) and Rigau and Prieto (2005) are rhetorical questions. They are pragmatically equivalent to assertions since the speaker knows the answer and, in most cases, does not even expect one.

- (13) *Que et penses que tinc quatre mans, jo?*
 QUE you think that have four hands I
 ‘Do you think I have four hands?’ (Prieto and Rigau, 2007, 18)

In Northwestern, Central and Balearic Catalan in addition to biased questions, *que* can also head what Prieto and Rigau (2007) call neutral PQs. Prieto and Rigau link the (optional) presence of *que* along with a special intonational contour to the expression of proximity or politeness. In their view a typical context for a neutral PQ headed by *que* is when the speaker and hearer share a close familiar relation. Furthermore, they adopt a cost-benefit definition of politeness, classifying an utterance as polite if it implies a low cost action for the hearer.

- (14) *Que em deixes el teu apartament de la platja, aquest cap de setmana?*
 QUE me leave the your apartment of the beach this weekend
 ‘Will you let me use your apartment by the beach this weekend?’
 (Prieto and Rigau 2007, 4)

In this perspective (14) is only felicitous if the hearer has offered previously to let the speaker use the apartment and therefore the question constitutes a low-cost request. In a context where the hearer has not offered to leave the apartment to the speaker it would be infelicitous since it would be a costly request.

- (15) Que puc fumar?
 QUE can smoke
 ‘Can I smoke?’
 (Prieto and Rigau 2007, 4)

Similarly, (15) is only felicitous if the speaker assumes that it is not going to bother the hearer. For instance if the speaker knows that the hearer has recently given up smoking, then asking whether he could smoke in his presence would be associated with a cost for the hearer and therefore the version of the PQ without *que* would be preferred. Rigau and Prieto corroborate this argumentation by observing that in formal contexts, for instance in court, *que* is not felicitous since these interactions have a higher cost.

- (16) (#) Que jureu dir la veritat i només la veritat?
 QUE swear say the truth and only the truth
 ‘Do you swear to tell the truth and nothing but the truth?’

Finally, in Minorcan Catalan, according to Prieto and Rigau, the use of *que* in PQs is practically obligatory, irrespective of the pragmatic context. Therefore it appears even in highly formal contexts like the one given in (16). The generalizations from Prieto and Rigau (2007) are summed up in table 1.

	biased	unbiased polite	unbiased neutral
Rossellonese, Northern	yes	no	no
Central, Valencian			
Northwestern, Central,	yes	yes	no
Balearic			
Minorcan	yes	yes	yes

Table 1: *que* in PQs according to (Prieto and Rigau 2007)

Rigau and Prieto (2005) and Prieto and Rigau (2007) moreover a detailed typology of the intonational properties of PQs in Catalan dialects, focusing in particular on neutral PQs. They distinguish two types. The truly unbiased neutral PQs and the unbiased ‘polite’ PQs. In their conception these are the questions that are attributed with a low cost for the hearer. The characteristics of the two types of PQs are summed up in table 2.

There are two conclusions the authors draw from the properties summed up in table 2. Firstly, different strategies are used in the dialects to encode the two types of unbiased PQs. And secondly, the (optional) presence of *que* in neutral PQs is only licensed along with a falling intonation.

Prieto and Rigau (2007) offer a description of the pragmatic contexts in which *que* is felicitous. My aim is now to identify the underlying properties in order to be able to systematically predict why *que* is accepted in some contexts yet not in others. To do this, I will test some of their generalizations in an experiment presented in section 2.4. Additionally, the experiment is based on an alternative

	unbiased neutral		unbiased polite	
	<i>que</i>	intonation	<i>que</i>	intonation
Central Catalan	no	rising	optional	falling
Majorcan, Eivissan	no	falling	optional	falling
Minorcan	yes	falling	yes	falling
Northern Central Catalan, Valencian	no	rising	no	rising

Table 2: neutral PQs in Catalan dialects (Prieto and Rigau 2007, 12)

analysis proposed in 2.3. The main idea is that even the PQs with *que* that Prieto and Rigau (2007) termed neutral, unbiased and polite are actually biased. Before proceeding with this, however, I will first introduce the main ingredients of my approach.

2.3 Motivating a Revised Analysis

In this section, I would like to further systematize and modify the analysis proposed by Prieto and Rigau (2007). I will propose to link the presence of *que* to the presence and absence of evidence in the context that supports a positive answer. In this perspective, all PQs headed by *que* are not neutral but biased.

2.3.1 Biased PQs (Sudo 2013)

For my revised analysis I adopt Sudo (2013)’s identification of biases involved in PQs in English and Japanese which goes back to Buring and Gunlogson (2000). Sudo argues that positive PQs (PPQ) and negative PQs (NPQ) are biased, however, they differ in their sensibility to subtypes of the biases. The biases he identifies are evidential (17), which he associates to the requirement for or incompatibility with contextual evidence and epistemic (19), which has to do with the speaker’s prior beliefs. Sudo distinguishes two types of evidential biases. The first one is responsible for the incompatibility of a PQ with contextual evidence (17a) and in the second one contextual evidence is a requirement (17b).

(17) a. **Evidential Bias (-)**

If a PQ is incompatible with contextual evidence for the positive (resp. negative) answer, the PQ is said to carry a [-positive] (resp. [-negative]) evidential bias.

b. **Evidential Bias (+)**

If a PQ requires contextual evidence for the positive (resp. negative) answer, the PQ is said to carry a [+positive] (resp. [+negative]) evidential bias. (Sudo 2013)

(18) **Contextual Evidence**

Evidence that has just become mutually available to the participants in the current discourse situation. (Buring and Gunlogson 2000)³

Note that, given these definitions an evidential bias with a - value is weaker than the bias with a + value. Since a + expresses a necessity for evidence to be present that suggests either the positive or the

³I propose a revised definition of contextual evidence in 2.3.2.

negative answer. A - sign, on the contrary, states merely incompatibility with either positive or negative evidence but does not require the presence of supporting or debilitating evidence. It follows that PQs with a + evidential bias are only felicitous if the relevant type of evidence is present, whereas for PQs with a - evidential bias to be felicitous it is sufficient if the relevant evidence is absent. Therefore the PQs with a - value are felicitous in a greater range of contexts. PQs with a [-positive] evidential bias are felicitous when the context contains evidence supporting a negative answer and in contexts where no contextual evidence relevant to the PQ is present, when the PQ is uttered out-of-the-blue.

The epistemic bias is related to the compatibility of the speaker’s beliefs with the content or implications triggered by the PQ. This bias comes in three flavors. It can be either positive, meaning that the content of the PQ is part of the speaker’s prior beliefs. It can also be negative if the content differs from what the speaker believes. The third option is a neutral or none epistemic bias, when the speaker held no prior belief towards the truth or falseness of the content of the PQ.

(19) **Epistemic Bias**

If a PQ carries an implication compatible with the positive (resp. negative) answer based on what the speaker believes, the PQ is said to carry positive (resp. negative) epistemic bias.⁴ (Sudo 2013)

According to Sudo (2013) the following biases are involved in the different types of English PQs, he discusses.

	Evidential Bias	Epistemic Bias
PPQ	- negative	none
ON-NPQ	- positive	positive
IN-NPQ	+ negative	positive

Table 3: Biases in English PQs (Sudo 2013)

PPQs are claimed to carry a [-negative] evidential bias, which means that they are incompatible with contextual evidence for the negative answer. This is why 20a) is infelicitous in the given context, since the dripping raincoat suggests that the answer to the question is negative. On the contrary 20b) is not incompatible with contextual evidence and therefore felicitous in the context. Note once again that it is not the same as stating that PPQs are [+positive] requiring positive evidence since PPQs are also felicitous in neutral contexts.

(20) **PPQ**

[Context: My officemate enters the windowless computer room wearing a dripping wet raincoat.]
What’s the weather like out there?

- a. #Is it sunny?
- b. Is it raining?

(Büring and Gunlogson 2000, 7)

Sudo (2013) also deals with NPQs. The split in two types goes back to Ladd (1981). He distinguished *Outer negation* NPQ (ON-NPQ) and *Inner negation* NPQ (IN-NPQ).

⁴I propose a revised definition of epistemic bias in 2.3.2.

(21) **ON-NPQ**

A: You guys must be starving. You want to go get something to eat?

B: Yeah, isn't there a vegetarian restaurant around here? Moosewood or something like that?

(22) **IN-NPQ**

A: I'd like to take you guys out to dinner while I'm here.

B: But there's not really any place to go in Hyde Park.

A: Oh, really, isn't there a vegetarian restaurant around here?

In the ON reading in (21) the speaker believes that there is probably a vegetarian restaurant around, so she is biased towards a positive answer. On the contrary in (22), the speaker believed that there was a restaurant around, but the contextual evidence contradicts this belief. The speaker seeks confirmation of her assumption supported by the contextual evidence, that there is no vegetarian restaurant around. She is therefore biased towards a negative answer. In addition to that, ON-NPQs are compatible with positive polarity items like *too* (cf. (23b)) and IN-NPQs with negative polarity items like *either* (cf. (24b)).

(23) **ON-NPQ**

[Context: For a psychological experiment, we are looking for some left-handed subjects. We have asked some of our friends, but only Mary was left-handed so far. To my surprise, John is using a pencil with his left hand.]

a. #Isn't John left-handed too?

b. Isn't John right-handed too?

(Sudo 2013)

Sudo (2013) claims that ON-NPQs carry a [-positive] evidential bias, which means that they are incompatible with contextual evidence for the positive answer. For that reason (23a) is infelicitous since seeing John using his left hand suggests a positive answer. (23b), however, is felicitous, since no incompatibility is implied. For the same reasons as indicated above, [-positive] is not the same as [+negative], since ON-NPQs are also felicitous in neutral contexts where no contextual evidence biases towards a particular answer. In addition to the evidential bias, ON-NPQs also carry a positive epistemic bias, meaning that the speaker has the expectation that the content of the NPQ is true. Sudo (2013) states that the two biases of ON-NPQs express a conflict between the speaker's belief that p is true and the lack of contextual evidence supporting p. IN-NPQs carry different biases.

(24) **IN-NPQ**

[Context: Bill is right-handed and Mary is left-handed. We're wondering who else is a lefty. John is using a pen with his right hand in front of us.]

a. #Isn't John right-handed either?

b. Isn't John left-handed either?

(Sudo 2013)

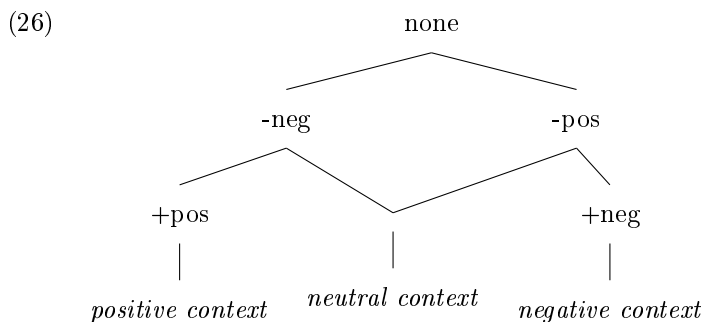
They have a [+negative] evidential bias, meaning that they are compatible with evidence suggesting a negative answer. Therefore 24a) is infelicitous since the contextual evidence (i.e. John using the right hand) supports a positive answer. In 24b) the opposite is true, the context suggests a negative answer. IN-NPQs contrast with ON-NPQ due to their infelicitousness in neutral contexts. Hence, contextual evidence for the negative answer must always be present. In addition to that IN-NPQs are also linked to a positive epistemic bias in Sudo (2013). He states that on some level the speaker has to believe that John is left-handed in 24b).

2.3.2 Adding on to Sudo's Definitions

Before applying the insights from Sudo (2013), that epistemic and evidential biases interact in biased PQs, to the Catalan data I will briefly go over the definitions he presents and add on to them when I consider it necessary for my purposes. I adopt the definition of the evidential bias and its two values, repeated in 25.

- (25) a. **Evidential Bias (-)**
 If a PQ is incompatible with contextual evidence for the positive (resp. negative) answer, the PQ is said to carry a [-positive] (resp. [-negative]) evidential bias.
- b. **Evidential Bias (+)**
 If a PQ requires contextual evidence for the positive (resp. negative) answer, the PQ is said to carry a [+positive] (resp. [+negative]) evidential bias. (Sudo 2013)

I will now briefly explain again how the biases are related to the contexts in which PQs are uttered. Generally contexts can come in three flavors. They can contain evidence supporting a positive answer (*positive context*), supporting a negative answer (*negative context*) or they can be neutral (*neutral context*), i.e. not contain evidence relevant to PQs. The PQs that carry a - value are acceptable in a larger range of contexts than the ones with a + value. They are felicitous in all the contexts where PQs with the reverse bias and a + value are felicitous and additionally in neutral contexts (cf. the figure in 26).



Concerning contextual evidence I would like to propose the modified version given in 27.

- (27) **Contextual Evidence**
 Evidence accessible to the speaker (i) in the current discourse situation or (ii) in a previous situation

There is a difference compared to the definition of [Büring and Gunlogson \(2000\)](#) adopted in [Sudo \(2013\)](#), I do not assume that the contextual evidence is mutually accessible. This means that the type of evidence required in (ii) does not require that both interlocutors were present in the previous situation. However, if the evidence required by a PQ is not mutually accessible, the hearer must be able to accommodate that the speaker is biased. Consider the example in [28](#) from my experiment.

- (28) [Context: La Maria explica a l'Enric que la seva cosina Aina tindrà un fill. El dia següent l'Enric es troba amb l'Aina i li pregunta:]
 'Maria tells Enric that her cousin Aina will have a child. The next day Enric runs into Aina and asks her:'
 a. Que estàs embarassada?
 'QUE Are you pregnant?'

The speaker, Enric, has hearsay evidence in favor of a positive answer because Maria told Enric the previous day that Aina is pregnant. The hearer, Aina, did not witness the conversation between Maria and Enric the previous day. She does not have access to the critical contextual evidence. However, she can accommodate that Enric has contextual evidence. If she knows that Enric is friends with her relatives, who know that she is pregnant, she might conjecture that Enric must have talked to one of them who has shared the good news with him. Another possible scenario would be that Aina concludes that she must be already showing and that this is why Enric bluntly asks her about her pregnancy. In both cases the hearer can accommodate that the speaker has some sort of contextual evidence supporting a positive answer. Finally, I propose a new definition of epistemic bias given in [29](#).

(29) **Epistemic Bias**

A PQ carries a positive (resp. negative) epistemic bias if the positive (resp. negative) answer follows from the speaker's beliefs. It carries no positive (resp. negative) epistemic bias if a positive (resp. negative) answer does not follow from the speaker's beliefs.

I adopt this new version, because the definition presented in [Sudo \(2013\)](#) cited in [\(19\)](#) runs a risk to overgenerate. In principle, a positive answer is always compatible with the speaker's belief unless the speaker believes $\neg p$ and vice versa a negative answer is compatible with her beliefs unless she believes p . Therefore, even in cases where the speaker does not have any beliefs about p one would attribute a positive/negative epistemic bias to the PQ. This is why I propose a more restricted definition of the epistemic bias. A PQ carries an epistemic bias if an answer follows from what the speaker believes and carries none if it does not. With these new definitions in place, I will now look at the Catalan PQs in detail.

2.3.3 Catalan PQs

In the present section I investigate the biases of Catalan PQs. I will show that PPQs and NPQs behave similar in Catalan as they do in English. I will use corpus data to determine the biases of Catalan PQs with *que*. Finally I will also talk about NPQ and show that *que* can appear in them.

Corpus data support that PPQs in Catalan behave similar as English PPQs. I hypothesize that they too carry a [-negative] evidential bias which makes them incompatible with negative contextual evidence. Just as English PPQs they are felicitous in neutral contexts.

- (30) Potser ha d'interessar-se pel que fa. ¿Estudia? ¿Viu sola? ¿Viu amb els pares? Aquestes són les coses que s'han de preguntar.
 —¿Estudies? —Sí. Disseny d'interiors.
 'Maybe one should be interested in what she does. Does she study? Live alone? Or live with her parents? Those are the things, one should ask.
 —Do you study? —Yes. Interior design.'

In (30) the context is the speaker's stream of consciousness. No evidential biases are indicated, apart from that, the speaker does not seem to have any knowledge as to whether the hearer does study or not, i.e. just as expected there is no epistemic bias. Similarly in (31), set at an antique shop, in the given context it is not obvious that the shop sells music instruments. So the client asks for them without any evidential or epistemic bias towards one answer or the other.

- (31) [Context: at an antique shop]
 I sempre estava enfeïnada [...] atenent els pocs clients que hi entraven amb un somriure que li feia mostrar unes dents perfectes.
 —Tenen instruments musicals?
 'She always had a lot of work [...] Attending to the few clients that entered with a smile showing her perfect teeth. 'Do you have musical instruments?'

Que can head PPQs. Its presence is however subject to different biases than regular PPQs. Consider the examples in (32) and (33).

- (32) La Caterina va entrar i va córrer cap al lavabo amb el paraigua que regalimava.
 A: Que plou?
 'Caterina entered and ran to the bathroom with a dripping umbrella. —Que Does it rain?'
- (33) Ella li diu: —¿A què jugues? Ell li contesta: —¿A què jugues? Ella li diu: —¿Que m'imites?
 Ell diu: —¿Que m'imites?
 'She says to him: 'What are you playing?' He answers: 'What are you playing?' She says: 'QUE Are you imitating me?' He says: 'QUE Are you imitating me?'

In my view, it is a necessary prerequisite to render *que* felicitous in (32), that there is evidence for the positive answer mentioned in the context. In this case the evidence is the dripping umbrella. Similarly in (33), the fact that the hearer is obviously imitating the speaker by repeating her exact words, can be interpreted as the contextual evidence required to license *que* in the PPQ *Que m'imites?*. Prieto and Rigau (2007) claim that PQs headed by the complementizer are impossible in neutral or out-of-the-blue contexts, which suggests that they carry a [+positive] evidential bias. Therefore contextual evidence for a positive answer must be present. The epistemic bias is neutral or none, as it is in PPQs, because *que* can be uttered in contexts where the speaker does not necessarily hold any prior beliefs of

which a positive or negative answer would follow. The contextual evidence supports a positive answer. So the speaker might be inclined to believing *p*. However she can still remain ignorant or even call into question the truth of *p*. In (32), the speaker might consider that it is raining, given the dripping umbrella. Still she might not be convinced to form a firm belief, this is why by uttering the PQ he asks the hearer to confirm it. In this respect *que*-PPQs can be assimilate to the confirmatory questions Prieto and Rigau (2007) discussed. Note also that in the same context a PQs without *que* is licensed since its [-negative] evidential bias is compatible with evidence for a positive answer.

Moreover, I would like to show that felicitousness of *que* in the contexts Prieto and Rigau (2007) classified as polite can be analyzed in the same way. The problem with explaining some of the occurrences of *que* through politeness in the sense of Prieto and Rigau (2007) is that it assumes that every unbiased PQ requires an action from the hearer. This is so because politeness is defined as an expected low-cost action for the hearer. In many cases, however, it is not evident, that there is an expected action implied. Consider for instance the following example. Since it is not biased in the sense of Prieto and Rigau (2007), the only possible explanation for the presence of *que* would be politeness, i.e. an expected low-cost action of the hearer.

- (34) [...] i com putes saps que jo he dit això de la pputa [sic] vida, mentider descarat? Eh? Eh?
 Que potser m'estaves espiant?
 '[...] and how the hell do you know that I said that thing about the fucked up life, you shameless liar? Hm? Hm? QUE maybe you have been spying on me?'

In (34) the speaker asks the hearer whether he spied on him. The speaker seemingly concludes this, based on the fact that the hearer has some knowledge of some remark she, the speaker, made. This question can hardly be considered polite since it implies a suspicion and the reproach that the hearer spied on the speaker, which threatens the hearer's face⁵. It is not apparent either that any action is required by the hearer other than answering the question. If this is in itself the expected action, in this case it cannot be qualified as low cost, contrary to the prediction of Prieto and Rigau (2007), since the hearer has to admit his own wrong doings. In my view, *que* is licensed because the PQ is biased. The speaker expects a positive answer, because she has inferential evidence in favor of it. In this case the evidence is the knowledge of the hearer of some things that the speaker said supposedly in a context where the hearer was not present. Consider also once again Prieto and Rigau's example (14) repeated in (35).

- (35) Que em deixes el teu apartament de la platja, aquest cap de setmana?
 QUE me leave the your apartment of the beach this weekend
 'Will you let me use your apartment by the beach this weekend?'
 (Prieto and Rigau 2007, 4)

According to Prieto and Rigau (2007) *que* is licensed only in a context where the hearer previously offered to let the house to the hearer. In my definition, this boils down to saying that the speaker has contextual evidence for a positive answer, i.e. the context is compatible with a PQ carrying a [+positive] evidential bias. Once again the speaker utters the PQ in order to request confirmation of the hearer. Contrary, in a context where the hearer did not offer the house, *que* should be infelicitous.

⁵See for instance Brown and Levinson (1987) for politeness and facework.

In my approach this follows naturally, since in this case, the speaker does not have any evidence for a positive answer.

In the following paragraphs I will briefly talk about Catalan NPQ. Although the discussion shows that this could prove to be an interesting field of research, for the present investigation, my primary goal is to determine the functions of *que* in PPQs. I will also include NPQ in my experiment albeit only on a superficial level. However, at this point of my research, I won't be able to account in detail for the function *que* in NPQs. In general, Catalan NPQs seem to behave similar to their English counterparts. There are two types, one with an inner negation (=IN) and with an outer negation (=ON) reading. My preliminary investigation suggests that *que* is licensed in both types of NPQs.

Prieto and Rigau (2007) state that only biased NPQs in their sense, i.e. rhetorical, confirmatory or anti-expectational questions, can host *que*. IN-NPQ, perceived from Sudo's perspective, lend themselves very easily to an anti-expectation reading, irrespective of the presence or absence of *que*. This is due to the fact that the biases they are specified for bias in different directions. The positive epistemic bias indicates that the speaker holds the belief that the content of the IN-NPQ is true. However due to the [+negative] evidential bias requires contextual evidence that contradicts this belief and leads the speaker to expect a negative answer. Based on this observation, it is not surprising that in (36) the IN-NPQs headed by *que* receives an anti-expectational reading.

- (36) —Ho va dir Horaci: Tu ne quaesieris (scire nefas) quem mihi, quem tibi / finem di dederint, Leuconoe, nec Babylonios / temptaris numeros. [...] —I això què vol dir, profe? —la noia agosarada de la trena immensa. —Que no has fet llatí? —sorpresa, l'Adrià. —Home...
'Horatio said: Tu ne quaesieris (scire nefas) quem mihi, quem tibi / finem di dederint, Leuconoe, nec Babylonios / temptaris numeros. - And what is that supposed to mean, professor? - the daring girl with the giant braid. -QUE you did not take Latin? - Adrià surprised. - Dude...'

For the PQ *Que no has fet llatí?* the speaker expects a negative answer. This expectation is based on the previous context which shows that the student is unable to understand Latin constituting a [+negative] bias. The fact that the speaker, Adrià, is surprised by it shows that he held a previous belief that the student knew Latin, i.e. a positive epistemic bias.

- (37) —On dius que te'n vols anar? —A Tübingen. [...] —Que no estàs fent la carrera aquí? Que no ets a mitja carrera, traient matrícules de tot, hòstia?
'—Where did you say, you want to go? — Tübingen. —QUE aren't you already getting your degree here? QUE Haven't you already finished half of it, taking all those courses, for god's sake?'

In (37) there are two PQs that, based on the context, can be categorized as ON-NPQ. For both of them the speaker expects a positive answer. One could argue that these PQs receive a rhetorical reading because the speaker does not question the content but actually asserts it.

Although I will not dwell deeper here, I would like to finish this section by pointing to a possible counter example for the idea proposed in Prieto and Rigau (2007) that all NPQs headed by *que* receive either a confirmatory, anti-expectation or rhetorical reading. Consider the PQ in (38).

- (38) —Però què acabeu de llegir, desgraciat? —Doncs que... , que Josep Xarom us va maleir poc abans que les flames... — Que no li van escapar la llengua? —Fra Miquel ho va impedir.

‘-So what did you just read, you poor devil? - Well that Josep Xarom cursed you right before the flames... - Didn’t they cut his tongue out? - said Fra. Miquel to put an end to it.’

One way to interpret it is that the cursing of Josep Xarom constitutes contextual evidence, biasing towards a negative answer ([+negative] evidential bias). The question would then be anti-expectational. However in the context it doesn’t seem like the contextual evidence is anti-expectational to Fra Miquel. It is especially unlikely since he seems to utter the PQ in order to put an end to it and not to express his surprise. To sum up the previous section, in table 4. I present the biases I proposed for the Catalan PQs.

	Evidential Bias	Epistemic Bias
PPQ	- negative	none
<i>que</i> -PPQ	+ positive	none
ON-NPQ	- positive	positive
IN-NPQ	+ negative	positive

Table 4: Biases in Catalan PQs

2.4 Experiment

The main goal of my experiment is to determine the systematic factors that license the presence of *que* in PQs. My primary focus rests upon PPQ. Preliminary inquiries into speaker’s intuitions, even though confirming certain tendencies, showed that the judgments are not very clear cut. This is not unexpected, as it is often the case when pragmatic felicitousness is elicited. My motivation to run an experiment online is founded in the expectation that the gradualness of the judgments will be more insightful if a larger number of speakers is consulted.

Hypothesis In my experiment I intend to falsify the zero hypotheses presented below. I will operationalize the hypothesis and discuss my expectations for each condition in the following sections.

H1: The presence of contextual evidence has a positive influence on the acceptability of *que* in PPQs.
H1₀: The presence of contextual evidence **does not** have a positive influence on the acceptability of *que* in PPQs.

H1 is the main hypothesis based on the investigation of corpus data as well as preliminary speaker’s inquiries. This idea is also spelled out in the [+positive] evidential bias I assumed for *que*-PPQs.

H2: The types of evidence influence the acceptability of *que* in PPQs differently.
H2₀: The types of evidence do not influence the acceptability of *que* in PPQs differently.

H2 is based on the same idea as H1, that the presence of evidence has a positive influence on the acceptability of *que* in PPQs. Additionally this hypothesis predicts that the type of evidence also has a systematic influence on the judgments of the speakers. In my experiment I modeled inferential, hearsay and direct evidence.

H3: A positive or negative the epistemic bias has an influence on the acceptability of *que* in PPQs.
H3₀: A positive or negative epistemic bias does not have an influence on the acceptability of *que* in PPQs.

H3 targets the influence of the epistemic bias. For the prototypical PPQ and *que*-PPQ contexts I designed in my experiment, there is no epistemic bias. In other conditions the contexts are modeled so that the PQs have a positive or negative epistemic bias.

2.4.1 Experimental Design

Method The experiment consists of an acceptability judgment test that ran on Ibex farm. I chose his particular provider because all its services are free. In commercial pages this is not the case. The drawback is that there is no graphic interface and everything has to be prepared in an .html or .js format.

The participants were asked to judge the acceptability of each stimuli in a given context. Acceptability is translated to a likert-scale ranging from 1 (= not acceptable) to 10 (= fully acceptable). The selection of an adequate scale is a controversial issue especially within social sciences. I deliberately chose a scale with even numbers, in order to force the participants to give an informative answer. As I have already mentioned, acceptability tasks in pragmatics are often subject to strong variation. If I used an odd number of intervals, chances would be that participants settled at the center of the scale often. This would have been hard to interpret. The relatively large number of intervals enables more fine grained judgments. But are also cultural factors to consider. If people are not used to larger scales this could result in problems, since they might not be able to correctly translate their judgments in numbers. In the Catalan context, however, scales from 1-10 are fairly common. For instance in elementary and high schools as well as at universities a 10 point scale is employed for grading. Therefore I am confident that the chosen scale is adequate.

The experiment is in a Latin square design. This means that for each context there are two versions of the stimuli, one with and one without *que*. Each participant is only exposed to one of the versions. The stimuli are counterbalanced so that each participant sees an equal number of stimuli with and without *que*. The stimuli are presented in a randomized order.

L'Anna es troba amb el seu amic Carles. El Carles està bronzejat i té l'aspecte relaxat. L'Anna li pregunta: A: <u>Que</u> has estat de vacances? B: <u>Has</u> estat de vacances?	Context ('Anna meets her friend Carles. He is tan and seems relaxed. Anna asks him:') Stimuli ('<u>QUE</u> Have you been on a vacation?') ('Have you been on a vacation?')
(Mal) 1 2 3 4 5 6 7 8 9 10 (Bo)	

Stimuli and Fillers Altogether there were 36 stimuli, four per condition. This means that each participant is exposed to 18 PQs with *que* and 18 PQs without *que*.

In addition to that 12 fillers were included. Resulting in an overall number of 48 experimental items. The ratio of 3:1 is acceptable. I chose not to include a higher number of fillers in order to maintain the duration of the experiment around 10-15 minutes. The fillers were chosen in a manner that a similar type of judgment as in the experimental stimuli is elicited. This means that the acceptability of the target property in a particular context also in this case had to be triggered by discourse pragmatic factors. For instance, inquiries of syntactic acceptability do not constitute an adequate type of fillers, since the judgments target grammatical factors. This difference in judgment could lead to unpredictable biases which would be very hard to control for. For my filler items, I used Focus Fronting (FF) because its acceptability relies on contextual factors.

Participants I recruited my participants via facebook. I posted the link of my experiment in two groups, where all the members are Catalan speakers. This proved to be very fruitful since I reached 102 participants within 24 hours. Gender is distributed equally (49 female vs 53 male). The participants' age ranges from 18-70 with a mean age of 39 years. Often online experiments are criticized for not having a representative sample population. Mostly people from the young and the older generation are underrepresented. Although I did not have access to the age group of young adolescent, the number of participants within the cohort above 50 (28 i.e. 27,5% between 50 and 70) is satisfactory. Most of the participants were native Catalans (63, i.e. 61,7%), the other biggest group were Valencians (21, i.e. 20,6%) followed by people from the Balearic Islands (12, i.e. 11,8%). The rest (10 i.e. 9,8%) did not specify the region they came from. Gender has an equal distribution also within the dialects.

2.4.2 Conditions

The main purpose of the experiment is to determine whether the presence or absence of epistemic and evidential biases influences if a PQ headed by *que* is preferred or not. I test the conditions summed up in table 5. The first four conditions (C1, C2a, C2b, C2c) represent the core interest of my experiment.

Condition	Evidential Bias	Epistemic Bias
C1 neutral context	- negative	none
C2a inferential context	+ positive	none
C2b hearsay context	+ positive	none
C2c direct context	+ positive	none
C3 anti-expectation	+ positive	negative
C4 hyperbolical question	- negative	negative
C5 ignorant hearer	- negative	none
C6 IN-NPQ	+ negative	positive
C7 ON-NPQ	- negative	positive

Table 5: conditions and biases

C3 goes back to [Prieto and Rigau \(2007\)](#). C4 and C5 test other less central hypotheses and finally C6 and C7 are modeled with NPQ, in order to gain preliminary insight into how *que* and negation interact. In table 6 I indicate my expectations given the hypotheses mentioned in section 2.4.

Condition	Expectation*	Hypothesis
C1 neutral context	PPQ	H1
C2a inferential context	<i>que</i> -PPQ	H1 & H2
C2b hearsay context	<i>que</i> -PPQ	H1 & H2
C2c direct context	<i>que</i> -PPQ	H1 & H2
C3 anti-expectation	<i>que</i> -PPQ or PPQ	H3
C4 hyperbolical question	<i>que</i> -PPQ or PPQ	H3
C5 ignorant hearer	PPQ	H1 & ?
C6 IN-NPQ	NPQ or <i>que</i> -NPQ	?
C7 ON-NPQ	NPQ or <i>que</i> -NPQ	?

Table 6: conditions and biases, *higher judgment

For C1 I designed neutral contexts, so there is no contextual evidence nor epistemic bias present. The example in (39) is taken from my stimuli. Núria has no evidence nor explicit prior belief as to whether Jordi was at the party.

- (39) [Context: La Núria es troba amb la seva germana Marta. La Marta li explica que va anar a una festa on també hi havia un parell d'amics de la Núria. La Núria no sap qui va anar i pregunta:]
 ‘Núria meets her sister Marta. Marta tells her that she went to a party where she met a couple of Núria’s friend. Núria has no idea who went there and asks:’
 a. Que hi era el Jordi?
 ‘QUE Was Jordi there?’
 b. Hi era el Jordi?
 ‘Was Jordi there?’

In these contexts I expect a preference for PPQs, i.e. the b) example, because of H1. This is in line with Sudo (2013), Prieto and Rigau (2007) as well as my own observations on the basis of native speakers’ inquiries.

C2a, C2b, C2c contain PQs in context that give rise [+positive] evidential and no epistemic bias. My previous research relying both on corpora as well as speakers’ judgments, suggest that these are the prototypical contexts in which *que*-PPQs are licensed (hence H1). Note however that I also expect high judgments for PPQs without *que* in these contexts, since their [-negative] evidential bias is compatible the [+positive] bias modeled here. The difference between these conditions is the type of evidence. In C2b the evidence is inferential (cf. 41), i.e. the fact that Carles is tanned and relaxed triggers Anna’s conjecture that he has been on a holiday. In (41) it is hearsay, since Enric knows about Aina’s pregnancy because Maria told him about it.

- (40) [Context: L’Anna es troba amb el seu amic Carles. El Carles està bronzejat i té l’aspecte relaxat. L’Anna li pregunta:]
 ‘Anna meets her friend Carles. He is tanned and seems relaxed. Anna asks:’
 a. Que has estat de vacances?
 ‘QUE have you been on a vacation?’

- b. Has estat de vacances?
‘Have you been on a vacation?’
- (41) [Context: La Maria explica a l’Enric que la seva cosina Aina tindrà un fill. El dia següent l’Enric es troba amb l’Aina i li pregunta:]
‘Maria tells Enric that her cousin Aina will have a child. The next day Enric runs into Aina and asks her:’
 - a. Que estàs embarassada?
‘QUE Are you pregnant?’
 - b. Estàs embarassada?
‘Are you pregnant?’

Both of the previous conditions rely on indirect evidence, condition 2c includes the same biases, however the evidence is direct. In (42) Rosa has direct visual evidence that Albert has a dog.

- (42) [Context: La Rosa es troba amb el seu amic Albert. L’Albert porta lligat un gos. La Rosa li pregunta:]
‘Rosa meets her friend Albert. Albert has a dog on a leash. Rosa asks him.’
 - a. Que tens un gos?
‘QUE Do you have a dog?’
 - b. Tens un gos?
‘Do you have a dog?’

H2 predicts to find differences in the judgments depending on the type of evidence. The three conditions contain PQs with a bias towards a positive answer given the contextual evidence. The speaker utters the PQ in order to confirm her intuitions based on the evidence she has.

In condition 3 I modeled anti-expectation contexts. There is a negative epistemic and a [+positive] evidential bias. In the example below (43), the contextual evidence, that Ferran is eating meat, is contradictory to Sara’s prior belief and therefore anti-expectational. Prieto and Rigau (2007) predict that in these contexts *que*-PPQs are licensed. If this is indeed the case, this could mean that the [+positive] evidential bias is a stronger factor than the epistemic bias, since it differs from the one in the presumed prototypical contexts for *que*-PPQs (C2a, C2b, C2c). On the contrary, if PPQs are preferred this could indicate that the epistemic bias does play a role (H3).

- (43) [Context: La Sara sempre ha cregut que el seu col·lega Ferran es vegetarià. El troba al restaurant menjant una botifarra. La Sara li pregunta:]
‘Sara always thought that her colleague Ferran is vegetarian. She sees him at restaurant eating a sausage. Núria asks:’
 - a. Que menjes carn?
‘QUE Do you eat meat?’
 - b. Menjes carn?
‘Do you eat meat?’

C4 contains hyperbolic PQs. Just like rhetorical questions they are a stand-in for another utterance. In opposition to rhetorical questions, however, they cannot be replaced by assertions but by can be replaced by polar questions. They present an exaggerated version of the underlying question. In a way they can be viewed as an extreme version of an anti-expectation PQ. I attributed a [-negative] evidential bias and a negative epistemic bias to the PQs in this condition. The evidential bias is motivated since hyperbolic PQs to some extent appear in out-of-the-blue contexts and are compatible with evidence for a positive answer but not for a negative answer. The negative epistemic bias is attributed to these PQs since all the examples included in my experiment are biased for a negative answer.

- (44) [Context: L’Anna i l’Oriol estan dinant. Quan acaben, l’Oriol vol pagar pels dos. L’Anna li pregunta:]
 ‘Anna and Oriol are having dinner together. When they finish Oriol wants to pay for both of them. Anna asks:’
 a. Que has guanyat la loteria?
 ‘QUE Have you won the lottery?’
 b. Has guanyat la loteria?
 ‘Have you won the lottery?’

In (44) the question whether Oriol has won the lottery is an exaggerated version of the question *Can you afford this?*. It could be categorized as out of the blue, because winning the lottery is not a topic currently under discussion. However, the fact that Oriol offers to pay indicates that he has at least sufficient money to invite Anna out to dinner. This can be taken as a contextual evidence suggesting a positive answer. The PQ is not simply information seeking, but Anna communicates additional information by uttering it. In particular, depending on the context, it could be read as Anna’s comment on Oriol’s financial situation, or it could be interpreted Anna declining Oriol’s offer. The speaker has a negative epistemic bias when uttering this hyperbolic PQ, since winning the lottery is a very improbable event. This improbability facilitates the hyperbolic interpretations of the PQ, since the hearer realizes that the speaker cannot be serious when asking the question and therefore must have intentions other than merely inquiring whether he has won the lottery or not.

C5 tests another peripheral hypothesis, namely whether the ignorance of the hearer plays a role in the licensing of *que* in PQs. In all the other conditions, the speaker can presuppose that the hearer knows the answer to the question, since they are mostly about his own experiences. In order to test this possible additional factor, C5 contain contexts where it must be assumed that the hearer is as ignorant as the speaker. I modeled neutral contexts with no epistemic bias. In (44) both Maria and Montse do not know whether the boy is really alone, or whether his parents are just momentarily out of sight. My expectation is that PPQs are preferred. The ignorance of the hearer should not play a role. If the results do not confirm this expectation, this would mean that the ignorance or presumed knowledge of the hearer does interact with the licensing of *que*.

- (45) [Context: La Maria i la Montse estan passejant. Veuen un nen petit sense ningú al costat. La Maria pregunta a la Montse:]
 ‘Maria and Montse are having a walk. They see a little boy without anybody next to him. Maria asks:’

- a. Que està sol aquest nen?
‘QUE Is this boy on his own?’
- b. Està sol aquest nen?
‘Is this boy on his own?’

In the last two conditions contexts that license NPQs are tested. In C6 the PQs should get an IN-NPQ reading i.e. there is positive epistemic bias and a [+negative] evidential bias (46). As I indicated above, my corpus analysis showed that *que* is licensed in IN-NPQ. Here I try to gain further support for this claim. The type of evidence varies, in two contexts the evidence is inferential and in the two remaining ones it is hearsay.

- (46) [Context: El Vicenç pensa que el seu amic Jaume passa el Nadal amb els seus pares. El truca per a desitjar bones festes. En Jaume explica que és amb la seva xicota i no a casa dels seus pares. El Vicenç pregunta:]
‘Vicens thinks that his friend Jaume spent Christmas with his parents. He calls to wish a Merry Christmas. Jaume says that he with his girlfriend and not has his parents house. Vicens asks:’
- a. Que no passes el Nadal amb els teus pares?
‘QUE Don’t you spend Christmas with your parents?’
 - b. No passes el Nadal amb els teus pares?
‘Don’t you spend Christmas with your parents?’

C7 are contexts that make an ON-NPQ reading of the PQs plausible (47). Once again the corpus supports that *que* can head these types of NPQs. In each of the contexts there is a positive epistemic bias. As we have seen above, for ON-NPQ evidence must not necessarily be present, i.e. they are also good in neutral contexts. I test two cases with indirect evidence and two cases without evidence.

- (47) [Context: La Catalina està visitant el Josep, a la taula auxiliar hi veu una guia turística d’Itàlia. Ella li explica que està pensant anar a Sicília aquest estiu i li pregunta:]
‘Catarina is visiting Josep. At the side table she sees a guidebook for Italy. She tells Jose that she considers going to Sicily this summer and asks:’
- a. Que no vas a Italia també?
‘QUE Aren’t you going to Italy as well?’
 - b. No vas a Italia també? ‘Aren’t you going to Italy as well?’

Furthermore, I test whether politeness influences the acceptability judgments. This goes back to the claim made by Prieto and Rigau (2007). In each condition two of the four stimuli constitute a more formal interaction (making use of the pronoun *vostè* and the corresponding verbal inflection) and two a more informal one (with the pronoun *tu* and the corresponding verbal inflection). I am aware that this differs from what Prieto and Rigau (2007) considered politeness. Therefore, the results of this variable cannot serve to test the predictions made by Prieto and Rigau. I decided not to imitate contexts as the ones discussed in their paper since all of them include deontic modality. As none of my other conditions contain stimuli with modal verbs, I had to leave out these contexts, because it would be hard to interpret whether an observed variation in acceptability was due to politeness or modality.

2.4.3 Results and Discussion

In the present section I report the results of my statistical analyses. I ran a series of t-tests in order to compare the mean judgments of PQs and *que*-PQs overall and across conditions. T-test compare the means of two groups and evaluate whether the two groups are significantly different. Additionally I performed analyses of variance (ANOVA), i.e. the generalized form of t-tests applicable to more than two groups, and post-hoc analysis to investigate the patterns and relations within the subgroups.

I had to exclude a total of five experimental items for different reasons that were pointed out to me by the participants. In one item in C1 the finite verb was misspelled and was therefore judged very low (mean: 2.48). A pair of items in the hyperbolical condition C4 had to be excluded because the idiom used was not idiomatic and therefor judged lower (mean for PQ: 4.56 and *que*-PQ: 4.86). Finally another pair of items in the ignorant hearer condition C5 was excluded because the collocation used was not idiomatic either and therefor significantly lower judgments were provided (mean for PQ: 4.77 and *que*-PQ: 5.19).

General Results Generally the mean judgments across conditions are high (with *que*: 8.08, without *que*: 7.77). The variation between the mean judgments is significant ($p=0.00$), which supports the rejection of the H_0 , that there is no difference between PQ with and without *que*. In figure 1. the mean judgments of the PQs with (dark gray) and without (light gray) *que* in the conditions 1-3 are displayed.

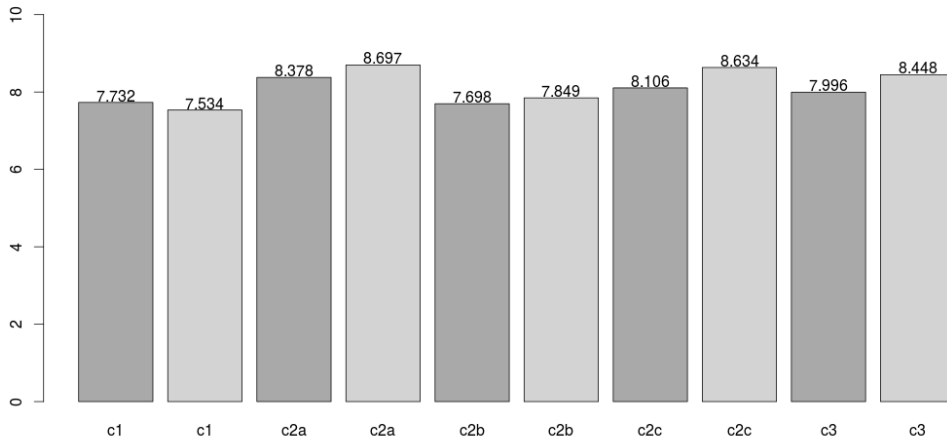


Figure 1: mean judgments by condition

In C1, the neutral context condition, the slightly higher judgments for PQs without *que* confirm my expectations, but the difference between the judgments is not significant ($p=0.73$). This means that the H_0 , stating that there is no difference between the two version of PQs in this condition cannot be rejected. In the conditions 2a, 2b and 2c the higher judgments for PQs with *que* are also expected. The contrast between the mean judgments of the conditions 2a, 2b and 2c grouped together (8.03

without *que* and 8.4 with *que*) are significant ($p=0.01$). When the two versions of PQs are compared individually per condition, only the difference in condition 2c, with direct evidence, is significant ($p=0.03$). The contrast in C2a, inferential evidence ($p=0.19$), and C2b, hearsay evidence ($p=0.29$), are not significant. Finally, in the anti-expectation condition 3, PQs with *que* are judged higher than the ones without *que*, in line with Prieto and Rigau (2007). However the difference in means is not significant ($p=0.08$).

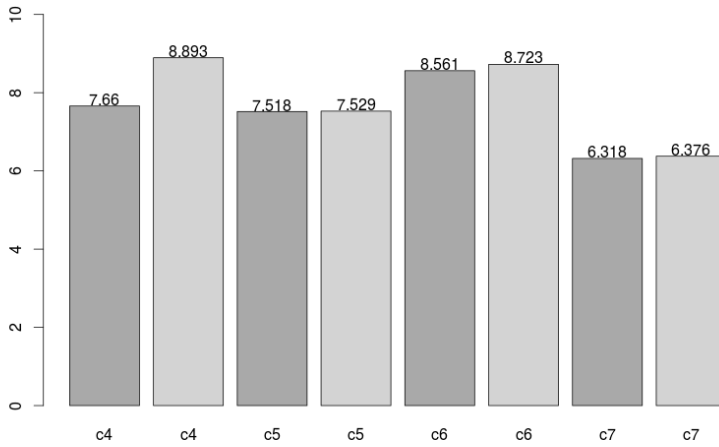


Figure 2: mean judgments by condition

In figure 2, the mean judgments for the remaining conditions 4-7 are shown. In C4, the hyperbolical question contexts, PQ with *que* are judged higher than the ones without *que* to a significant degree ($p=0.00$). Apart from that, in the other three conditions, there is no significant difference between the PQs with and without *que*. The ignorant hearer contexts (C5) are judged similar as the neutral condition (C1). Since I constructed these contexts with similar biases, this proves that the ignorance of the hearer does not influence the acceptability of *que* in PQs. IN-NPQ in C6 are judged significantly higher than ON-NPQ in C7 ($p=0.00$). One possible explanation could be that the contexts I designed for the ON-NPQ are less natural than the ones for IN-NPQ. Moreover, ON-NPQ are apparently judged less acceptable in general. An ANOVA followed by a post-hoc Turkey's honest significant difference (HSD) test revealed that C7 had a significant effect compared to all conditions but C5 when comparing the PQs. When tested separately, the effect is stronger in PQs with (significant in all but C5 and C1) than without *que* (only significant in C2a, C2b and C6). In the following I am going to evaluate my results in relation to the hypotheses I formulated in section 2.4.

Hypothesis 1

H1

The presence of contextual evidence has a positive influences on the acceptability of *que* in PQs.

H1₀

The presence of contextual evidence **does not** have a positive influences on the acceptability of *que* in PQs.

The first hypothesis targets the influence of the evidential bias on the acceptability of PQs with *que*. In order to test whether this hypothesis is tenable, I ran a number of ANOVAs. For the PQs with *que* the post-hoc Turkey's HDS shows that the effect of the evidential biases can be reduced to the same source as the effect mentioned above when comparing the variation across conditions. Only the [-positive] evidential bias associated with the ON-NPQ (C7) shows significant effects when compared to the other types of evidential biases. Bases on my hypothesis I expected a significant difference between the [-negative] bias that PQs receive in the neutral context vs. the [+positive] bias they receive in the conditions 2a,2b, 2c and 3. However the effect is not significant (p=0.51). The H1₀, that the presence of contextual evidence does not have positive influence on the acceptability of *que* in PQs cannot be rejected based on the results of my experiment. Additionally, also in the PQs without *que* the only significant effects involve the [-positive] bias (C7).

Hypothesis 2

H2

The types of evidence influence the acceptability of *que* in PQs differently.

H2₀

The types of evidence do not influence the acceptability of *que* in PQs differently.

The second hypothesis predicts a difference in acceptability depending on the type of evidence. Note that this goes beyond conditions 1 (=no evidence), 2a (=inferential), 2b (=hearsay) and 2c (=direct), because also in the remaining conditions type of evidence varied.

The graphs below show the mean judgments by type of evidence for PQs without *que* in darkgray and PQs with *que* in lightgray. Consistently the highest judgments are found with direct evidence and the lowest with no evidence. The context with indirect evidence (=hearsay and inferential) are judged almost the same in PQs without *que* (p=0.99), whereas in PQs with *que* the preference for inferentials is a little bit higher (albeit not significant, p=0.5).

Once again I ran ANOVAs and post hoc tests. The main results are that in PQs without *que* type of evidence does not have a significant effect on the acceptability (p=0.18). On the contrary in PQs with *que* it does (p=0.01). The post hoc Turkey's HDS test shows that in PQs with *que* the variation between no evidence vs. inferential evidence is significant (p=0.01), as well as the variation between no evidence vs. direct evidence (p=0.02). These results permit the rejection H2₀ and show that type of evidence does in fact have an influence on the acceptability of PQs with *que*.

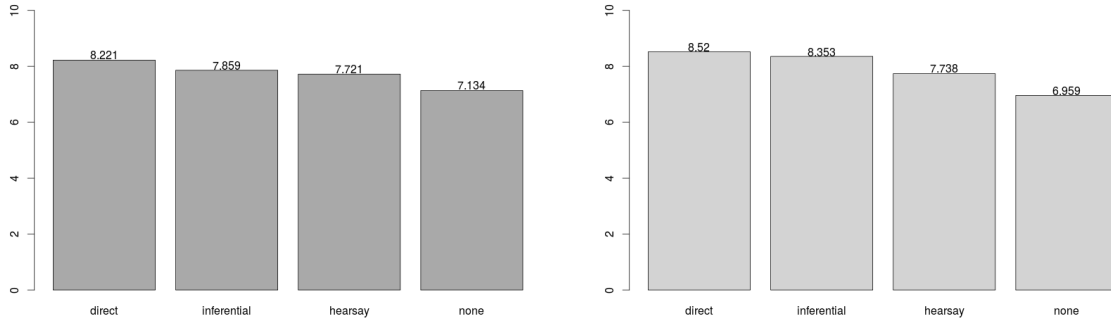


Figure 3: mean judgments by type of evidence with and without *que*

Hypothesis 3

H3

A positive or negative the epistemic bias has an influence on the acceptability of *que* in PQs.

H3₀

A positive or negative epistemic bias does not have an influence on the acceptability of *que* in PQs.

The third hypothesis predicts significant effects depending on the different epistemic biases. The ANOVAs I ran, however, do not support the rejection of H3₀, since no effect was found. This suggests that the epistemic bias does not influence the acceptability of PQs.

In what follows I will compare the predictions that follow from the generalizations in [Prieto and Rigau \(2007\)](#) with the results of my experiment.

Dialectal differences and politeness ([Prieto and Rigau \(2007\)](#)) According to [Prieto and Rigau \(2007\)](#), we should expect significant dialectal variation. Below I repeated table 1. In bold print I highlighted the dialects my participants spoke. Unfortunately I cannot distinguish between the different varieties spoken in Catalonia, since most of my participant chose to declare the region the came from as “Catalunya” and did not specify the exact area. In a future experiment I would offer a closed set of answers to chose from in order to gain a more informative dialectal classification. In the present analysis speakers from Northern Central, Northwestern and Central Catalonia a treated on a par. For the analyses on the dialectal contrasts I distinguished between the Catalan (63 participants), the Valencian (21 participants) and the Balearic (12 participants) dialect.

	biased	unbiased polite	unbiased neutral
Rossellonese, Northern	yes	no	no
Central, Valencian	yes	yes	no
Northwestern, Central, Balearic	yes	yes	yes
Minorcan	yes	yes	yes

Table 7: *que* in PQs according to ([Prieto and Rigau 2007](#))

Prieto and Rigau (2007) predict that in all the dialects *que* should be more acceptable in PQs in contexts than are compatible with a biased reading of the PQ. In the perspective taken by of the authors, biases PQs comprises confirmatory (C2a, C2b, C2c)⁶, anti-expectation (C3). In figure 4. I plotted the mean judgments by dialect for the indicated conditions that approximate Prieto and Rigau’s notion of biased PQs. Once again light gray shows the judgments for PQs with *que* and dark gray the judgments for PQs without *que*. To put these judgments in relation I also plotted the mean judgments for the neutral contexts, which I assimilated by including the neutral condition 1 and the ignorant hearer condition 5. The difference in PQs with and without *que* in the contexts supporting a

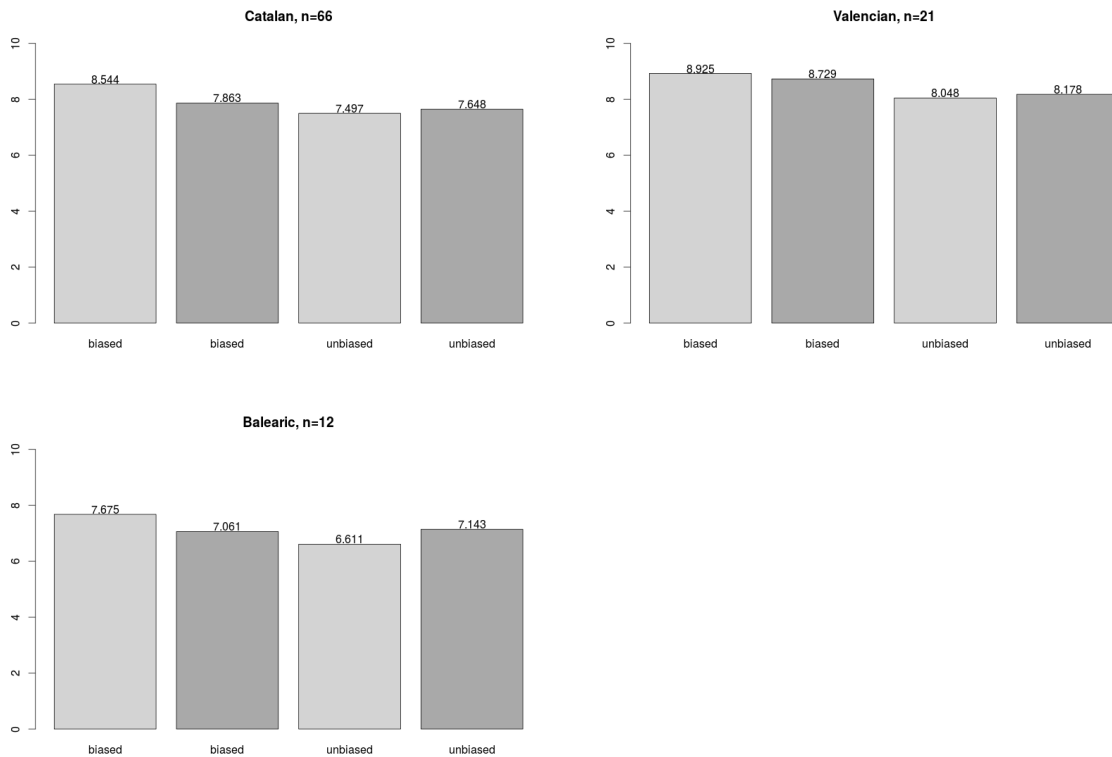


Figure 4: mean judgments for *que*-PQs

biased reading of the PQs is only significant in the Catalan dialect ($p=0.00$). This does not necessarily disprove the hypothesis from Prieto and Rigau (2007), since they assume optionality of *que*, hence also PQs without *que* are predicted to be acceptable. The contrast in the biased *que*-PQs vs. the unbiased *que*-PQs is significant in Catalan ($p=0.00$) and Valencian ($p=0.02$), just as expected by Prieto and Rigau (2007). It is not significant in Balearic ($p=0.11$). However the number of Balearic speakers in my experiment is relatively low ($n=12$). The lack of significance can probably be explained due to this fact. Based on the authors generalizations one would also expect a clear contrast between the two types of PQs in the neutral contexts, since *que* should only be acceptable in the Minorcan dialect but not in the other ones. However in my experiment this difference is not significant in any of the three

⁶Note that in Prieto and Rigau (2007) confirmatory questions always include a particle, in the stimuli in the experiment they however don't.

considered dialects.

Prieto and Rigau (2007) furthermore predict that there should be a difference in unbiased PQs between polite and less polite contexts. In their conception, politeness is based on a cost-benefit scale, classifying questions that imply a costly action from the hearer as impolite. *Que* should be acceptable in neutral or impolite contexts only in Minorcan. In polite contexts speakers of the Minorcan, Balearic, Northwestern and Central Catalan should accept *que* but not the speakers of Rossellonese, Valencian and Northern Central Catalan. As I stated above, I found myself unable to model politeness in the sense of the authors. I did not test similar contexts as the ones given in Prieto and Rigau (2007) because all of them included modal verbs. In the experiment politeness was modeled by the use of the formal vs informal pronoun and the corresponding verbal inflection in half of the stimuli of each condition. The ANOVAs showed no effect of politeness on the judgments of PQs with nor without *que*. This suggests that politeness modeled by the use of pronouns and verbal inflection does not influence the acceptability of PQs of either type.

In order to gain a general insight on the dialectal variation in my experiment, I ran t-test comparing the mean judgments per condition of the participants from the respective dialect with the judgments of the rest of the participants. I ran three tests per condition, one comparing the overall judgments irrespective of the presence or absence of *que*. The other two tests compared the mean judgments of the respective dialect speakers vs. the other participants for the two types of PQs individually.

The Catalan dialect is over represented in my data, therefore if Catalans show a drastically different behavior than the rest of the participants, this could have a strong impact on the results in general. However, my analyses show that across conditions the variation in judgments given by Catalan compared other participants is almost never significant. The only exception is C7 (ON-NPQ) where Catalans have significantly lower judgments overall (cat: 6.07 other: 6.78, $p=0.036$) as well as in PQs without *que* (cat: 5.8 other: 6.86, $p=0.03$). For PQs with *que* in C7 there is no significant difference between Catalans and the other participants (cat: 6.35 other: 6.71, $p=0.45$).

Valencians' judgments show a greater variation compared to the other dialects. In the inferential condition 2a, on all compared levels, Valencians' judgments are significantly higher (overall: val: 9.3 others: 8.28 $p=0.00$; PQs: val: 9.28 others: 8.04 $p=0.00$; *que*-PQs: val: 9.31 others: 8.52 $p=0.00$). The same goes for hyperbolic question (C4) (overall: val: 9.08 others: 8.09 $p=0.00$; PQs: val: 8.61 others: 7.38 $p=0.01$; *que*-PQs: val: 9.53 others: 8.89 $p=0.00$) and the ON-NPQ condition 7 (overall: val: 7.38 others: 6.04 $p=0.00$; PQs: val: 7.48 others: 5.82 $p=0.00$; *que*-PQs: val: 7.28 others: 6.26 $p=0.04$). In the direct evidence condition 2c the overall judgments as well as the ones for the PQs without *que*, but not for the ones *que*-PQ, were significantly higher in this dialect (overall: val: 8.96 others: 8.21 $p=0.00$; PQs: val: 8.98 others: 7.83 $p=0.00$). In the IN-NPQs C6 only the PQs without *que* are judged significantly higher, whereas the other levels I tested do not differ significantly (PQs: val: 9.19 others: 8.41 $p=0.02$). In C5, where hearer ignorance was modeled, the overall judgments but not the individual ones, are significantly higher for Valencians than for other speaker (overall: val: 8.24 others: 7.3 $p=0.02$).

The judgments of Valencian speakers does not permit inferring any particular different behavior concerning *que*-PQs, since in all the cases when this type of PQ is judged higher also the overall judgments and the ones for PQs without *que* are higher than in the other dialects. These results however show that

Valencian speakers generally give higher judgments for certain types of PQs that are less acceptable in the other dialects.

The judgments provided by Balearic speakers also show some variation compared to the other dialects. The neutral condition 1 and the anti-expectation condition 3 are judged significantly lower by Balearic speakers both overall as well as in PQs with *que* (C1: overall: bal: 6.57 others: 7.86 $p = 0.02$; *que*-PQs: bal: 5.55 others: 7.75 $p = 0.02$) (C3: overall: val: 7.1 others: 8.44 $p = 0.01$; *que*-PQs: bal: 7.04 others: 8.68 $p = 0.02$). The inferential (C2a) and hearsay (C2b) have significantly lower overall judgments, but not on individual levels (C2a: overall: bal: 7.6 others: 8.62 $p = 0.03$; C2b: overall: bal: 6.81 others: 7.86 $p = 0.05$).

The results indicate that in general the Balearic speakers judged certain conditions lower than the other speakers. The lower acceptability of *que*-PQs in the neutral condition (C1), supports H1, however, given the low number of participants from the Balearic islands, this is not sufficient to make conclusive generalizations.

2.4.4 Summary

The statistical analysis of the judgments provided by the participants show some variation in C1-C5. In all but C1 the PQs with *que* reached higher judgments than the PQs without *que*. There is almost no difference in the mean judgments in the two conditions testing NPQ. This could mean that in NPQs the presence of *que* is truly optional. But it could also be that the contexts I designed permitted that the participants accommodated a different interpretation for the NPQs with and without *que*. Since this was not the core focus of my investigation I leave this question for futur research.

The results of my experiment cannot support H₁. This means that the evidential bias does not have a significant influence on the acceptability of the PQs with *que*. H₂, on the contrary, is supported by the results of the experiment. There was a statistically significant effect of type of evidence for both types of PQs, that was stronger in PQs with *que*. H₃, which predicts an influence of the different values of the epistemic bias did not show any effect. Moreover, politeness, as it was modeled in this experiment, did not show any significant effect.

The results show some dialectal variation, but not in the way that [Prieto and Rigau \(2007\)](#) generalized. The judgments provided by Catalan speakers did not differ significantly from the judgments from the other participants, except for C7, which was judged lower by Catalans. Balearic speakers showed some variation, however the low n (12 participants) does not permit to draw conclusions. Valencians' judgments varied to a greater extend. They showed a general tendency to give higher judgments in conditions that were less acceptable in the other dialects.

2.4.5 Unintended Biases

The results of the experiment fail to support some of my hypotheses. Although this might indicate that the variables tested are not relevant for the acceptability of *que* in PQ, I am still cautious to reject the hypotheses because a number of external factors could have influenced the judgments of the participants.

First of all, the participants were aware that the experimenter was not Catalan. Some of them commented that the data were good considering I was not a native or that they wished they spoke German

as good as I spoke Catalan. This leads me to believe that the fact that I am not a native might have biased some participants to judge the stimuli differently. This might have provoked them to provide higher judgments than they would have were the experimenter a native speaker. For any future online experiment I will require assistance of native speakers in order to counteract influencing the results.

As I already mentioned above I had to exclude a number of experimental items from the analyses due to misspelling or their lack of being idiomatic and I cannot exclude the possibility that they influenced the results. It could be that my experiment failed to actually measure the pragmatic acceptability of the stimuli. It is possible that some participants gave high judgments because they were judging the stimuli on the basis of orthography, idiomacy or grammatical correctness and not their pragmatic acceptability.

Furthermore, there are some issues that have to do with the experimental design that could also lead to uncontrollable biases. One can never fully control which interpretations participants derive. However, reviewing my stimuli with a fresh eye I realized that sometimes the differences between the conditions are not as clear cut as I intended. For instance it is possible that C2c with direct evidence was interpreted as anti-expectational. Even though I did not specify in the contexts that the evidence contradicts the speaker’s prior belief, this can be accommodated fairly easily.

In addition to that, the items lack uniformity to some extent. Since I concentrated mainly on building pragmatically homogeneous contexts, I partly failed to maintain them grammatically uniform. In a future experiment I would be more cautious and try not to vary too much in verbal tense and argument structure. Another factor I would control for is the presence and absence of the subject as well as the syntactic position of the subject.

Additionally it also turned out that within the experimental items I did not grant the participants the possibility to give low judgments, since in all the contexts PQs as well as *que*-PQs seem to have been quite acceptable. On the contrary, the judgments in the filler conditions showed a greater variability.

2.5 Conclusion and Topics for Future Research

This section treated the properties of *que*-PPQs. I presented the descriptive generalizations of [Prieto and Rigau \(2007\)](#). I then tried to systematize the underlying factors determining the licensing of *que* in PQs applying the typology of biases put forth in [Sudo \(2013\)](#). I considered the possibility that evidential and epistemic biases could play a role in the licensing of *que* in PQs. Supported by corpus data and preliminary speakers’ inquiries I hypothesized that *que*-PQs can be associated with no epistemic bias and a [+positive] evidential bias. Moreover, I showed that the biases [Sudo \(2013\)](#) identifies for the different kinds of English PQs are the same in Catalan PQs. In this view it follows from the make-up of their biases that *que*-PPQs constitute a more restricted version of PPQs.

	Evidential Bias	Epistemic Bias
PPQ	- negative	none
<i>que</i> -PPQ	+ positive	none
ON-NPQ	- positive	positive
IN-NPQ	+ negative	positive

Table 8: Biases in Catalan PQs

In section 2.4 I described an acceptability judgment experiment aimed at testing whether these biases are in fact decisive for the licensing of *que* in PQs. C1 were neutral contexts, where a slight preference for PPQs was noted. C2a-c constitute contexts where the PQs carry a [+positive] evidential bias, 2a and 2b contain indirect evidence on the other hand 2c involves direct evidence. In all of these conditions *que*-PPQs had slightly higher judgments. C3 was anti-expectational and C4 were hyperbolic questions. In both conditions *que*-PQs were preferred. C5 was neutral just as C1 but the hearer was ignorant. C6 tested IN-NPQs and C7 tested ON-NPQs. In the latter three conditions there was practically no difference in judgments between PQs and *que*-PQs.

Statistical analysis showed that most of the differences reported above were not significant. I formulated three hypotheses that are only partly compatible with the experiment. The results cannot support H_1 nor H_3 , which assume a significant influence of the evidential and epistemic bias respectively. They do however support H_2 , therefore type of evidence did have a significant effect on the judgments provided by the participants. Finally, the dialectal variation observed in the results does not confirm the generalizations of Prieto and Rigau (2007).

Some issues that might in part be responsible for these results were already mentioned in section above. So it is still possible that the hypotheses target relevant factors after all. In a future version of this experiment, I would control for the mentioned factors. I would also model different conditions. I would exclude C5-7, since the judgments did not differ depending on the presence or absence of *que*. Instead I would include conditions testing PQs with modal verbs.

In my experiment I could only test one property of Catalan PQs. In the remaining part of this section I want to point out a number of other properties that could prove to be interesting topics for future research. I exclude intonation since the experiment relied on written stimuli. Prieto and Rigau (2007) assume a connection between intonation and the illocutionary force of the PQs. According to Prieto and Rigau, PQs that look like questions but are actually commands do not permit *que*: *#Que voleu callar?* ‘Will you shut up?’

I also did not test confirmatory questions headed by a particle that Rigau and Prieto discuss. It could be an interesting topic for a follow up study to determine, whether there are observable differences when confirmatory questions are headed either by the particle, the particle and *que* or by *que* alone.

Prieto and Rigau claim that familiarity or proximity is a factor in the licensing *que* in PQs. They predict that it should be particularly frequent in child-directed-speech. This is another hypothesis worth exploring in the future.

There is another interesting property of *que*-PQs that had to be excluded in my experiment. It is an interesting asymmetry noticed by Prieto and Rigau (2007) concerning alternative questions. Apparently, they can only be headed by *que* if what is alternated is the whole VP (48b, 48c) and are infelicitous if polarity particles are alternated (cf. 48a).

- (48) a. *#Que vens a dinar si o no?*
 QUE come to eat dinner yes or no
 ‘Are you coming for dinner, yes or no?’
 b. *Que vens a dinar o no?*
 QUE come to eat dinner not
 ‘Are you coming to dinner or not?’

- c. Que ets gran o petit?
 QUE are big or small
 ‘Are you big or small?’

Even though I will not go into detail here, it is worth mentioning that the same pattern can also be observed in Austrian German PQs with the modal particle *leicht*. My intuition is that the particle is felicitous in PQs if the speaker has contextual evidence in favor of a positive answer⁷. Just as *que*, it is not acceptable in alternative questions where polarity particles are alternated (49a) but is felicitous if the VP is alternated (49b, 49c). In these case the contradictory alternative has to be introduced by *doch*.

- (49) a. Kommst du #leicht abendessen, ja oder nein?
 come you LEICHT eat dinner yes or no
 ‘Are you coming for dinner, yes or no?’
 b. Kommst du leicht abendessen oder #(doch) nicht?
 come you LEICHT eat dinner or DOCH not
 ‘Are you coming for dinner or not?’
 c. Bist du leicht groß oder #(doch) klein?
 are you LEICHT big or DOCH small
 ‘Are you big or small?’

Zobel (2015) noted that for alternative questions where the alternatives are not mutually exclusive, PQs with *leicht* are interpreted differently than the corresponding version without *leicht*. Consider the examples in (50).

- (50) a. A: Hast du Deutsch oder Englisch studiert? B: Deutsch/Englisch. #Ja/#Nein.
 have you German or English studied German/English Yes/No
 ‘A: Did you study German or English? B: German./English. #Yes./#No.’
 b. A: Hast du leicht Deutsch oder Englisch studiert? B: #Deutsch./#Englisch.
 have you LEICHT German or English studied German/English
 Ja./Nein.
 Yes/No
 ‘A: Did you study German or English? B: #German./#English. Yes./No.”

It seems to me that while (50a) without *leicht* is a truly alternative questions, asking which of the two alternatives is true, (50b) receives a normal PQ interpretation, asking whether it is the case that either one of the two alternatives are true (cf. Romero and Han 2003).

- (51) a. **Reading (50a):** Which of these two subjects did you study: German or English?
 b. **Reading (50b):** Is it the case that you studied any of the two subjects: German or English?

Moreover, (50a) is uttered with a typical alternative question intonation where each alternative is stressed. In this case a natural answer is either of the two alternatives. It is infelicitous to answer with a polar particle. In (50b) the intonation is different. The two alternatives form a prosodic unit and only the final element is stressed. In this case polar particles but not either of the alternatives

⁷For a different proposal see Zobel (2015).

are felicitous answers. It is possible to force the PQ interpretation also for (50a) by uttering it the same intonation as (50b). In this case polarity particle become felicitous answers. Going back to the examples above, (48a) and (49a) clearly constitute alternative questions whereas (48b), (49b), (48c and (49c) can admit a normal PQ-interpretation. This means that the generalization is that *que* and *leicht* are infelicitous in alternative questions and, as expected, felicitous in PQs.

Finally, although I will not offer a formal analysis at this point, I will briefly sketch two possible ways to account for this fact. I believe that this pattern actually supports the function I suppose that *leicht* has. I claimed that it is felicitous in a context where the speaker has evidence for a positive answer. If we assume a semantics for PQs where its propositional content are its polar alternatives p and $\neg p$ we could hypothesize that for PQs with *leicht* p is rendered more prominent than $\neg p$ through the presence of *leicht*. In alternative questions that disjoin mutually exclusive alternatives, both p and $\neg p$ must be considered equally possible options. This is not compatible with the idea that in PQs with *leicht* p and $\neg p$ are unbalanced in favor of p . It might also be possible to extend this argumentation to *que*.

Still another way to account for the incompatibility of *que* with alternative questions could be to treat these types of questions not as PQs but as Wh-questions (cf. the readings in 51). Since *que* is not felicitous in Wh-questions, it would follow naturally, that it is also infelicitous in alternative questions.

- (52) Wo kommst du leicht her?
 where come you LEICHT from
 ‘Where do you come from?’

Unfortunately this account cannot be trivially extended to *leicht*, since the particle is felicitous in Wh-questions (cf. 52).

3 Root Clause Complementation

In Catalan the complementizer can appear in different root-clause context in addition to its licensing in PQs discussed in 2. Consider the examples in (53) (repeated from 3 in section 1). In (53b) and (53c) it introduces declaratives, in (53a) a wh-question and in (53e) a PQ. In (53d) it heads a directive clause.

- (53) a. A: Què fa la Tecla? B: Què m' has preguntat? A: Que què fa la Tecla?
 what does the Tecla what CL.1S have asked QUE what does the Tecla
 'A: What does Tecla do? B: What did you say? A: (I said) what does Tecla do?'
- b. Vinga, home! Que és el final.
 come on man QUE is the final
 'Come on, man! It's the Final.'
- c. Segur que és aquesta, la solució.
 sure QUE is this the solution
 'Surely this is the solution.'
- d. Un altre whisky, si us plau. Que sigui doble.
 a other whisky please QUE be.SUBJ double
 'Another whisky, please. Make it a double.'
- e. Que tens pressa?
 QUE have stress
 'Are you stressed out?'

Root-clause-*que* is not restricted to one complementizer per clause but actually multiple *que* can appear in one and the same sentence (cf. 54). The first clause in (54) is a Wh-exclamative. *Que puta* is the degree modifier i.e. the first *que* is a wh-pronoun associated with the NP *puta* and not a complementizer. This phrase is however followed by a root complementizer. The second clause is a declarative and contains two root-complementizers. The first one introduces the clause and the second one is part of the Adv+C construction that consists of the epistemic adverb *segur* followed by the complementizer.

- (54) Que puta que és la vida! Que segur que estàs carregada de fills.
 how whore QUE is the life QUE sure QUE are loaded of children
 'How fucked up is life! Surely you have a whole herd of kids!'

There are two core properties of root clause complementation. One is that *que* appears in root contexts and apparently does not carry out its prototypical function as a subordinating element. The second characteristic is that root-*que* is licensed in all types of clauses. In the present section I will approach the phenomena from a descriptive perspective and show that different functions must be assumed for *que* within and across clause types.

3.1 *Que* in Declaratives

As I have shown before, *que* is licensed in declaratives.

-
- (55) a. Vinga, Bernat. Que això no són bromes.
 come Bernat QUE this not are jokes
 ‘Come on, Bernat. This is not a joke.’
- b. esclar que se ’l troba a faltar, al Comandante, però només Déu sap
 is-clear QUE CL.REFL CL.3S find at miss at the Comandante but only God knows
 com està.
 how is
 ‘Clearly, El Comandante [Fidel Castro] is missed, but only God know how he is.’
- c. Si que feia temps, que no s’havien vist.
 VERUM QUE made time that not each other had seen
 ‘It HAS been a long time since they saw each other.’

In (55a) *que* is the first element of a root declarative. I will use the term initialC to refer to this construction. In (55b) and (55c) *que* follows an adverb or particle. In (55b) the adverb is an evidential, I will refer to this construction by Adv+C. In addition to evidential adverbs also epistemics are licensed (cf. 53c). In (55c) the first element of the clause is the polar particle *si*, this construction will be referred to by the term Aff+C. The three constructions exemplified in (55) receive a similar interpretation. The utterance content is presented as something that either has been mentioned before, or as something that is uncontroversial and both speaker and hearer agree on. In Adv+C the speaker additionally expresses his or her epistemic judgment towards the truth of p or indicates that she has evidence for p. In Aff+C *si* functions as a verum marker that stresses the polarity of the utterance. Sentences introduced by Aff+C or Adv+C are also grammatical if *que* is absent, however, the interpretation that arises is different. The examples below (56) illustrate the contrast of a clause headed by Adv+C versus a clause headed just by an epistemic adverbial.

- (56) a. En la botiga em van recomanar que em poses Linux en lloc de windows, però a
 in the shop me OST recommend that me put Linux in place of windows but at
 l’aparador tenien etiquetes de Linux. Segur que ho van fer per interès.
 the show window had stickers of Linux sure QUE it PST do for interest
 ‘In the shop they recommended that I should use Linux instead of Windows, but in the
 shop windows they had Linux etiquettes. Surely they said that out of their own peculiar
 interests.’
- b. [...] [a] França s’arriba a un total de 90.000 jueus morts, gairebé una quarta part
 in France CL reach at a total of 90.000 Jews killed almost a quarter part
 del total de la població jueva d’abans de la guerra. Certament, a Holanda
 of the total of the population Jewish from before of the war certainly in Holland
 els jueus morts foren el 75% del total, ara bé, a França la xifra hauria
 the Jews killed were the 75% of the total however in France the number would have
 estat molt més baixa sense la col·laboració de Vichy.
 been much more low without the collaboration of V.
 ‘In France the total number of killed Jews reaches 90.000, which is almost a quarter of
 the Jewish population before the war. Certainly, in Holland the killed Jews constituted
 75% of the total. However, in France the number would have been much lower without the
 collaboration of Vichy.’

In the Adv+C example in (56a) the conclusion that the owners of the shops recommended Linux merely for their own peculiar interests is marked by *que* as uncontroversial and something the hearer will agree on. The speaker explicitly motivates why she believes that the owners are partial to Linux: they display Linux stickers in their shop window. This information is shared with the hearer. Therefore the speaker can use *que* in this context, since she can assume that the hearer arrives at the same conclusion given evidence for the owner's preference for Linux over Windows.

(56b) is different. The content of the sentence modified by *certament*, i.e. the percentage of killed Jews in Holland, is not mentioned or implied by the context. On the contrary, the clause introduces a new idea and therefore something the speaker cannot presuppose. This is why in this case the adverb appears without *que*.

Both Adv+C and Aff+C are licensed in certain embedded context namely embedded under verbs of saying and in relative clauses. So far I could not find cases of embedded initialC. This could however be due to a phonological restriction, prohibiting the string *que que*, rather than for syntactic or pragmatic reason.

- (57) a. A nivell de relació de parella us haig de dir que evidentment que les
at level of relationship of couple you have to say that evidentially QUE the things
coses canvien.
change
'Concerning couples' relationships I have to tell you that evidentially things change.'
- b. Durant l'excavació es va trobar quatre dents i tres queixals d'adult.
during the excavation CL PST find four teeth and three wisdom teeth of adults
A més es van trobar diversos recipients ceràmics i un punxó que segur que
additionally CL PST find various containers ceramic and a punch that sure QUE
eren entregades com a ofrenes funeràries.
were given as grave goods
'During the excavation four common and three wisdom teeth were found, additionally
various ceramic containers and a punching device were found, which surely were donated
as funerary goods.'
- c. Al museu, mirant un dibuix de Manolo Hugué ha conegut una dona d'ulls
at the museum looking a drawing of Manolo Hugué has met a woman of eyes
nets, profunds i amb una punta de malícia, i ha pensat que potser d'aquesta
honest deep and with a hint of malice and has thought that maybe of this
dona si que se'n podria enamorar.
woman VERUM QUE CL CL could fall in love
'At the museum, while looking at a drawing of Manolo Hugué he met a woman with honest
and deep eyes and with a hint of malice and thought that maybe he COULD fall in love
with this woman.'
- d. El que han de fer és donar pas a aquells que si que tenim una política
the that should do is give way to those who VERUM QUE have.2P a politics
adequada per Catalunya i a més resulta que som la força política més
adequate for Catalunya and furthermore result that are.2P the power political most
votada a Catalunya.
voted in Catalunya

‘What they should do is give way to us how DO have the right politics for Catalonia and furthermore happen to be the most voted political force in Catalonia.’

The examples below illustrate another construction with *que* in declaratives. In these cases the interpretation is different to the one I postulated for initialC, Adv+C and Aff+C. In (58a) *que* marks the utterance headed by it as reported or *quoted* in the sense of Etxepare (2007). The speaker reports something someone else said. I adopt the term from Etxepare (2007) and call these types of constructions quotativeC. In the example the source of the utterance is the mother. This is evident because in the previous clause the mother’s speech act is explicitly spelled out by *la mare* [...] *va dir que* ‘mother said that’ and the quotativeC construction is linked to the same speech act.

In (58b) the clause headed by *que* is not interpreted as a quotation. I will call this construction insubordinateC.⁸ It has in common with quotativeC that the clause is interpreted to be linked to an implicit or contextually recoverable matrix clause. In the example below, for instance, the clause headed by *que* depends on the comparative clause (*estava*) *més guapa que* ‘was prettier than’.

- (58) a. Tenia ganes de començar o amb el rus o amb l’arameu, però la mare
 wanted to start either with the Russian o with the Aramenaic but the mother
 va entrar a l’habitació i va dir ni parlar-ne. Que ja estava bé amb
 PST enter to the room and PST say not even talk about it QUE already was well with
 aquelles llengües que sabia però que havia de fer una altra cosa a la vida i no
 these languages that knew but QUE had to do something else in the life and not
 anar aprenent llengües com un lloro.
 go learning languages like a parrot
 ‘I wanted to start with Russian or Aramaic but my mother came into my room and said
 that’s out of question. That the languages I already knew were enough and that I had to
 do more with my life than just learning to speak languages like a parrot.’
 b. M’agradava, la Cecília, quan s’enfilava. Encara estava més guapa. Més guapa que
 CL liked the Cecília when CL climbed even was more pretty more pretty than
 la mare i tot. Que la mare en aquella època.
 the mother and all QUE the mother in that times
 ‘I found Cecília attractive as she climbed the stairs. She was even prettier... even prettier
 than my mother and all. (Prettier) Than my mother in those times.’

Clauses introduced by insubordinateC as well as quotativeC can receive subjunctive verbal mood. This once again shows that they are in fact dependent on a matrix clause. In (59) the insubordinateCs heads relative clauses, which receive subjunctive mood because they modify a non-specific indefinite DP. Clauses headed by quotativeC are subjunctive when the clause constitutes an embedded directive (cf. 69a in 3.3.).

- (59) Ha de ser un home intel·ligent, que tingui èxit, i amb una vida pròpia i intensa.
 has to be a man intelligent that has.SUBJ success and with a life own and intense
 Que no estigui pendent d’ella. Que viatgi, i que (no cal que sigui
 QUE not is.SUBJ dependent of her QUE travels.SUBJ and QUE not is necessary that is.SUBJ
 gaire d’amagat) tingui altres dones, a més d’ella.
 any of secret has.SUBJ other women in addition to her

⁸This terminology is inspired by Evans (2007), who uses the term *insubordinate clauses* to describe similar phenomena.

‘It has to be an intelligent man who is successful and has his own intense life. Who does not depend on her. Who travels and who (no need to make this a secret) has other women apart from her.’

Although quotativeC and insubordinateC have very similar properties, so far this link has not been established. In both of them the clauses introduced by *que* are generally also grammatical if *que* is omitted⁹, however the interpretation once again might differ.

- (60) (Que) el Barça ha guanyat la Champions.
 QUE the Barcelona has won the Championsleague
 ‘Someone said that Barcelona has won the Champeonchip.’ (with *que*)
 ‘Barcelona has won the Champeonchip.’ (without *que*)
- (61) ‘Volver’ es una de les pel·lícules que vaig veure amb en Jordi. (Que) no ens va agradar
 Volver is one of the movie that PST watch with the Jordi QUE not us PST like
 gaire.
 at all
 ‘Volver’ is one of the movie I watched with Jordi. (One of the movies) we didn’t like at all.’
 (with *que*)
 ‘Volver’ is one of the movie I watched with Jordi. We didn’t like it at all.’ (without *que*)

The difference between (60) with and without quotative *que* is that in the first case, the speaker reports that Barcelona won and indicates that she gathered the news from someone. In the second case the speaker does not indicate the fact that she acquired the information through an external source but presents it as her own knowledge.

In (61) the relative clause is restrictive. The interpretation of the sentence is that the hearer already knows that the speaker and Jordi watched movies together. In the version where the second sentence is introduced by insubordinate *que*, this sentence is also interpreted as a relative restricting the set of movies. Again, that there were some movies Jordi and the hearer didn’t like is not news to the hearer but is already known to him. Contrarily, when the second sentence is not introduced by *que*, it is not interpreted as a relative clause containing some information that is already known. It is an assertion that introduces new information.

There are also differences in the interpretation between intialC, Adv+C and Aff+C on the one hand and quotativeC and insubordinateC on the other hand. In the first three constructions the interpretation that the clause headed by *que* is presupposed, is associated with the complementizer itself. In the latter two constructions the meaning that arises is linked to an implicit or recoverable matrix clause. Therefore in quotativeC and insubordinateC the function of *que* does not differ from that of a complementizer in an embedded context. The perspective I will adopt is that here *que* is an ordinary complementizer and that root complementation in these cases is only apparent because the matrix clause is not spelled out.

⁹An exception are insubordinate and quoted subjunctive clauses like the ones in (59).

3.2 *Que* in Interrogatives

As has been discussed at length in section 2., *que* appears in PQs and contributes discourse pragmatic meaning. I will call these constructions interrogativeC.

- (62) Que passa res?
QUE happens nothing
'Is something up?'

Since the results of the experiment discussed in 2.4. were not conclusive, I can only offer a tentative analysis. I argued that *que* is licensed if there is contextual evidence supporting a positive answer. My proposal is that *que* in interrogativeC has essentially the same function as in initialC, Aff+C and Adv+C. In section 5.3 I present an analysis to account for all of these constructions in the same way. QuotativeC can also introduce PQs (63a). In these cases in addition to *que* also the interrogative complementizer *si* is present. This is also an option in truly embedded interrogatives in Catalan illustrated in (63b). The presence of both complementizer is further support for the idea that clauses headed by quotativeC are truly embedded and therefore must be associated with a different structure than initialC, Adv+C, Aff+C and interrogativeC.

- (63) a. —Ets feliç? [...] —Què. —Que si ets feliç. —No. I tu? —Tampoc.
are happy what QUE SI are happy no and you neither
'Are you happy? [...] -What? -Whether you are happy. -No and you? -Neither am I.'
- b. Aquests dies la gent em pregunta que si m'agrada la política.
these days the people me ask that whether me like the politics
'Lately people ask me whether I like politics.'

Moreover quotativeC can also head wh-questions cf. (64).

- (64) a. A: Què fa la Tecla? B: Què m' has preguntat? A: Que què fa la Tecla?
what does the Tecla what CL.1S have asked QUE what does the Tecla
'A: What does Tecla do? B: What did you say? A: (I said) what does Tecla do?'
- b. La mare, que què t' has cregut?
the mother QUE what CL.2S have thought
'The mother (said) what were you thinking?'

Once again in both types of constructions the clauses are also grammatical without *que*, however the resulting interpretations are different.

3.3 *Que* in Imperatives

Catalan marks imperative clauses directed to the hearer(s) by verbal mood as well as verbal movement to a clause initial position. This movement analysis finds empirical support through the position of weak pronouns. They are proclitic in indicative (65b, 65d) and enclitic in imperatives (65a, 65c).

- (65) a. Renta't les mans.
wash.IMP yourself the hands
'Wash your hands! (informal)'

- b. Et rentes les mans.
yourself wash.IND the hands
'You are washing your hands. (informal)'
- c. Renti's les mans.
wash.IMP yourself the hands
'Wash your hands! (formal)'
- d. Es renta les mans.
yourself wash.IND the hands
'You are washing your hands. (formal)'

In jussive clauses, i.e. imperatives directed not to the hearer(s) but towards a third party, *que* and a subjunctive mood on the verb are obligatory (cf. 66a, 66b). The term used in the literature to refer to this construction is jussiveC (cf. Villa-García 2015).

- (66) a. Que torni els 110.000, ja.
QUE return.SUBJ the 110.000 already
'He should return the 110.000 already!'
- b. Que governin!
QUE govern.SUBJ
'They should govern!'

The complementizer can only be omitted in idiomatic cases like *visca* 'long live' in (67a).

- (67) a. Visca l' Entente! Que morin els imperis centreeuropeus!
live.SUBJ the Entente QUE die.SUBJ the empire central European
'Long live the Entente! May the central European empire die!'

In the jussive construction the verb remains lower than in the imperative since here we observe proclisis.

- (68) Que es renti les mans!
QUE himself wash the hands
'He should wash his hands.'

JussiveC contrasts with the other constructions. On the one hand *que* is obligatory, so its omission results in ungrammaticality. On the other hand it does not attribute any discourse pragmatic meaning but merely marks the clause as imperative.

QuotativeC can head hearer-directed (69a) as well as non-hearer-directed imperatives (69b). In these cases, just as in embedded imperatives, the verbal mood is subjunctive (69c).

- (69) a. —Fugiu. —Què heu dit? —Que fugiu.
flee.IMP what have said QUE flee.SUBJ
'-Flee!. -What did you say? -That you should flee.'
- b. El mecànic li diu que ha de parlar amb ell personalment. Que hi passi.
the mechanic him tells that has to talk to him personally QUE there passes
'The mechanic tells him that he has to talk to him personally. He should pass by.'
- c. Em va ordenar que digués el seu nom davant vostre.
me PST order that say.PST.SUBJ his name in front of you
'He ordered me to say his name in front of you.'

3.4 *Que* in Exclamatives

For the present work, in line with [Zanuttini and Portner \(2003\)](#), I consider exclamatives a clause type of its own. The relevant exclamatives contain a *wh*- or degree operators operating on an adjective or adverb (cf. 70a) or an NP (cf. 70b). These elements appear in the left periphery. In Catalan, *que* appears immediately after the fronted element. Its presence is not obligatory but it renders a more emphatic reading. I will argue that *que* in exclamatives has a similar function as in initialC, Adv+C, Aff+C and interrogativeC namely that it marks that the proposition is presupposed. If, as [Zanuttini and Portner \(2000 2003\)](#) argue, the propositional content of exclamatives is presupposed, *que* in these cases simply highlights an aspect of meaning that is present anyways.

- (70) a. Que dolça que és la venjança.
 how sweet QUE is the revenge
 ‘How sweet revenge is!’
 b. Quins nervis que tenia la Marta.
 which nerves QUE had the Martha
 ‘What nerves Martha has!’

So far I could not find evidence for quotativeC or insubordinateC heading exclamatives. Note however that it is acceptable in Spanish (cf. 71). Given the very similar properties of quotativeC in Spanish and Catalan, one can hypothesize that it is also licensed in Catalan.

- (71) Que qué bonito día que hace.
 QUE what beautifully day QUE makes
 ‘What a pretty day it is!’ ([Demonte and Fernández Soriano 2014](#), 39)

3.5 Summary

In table 9. the results of the above sections is summarized. Initial-C as well as Adv+C and Aff+C are restricted to declaratives. InterrogativeC, jussiveC and exclamativeC, just as expected, only appear in the respective clause types. On the contrary quotativeC and insubordinateC is not sensitive to clause type.

	declarative	PQs	wh-questions	imperatives	exclamative
quotative/insubordinateC	✓	✓	✓	✓	?
jussiveC	X	X	X	✓	X
initialC	✓	X	X	X	X
Aff+C	✓	X	X	X	X
Adv+C	✓	X	X	X	X
interrogativeC	X	✓	X	X	X
exclamativeC	X	X	X	X	✓

Table 9: types of construction by clause type

4 Literature Discussion

In Romance linguistics, authors so far have focused on the properties of Spanish root clause *que*. The only account that discusses one of the Catalan phenomena more prominently is proposed by [Prieto and Rigau \(2007\)](#) and was discussed at length in section 2. In the present section I will primarily review the analyses proposed for Spanish root clause *que* and discuss to which extent they are applicable to Catalan *que*. Most of these accounts take a syntactic approach and are formulated within a cartographic framework. This theoretical approach is based on the assumption that the left periphery is split in a number of hierarchically ordered functional projections.

- (72) Force Top* Int Top* Foc Mod* Top* Fin IP
([Rizzi, 1997, 2001, 2004](#))

In section 4.1 I evaluate the previous analyses from the literature and motivate the modified structures I defend based on the analyses proposed by other authors. Below, I anticipate my own analyses. A more thorough discussion and motivation for my analyses follows in 5.4.

Outline of my Analyses The root clause complementation constructions described in Catalan show distinct syntactic properties. These properties suggest that the complementizer is merged in different projections. QuotativeC and insubordinateC can head all types of clauses that have embedded properties. The omission of the complementizer does not yield ungrammaticality but alters the interpretation. I will use the term **embedding *que*** to refer to these two constructions in the rest of this work. They occupy a high position in the left periphery which I identify with ForceP. I assume the analyses in 73.

- (73) Embedding *que*:
- a. QuotativeC:
 $[_{\text{ForceP}} \text{ Que}] [_{\text{TopP}}] [_{\text{IntP}} \text{ sí}] [_{\text{TopP}}] [_{\text{FocP}}] [_{\text{ModP}}] [_{\text{MoodP}}] [_{\text{TopP}}] [_{\text{FinP}}] [_{\text{IP}} \text{ ets felic.}]$
 (structure of 63a in section 3.2)
 - b. InsubordinateC:
 $[_{\text{ForceP}} \text{ Que}] [_{\text{TopP}}] [_{\text{IntP}}] [_{\text{TopP}}] [_{\text{FocP}}] [_{\text{ModP}}] [_{\text{MoodP}}] [_{\text{TopP}}] [_{\text{FinP}}] [_{\text{IP}} \text{ viatgi [...]}]$
 (structure of 59 in section 3.1)

In contrast to this, jussives or optatives headed by *que* (hence **directive *que***) are ungrammatical if the complementizer is omitted. In this construction the complementizer does not seem to contribute any special meaning. I proposed an analysis where it functions as a clause typer and is merged in MoodP (cf. the structure in 74).

- (74) Directive *que*:
 $[_{\text{ForceP}}] [_{\text{TopP}}] [_{\text{IntP}}] [_{\text{TopP}}] [_{\text{FocP}}] [_{\text{ModP}}] [_{\text{MoodP}} \text{ Que}] [_{\text{TopP}}] [_{\text{FinP}}] [_{\text{IP}} \text{ governin!}]$ (structure of 66b in section 3.3)

I group all the other constructions under the label **presuppositional *que***, motivated by the shared interpretation. *Que* is externally merged in FinP and subsequently moves up in the left periphery and occupies different projections in all these superficially different constructions (cf. the structures in 75).

Here too the omission of the complementizer has consequences on the interpretation but not in the grammaticality of the clause.

(75) Presuppositional *que*:

a. InitialC:

[_{ForceP} (*Que_i*)] [_{TopP}] [_{IntP}] [_{TopP}] [_{FocP}] [_{ModP}] [_{MoodP}] [_{TopP}] [_{FinP} (*t_i*)] [_{IP} *això no són bromes.*] (structure of 56a in section 3.1)

b. AdvC:

[_{ForceP}] [_{TopP}] [_{IntP}] [_{TopP}] [_{FocP}] [_{ModP} *segur que_i*] [_{MoodP}] [_{TopP}] [_{FinP} *t_i*] [_{IP} *ho van fer per interès*] (structure of 55b in section 3.1)

c. AffC:

[_{ForceP}] [_{TopP}] [_{IntP}] [_{TopP}] [_{FocP}] [_{ModP}] [_{MoodP} *Si que_i*] [_{TopP}] [_{FinP} *t_i*] [_{IP} *feia temps, que no s’havien vist.*] (structure of 55c in section 3.1)

d. ExclamativeC:

[_{ForceP}] [_{TopP}] [_{IntP}] [_{TopP}] [_{FocP} *Que dolça que_i*] [_{ModP}] [_{MoodP}] [_{TopP}] [_{FinP} *t_i*] [_{IP} *és la venjança.*] (structure of 70a in section 3.4)

e. InterrogativeC:

[_{ForceP}] [_{TopP}] [_{IntP} *Que_i*] [_{TopP}] [_{FocP}] [_{ModP}] [_{MoodP}] [_{TopP}] [_{FinP} *t_i*] [_{IP} *passa res?*] (structure of 62 in section 3.2)

4.1 Previous Analyses

In this section I discuss the most important analyses proposed for each type of construction in the research literature and relate them to the analysis I adopt, which I summarized in the previous section.

4.1.1 QuotativeC

QuotativeC has received the most attention. Etxepare (2007, 2008, 2010) proposes to treat *que* in these contexts as quotative marker. Demonte and Fernández Soriano (2014) revisit Etxepare’s data. They observed systematic contrasts. Based on that they conclude that two different types of *que* and consequently two different types of constructions should be assumed.

(76) a. *Que* *mañana* *no* *hay* *clase*.

QUE tomorrow not there is class

‘Tomorrow there will be no class (I just heard).’ (Demonte and Fernández Soriano 2014, 16)

b. *Y* *él*, *que* *llegábamos* *tarde*, *que* *no* *se* *podía* *salir* *con* *nosotros*...

and he *QUE* arrive late *QUE* not CL could go out with us

‘And he kept on saying that we were late, that you cannot meet up with us...’ (Demonte and Fernández Soriano 2014, 30)

According to Demonte and Fernández Soriano (2014), the first type (cf. 76a) marks reported evidentiality and therefore doesn’t constitute a complementizer. They analyze it as merged in Speech Act

Phrase (SAP) (cf. [Speas and Tenny, 2003](#)), a projection dedicated to the management of pragmatic roles and illocutionary forces assumed above ForceP (cf. the discussion in section 5.1.1). In the second type, *que* constitutes a proper complementizer selected by a silent verb of saying and is merged in ForceP. The contrasts they observed are summed up in table 10.

	type I	type II
out-of-the-blue context	✓	X
restricted to declaratives	✓	X
narrow scope with negation and disjunction	✓	X
limited to 3S antecedent	✓	X
can be fragmented, onomatopoeic or loan word	X	✓
agent, source of information can be expressed overtly	X	✓

Table 10: evidential *que* vs. echo *que* ([Demonte and Fernández Soriano 2014](#))

The authors state that propositions introduced by the first but not the second type can be uttered out of the blue, while in the other case a linguistic antecedent must be given in the context. QuotativeC in Catalan cannot be uttered out-of-the-blue either, since we have seen that an implicit or recoverable matrix clause must be present in the context. The first type is restricted to declaratives, while the second one is not sensitive to clause type. Once again Catalan quotativeC pairs with type II (cf. [79b](#) and [79a](#)). In type I, when the complementizer is preceded by a negation, the only possible interpretation is the negation of the propositional content but not the negation of the evidential meaning. On the contrary, in the second type it is possible to negate the speech act (cf. [77](#)). Catalan quotativeC behaves like type II again (cf. [79c](#)).

- (77) (Oye) que el Barcelona ha ganado la Champions, no que se ha acabado el
listen QUE the Barcelona has won the Championsleague not QUE CL has ended the
mundo.
world
'Listen, I just said that Barcelona has won the Champions not that the world has come to an
end.' ([Demonte and Fernández Soriano 2014](#), 34)

Furthermore, the first type only admits third person singular antecedents while in the second type any person, even oneself, can be the source of the quoted utterance. Catalan quotativeC also behaves like that. See ([79a](#)) for a case of self-quotation. In addition to that in type II but not type I proposition can be fragmented or onomatopoeic. This is illustrated in ([78](#))

- (78) Que mañana / que post- / que oui / que ja
QUE tomorrow QUE post- QUE oui QUE ha ([Demonte and Fernández Soriano 2014](#), 36)

Finally, in type II the source of the information can be spelled out, this is also the case in Catalan (cf. [79b](#) repeated from [53a](#) in section 3).

- (79) a. A: Què fa la Tecla? B: Què m' has preguntat? A: Que què fa la Tecla?
what does the Tecla what CL.1s have asked QUE what does the Tecla
'A: What does Tecla do? B: What did you say? A: (I said) what does Tecla do?'
b. La mare, que què t' has cregut?
the mother QUE what CL.2s have thought

‘The mother (said) what were you thinking?’

- c. Et vaig dir que m’havia semblat bé. No que m’hagués agradat.
 you PST say that me had seemed well not QUE me had.SUBJ liked
 ‘I told you it seemed good to me. Not that I liked it.’

In sum, Catalan quotativeC pairs with type II in the mentioned properties. No evidence for the existence of Demonte and Fernández Soriano’s type I has been found in Catalan so far.

Parallel to Demonte and Fernández Soriano’s proposal, I analyze the Catalan quotativeC as an insubordinate clause (cf. Evans, 2007) selected by a silent predicate. *Que*, therefore, constitutes a true complementizer that heads the clause and is merged in ForceP. Further evidence for assuming *que* in the highest projection stem from the fact that it precedes elements that are assumed in relatively high projections in the left periphery. Qh-pronouns (79a, 79b) are generally assumed in FocP and the interrogative complementizer *si*, that quotativeC also precedes (cf. 63a) is assumed even higher in IntP.

$$(80) \quad [_{\text{ForceP}} \text{ que}] [_{\text{TopP}}] [_{\text{IntP}} \text{ sí}] [_{\text{TopP}}] [_{\text{FocP}} \text{ què}] [_{\text{ModP}}] [_{\text{TopP}}] [_{\text{FinP}}] [_{\text{IP}}]$$

This analysis can furthermore be extended to account for insubordinateC, discussed in section 3.1., which to my knowledge has not been studied so far. Here too *que* constitutes a true complementizer embedding a clause depending on an implicit or explicit antecedent.

4.1.2 JussiveC

Jussive and optative *que* in Catalan have not been studied systemtically either.

- (81) a. Que guanyi el Barça!
 QUE win.SUBJ the Barça
 ‘May Barça win!’ / ‘Barça should win!’
 b. Que en prengui nota qui vulgi.
 QUE CL take.SUBJ notes who wants.SUBJ
 ‘Whoever wants to should take notes.’

So once again I evaluate whether to the cartographic analysis of the Spanish counterpart proposed by Demonte and Fernández Soriano (2009, 2014) can be extended to Catalan. They show that distributional facts support an analysis of *que* in FinP. FinP in this analysis is associated with imperative mood and triggers the movement of the verb to its specifier, when the verb possesses a strong interpretable feature expressed by the imperative morphology. In third person directives the verb is not equipped with these features because it lacks imperative morphology. *Que* is merged as a last resort operation. JussiveC in Catalan behaves the same as in Spanish. This makes it possible in principle to adopt Demonte and Fernández Soriano’s analysis. However, in my analysis, detailed in section 5.4, predicts that a complementizer in FinP provokes a special interpretation of the proposition that is not present in jussives or optatives. Instead I propose that *que* in these contexts is merged in Lohnstein’s MoodP functioning as a clause typer.

- (82) Directive *que*:

$$[_{\text{ForceP}} \cdots [_{\text{MoodP}} \text{ que} \cdots [_{\text{FinP}} [_{\text{IP}} \cdots]]]]$$

4.1.3 Adv+C and Aff+C

Adv+C (83a) and Aff+C (83b) have similar characteristics. In both of them a complementizer is preceded by an element that is associated either directly or indirectly with the assessment or evaluation of the truth of a proposition.

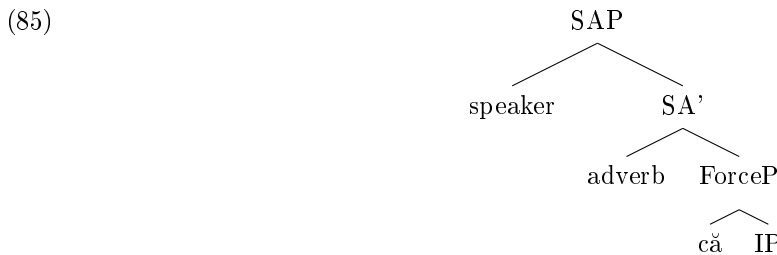
- (83) a. Segur que ell no entendria que ella sentís llàstima, però és el que sent.
 sure QUE he not would understand that she feels pity but is that that feels
 ‘Surely he wouldn’t understand why she feels pity, but that is indeed what she feels.’
- b. El PP no té programa, però sí que té un pla.
 the PP not has programm but VERUM QUE has a plan
 ‘The PP doesn’t have a (party) programm, but it DOES have a plan.’

Verum focus in Aff+C stresses that the speaker considers the propositional content to be true (cf. Höhle 1992). Epistemic adverbs express judgments on the probability and possibility of a proposition (cf. Cornillie 2009, Palmer 2001). Evidentiality marks the source of information of an utterance (Aikhenvald 2004) and implies different degrees of commitment to the truth of the proposition.¹⁰ From a diachronic perspective at least in Spanish there is evidence that Aff+C is the historical source of Adv+C (Kocher view).

The two constructions are also similar on a structural level. Both of them are restricted to appear in the left periphery and the complementizer and the preceding element must be adjacent. Hill (2007a) suggests an analysis for Adv+C in Romanian.

- (84) Sigur că va veni. (rom.)
 sure QUE will come
 ‘Surely he will come.’ (Hill 2007a)

She adopts Speas and Tenny’s SAP¹¹ above Rizzi’s split CP. She assumes the complementizer merged as the head of ForceP and the preceding epistemic adverb *sigur* in SAP.



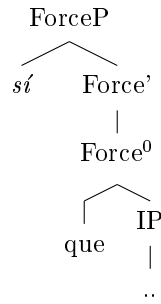
A similar analysis has also been proposed for Italian Adv+C (?).

For Spanish Aff+C Hernanz (2007) proposed the following structure. Once again the complementizer is merged as the head of ForceP and *sí* is assumed in its specifier.

¹⁰See also for other definitions of epistemic modality and evidentiality and the semantic relation between them in Auwera and Plungian (1998), Dendale and Tasmowski (2001) and Palmer (2001). See Cornillie (2009) or Kocher (2014) for a discussion of the conceptual differences of the definitions.

¹¹A discussion of Speas and Tenny (2003) is given in section 5.1.1.

(86)



The analyses make similar predictions since both assume a very high projection on the edge of the left periphery as the host of the complementizer and the preceding element. One would therefore expect that no phrases that are assumed below ForceP should precede Aff+C or Adv+C. The data below show that this prediction is not born out in Catalan. Adv+C and Aff+C can be preceded by clitic left dislocated topics.

- (87) a. [TopP A aquest]_i sí que li_i agrada el poder.
to this-one VERUM QUE CL pleases the power
'This one DOES like power.'
- b. [...] i ha pensat que potser [TopP d'aquesta dona]_i sí que se 'n_i
and has thought that maybe of this woman VERUM that CL.REFL CL.PART
podria enamorar.
could fall in love
'And he has thought that maybe it was true that he could fall in love with this woman.'

Furthermore both constructions can be embedded under verbs of saying (88a) and in relative clauses (88b). This is problematic if the analyses proposed by Hill (2007a) and Hernanz (2007) were assumed for Catalan, since in both cases the embedding complementizers and the complementizer of Adv+C and Aff+C would compete for the same position.

- (88) a. Truco a telefònica i em diuen que si que em donen de baixa de facturació de
call at telephone and me tell that VERUM QUE me reduce of billing of
ADSL.
ADSL
'I call them on the phone and they tell me that they WILL reduce my ADSL bill.'
- b. A banda d'aquest dissentiment inicial, hi ha dos partits de l'oposició que
at side of this disagreement initial there are two parties of the opposition that
si que la votaran afirmativament.
VERUM QUE it vote affirmative
'Concerning this initial disagreement there are two parties of the opposition that WILL vote in favour of it.'

This shows that neither Hill's analysis of Adv+C nor Hernanz's proposal for Aff+C can account for the cognate constructions in Catalan. The data above indicate that Catalan Adv+C and Aff+C must be assumed in the lower section of the left periphery. I propose that in both construction the complementizer starts out in FinP and subsequently moves to the head of the projection the adverb or verum marker occupies. I assume Mod(*ifier*)P as the host of the epistemic and evidential adverbs

in line with Rizzi (2004), Giorgi (2010) and van Gelderen (2011) and MoodP as the host of the verum marker. This projection is associated with sentence mood and clause typing (cf. 4.1.2.). The link between mood and verum has been established by Lohnstein (2015), who proposes that verum focus is focus on sentence mood.

- (89) Aff+C: $[_{\text{ForceP}} \dots [_{\text{ModP}} \dots [_{\text{MoodP}} [\text{ sí }] [_{\text{Mood}'} [_{\text{Mood}^0} \text{ que}_i \dots [_{\text{FinP}} t_i [_{\text{IP}} \dots]]]]]]$
 Adv+C: $[_{\text{ForceP}} \dots [_{\text{ModP}} [\text{ segur }] [_{\text{Mod}'} [_{\text{Mod}^0} \text{ que}_i \dots [_{\text{MoodP}} \dots [_{\text{FinP}} t_i [_{\text{IP}} \dots]]]]]]$

My analyses build on the idea that both Adv+C and Aff+C share the interpretation that the proposition introduced by them is part of the common ground. I assume that this interpretation is linked to FinP (cf. section 5.3 for more discussion on this point). My analyses are compatible with the syntactic properties of Adv+C and Aff+C and can also account for the interpretive similarity observed in both constructions.

4.1.4 InitialC

So far initialC, i.e. the occurrence of *que* clause initially without a quotative or insubordinate interpretation, has not been studied in depth in Catalan.

- (90) Cosmètics com els desodorats són una important font de contaminació. Que cal
 cosmetic products like the deodorant are an important source of contamination QUE must
 estalviar aigua.
 save water
 ‘Cosmetic products like deodorants are an important source of contamination. We must save water.’
- (91) Que Catalunya s’ha format com a nació al llarg de deu segles.
 QUE Catalonia CL has formed as a nation at the course of ten centuries
 ‘Catalonia was formed as a nation at the course of ten centuries.’

Its Spanish counterpart has been described by Gras (2010) from a functionalist perspective. Corr (2015) compares different Ibero-Romance varieties and proposes a cartographic analysis. She uses two labels to refer to this type of complementizer: *exclamative que* and *conjunctive que*.

Corr (2015) does not specify reasons to assume two types of initialC and in the diagnostics that are systematically applied exclamative and conjunctive *que* pattern alike.¹² Corr (2015) adopts Haegeman’s 2014 modified version of SAP (Speas and Tenny 2003) and assumes exclamative *que* in SAlow and conjunctive *que* in SAhigh. Whether the complementizer is merged externally or internally in the dedicated positions is not addressed.

In my analysis initialC, Adv+C and Aff+C share the interpretation that the proposition is presupposed. In order to maintain the idea that this interpretation is systematically associated with FinP, Corr’s analysis is only tenable if one assumes external merge of *que* in FinP and possibly a subsequent movement to SAP.

- (92) InitialC: $[_{\text{SAP}} [(\text{que}_i)] \dots [_{\text{ForceP}} \dots [_{\text{FinP}} \text{ que}/(t_i) [_{\text{IP}} \dots]]]]$

¹²The only exception is the co-occurrence with “*discourse activating particles*”. However the particles that are used to motivate the contrast are not the same. For exclamative *que*, which supposedly follows these types of particles, she resorts to *ay*. And for conjunctive *que*, that is not compatible with them, Corr (2015) discusses *oye*. This makes it hard to evaluate whether the contrast can be attributed to the structural difference underlying exclamative and conjunctive *que*, or to the different behavior of *oye* and *ay*.

4.1.5 ExclamativeC

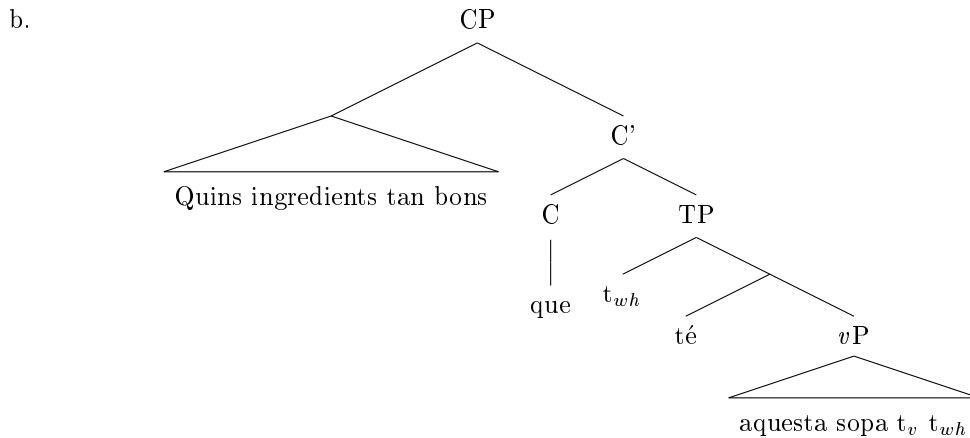
In Catalan wh-exclamatives the wh-phrase can be followed by *que*. [Castroviejo \(2006\)](#) investigates them along with other types of exclamatives. She also mentions the optional presence of the complementizer (cf. [93a, 93b](#) vs. [93c](#)).

- (93) a. Que dolça que és la venjança.
 how sweet QUE is the revenge
 ‘How sweet revenge is!’
 b. Que fill de puta que ets.
 how son of whore QUE are
 ‘What a dick you are!’
 c. Que fart n’estic, Déu meu.
 QUE fed up CL am God my
 ‘How fed up I am, Dear God!’

She does however not assume that the presence of the complementizer has an effect on in the interpretation of the exclamative clause. [Castroviejo](#) argues in a favor of a strong minimalist perspective assuming no semantic but only formal features in the left periphery. In her view the complementizer in exclamatives is a ‘*semantically vacuous item, namely the lexical realization of C^0* ’ ([Castroviejo 2006, 51](#)).

She proposes the syntactic analysis for (94a) given in (94b). The wh-phrase is merged vP internally and moves through the specifier of the TP to the specifier of the only CP in the structure. The complementizer is realized as the head of the same CP.

- (94) a. Quins ingredients tan bons que té aquesta sopa.
 which ingredients that well QUE has this soup
 ‘What great ingredients this soup has!’



[Demonte and Fernández Soriano \(2009, 2014\)](#) investigate Spanish wh-exclamatives and, contrary to [Castroviejo \(2006\)](#), once again adopt a cartographic approach. They assume *que* in FinP. The preceding XP headed by the wh-pronoun *que* has focal properties, which motivate an analysis as the specifier of FocP.¹³

¹³See also [Gutiérrez-Rexach \(2001\)](#) for a different approach on exclamatives.

I propose a similar analysis for Catalan wh-exclamatives. The assumption of *que* in FinP, marking its complement as part of the CG, is in line with the interpretation of wh-exclamatives. Many authors observed that the propositional content of exclamatives is factive, i.e. presupposed (for instance Zanuttini and Portner 2003, Castroviejo 2006, Cruschina 2015). Assuming the dislocated XP of an exclamative in FocP also finds support in the literature (cf. also Cruschina 2015). I additionally propose that the complementizer moves from FinP to FocP. I draw empirical support for this assumption from examples like the ones in (95), that show that the wh-phrase and *que* must be adjacent.

- (95) a. [_{FocP} *Que estrany] [_{TopP} al Jordi_i] [_{FinP} que] l_i‘hagin trucat però no a la Maria.
 b. [_{FocP} Que estrany que_j] [_{TopP} al Jordi_i] [_{FinP} t_j] l_i‘hagin trucat però no a la Maria.
 c. [_{TopP} Al Jordi_i,] [_{FocP} que estrany que_j] [_{FinP} t_j] l_i‘hagin trucat però no a la Maria.
 d. [_{FocP} Que estrany que_j] [_{FinP} t_j] l_i‘hagin trucat al Jordi_i però no a la Maria.
 how strange QUE CL have called to the Jordi but not to the Maria
 ‘How strange that they called Jordi but not Maria.’

A topic cannot intervene, which would be structurally possible if *que* remained in FinP, hence the ungrammaticality of (95a). Dislocated topics can however follow (95b) or precede (95c) the focalized phrase and *que* and finally are also acceptable in situ (95d). These properties are compatible with the analysis sketched in (96).

- (96) ExclamativeC:
 [_{ForceP} ... [_{TopP} (al Jordi) ... [_{FocP} [_{SpecFoc} que estrany] [_{Foc⁰} que_i] ... [_{TopP} (al Jordi) ... [_{FinP} t_i [_{IP} ...]]]]]]

4.1.6 InterrogativeC

The properties of *que* in PQs and their analysis in the literature have been discussed in detail in section 2.

- (97) a. Que no saps què vol dir prou?
 QUE not know what wants say enough
 ‘Don’t you know that enough is enough?’
 b. Que està fet de mantega, el meu fill?
 QUE is made of butter the my son
 ‘Are you trying to say, my son is a wimp?’
 c. Que passa res?
 QUE happens nothing
 ‘Is something up?’

Prieto and Rigau (2007) propose that *que* is merged in FinP. In their approach, the special interpretation that PQs with *que* receive is attributed to the presence of an interrogative operator in Force, which is realized by prosodic means. They assume that the presence of *que* is optional and that it does not contribute any particular meaning.

I adopt the idea that also in PQs *que* is externally merged in FinP. This is also plausible from a semantic point of view. The function of *que* in PQs can be reduced to the same core as *que* in initialC, exclamativeC, Adv+C and Aff+C (cf. section 5.4).

Prieto and Rigau (2007) assume a position in the low left periphery for interrogativeC, motivated by the fact that it can be preceded by topics. However, as I showed before, interrogativeC can also be followed by CLLD topics (examples 8 and 9 repeated in 98).

(98) [Context: Marta finds a bag of oranges in the kitchen. She asks her roommate:]

- a. [_{TopP} Les taronges [_{αP} que ... [_{IP} les vas comprar tu?]]]
 the oranges QUE them PST buy you
 ‘The oranges, did you buy them?’
- b. [_{αP} Que [_{TopP} les taronges ... [_{IP} les vas comprar tu?]]]
 QUE the oranges them PST buy you
 ‘The oranges, did you buy them?’

This once again suggest that the complementizer moves to a higher projection. Further research is necessary to determine the exact projection *que* reaches in PQs. For now, I assume IntP, as has also been claimed by Cruschina (2010) for Sicilian complementizers in PQs. This projection was assumed by Rizzi (2001, 2013) to host interrogative complementizers like *si* in Catalan. The analysis I tentatively assume for interrogativeC is given in (99).

(99) InterrogativeC:

[_{ForceP} ... [_{TopP} (les taronges) ... [_{αP/(IntP)} que_i ... [_{TopP} (les taronges) ... [_{FinP} t_i [_{IP} ...]]]]]

4.2 Summary

In the previous sections I presented the analyses for root clause complementizer constructions proposed in the literature. Since most of these analyses focused on Spanish, my main motivation was to determine to which extend they are compatible with the Catalan data. I defended some modifications to these analyses. Based on their syntactic and semantic properties, I propose that there are only three global types of root clause complementation constructions. In table 11, I summarize the core properties of these three types.

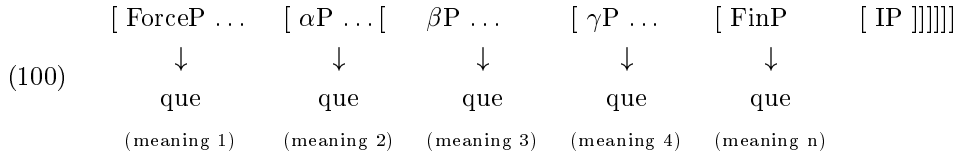
	externally merged	CT sensitive	grammatical without <i>que</i>
embedding <i>que</i>	ForceP	X	✓
directive <i>que</i>	MoodP	✓	X
presuppositional <i>que</i>	FinP	X	✓

Table 11: syntactic properties

In the next section 5, I present a unified analysis, synthesizing the insights and analyses discussed in the previous sections.

5 Towards a Unified Analysis

In the previous section I showed that there is a variety of phenomena involving *que* in root clauses. Depending on their interpretation and the clause types they appear in, I distinguished eight types that can be further synthesized based on their characteristics. InsubordinateC and QuotativeC, subsumed under the label **embedding *que***, show parallel properties and behave similar to subordinating complementizers. I proposed that they are subordinate under an implicit or contextually recoverable matrix clause. Adv+C, Aff+C, initialC, exclamativeC and interrogativeC have a common component in their interpretation: the clause headed by them constitutes information that both the speaker and hearer can agree upon, i.e. that is presupposed, hence the label **presuppositional *que***. Finally in **directive *que***, which is restricted to jussive and optative clauses, the complementizer functions as a clause typer typing the clause as imperative. I showed that *que* occupies different projections in the left periphery. One question I will focus on in the present section is whether the positions occupied by the complementizer correlate with the meanings or functions that I distinguished.



Maintaining a strong syntactic view, one would expect a one-to-one correspondence between syntactic position and interpretation (cf. 100). In this view all the work is pushed towards syntax. The interpretation arises only in relation to the syntactic projection *que* occupies. This view remains compatible with different views on the lexical meaning of *que*. The first option could be to adopt a lexicalist perspective, assuming different lexical entries for different functions expressed by *que*. Most authors working on root-clause *que* in Spanish adopted this view (cf. for instance [Etxepare 2010](#), [Demonte and Fernández Soriano 2014](#), [Corr 2015](#)). Whether or not this is compatible with the strong syntactic view I sketched above depends on different assumptions. It could lead to its rejection if one argued that all the necessary functions are encoded in the semantics of the different linguistic items. However, it could also be paired with it, assuming that the relevant syntactic projection and each lexical item *que* have a shared feature they have to match for.

However, a contrary perspective on the meaning of *que* is also plausible. *Que* could be an underspecified element with a core meaning that is adapted or influenced by the properties of the syntactic projections it occupies, the clause type it appears in and/or the pragmatic context. This view is naturally compatible with the strong syntactic view. It could also be maintained independently if one assumes a stronger dependency on contextual factors.

The first explanation, relies on the idea that there are multiple homophonous *ques*, where each function or meaning is expressed by a different lexical item.

$$\begin{aligned}
(101) \quad & \llbracket que_1 \rrbracket = \text{meaning 1} \\
& \llbracket que_2 \rrbracket = \text{meaning 2} \\
& \llbracket que_3 \rrbracket = \text{meaning 3} \\
& \llbracket que_4 \rrbracket = \text{meaning 4} \\
& \dots \\
& \llbracket que_n \rrbracket = \text{meaning n}
\end{aligned}$$

The opposite perspective assumes that *que* is polyfunctional and its meaning depends on the (syntactic and/or pragmatic) context it appears in. *Que* has a core meaning and the nuanced interpretations are contributed by syntactic or pragmatic factors.

$$\begin{aligned}
(102) \quad & \begin{array}{rcll} & + \text{ context 1} & + \text{ (meaning of } \chi\text{P)} & = \text{ meaning 1} \\ & + \text{ context 2} & + \text{ (meaning of } \chi\text{P)} & = \text{ meaning 2} \\ \llbracket QUE \rrbracket & + \text{ context 3} & + \text{ (meaning of } \chi\text{P)} & = \text{ meaning 3} \\ & + \text{ context 4} & + \text{ (meaning of } \chi\text{P)} & = \text{ meaning 4} \\ & \dots & & \\ & + \text{ context n} & + \text{ (meaning of } \chi\text{P)} & = \text{ meaning n} \end{array}
\end{aligned}$$

The questions I pursue in the present section are the following:

1. Does *que* occupy different syntactic projections in different constructions?
2. Is there a one-to-one mapping between syntactic position and interpretation?
3. Are there multiple homophonous *ques*?
4. Is there one polyfunctional *que*?

In the following, I propose a unified analysis of the phenomena I have discussed so far. I will argue that the constructions fall broadly into three categories that I will discuss individually in sections 5.1, 5.2 and 5.3. In the first type *que* is an ordinary complementizer. The special interpretation of this type can be attributed to silent material. This view will be adopted for quotativeC and insubordinateC. In the second type *que* functions as a clause typer (jussiveC). The rest of the constructions are grouped together in the third type, where the interpretation cannot be attributed to a silent matrix predicate as above but must be linked directly to *que* itself. I will show that for these different constructions *que*'s contribution to the interpretation can be attributed to a single common meaning. The different nuances are due to the properties of the clause type they appear in or the co-occurrence with other linguistic elements expressing related semantic categories.

I will then proceed to present my main assumptions and develop analyses in section 5.4. I will focus on the features in the split CP that are responsible for the attraction of the complementizer, and eventually also for the interpretation of the proposition in its scope. In the last section 5.5, I argue that it is not coincidental that *que* in the root clause complementation constructions looks and behaves like a complementizer. I will draw parallels to embedded clauses and show that, here too, the complementizer occupies different positions in different constructions and that similar interpretations to the ones in root clause complementation constructions arise.

5.1 Embedding *que*

Demonte and Fernández Soriano (2014) propose an analysis of Spanish quotative *que* as a Force head.

In their analysis it constitutes a true complementizer selected by a silent verb of saying. This means that they assume a silent performative structure heading the CP.

An account in this vein is also tenable for the quotativeC data in Catalan and will be pursued in this work. The fact that - in this interpretation - *que* is not sensible to clause type and can even head wh and polar questions, supports the idea that *que* is merged high in left periphery. I'd like to extend the scope of this basic idea to also account for insubordinateC (cf. the second sentence in (103)). In this example the clause headed by *que* is not interpreted as a report of something someone else or the speaker uttered previously but it is linked to the previous matrix clause, dominating a relative clause. The clause headed by *que* is therefore interpreted as another relative clause depending on this same matrix clause.¹⁴

- (103) És gent que segur que has vist, però mai has passat un cap de setmana amb ells.
 is people that sure QUE have seen but never have passed a weekend with them
 Que segur que conèixes però que mai te ha convidat a casa seva.
 that sure QUE know but that never you has invited to house their
 'These are people who surely you have met but never have passed a weekend with. Who surely you know but who never have invited you over to their house.'

The general assumptions of my account are that *que* in Force marks that the clause is embedded. Since the matrix clause is not explicitly spelled out this signals to the hearer that it can be recovered. This is possible if the matrix clause can be retrieved from the context, for instance in the relative clause example above (103). There are also situations where no adequate matrix clause can be recovered from the context for instance in (104).

- (104) Que el Barça ha guanyat la Champions.
 QUE the Barcelona has won the Championsleague
 '(I said/somebody else said) that Barcelona has won the Championsleague.' (adapted from Demonte and Fernández Soriano 2014, 34)

In these cases the interpretation is that of a report. It is interpreted as a clause embedded under a performative structure encoding at least the pragmatic role of the speaker. In Demonte and Fernández Soriano (2014) this is modeled by assuming a silent verb of saying. The idea relies on the assumption that every sentence that is a speech act encodes information relevant to its speech-act-hood. A syntactic modeling of this idea is given in (105). For examples like (103) I propose a silent matrix clause (structure in 105a). For cases like (104) a silent speech act structure (structure in 105b) is assumed.

- (105) a. [_{ForceP₁} ... [_{FinP₁} [_{IP₁} És gent [_{ForceP₂} Que [_{ModP₂} segur que_i [_{FinP₂} t_i [_{IP₂} conèixes.]]]]]]]]
 b. [_{SAP} [_{ForceP} Que [_{FinP} [_{IP} el Barça ha guanyat la Champions.]]]]

At the present stage of my research, I am agnostic which account is chosen for the representation or encoding of speech act information. In the analysis of quotativeC defended in Demonte and Fernández Soriano (2014) (cf. section 4.1.1) the authors do not flesh out the theoretical details of their idea. In

¹⁴The example in (103) also shows that insubordinateC or quotativeC and Adv+C can co-occur, which indicates that they occupy different projections and express different functions.

subsection 5.1.1. I briefly discuss some of the approaches given in the literature. I leave it open for future research to determine which of the accounts proves most adequate.

5.1.1 Performative Hypotheses

Ross (1970) hypothesized that every sentence is a performative utterance, and that the illocutionary force of a sentence is encoded in its syntactic structure (see also Katz and Fodor 1963, Ross 1970, Sadock 1969, 1974). The version of transformational grammar adopted by the proponents of the performative hypothesis is based on the assumption that transformations do not change the meaning of sentence (cf. Katz and Postal 1964). This means that whatever meaning apart from the propositional content one attributes to a surface structure has to be encoded in its deep structure.¹⁵ Ross (1970) and various other authors assume the presence of a performative verb embedding the main clause in the deep structure, that expresses the illocutionary force. This performative verb is later deleted via a transformation termed *performative deletion*.

- (106) a. [_{DS} I tell you that I have a dog.]
b. [_{SS} ~~I tell you that~~ I have a dog.] (via *performative deletion*)
- (107) a. [_{DS} I ask you whether Q the exam is tomorrow.]
b. [_{SS} ~~I ask you whether~~ Is the exam tomorrow?] (via *performative deletion* and *subject auxiliary inversion*)

There are a number of arguments which have been mentioned in support of Ross' hypothesis. One of them stems from the fact that apparently there is a first person subject speaker and a second person object addressee encoded in sentence. Anaphors like the ones in (108a) and (108b) need to be bound by their antecedent in their binding domain. Therefore, the licensing of *myself* in (108b) and *yourself* in (108c) can be explained, if one assumes that the speaker and address are encoded syntactically.

- (108) a. Peter_i washed himself_i/her*self.
b. He sent a picture of myself in a swimsuit.
c. Smart FOX viewers like yourself know there is a strong liberal bias in the mainstream media.

Furthermore, certain high adverbs directly modify aspects related to the speech act (for instance the speech act adverbs in (109a) and (109b) or are strongly linked to the speaker (for instance epistemic and evidential adverbs in (109c, 109d)). These facts have been counted as arguments in favor of a performative hypothesis.

- (109) a. Frankly, ~~I tell you that~~ I'm not sure I blame the Dutchmen.
b. Honestly, ~~I tell you that~~ the question is a little naive.
c. ~~I tell you that~~ the guilt will probably always plague her.

¹⁵This is a generative view of semantics, that relies on a very strong link between syntax and meaning. This idea was soon rejected by mainstream generative linguists in favor of interpretive semantics, where more or less autonomous syntactic structures are associated with interpretations generated in a separate semantic theory.

- d. ~~I tell you that~~ No wonder women supposedly dropped at his feet like autumn leaves.

This basic idea is similar to what [Demonte and Fernández Soriano \(2014\)](#) have in mind for their analysis. However, there are some conceptual problems for the performative hypothesis. One of these is for instance the question whether the performative clause can be spelled out or if then one has to assume an iteration of it, as indicated in (110).

- (110) ~~I tell you that~~ I tell you that the Dutchmen are to blame.

Another problem raised by many scholars ([Anderson 1971](#), [Fraser 1974](#), [Gazdar 1979](#), [Newmeyer 1986](#)) concerns the question of how the verb of saying which encodes the illocutionary force is determined.

- (111) ~~I tell/state/inform/say/... (to) you that~~ I have a dog.

Other problems have to do with syntactic factors. For instance, speech act adverbs can also modify certain types of embedded clauses. It is unclear how a performative hypothesis as presented above can account for this fact, unless one also assumes a performative clause embedding subordinate clauses.

- (112) ~~I tell you that~~ I will not read any more of your books, because, ~~I tell you that~~ frankly, they suck.

Another commonly stated criticism has to do with the fact that the performative hypothesis assumes a direct mapping from the clause type to the explicit performative verb encoding the speech act. This can be problematic, as is shown by the interrogative in (113) that can be interpreted as a question, a command or even a threat.¹⁶

- (113) Will you do your homework?

Finally, another problem of an explicit performative structure is that every sentence should be assigned a truth value. This is not tenable since not all meaningful sentences express statements that can be either true or false. Questions, commands or exclamatives cannot be evaluated in this way.

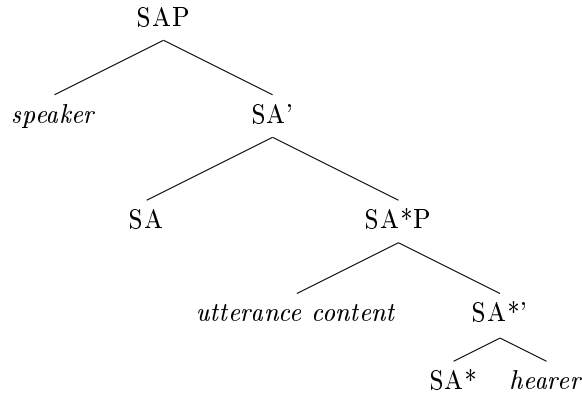
The performative hypothesis is based on a generative view on semantics, that was rejected by mainstream generative linguists in favor of interpretive semantics. Apart from that, the further development of the syntactic theory lead to the abolition of deep structure as a theoretical concept, which is another reason why research on the performative hypothesis came to a halt.

Lately, however, new hypotheses have emerged, that follow a similar idea to the the one presented above. However, speech act and related properties are no longer treated as performative clauses encoded in the deep structure that are subsequently deleted, but are part of the functional architecture of the clause. Typically, they are conceived of as functional domains above the CP. In many approaches these domains contain a series of projections linked to different functions (cf. for instance the contributions made by the following scholars [Benincà 2001](#), [Garzonio 2004](#), [Hill 2006](#), [Hill 2007a,b](#), [Speas and Tenny 2003](#), [Speas 2004](#), [Tenny 2006](#), [Poletto and Zanuttini 2003](#), [Zanuttini 2008](#), [Zanuttini et al. 2012](#), [Krifka 2013](#), [Haegeman 2014](#), [Wiltschko 2014](#)). In the following, I discuss two prominent accounts from the literature and determine to what extend they are fit to capture the properties of Catalan embedding *que*.

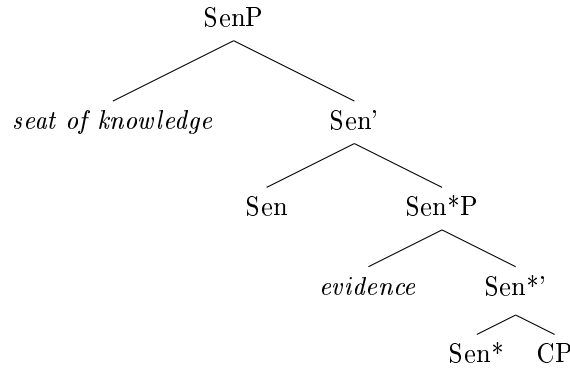
¹⁶Note that there is no agreement on the typology of speech acts, different scholars have put forth different categorizations, however *assertion* and *command* are broadly accepted.

One approach that received a lot of attention is developed in [Speas and Tenny \(2003\)](#). The authors assume that pragmatic roles are encoded syntactically. They propose that the universal types of speech acts or illocutionary forces (declarative, interrogative, imperative and subjunctive) can be modeled via different configurations of the pragmatic roles and the utterance content, following universal syntactic principles. They postulate two projections above the CP. The pragmatic roles of speaker and hearer are contained in a Speech Act Phrase (SAP). These roles interact with the role of the seat of knowledge in SentenceP in the scope of SAP, which is associated with the evaluation of the truth of an utterance. They assume a maximal projection with two SAPs or SenPs, respectively, paralleling the vP shell analysis. The lower projections can furthermore be iterated, which is indicated by the asterisk in the structures. In a declarative the speaker and the seat of knowledge coincide. As opposed to that, in a question the hearer is the seat of knowledge. The illocutionary forces are modeled through different syntactic configurations. In questions the hearer moves up the tree and merges in an iterated specifier of SA*P c-commanding the projection that hosts the utterance content. The same configuration is assumed for imperatives, differing only in the [-finite] feature of the utterance content. Finally, also in subjunctive the utterance content is assumed as [-finite], otherwise the structure is the same as in a declarative in [\(114\)](#).

(114)



(115)



To account for quotativeC in this approach, one could link the reported speech act to SenP. In a scenario where a quotation or report is attributed to someone else, the foreign perspective could be anchored to the seat of knowledge and the evidence could be hearsay or reportative. For cases where the source of the utterance is stated explicitly like in [\(116\)](#) (repeated from [79b](#) from section [4.1.1](#)) one could state that here the seat of knowledge is spelled out.

- (116) La mare, que què t' has cregut?
 the mother QUE what CL.2s have thought
 'The mother (was like) what were you thinking?'

This structure would be parallel in utterances where the reported or hearsay evidence is encoded through adverbs. In this case evidence could be reported too, however the seat of knowledge could be some unspecified foreign source. In self-quotation the speaker and the seat of knowledge coincide just as in declaratives. They would therefore only differ in that the evidence is marked as reported or quoted.

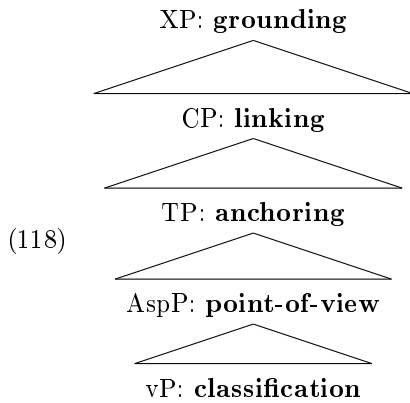
- (117) L'Estat Islàmic decapita suposadament un cooperant britànic.
 the IS decapitates reportedly a volunteer British
 'Reportedly the IS has decapitated a British volunteer.'

Summarizing, [Speas and Tenny \(2003\)](#) and similar proposals by [Haegeman \(2014\)](#) seem fit to account for the phenomenon at hand and are widely adopted by authors working on related issues. [Gärtner and Steinbach \(2006\)](#), however, criticize that the theory over generates. [Speas and Tenny \(2003\)](#) argue that illocutionary forces can be derived by universal syntactic principles. According to [Gärtner and Steinbach \(2006\)](#), the authors fail to convincingly motivate how other equally possible structures are excluded, that would give rise to different illocutionary forces that are either not universal or do not exist at all. The main criticism of [Gärtner and Steinbach \(2006\)](#) is therefore that the authors postulate the structure they assume as universal when in fact it constitutes merely one possibility, while others are ignored.

Another approach influenced by the neo-performative hypotheses was proposed by [Wiltschko \(2014\)](#). She has two main concerns: First, she wants to determine to what extent categories are universal. Secondly, she aims at proving that the universal aspects of categories are encoded in the syntax and form the universal spine of all clauses. [Wiltschko](#) tries to shed light on categorial universals on the basis of cross-linguistic comparison. She comes to the conclusion that it is not satisfactory to maintain the idea that a conceptual content such as *subjunctive* is universal in all the languages that encode it, because there is too much cross-linguistic variation. On the other hand, adopting the idea that there are no categorial universals, is not tenable either, because it does not capture the vast similarities observed in the languages of the world. [Wiltschko \(2014\)](#) suggests to treat categories as complex constructed entities, that consist of a universal core interpretation and a language specific interpretation.¹⁷ This can explain the cross-linguistic variation of universal properties of languages. The Universal Spine Hypothesis, [Wiltschko](#) develops, is based on the idea that all languages of the world encode abstract universal categories in syntax. These categories form a hierarchy that constitutes the universal spine of any sentence. The units that encode the language specific interpretations either express a dedicated category or modify it. The different categories [Wiltschko](#) assumes are ordered and form the hierarchy given in (118). The universal categories in the spine are equivalent to the projections indicated in the structure below. Her point is that, while in some languages anchoring is done through tense marking (i.e. T(ense)P), in other languages this is achieved by other means. By adopting more abstract or

¹⁷[Wiltschko \(2014\)](#) uses *universal core category* to refer to encoding of the first concept and *unit of language* to refer to encoding the second concept.

general labels, like the ones she proposes, different language specific expressions of a universal category can be captured more readily.



(Wiltchko 2014, 74,291)

Wiltchko (2014) focuses on the four lower categories. The possibility of a fifth category termed *grounding*, which scopes above *linking* is presented in the final section. *Grounding*, in her view, could be associated to the negotiation and management of the common ground.

If one were to adopt the universal spine hypothesis, both in subordinateC and quotativeC must be treated as expressions of *linking*. In the first case, the clause is linked to a syntactic antecedent and in the second case it is interpreted in a more pragmatical sense as a linking to discourse. At the present stage, I can merely offer tentative hypotheses why the different interpretations arise. On the one hand it could be possible that both clauses headed by *que* are embedded by omitted material. This solution, however, would not diverge from what we have seen so far. The second option would be to assume that Catalan has two or more lexical items that are spelled out as *que*. Since both the in subordinate and the quotative *que* target the same position, i.e. encode the same universal category, one could adopt a lexical explanation attributing the differences to two, or possibly more, different lexical entries for homophonous *ques*.

Wiltchko's hypothesis could be a promising candidate to account for the phenomena discussed. Still, I refrain from adopting it in the present work. It is not clear, in the particular case I discussed, what the gain of reformulating the syntactic tree in Wiltchko's terminology would be. Finally, the analysis might drift into a more lexical account that goes against my assumption that there is only one lexical item *que* in Catalan.

5.2 Directive *que*

In this section I discuss the properties of the second type of root clause complementizer, in which *que* appears in jussives. The verbal mood of these sentences is subjunctive, the clause type of these commands is imperative none the less (cf. Portner 2004). Demonte and Fernández Soriano (2009) give a last resort explanation for the licensing of *que* in Spanish jussives. In imperatives directed to the hearer, the verb has the necessary morphological features (=imperative inflection) to check features in

FinP, which triggers its movement to the projection. The fact that the verb reaches a higher projection in hearer-directed imperatives is empirically supported by the fact that unstressed pronouns are enclitic and not proclitic as in indicatives. Furthermore, neither subjects nor negative particles can appear before the imperative verb. The same patterns hold for Catalan imperatives (cf. 119a).

- (119) a. *(Tu) *(No) Compra-lo tu.
 you not buy.IMP it you
 b. Tu no lo compres.
 you not it buysIND
 ‘You don’t buy it.’

In Spanish and Catalan jussive clauses the verb has subjunctive inflection and the clitic placement, and the licensing of preverbal negation (and subjects)¹⁸ pattern with declaratives, not imperatives. Since the verb remains low in jussives, yet the clausetype is imperative Demonte and Fernández Soriano (2009) argue that *que* is introduced as a last resort to check a mood feature in FinP.

- (120) Que ell no lo compri.
 QUE he not it buys.SUBJ
 ‘He should not buy it.’

For my analysis I adopt this idea. Nonetheless, I introduce a modification that results from theoretical assumptions. In line with Lohnstein (2015), in my analysis a clause is typed not in FinP but MoodP, since FinP hosts a $\pm$ referential feature not associated with clause typing. Therefore in my perspective, the imperative verb and the complementizer target MoodP.

- (121) [_{ForceP} ... [_{MoodP} Que [_{FinP} [_{IP} ell no lo compri.]]]]

The presence of the complementizer in MoodP is not an arbitrary assumption. Note first of all that in embedded directives a complementizer is obligatorily present (cf. 122).

- (122) Vull que ho facis.
 want QUE it do.SUBJ
 ‘I want you to do that.’

In these constructions, irrespective of whether the command is directed to a hearer or a third person, the verb is inflected in subjunctive and not imperative mood. My assumption is that in this case as well the lack of imperative morphology prohibits the verb to move to the left periphery to type the clause. Assuming that a clause necessarily has to be typed, this is once again done by the complementizer. Whether in (122) the complementizer occupies the highest projection in the left periphery, ForceP, or the lower MoodP that I defended above, is not evident. Support for the assumption, that *que* indeed can occupy a lower projection in embedded directives stems from examples like (123). This example shows that Catalan permits multiple copies of complementizers in a so called recomplementation (terminology

¹⁸Most of the jussives discussed here are ambiguous between an imperative and an optative interpretation. At least in Spanish, the presence of a preverbal subject could be a means to disambiguate between the optative (allows the preverbal subject) and the jussive (does not allow the preverbal subject) (p.c. Julio Villa García). Whether this is also the case in Catalan cannot be determined at this point.

adopted from [Villa-García 2015](#)) context where a CLLD or another apparently dislocated element is sandwiched between two complementizers.¹⁹

- (123) El director va ordenar [_{ForceP} que] [_{TopP} a la teva germana_i] [_{MoodP} que] la_i
 the director PST order that at the your sister QUE CL
 contractessin immediatament.
 hire.SUBJ immediately
 ‘The director ordered that your sister should be hired immediately.’ ([González i Planas 2014](#))

I propose that here the lower complementizer occupies MoodP and types the clause. I analyze the higher complementizer in ForceP, assuming that a Catalan embedded clause requires an overt element occupying this projection to mark it as embedded. Another piece of evidence that *que* in jussives occupies MoodP and not ForceP is the fact that here left peripheral CLLD topic can only be followed but not preceded by the complementizer (cf. [124](#)).

- (124) [_{ForceP} (*que)] [_{TopP} Els llibres] [_{MoodP} que] els llegeixin els fills (i no les revistes).
 QUE the books QUE CL read.SUBJ the children and not the journals
 ‘The children should read the books (and not the journals).’

In embedded directives with CLLD such as [\(123\)](#) the lower copy of the complementizer is not obligatory (cf. [125](#)).

- (125) El director va ordenar [_{ForceP} que] [_{TopP} a la teva germana_i] la_i contractessin
 the director PST order that at the your sister CL hire.SUBJ
 immediatament.
 immediately
 ‘The director ordered that your sister should be hired immediately.’ ([González i Planas 2014](#))

The sentence is grammatical even in the absence of the lower but not in the absence of the higher complementizer. Assuming that the clause needs to be typed, one way to account for this could be to propose a phonologically empty element in MoodP. Another possibility could be to assume that the complementizer is base generated in MoodP but moves higher.²⁰

5.3 Presuppositional *que*

The types of constructions grouped among the label *presuppositional que* differ from the ones we have seen so far. Its meaning cannot be attributed to silent structure and the function of *que* cannot be assimilated to clause typing. In these constructions *que* expresses discourse pragmatic meaning. In this section I show that for these constructions, the interpretation contributed by *que* can be reduced to a common core meaning. The different nuanced interpretations are due to the clause type they

¹⁹Note that recomplementation is also possible in declaratives embedded under verbs of saying. See [Villa-García \(2015\)](#) for an analysis of Spanish and [González i Planas \(2014\)](#) for an analysis of Catalan recomplementation.

²⁰[Villa-García \(2015\)](#) noted that sandwiched CLLD like [123](#) differ from non-sandwiched CLLD like [125](#). The former ones cannot reconstruct and behave like elements that are base generated in the left periphery. The CLLD topics in examples like [125](#) can reconstruct and behave like moved elements. [Villa-García \(2015\)](#) accounts for this asymmetry by assuming that in fact CLLD topics are base generated in examples like [123](#) and moved in examples parallel to [125](#). In his analysis, the lower complementizer is always present in the derivation but is deleted at PF in cases like [125](#), because its presence would lead to ungrammaticality. The complementizer remains present in the recomplementation because the CLLD does not have to move across it since it is base generated and therefore *que* does not offend the derivation.

appear in or are a result of the co-occurrence with other lexical or functional elements expressing related semantic categories.

The common meaning I argue for is that *que* marks the propositional content of the sentence it introduces as part of the common ground. By uttering *que*-p, the speaker highlights something both interlocutors agree upon, i.e. something that is possibly already part of the common ground.

Que is therefore licensed in a context when the propositional content is truly part of the common ground when all the interlocutors share the belief. So it is licensed for instance if p is salient in the context because it was asserted previously and is revisited by the speaker. But presuppositional *que* can also be a means for the speaker to force the hearer to accommodate the proposition to the common ground. It can therefore be used even in contexts where the propositional content is not truly part of the common ground. In this way it can become a device for the speaker to speed up the conversation or to present a possibly controversial information as uncontroversial. If the speaker would assert the proposition containing this information she proposes to add it to the common ground. This leaves the possibility for the hearer to reject it. If however, the speaker presents the proposition as presupposed and the hearer accommodates it, there is no room for debate or rejection.

In other contexts marking a proposition as presupposed can be a means to express surprisal or mirativity. This happens if the speaker was under the impression that the proposition was part of the common ground but the recent linguistic or extra-linguistic behavior of the hearer is not compatible with his knowledge of p. The speaker can then utter *que*-p to show that she is surprised the hearer is not aware of p or does not agree with p since the speaker considered it to be part of the common ground.

Declaratives and Exclamatives In declaratives there are three different constructions containing presuppositional *que*: Adv+C, Aff+C and initialC. InitialC, where *que* heads a declarative clause without any additional particle, constitutes the base construction. Here the presence of *que* is essentially associated with the meaning described above.

(126) [Context: The father gave the son a book to read that the mother considers not age appropriate.]

Father: És dolent demanar a un fill que llegeixi un llibre? Mother: Que té nou anys,
is bad demand of a son that read.SUBJ a book QUE has nine years
per l'amor de Déu.
for God's sake

'Father: Is it a bad thing to ask your son to read a book? Mother: He's only nine for God's sake!'

In (126) the father and the mother disagree on the age appropriateness of a book the father gave their son to read. The initialC clause is a reaction to a question the father asks. In this context it is very obvious that the propositional content of the clauses headed by *que* is part of the common ground, since both mother and father are of course aware of the age of their son.

In other contexts the proposition headed by *que* is interpreted as the reason or explanation for a previous assertion or command. This is not necessarily associated with *que*, since an implication that two juxtaposed clauses are causally related, is fairly common.

- (127) No menges pipas. (Que) fa castellà.
 not eat sunflower seeds QUE makes Castillian
 ‘Don’t eat sunflower seeds. That makes you (look) Spanish.’

In (127) the second clause is interpreted as an explanation for why you should not eat sunflower seeds, irrespective of whether *que* is present or not. Since the second clause is headed by *que* it is additionally marked as something uncontroversial that both speaker and hearer know.

In Adv+C, declaratives are headed by epistemic or evidential adverbs followed by *que*. Here too *que* marks that the speaker takes the proposition to be part of the common ground.²¹

- (128) Acaba de perdre un dels òrgans indispensables i és viu, al lavabo i astorat. Potser perquè, tot i ser un òrgan indispensable, no és el més indispensable de tots. Siguem clars: no és el cor, el que li ha esclatat. Segur que si hagués estat el cor ja hauria mort fa estona.
 ‘He just lost a vital organ and is still alive - in the bathroom and surprised. Probably because, even though it was a vital organ, it was not the most vital of them all. Let’s be clear: it is not the heart that burst. Surely, if it would have been the heart he already would have been dead a while ago.’

By using epistemic or evidential adverbs the speaker highlights her commitment to the truth of the proposition or indicates her source of information. In (128) the speaker uses *segur* to mark that she is strongly committed to the outcome of the condition, i.e. that the person she is talking about would be dead if his heart had failed. The fact that in addition to the strong epistemic adverb the statement is also headed by *que* indicates that the speaker considers its content to be uncontroversial and that the hearer shares her judgment.

Aff+C, the third type of *que* in declarative clauses, patterns with *que* in exclamatives. In both cases the propositional content is interpreted as part of the common ground irrespective of whether *que* is present or not. This means that *que* marks something that is already part of the non-at-issue meaning of the construction. The interpretation that arises when *que* is present is therefore strengthened or more emphatic.

- (129) A: Crec que en Joan no ve. B: Sí que ve.
 believe that the Joan not comes VERUM QUE comes
 ‘A: I think Joan won’t come. B: No - he WILL come.’
- (130) A: No sé si en Joan ve. B: Sí ve.
 not know whether the Joan comes VERUM comes
 ‘A: I don’t know whether Joan will come. B: He WILL come.’

In (129) and (130), both verum focus constructions are felicitous. Still, verum focus with *que* is more natural in (129) whereas verum focus without *que* is more natural in (130). I consider the version with *que* to be stronger in the sense that in (129) speaker B explicitly rejects speaker A’s belief that $\neg p$, which is expressed in the previous utterance. In (130), speaker A states that she is uncertain whether p

²¹See Hill 2007a for Adv+C in Romanian, Hernanz 2007 for Adv+C in Spanish, Cruschina 2013 for Adv+C in Sicilian and Italian, Kocher 2014 for Adv+C in Spanish and Portuguese, Cruschina and Remberger 2014 for Adv+C in Romance, Kocher *ming* for a diachronic analysis of the relation between Aff+C and Adv+C and Kocher *view* for Adv+C in comparison to other constructions containing epistemic and evidential modifiers.

or $\neg p$ is true. By picking out p here too the speaker B rejects $\neg p$, but she does not explicitly contradict speaker A's belief.

Castroviejo (2006) claims that *que* is optional in exclamatives like (131).

- (131) Que amable (que) és!
 how nice QUE is
 ‘How nice he/she is!’

Assuming that the contribution of presuppositional *que* is the same in wh-exclamatives as in declaratives, one would predict that the interpretation of the exclamatives with *que* should be strengthened in a similar way as in Aff+C. At present, nevertheless, I cannot offer conclusive results. Therefore, whether this prediction is born out must be determined in the future.

PQs Catalan PQs with *que* are biased (cf. section 2) for a positive answer. This means that, when uttering a PQ introduced by *que*, the speaker indicates that she expects to receive a positive answer based on the contextual evidence. One way to look at the contribution of *que* in PQs, is to say that just as in declaratives and exclamatives, the complementizer establishes a link to the common ground. The speaker signals that she believes that the positive answer to the question is contained in or implied by the common ground.

- (132) a. Hi es la Lola?
 there is the Lola
 ‘Is Lola there?’
 b. Que hi es la Lola?
 there is the Lola
 ‘Is Lola there?’

The difference between the two PQs in (132) is that in (132a) the speaker does not give the hearer any indication which answer she is biased for. In (132b), by using *que* the speaker shows that she is biased towards a positive answer. She establishes a link to the common ground, signaling to the hearer that he should check the common ground for the answer.

The function of *que* in PQs therefore can be reduced to the same as in the other constructions grouped among presuppositional *que*. The difference results from the clause type. In declaratives and exclamatives the proposition itself is marked as part of the common ground. In PQs it is the positive answer, identical to the proposition content of the PQ, that is marked as part of the common ground.

5.4 A Unified Analysis for Root Clause Complementation

In the present section, I synthesize the syntactic analyses I assume for the constructions containing root clause complementizers. My analysis is based on three assumptions. First, there is only a single lexical element *que* (for further motivation of this point cf. section 5.5). Second, the different interpretations it receives result from different underlying syntactic structures. Third, the complementizer is an underspecified element that carries an unvalued C-feature.

The analysis is based on the idea that the syntactic position the complementizer occupies has an effect on its interpretation. This assumption is supported by the observations made by Haegeman 2004, 2006

and [de Cuba and MacDonald 2013](#). They show that the complementizers in factive and non-factive complement clauses occupy different positions. [de Cuba and MacDonald 2013](#) furthermore establish that factive complements are referential in the sense that the proposition they express is already in the common ground. Consequently, non-factives are non-referential because the proposition they express is not in the common ground yet.

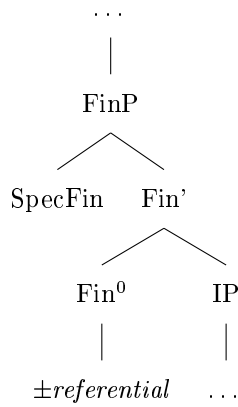
- (133) a. John thinks that this book Mary read. (*non-factive*)
 b. *John regrets that this book Mary read. (*factive*) ([de Cuba and MacDonald 2013](#), 8)
- (134) a. Juan cree que ese libro_i ya se lo_i había leído. (*non-factive*)
 Juan believes that that book already CL it had read
 ‘Juan believed that that book he had already read.’
 b. *Sabía a Juan_i qué le_i había prometido el decano. (*factive*)
 knew to Juan what him had promised the dean
 ‘I knew what the dean had promised John.’ ([de Cuba and MacDonald 2013](#), 9-10)

In (133a), *think* selects a non-factive complement clause. The DP *this book* can be dislocated to the left periphery of the embedded clause below the complementizer. On the contrary, *regret* in (133b) selects a factive complement clause. Here the dislocation of the DP is ungrammatical (cf. also the Spanish examples in 134). [de Cuba and MacDonald \(2013\)](#) take these facts to indicate that the structure of the complement clauses differs. More precisely they assume that the structure of non-factive complements is bigger than the one of factive complements. They propose a CP-shell analysis (cf. table 12). Non-factive complements project a little cP that hosts the complementizer while factive complements are smaller and lack the additional structure. [Villa-García \(2015\)](#) adapts the basic idea and proposes an analysis within a cartographic framework (cf. table 12). Non-factive complements project the entire split CP ranging from ForceP to FinP. The complementizer is assumed as the head of ForceP. Factive complements are truncated CPs that lack ForceP. The complementizer is assumed in FinP. Factive complements are FocPs in [Villa-García \(2015\)](#) because they can host wh-pronouns that are generally assumed to be foci occupying this projection (cf. 134b).

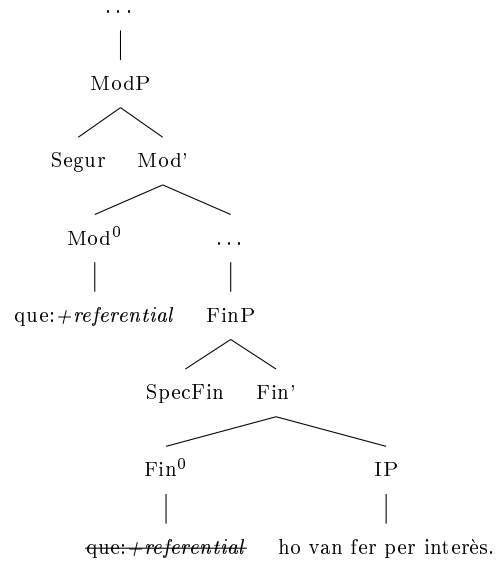
	interpretation	de C. and MacD. (2013)	Villa-García (2015)
non-referential (~ non factive)	<i>p</i> is a new proposition	[cP <i>-ref</i> [CP]]	[ForceP [TopicP [FocusP [FinP]]]]
referential (~ factive)	<i>p</i> is part of the common ground	[CP <i>+ref</i>]	[FocusP [FinP]]

Table 12: properties of referential and non-referential CPs

(135)



(136)

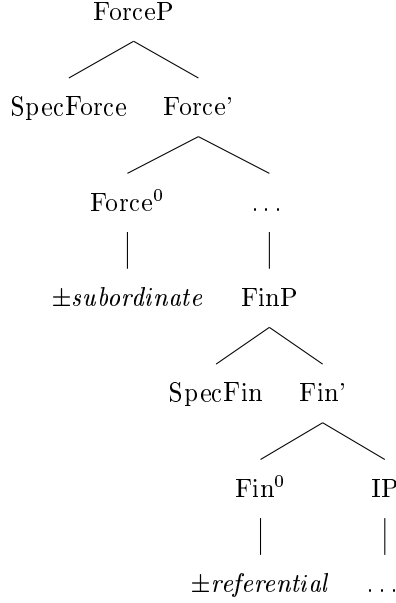


(structure of 55b in section 3.1)

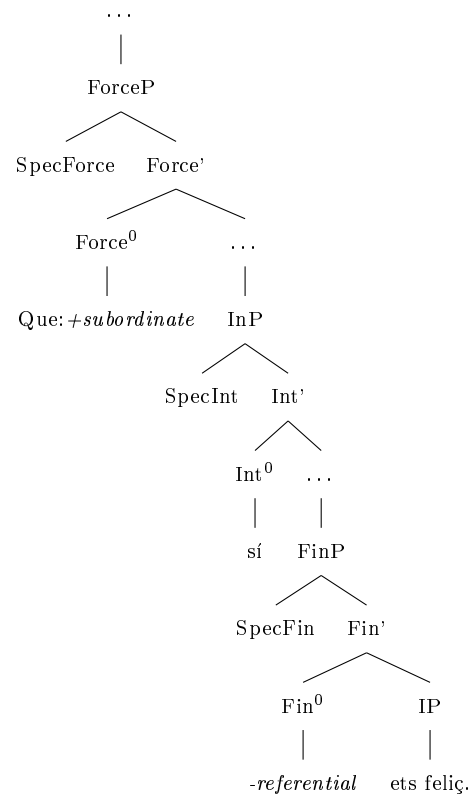
For my analysis, I assume that referentiality is not restricted to embedded clauses but also relevant for the interpretation of root clauses. I propose that there is a $\pm$ referential feature in the lowest head of the CP, FinP (cf. the structure in 135). If it carries a negative value, no complementizer is merged in FinP. Contrarily, if the feature carries a + value, a complementizer is merged in FinP. The complementizer merged in FinP then moves from head to head through the left periphery (cf. the structure in 136).

The movement is motivated empirically because of the facts discussed in section 3, that show that the complementizer surfaces in different positions in the different constructions grouped under pre-suppositional *que*. Independent arguments for the assumption of a head-to-head movement of the complementizer are presented in Rizzi (1997), Poletto (2000), Ledgeway (2005) and Belletti (2013). It follows from this assumption that the complementizer can occupy any position in the left periphery. Although this prediction still needs to be tested more thoroughly, it is not completely unsubstantiated. For instance, Villa-García (2015) shows that in recomplementation constructions in Spanish the complementizer occupies TopP. The second feature that attracts a complementizer is hosted in the highest projection of the CP, ForceP. I propose that there is a $\pm$ subordinate feature associated with this functional head. Once again, the complementizer is only inserted if the feature carries a + value and is not inserted if there is a -subordinate feature in ForceP (cf. the structure in 137 and 138).

(137)



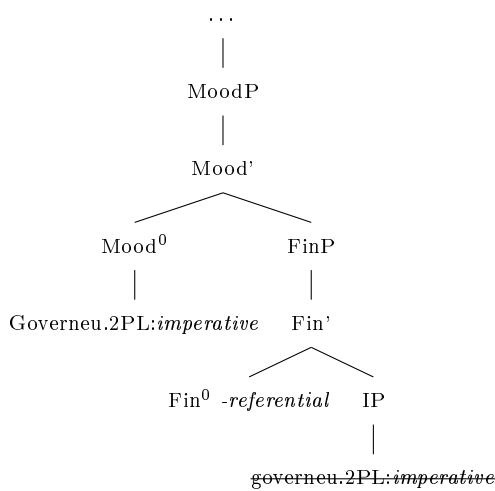
(138)



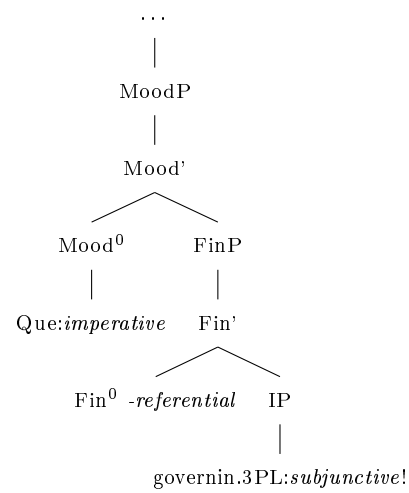
(structure of 63a in section 3.2)

Finally, the third feature relevant for the root clause complementation constructions is hosted by the clause typing head MoodP. This head carries the features that encode the clause type of the sentence. At present I assume the features declarative, imperative, interrogative and exclamative (cf. 3.4). The complementizer is inserted as a last resort operation if MoodP carries an imperative feature and the verb lacks the relevant features to move (cf. the contrast between 139 and 140).

(139)



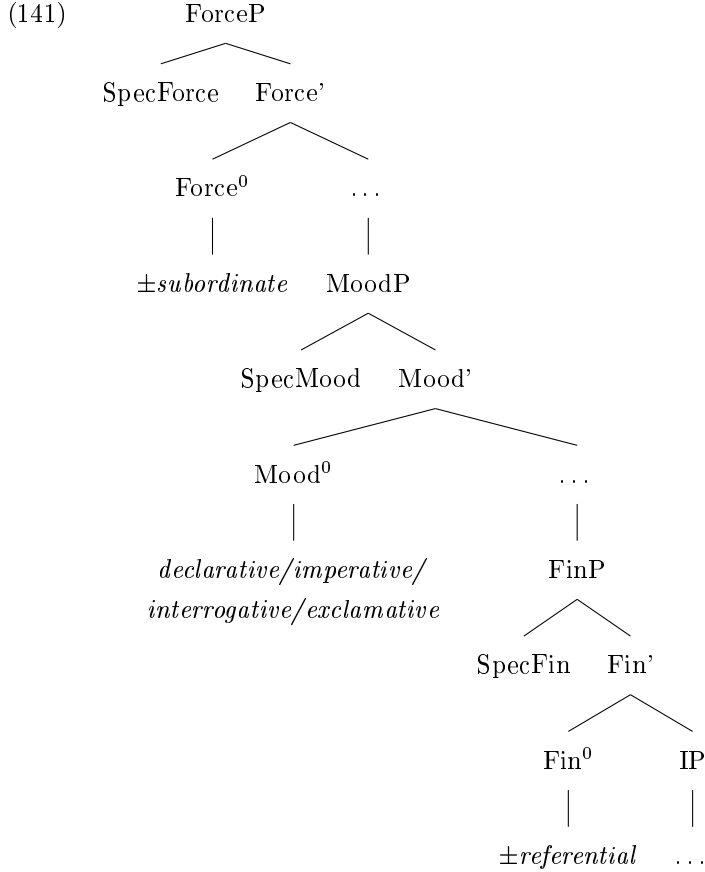
(140)



(structure of 66b in section 3.3)

Summarizing, in (141) I present the featural make up of the syntactic heads I consider relevant for

root clause complementation in Catalan. The complementizer is externally merged in one of the three heads when the head is equipped with the relevant features. It is merged in ForceP when there is +subordinate feature and in FinP when there is a +referential feature. Finally, it is merged in MoodP as a last resort insertion when this head carries an imperative feature.



My analysis can account for the presence of multiple complementizers in one (unembedded) clause.

- (142) Només volíem dir-vos [ForceP que: +subordinate] estem molt contents de hagueu fet
 just wanted tell-you QUE are very glad of have.SUBJ made
 una altra pel·li. [ForceP Que: +subordinate] [ModP segur que: +referential] estareu molt
 an other movie QUE sure QUE will-be very
 guapos i fareu molt bé!
 pretty and will-make very well
 ‘We just wanted to tell you that we are very glad you made another movie. (That) surely you
 will be very pretty and you will do very well.’

In the second sentence in (142), the first complementizer is merged in ForceP. The clause is interpreted as embedded under the contextually recoverable performative verb *dir-vos* ‘tell you’. The second *que* follows *segur* and is analyzed as merged in FinP and moved to the head of ModP. The interpretation is that “they will be pretty and do very well” is something that the speaker considers part of the the

common ground. Possibly the intention is to flatter the addressee by presenting the proposition as something that she considers sure and common grounded even before she has seen the film.

As stated above, I assume that the complementizers inserted in FinP proceed to move from head-to-head through the left periphery. There are two questions related to this complementizer movement that remain open at this point. The first question is whether the movement is restricted to the complementizers that are merged in FinP or whether it is a general property of complementizers irrespective of where they are merged. In principle both scenarios are plausible. If the first option is pursued, one has to find empirical and theoretical evidence to motivate the difference between FinP and the other projections where *que* can be merged. If the second option is pursued, one has to explain why the complementizers merged in MoodP remain in this projection. The complementizers merged in ForceP are less problematic, since they appear in the highest projection in the left periphery and therefore a movement to an even higher projection is excluded.²²

The second question has to do with the conditions on the complementizer movement. Even assuming that only the +referential complementizer merged in FinP moves, one still has to account for why the complementizer does not move all the way to the left edge of the periphery but stops in a certain position. At present, I can merely offer hypotheses that need to be developed in greater detail in the future. The first hypothesis is that the semantic scope restricts the possibility of movement of the complementizers. The idea is that the complementizer needs to take surface scope and remain low with respect to elements that scope above it. This hypothesis makes the right predictions for wh-exclamatives (70a), since the common grounded proposition follows the focused wh-phrases. It can in principle also explain the clause initial position of presuppositional *que* in declaratives and PQs. However, it possibly makes the wrong predictions for Aff+C and Adv+C, since in these cases the proposition including the epistemic and evidential evaluation or the verum focus is marked as part of the common ground.

The second possible hypothesis is syntactic. It states that the complementizer movement comes to a halt because *que* cannot cross base generated elements.²³ This idea can account for Adv+C and Aff+C, assuming that the elements preceding *que* are base generated in the left periphery.²⁴ It also can be extended to capture the position of presuppositional *que* in declaratives and PQs. Here the complementizers move all the way up since no base generated element intervenes. However, it makes the wrong predictions for wh-exclamatives. Generally the focused phrase is analyzed as merged IP internally and moved to the left periphery. Therefore, unless one finds empirical evidence to prove that the wh-phrase is merged in the left periphery, the syntactic hypothesis cannot explain the word order in wh-exclamatives with presuppositional *que*.

5.5 Root and Embedded Complementizers

In the present section I synthesize my ideas on the relation between the syntax and the meaning of the different constructions. I argue that the semantics and pragmatics of *que* in a given construction

²²Even in accounts where there is structure assumed above ForceP (cf. [Speas and Tenny 2003](#) and the discussion in section 5.1.1, one could account for this fact by arguing that ForceP constitutes a phase that cannot be moved out of.

²³See [Villa-García \(2015\)](#) for a similar idea. In his case, however, it is the base generated complementizer that inhibits movement of a topic across it.

²⁴For arguments in favor of this idea, see [Giorgi \(2010\)](#), [van Gelderen \(2011\)](#), [Kocher \(ming\)](#).

is determined by the syntactic position it occupies. I assume that there is only one lexical item *que*. I moreover showed that there are three different syntactic base positions each of which are associated with a dedicated interpretation. This means that I propose a strong syntactic approach linking the interpretation to syntax. I furthermore corroborate my account by showing that the interpretation that *que* contributes in unembedded root clauses parallels the one it has in embedded contexts when occupying the same syntactic positions. The general ideas of my analysis are sketched in the scheme in (143).

	[ForceP ...	[IntP ...	[FocP ...	[ModP ...	[MoodP ...	[FinP	[IP]]]]]]
	↓	↓	↓	↓	↓	↓	
(143)	<i>que</i>	<i>que_i</i>	<i>que_i</i>	<i>que_i</i>	<i>que/que_i</i>	<i>que/t_i</i>	
	(+subordinate)	(+referential)	(+referential)	(+referential)	(imperative/+referential)	(+referential)	
	(quotativeC/ insubordinateC)	(interrogativeC)	(exclamativeC)	(Adv+C)	(jussiveC/ Aff+C)	(initialC)	

I will now discuss the parallels between root and embedded clauses for each type individually. Embedding *que* (i.e. insubordinateC and quotativeC) is assumed to be externally merged in Force where it is valued with a feature that marks the clause as subordinate.²⁵ This is motivated empirically by the fact that the clauses headed by embedding *que* behave like subordinate clauses. In addition to that, I showed in section 4.1.1 that the complementizer in this construction must occupy a very high projection since it precedes focused elements, wh-pronouns and even interrogative complementizers. I'd like to argue that the meaning that *que* contributes in insubordinateC and quotativeC parallels the one it has in embedded context where the matrix clause is spelled out. In both cases *que* marks that the clause is embedded. In (144a) the clause headed by *que* is embedded under a matrix clause. In (144b) the clause once again is marked as subordinate, however it is not immediately preceded by a matrix clause. This is only possible if it can be recovered from the context. In this example the matrix clause is recovered from the question *Qué vas dir?* 'What did you say?'.²⁵

- (144) a. En Jordi va dir *que* ahir plovia.
 the Jordi PST say QUE yesterday rained
 'Jordi said that it rained yesterday.'
- b. Qué vas dir? - *Que* ahir plovia.
 what PST say QUE yesterday rained
 'What did you say? - That it rained yesterday.'

Imperative *que* is externally merged in MoodP where it essentially functions as a clause typer and receives the sentence mood feature. MoodP is motivated in Lohnstein (2015) as the left peripheral head responsible for sentence mood and clause typing. As outlined in section 5.2., the idea is that in

²⁵ForceP was initially assumed by Rizzi (1997) to be associated with sentential force and not illocutionary force, but has been reinterpreted in a different way in various works building on Rizzi (1997). I propose to link Rizzi's initial conception to MoodP in line with Lohnstein (2015). Therefore sentential force (or mood) is dealt with in the lower section of the CP. The question is then what the precise function of Force is. Is it really associated with illocutionary force rather than clause typing. Or are there two heads in the left periphery responsible for clause typing? In the present work, I propose that in Catalan the highest projection accessible to the complementizer can host a feature $\pm$ subordinate that marks clauses as syntactically embedded. Whether this projection is ForceP, as I assume at present, or whether it is Haegeman's SubP, projected even higher than ForceP (permitting therefore to maintain Force's function as it was initially assumed), must be answered in future research.

second person imperatives the verb morphology licenses the movement of the verb to MoodP, since it is equipped with the corresponding features. An observable consequence of this movement is the enclisis of unstressed pronouns. In jussive clauses the verb is in subjunctive mood and therefore does not have the relevant features to type the clause as imperative. The complementizer is attracted by the strong sentence mood feature. Once again the function of *que* in jussives parallels its function in embedded imperatives. I argue that here too *que* is merged in MoodP.

- (145) a. La Maria ha ordenat que es marxi.
 the Maria has ordered QUE CL leaves
 ‘Maria has ordered that he should leave.’
 b. Que es marxi.
 QUE CL leaves
 ‘He should leave.’

In embedded directives, irrespective of whether they are directed to the addressee or a third party, the verb remains low and receives subjunctive mood. Therefore it is incapable to type the clause as imperative, which is why the complementizer is merged in MoodP. In section 5.2., I discussed (123) repeated in (146), which shows that optionally two copies of the complementizer can appear. As indicated in the example, I analyze the higher one in ForceP, marking the clause as embedded and the lower one in MoodP typing the clause as imperative.

- (146) El director va ordenar [_{ForceP} que] [_{TopP} a la teva germana_i] [_{MoodP} que] la_i
 the director PST order that at the your sister QUE CL
 contractessin immediatament.
 hire.SUBJ immediately
 ‘The director ordered that your sister should be hired immediately.’ (González i Planas 2014)

The syntax of presuppositional *que* is more complex, since a variety of different constructions are grouped under this label and in the different constructions *que* occupies different syntactic positions. All of them share the interpretation that the sentences headed by them is part of the common ground. The common interpretation motivates the assumption that the complementizer starts out in the same projection and arrives at the surface positions via movement. I assume that *que* is merged in FinP attracted by the +referential feature and undergoes movement that targets different projections. In principle my analysis predicts that the complementizer moves to the highest projection accessible to it. This means that it stops only if a critical element inhibiting the movement intervenes (cf. section 5.4 for my hypotheses on the conditions of the complementizer movement).

In Adv+C *que* moves from FinP to the head of ModP and in Aff+C, the complementizer stops in MoodP. In exclamative clauses the fronted wh-phrase is assumed in FocP and the complementizer is assumed in the head of this projection. Further empirical evidence is needed to determine the exact positions occupied by *que* in PQs and initialC. In section 4.1.6 (example 98) we have seen that in PQs the complementizer can be both preceded and followed by a CLLD topic. This suggests that in this case the complementizer moves out of FinP as well. At present I assume that it targets IntP, in line with Cruschina (2010) who analyzes a similar phenomenon in Sicilian. For initialC my analysis predicts that the complementizer should land in ForceP, since if no critical element intervenes, it should reach the highest projection accessible to it.

Also for presuppositional *que* I assume a strong link between syntax and interpretation. This is my motivation to propose that in the different constructions I grouped under this label *que* starts out in the same syntactic projection. The idea is that the +referential feature yields the interpretation that the proposition introduced by presuppositional *que* is part of the common ground.

The comparison between the interpretation of *que* in root and embedded clauses shows that a complementizer merged in FinP gives rise to the same interpretation irrespective of whether it appear in an unembedded or embedded CP. The relevant embedded contexts were already mentioned in section 5.4 where I discussed the analysis of [de Cuba and MacDonald \(2013\)](#) of factive and non-factive complement clauses.

The interpretation of factive complements parallel the one of the presuppositional *que* constructions. They are interpreted as part of the common ground. Furthermore, factive complement clauses do not project an entire ForceP (cf. [Villa-García 2015](#)) but have a smaller structure. This is why in example (147b) (repeated from 134b from section 5.4) the CLLD is ungrammatical contrasting with (147a) (repeated from 134a) where it is grammatical.²⁶ The wh-pronoun *qué* is analyzed in FocP, which is assumed to be the left edge of a factive complement (cf. [Villa-García 2015](#)), proven by the fact that the CLLD cannot precede it. Consequently the complementizer is assumed to be merged in a lower projection than ForceP. In line with [Villa-García \(2015\)](#), I identify it with FinP.

- (147) a. Juan cree que ese libro_i ya se lo_i había leído. (*non-factive*)
 Juan believes that that book already CL it had read
 ‘Juan believed that that book he had already read.’
 b. *Sabía a Juan_i qué (que) le_i había prometido el decano. (*factive*)
 knew to Juan what that him had promised the dean
 ‘I knew what the dean had promised John.’ ([de Cuba and MacDonald 2013](#), 9-10)

This analysis moreover can be extended to clefts. Once again the content of the embedded clause is interpreted as part of the common ground (cf. [Belletti 2009, 2013](#))

- (148) a. E’MARIA che il libro l’ ha comprato (non Gianni).
 is Maria QUE the book CL has bought not Gianni
 ‘It is MARIA who bought the book.’
 b. ... [_{VP} è [_{FocP} [_{SpecFoc} Maria] chei [_{TopP} [_{SpecTop} il libro] [_{FinP} t_i ...

In her analysis [Belletti \(2013\)](#) argues that the copula selects a small clause, which in this case is a truncated ForceP cut off at the Foc projection. The parallel to the factive complements is therefore evident also structurally. The focalized phrase occupies the specifier of the FocP. [Belletti](#) analyses the complementizer externally merged in FinP and moved to the highest projection in the left periphery. Consequently, in the case of the FocP small clause it lands in the head of the FocP adjacent to the

²⁶In the critical example (147), there is not complementizer present. However, some dialects permit a co-occurrence of a wh-pronoun and a complementizer even below factive verbs (cf. I). Crucially in these cases the complementizer follows *qué*, which indicates once again that it must be assumed lower than FocP.

- (I) ¿Sabes qué que le dice una madre a su hijo informático?
 know what QUE him tells a mother to her son computer scientist
 ‘You know what (that) a mother tells her computer scientist son?’

focalized phrase *Maria*. A consequence of this movement is the fact that CLLD topics, like *il libro* in (148a), although merged in the left periphery, follow the complementizer.

Both of these embedded constructions can be analyzed in the same way as I proposed for the presuppositional *que* constructions. FinP has a +referential feature that attracts the complementizer. This feature has an impact on the interpretation of the proposition introduced by *que*. It is interpreted as part of the common ground.

5.6 Summary

In the previous section I discussed the syntactic and semantic properties of the different root clause complementation constructions. I proposed to adopt a unified account reducing the various different constructions to three general types depending on their syntax and interpretation.

The first type is termed embedding *que*. Here the complementizer is merged in the highest projection of the left periphery and essentially fulfills its prototypical function by marking the clause headed by it as embedded. Its interpretation (i.e. as a quotative or insubordinate construction) is mainly determined by the matrix clause recovered from the context.

In the second type, directive *que*, the complementizer functions as a clause typer, typing the clause as imperative due to the absence of the relevant features in the subjunctive verb. It is merged in MoodP. Finally, all the constructions grouped together under the label presuppositional *que* share the interpretation that the propositional content of the sentence headed by it, or the answer assumed for it in PQs, is marked as part of the common ground. Syntactically this interpretation was linked to FinP. Presuppositional *que* also differs from the other types in that the complementizer is more mobile and moves to higher projections. In this section I also set out to answer a number questions. I will briefly summarize my results below.

1. Does *que* occupy different syntactic projections in the different constructions?

I argue that the complementizer is externally merged in three different projections (ForceP, MoodP and FinP), each attracted by different features. Furthermore, the syntactic mobility of the complementizer differs depending on where it is merged. When merged in ForceP or MoodP it remains in these projection. When merged in FinP it moves to higher projections, given word order restrictions and the obligatory adjacency between the adverbs, particles or wh-phrases preceding the complementizer in some of the constructions.

2. Is there a one-to-one mapping between syntactic position and interpretation?

I assume a one-to-one mapping between syntactic position and interpretation. Embedding *que* merged in ForceP is interpreted as a subordinate clause, in directive *que* the complementizer functions as a clause typer linked to MoodP, the projection containing sentence mood features. The complementizer in FinP gives rise to the interpretation that the proposition is part of the common ground. Support for my analysis stems from the observation that the correspondence between syntax and interpretation can also be observed when the complementizer occupies the same positions in embedded clauses.

3. Are there multiple homophonous *ques*? Or 4. Is there one polyfunctional *que*?

I argued in favor of a strong syntactic view. This approach could still be paired with a lexicalist view, assuming multiple lexical items *que* which contain a matching feature with the relevant

heads they target. In view of the fact that *que* does not offer any phonological cues hinting at different base interpretations, I propose that it acquires different functional interpretations depending on which syntactic position it occupies.

6 Conclusion

In this thesis I focused on the properties of Catalan root clause complementation. In the first part (section 2) I investigated in greater detail the interpretation of root clause complementizers in polar questions. In the second part (sections 3, 4 and 5), I adopted a broader perspective and studied the structure and interpretation of the other root clause complementation constructions. To conclude, I will now summarize the results of each section.

In section 2, where I treated the properties of *que* in PQs, I first presented the descriptive generalizations of Prieto and Rigau (2007). Based on this, I developed a modified analysis inspired by the typology of biases that Sudo (2013) proposed. Supported by corpus data and preliminary speakers' judgments, I showed that the biases Sudo (2013) identifies for the different kinds of English PQs are also relevant for Catalan PQs. In line with Sudo (2013), PQs (without *que* in Catalan) are licensed in neutral contexts and in contexts containing evidence supporting a positive answer. I proposed that PQs with *que* constitute a more restricted version of PQs. They are licensed only in contexts containing evidence supporting a positive answer but not in neutral contexts.

In section 2.4 I presented an acceptability judgment experiment with the aim to test the influence of the biases presented in Sudo (2013) for the licensing of *que* in PQs. The results, however, were not conclusive. Although some tendencies supporting my hypotheses were observed, they lacked statistical significance. From the results, I could not detect a significant influence of the evidential and epistemic bias respectively. What I did find, however, was that different types of evidence had a significant effect on the judgments provided by the participants.

At the beginning of the second part of the thesis, in section 3, I described the properties of the different constructions containing a root clause complementizer. I focused in particular on their sensitivity to clause types. In the following section 4, I presented the analyses proposed in the literature. The majority of these analyses deals with similar constructions in Spanish. Therefore my motivation was to evaluate to which extent these analyses are compatible with the Catalan data. I proposed some modifications to these analyses and summarized them in section 4.

In section 5, I investigated the syntactic and interpretive properties of the different constructions from a theoretical perspective. I proposed a unified analysis, in which the various constructions are reduced to three general types. In the first type, embedding *que*, the complementizer is merged in the highest projection of the left periphery and marks the clause headed by it as embedded. The interpretation (as a quotative or in subordinate construction) depends on a silent speech structure or on the matrix clause that can be recovered from the context. In the second type, directive *que*, the complementizer has the function to type the clause as imperative and is merged in MoodP as a last resort operation since the verb lacks the relevant features to move. The constructions containing the third type, presuppositional *que*, share the interpretation that the propositional content of the sentence headed by it, or in PQs the answer assumed for it, is marked as part of the common ground. This interpretation was linked

to FinP.

Finally, I showed that *que* occupies different syntactic projections in the different constructions. This supports the assumption that there is a one-one-mapping between syntactic position and interpretation. I argued that the Catalan data can be accounted for without assuming that there are multiple lexical items *que*. Instead, I argued in favor of one single *que* that is underspecified and receives its interpretive features in the projection it is merged in.

7 References

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A Experimental Stimuli

practice:

La Montse és jardiner. Explica al seu cap quines plantes ha regat fins ara:

De les roses, n'he regat aquestes tres.

Montse is a gardener. She tells her boss which plants she watered until now:

Of the roses I watered these three.

La Dolors està preparant el sopar. L'Eulàlia deu posar la taula però hi fallen algunes coses:

De forquilles n'he portat cinc a la taula però de ganivets només n'he trobat tres.

Dolors is preparing dinner. Eulàlia should set the table but some things are missing:

Of the forks I brought five to the table, but of the knives I only found three.

El David vol fer una tarta de taronja. Li pregunta al Felip si ha comprat taronges. El Felip respon:

De taronges, n'he comprat un quilo.

David wants to make an orange cake. He asks Felip if he bought oranges. Felip says:

Of oranges I bought a kilo.

C1:

La Núria es troba amb la seva germana Marta. La Marta li explica que va anar a una festa on també hi havia un parell d'amics de la Núria. La Núria no sap qui va anar i pregunta:

(Que) Hi era el Jordi?

Núria meets her sister Marta. Marta tells her that she went to party where also some of Núria's friend were. Núria has no idea who was there and asks:

Was Jordi there?

L'Albert es troba amb la seva amiga Laura. Li explica que va passar el darrer cap de setmana a casa dels seus pares. No sap que va fer ella i li pregunta:

(Que) Has visitat els teus pares també?

Albert meets his friend Laura. He tells her that he spent the last weekend with his parents. He doesn't know what she did and asks her:

Did you also visit your parents?

És dissabte i la Carme es troba amb el seu cap Ferran. Li explica que va a les muntanyes per a gaudir del bon temps. No sap que farà ell i li pregunta:

(Que) Farà alguna excursió també?

It is Saturday and Carme runs into her boss Ferran. She tells him that she plans on going to the mountains to enjoy the good weather. She doesn't know what he will do and asks:

Are you going on a trip as well?

El Pau es troba amb un col·lega. El col·lega només treballa dos dies a la setmana però el Pau no sap quins. Li pregunta:

(Que) Serà a la feina demà?

Pau meets his colleague. The colleague only works two days a week but Pau does not know which ones. He asks him:

Will you be at work tomorrow?

C2a:

L'Anna es troba amb el seu amic Carles. El Carles està bronzejat i té l'aspecte relaxat. L'Anna li pregunta:

(Que) Has estat de vacances?

Anna meets her friend Carles. Carles is tan and seems relaxed. Anna asks him:

Have you been on a vacation?

El Bernat es troba amb el seu amic Jordi. El Jordi porta el cabell blau. El Bernat li pregunta:

(Que) T'has tenyit el cabell?

Bernat meets his friend Jordi. Jordi has blue hair. Bernat asks him:

Have you dyed your hair?

La Carme es troba amb la seva professora. La professora porta una tovallola de platja. La Carme li pregunta:

(Que) Va a la platja?

Carme meets her professor. The professors carries a beach towel. Carme asks her:

Are you going to the beach?

El Carles es troba amb el seu veí. El veí porta un abric i una gorra. El Carles li pregunta:

(Que) Té fred?

Carles meets his neighbor. The neighbor wears a coat and a hat. Carles asks him:

Are you cold?

C2b:

La Teresa explica a la Carme que el seu amic Bernat va tenir bones notes als exàmens a la facultat. El dia següent la Carme es troba amb el Bernat i li pregunta:

(Que) Has tingut sort?

Teresa tells Carme that their friend Bernat had good grades at the exams at university. The next day Carme runs into Bernat and asks him:

Have you been lucky?

La Maria explica a l'Enric que la seva cosina Aina tindrà un fill. El dia següent l'Enric es troba amb l'Aina i li pregunta:

(Que) Estàs embarassada?

Maria tells Enric that her cousin Aina will have a child. The next day Enric runs into Aina and asks her:

Are you pregnant?

El Jordi explica al Pere que llur cap passarà dues setmanes a Eivissa al estiu. El dia següent el Pere es troba amb el cap i li pregunta:

(Que) Farà vacances a Eivissa?

Jordi tells Pere that their boss will spend two weeks in Ibiza during the summer. The next day Pere meets the boss and asks him:

You are going to go on a vacation in Ibiza?

El Pau explica al Bernat que la seva tia ja no viu més al seu apartament. El dia següent el Pau es troba amb la tia d'el Bernat i li pregunta:

(Que) S'ha canviat de casa?

Paul tells Bernat that his aunt no longer lives in her apartment. The next day Pau runs into Bernat's aunt and asks her:

Did you move?

C2c:

La Rosa es troba amb el seu amic Albert. L'Albert porta lligat un gos. La Rosa li pregunta:

(Que) Tens un gos?

Rosa meets her friend Albert. Albert has a dog on a leash.

Rosa asks him:

Do you have a dog?

El Manel es troba amb el seu germà Pau. El Pau porta una motxilla molt bonica. El Manel li pregunta:

(Que) Tens una motxilla nova?

Manel meets his brother Pau. Pau has a very pretty backpack. Manel asks him:

Do you have a new backpack?

L'Anna es troba amb el seu cap Enric. L'Enric va molt elegant i porta una corbata molt xula. L'Anna li pregunta:

(Que) És nova la corbata?

Anna meets her boss Enric. Enric is dressed very elegantly and wears a fancy tie. Anna asks:

Is that a new tie?

El Bernat es troba amb el seu professor Jordi. El Jordi porta una raqueta de tennis. El Bernat li pregunta:

(Que) Juga al tenis?

Bernat meets his professor Jordi. Jord carries a tennis racket. Bernat asks him:

Do you play tennis?

C3:

La Sara sempre ha cregut que el seu col·lega Ferran es vegetarià. El troba al restaurant menjant una botifarra. La Sara li pregunta:

(Que) Menges carn?

Sara always thought that her colleague Ferran was a vegetarian. She meets him at a restaurant eating a sausage. Sara asks him:

Do you eat meat?

La Carme pensa que la temporada de maduïxes ja s'ha acabat. La seva companya de pis Marta torna del mercat i porta una cistella plena de maduïxes. La Carme li pregunta:

(Que) Venen maduïxes encara?

Carme thinks that strawberry season is already over. Her roommate Marta comes home from the market with a basket full of strawberries. Carme asks:

Do they still sell strawberries?

El Carles pensava que la seva veïna no té fills. Sortint del seu pis es troba amb la veïna amb un nadó al braç. Li pregunta:

(Que) És el seu fill?

Carles thought that his neighbor didn't have any children. Existing his flat he runs into his neighbor with a baby in her arms. He asks her:

Is that your child?

El cap del Jordi sempre ve a la feina amb cotxe. Aquest mati el Jordi veu el seu cap arribant en bici. Li pregunta:

(Que) S'ha venut el cotxe?

Jordi's boss always goes to work by car. This morning Jordi sees his boss arriving by bike. He asks him:

Have you sold your car?

C4:

L'Anna i l'Oriol estan dinant. Quan acaben, l'Oriol vol pagar pels dos. L'Anna li pregunta:

(Que) Has guanyat la loteria?

Anna and Oriol are eating out. When they finish Oriol wants to pay for both of them. Anna asks:

Did you win the lottery?

La casa de l'Enric i l'Albert està desordenada. L'Enric se'n va a comprar. Quan torna ho troba tot arreglat. Pregunta a l'Albert:

(Que) Tens poders màgics?

Enric's and Alber's house is messy. Enric goes shopping and when he returns the house is cleaned up. He asks Albert:

Do you have magical power?

El Pau està comprant un gerro. Té molta pressa i demana al venedor que s'afanyi. El venedor li pregunta:

(Que) Vol que el trenqui?

Pau is buying a jar. He is busy and asks the seller to hurry up. The seller asks him:

Do you want me to break it?

La Núria i el seu empleat Bernat estan a punt de sortir al carrer. Se n'adonen que està plovent. El Bernat diu que vol agafar un paraigua. La Núria li pregunta:

(Que) Està fet de sucre?

Núria and her employer are about to step on the street. They realize that it is raining. Bernat want to fetch an umbrella. Núria asks him:

Are you made out of sugar?

C5:

La Maria i la Montse estan passejant. Veuen un nen petit sense ningú al costat. La Maria pregunta a la Montse:

(Que) Està sol aquest nen?

Maria and Montse are having a walk. They see a little boy with nobody nearby. Maria asks Montse:

Is this boy on his own?

El Pau i el Jordi volen comprar una casa. Han quedat amb un agent immobiliari. Quan arriben no hi ha ningú. El Pau pregunta el Jordi:

(Que) S'ha venut la casa?

Pau and Jordi want to buy a house. They had a set up a meeting with an realtor. When they arrive, nobody is there. Pau asks Jordi:

Have they already sold the house?

La Marta i el seu cap l'Enric volen esmorzar junts a un restaurant del barri. Quan arriben al restaurant es troben amb la porta tancada. La Marta pregunta a l'Enric:

(Que) Han canviat de lloc?

Marta and her boss Enric want to have lunch at nearby restaurant. When they arrive the doors of the restaurant are locked. Marta asks Enric:

Did they move this restaurant somewhere else?

El Pere va cap a la feina. Observa un home que cau de la bici. El home s'aïreca i es prepara per a tornar a muntar la bici. El Pere pregunta a un altre vianant:

(Que) Pot muntar encara aquest senyor?

Pere is going to his work place. He notices a man who fell form his bike. The man gets up and want to get on his bike again. Pere asks another pedestrian:

Is this man still fit to ride his bike?

C6:

El Vicenç pensa que el seu amic Jaume passa el Nadal amb els seus pares. El truça per a desitjar bones festes. En Jaume explica que és amb la seva xicota i no a casa dels seus pares. El Vicenç pregunta:

(Que) No passes el Nadal amb els teus pares?

Vicenç thinks that his friend Jaume spends Christmas with his parent. He calls him to wish him a Merry Christmas. Jaume tells him that he is with his girlfriend and not at his parents house. Vicenç asks:

Don't you spend Christmas with your parents?

La Carme i el Pau han de llegir un llibre de Jordi Punti per la facultat. Quan es troben abans de la classe, la Carme li pregunta que pensa dels personatges principals. El Pau no

te cap idea. La Carme li pregunta:

(Que) No has llegit el llibre?

Carme and Pau have to read a book by Jordi Puntí for class. When they meet before the class, Carme asks what Pau thinks about the main characters. Pau has no idea. Carme asks:

Didn't you read the book?

L'Anna sempre ha cregut que a la seva sogra li agrada l'òpera. En una conversa la sogra menciona que troba l'òpera horrible. L'Anna pregunta:

(Que) No li agrada l'òpera?

Anna always thought that her mother in law liked the opera. In a conversation the mother in law mentions that she finds the opera terrible. Anna asks:

You don't like the opera?

L'Enric és professor i té el seu despatx a la cinquena planta. Està esperant un estudiant seu. Quan arriba està suant i panteixa. L'Enric li pregunta:

(Que) No has agafat l'ascensor?

Enric is a professor and his office is on the fifth floor. He is waiting for one of his students. When he arrives he is sweating and panting. Enric asks him:

Didn't you take the elevator?

C7:

La Catalina està visitant el Josep, a la taula auxiliar hi veu una guia turística d'Itàlia. Ella li explica que està pensant anar a Sicília aquest estiu i li pregunta:

(Que) No vas a Itàlia també?

Catalina is visiting Josep. At the side table she sees a guide book to Italy. She tells him that she is thinking about going to Sicily this summer and asks him:

Aren't you going to Italy as well?

El Bernat és al treball. Vol sortir per a fumar un cigarret. Pensa que el Pere també fuma però no ho sap segur. Li pregunta:

(Que) No fumes tu també?

Bernat is at work. He wants to go out for a smoke. He thinks Pere also smokes but is not sure about it. He asks him:

Don't you smoke as well?

La Laura està parlant amb la seva veïna. Li explica que anirà a un concert de la Beyoncé aquesta nit. Creu que a la seva filla també li agrada, però no ho sap segur. Li pregunta:

(Que) No és fan la seva filla també?

Laura is chatting with her neighbor. She tells her that she is going to a Beyoncé show this night. She thinks that the neighbors daughter also like Beyoncé but she is not sure. She asks the neighbor:

Isn't your daughter a fan as well?

La Núria i el Pere aniran a veure la nova pel·lícula Star Wars al cine aquest vespre. El Pere diu que el seu cap Carles també hi anirà. Més tard la Núria troba el Carles i li pregunta:

(Que) No ve al cine amb nosaltres?

Núria and Pere will go to watch the new Star Wars movie at the cinema this night. Pere says that this boss Carles will also join them. Later Núria runs into Carles and asks him:

Aren't you coming to the cinema with us?

FC1:

El Bernat i el Jordi estan parlant d'uns coneguts seus que van publicar llibres junts. El Bernat diu: És impressionant: Van publicar tres llibres junts. El Jordi li corregeix:

Van escriure només dos llibres junts. El tercer el va fer la Maria sola.

Bernat and Jordi are talking about some acquaintance who published books together. Bernat says: It's impressive: They published three books together! Jordi corrects him:

They wrote only three books together. The third one

Maria did on her own.

La Marta i la Núria son col·legues de treball. La Marta diu: Ets molt treballadora, sempre al despatx! La Núria li contradïu:

Sóc al despatx quatre dies de la setmana. El cinquè

treballo a casa.

Marta and Núria are colleagues. Maria says: You're a workaholic, always at the office! Núria contradicts her:

I'm at the office four days a week. The fifth I work at

home.

El Manel i el Pere estan parlant de la Marta, la parella del Manel. El Pere diu: Vaig sentir que va visitar la seva mare a França. El Manel diu:

Va visitar el seu pare a França. La seva mare encara viu

a Barcelona.

Manel and Pere are talking about Marta, Manel's girlfriend. Pere says: I heard she visited her mother in France. Manel says:

She visited her father in France. Her mother stills lives

in Barcelona.

L'Anna està buscant els seus companys del pis, només troba el Carles. L'Anna diu: S'han anat al supermercat, oi?

Han anat al mercat central. Volen comprar verdures

fresques.

Anna is looking for her roommates, but she only finds Carles. Anna says: They went to the supermarket, right?

They went to the farmers market. They want to buy fresh

vegetables.

FC2:

La Clàudia explica al seu amic Pau la festa d'aniversari del seu germà. Hi havia molta gent però el germà no esperava tanta gent. La Clàudia diu:

Hi havia només una ampolla de vi.

Claudia tells her friend Pau about her brother's birthday party. There were a lot of people but her brother was not prepared for that many guests. Claudia says:

There was only one bottle of wine.

El Pau explica a la Maria la seva visita al metge. Havia pensat que duraria pocs temps, ja que normalment hi ha pocs pacients. Però aquesta vegada la sala d'espera estava plena. El Pau diu:

Vaig esperar tres hores.

Pau tells Maria about his visit at the doctor's office. He thought it would be quick, because normally there are few patients. But this time the waiting room was full. Pau says:

I waited for three hours.

La Lola explica al Bernat que va anar a un concert d'una banda de rock. Pensava que seria la més vella, però al final hi havia molta gent gran. La Lola diu:

Hi havia la meua tia també!

Lola tells Bernat that she went to a rock concert. She thought she would be the oldest but in the end there were a lot of older people. Lola says:

My aunt was there as well!

El Jordi i la Núria estan parlant dels seus amics que acaben de casar-se i tenen pocs diners. Sorprenentment van fer un

viatge de noces molt luxós. El Jordi diu:

Van anar a les Maldives!

Jordi and Núria are talking about their friend who just got married and have very little money. Surprisingly they went on a very luxurious honey moon. Jordi says:

The went to the Maldives!

FC3:

El Pere li explica al Ferran que aquest estiu hi havia moltes prunes a l'arbre del seu jardí i diu que vol fer melmelada. El Ferran suggereix:

Cal comprar dos quilos de sucre com a mínim, i no només un.

Pere tells Ferran that this summer there were a lot of plums on the tree in his garden and that he wants to make jam. El Ferran suggests:

Well then you have to buy at lest two kilos of sugar and just one.

L'Albert li explica a la Marta que els seus pares volien anar de vacances cinc dies a València. Però al final van decidir de passar dos dies a la costa. L'Albert resumeix:

Van passar tres dies a València per tant, i no cinc.

Albert tells his friend Marta that his parents wanted to spend

five days of vacation in Valencia. But finally they decided to spend two of the days at the coast. So Albert sums up:

They spent three days in Valencia and not five.

L'Anna es troba amb l'Enric. L'Enric té molta pressa, està arribant tard a una cita al Born. Li pregunta a l'Anna si sap quant triga a arribar allí en metro. L'Anna diu que 20 minuts. L'Enric conclou:

Prenc un taxi doncs, i no el metro.

Anna runs into Enric. Enric is busy and running late for a meeting in Born. He asks Anna whether she know how long it takes to go there by metro. Anna says it takes 20 minutes. Enric concludes:

Then I take a cab and not the metro.

El Ferran fa anys i vol convidar els seus amics per a dinar. Desgraciadament no té gaire temps per a preparar gran cosa. La seva mare li aconsella:

Aneu menjar al restaurant doncs, i no a casa.

It's Ferran's birthday and he wants to invite his friends to dinner. Unfortunately he has no time to prepare anything. His mother recommends:

Well then eat at a restaurant and not at home.

B Abstract (deutsch)

Diese Arbeit beschäftigt sich mit der Syntax und Interpretation von katalanischen Hauptsätzen, die von dem Komplementierer *que* eingeleitet werden. Diese Sätze sind deshalb interessant weil hier der Komplementierer scheinbar nicht typische subordinierendes Verhalten hat sondern Funktionen auf der Syntax-Diskurs Schnittstelle ausdrückt. Im Zentrum dieser Forschung stehen die kategorialen Eigenschaften des katalanischen Komplementierers und die Architektur der linken Satzperipherie im Katalanischen. Das Ziel ist es einen Beitrag zum besseren Verständnis der syntaktischen und semantisch-pragmatischen Eigenschaften dieses funktionalen Feldes zu leisten.

Der erste Teil der Arbeit beschäftigt sich mit der Bedeutung von *que* in Entscheidungsfragen. Ausgehend von der Forschungsliteratur zu diesem Thema entwickle ich eigene Hypothesen über die pragmatischen Konditionen, die die Anwesenheit von *que* beeinflussen und teste sie in einem experimentellen Setting. Der zweite Teil der Arbeit nimmt eine globalere Perspektive ein. Ich diskutiere alle weiteren Kontexte in denen der Komplementierer augenscheinlich keine satzeinbettende Funktion hat. Nach einer Evaluierung der Literatur schlage ich eine Typologie vor, in der die verschiedenen Konstruktionen auf drei Typen reduziert werden. Ich entwickle eine einheitliche Analyse, die die unterschiedlichen syntaktischen und semantisch-pragmatischen Eigenschaften der Typen erklärt. Schließlich stelle ich die Hypothese auf, dass sich diese Typologie nicht auf uneingebettete Sätze beschränken, sondern dass auch Komplementierer in eingebetteten Sätzen ähnlich analysiert werden können.

C Abstract (English)

This thesis focuses on the structure and interpretation of Catalan main clauses that are introduced by the complementizer *que*. These clauses are interesting because the complementizer does not exhibit its typical behavior as a subordinator but expresses functions on the syntax-discourse interface. The core interest of this investigation are the categorial properties of the Catalan complementizer and the architecture of the Catalan left periphery. The aim is to better contribute to an understanding of the semantic and syntactic properties of this functional field.

The first part of this thesis deals with the interpretation of *que* in polar questions. Based on the research literature, I develop my own hypotheses about the pragmatic conditions that license the presence of *que* and test them in an experimental setting. The second part of the thesis adopts a broader perspective. I present all the other contexts in which the complementizer apparently lacks a subordinating function. After evaluating the relevant literature, I propose a typology in which the different constructions are reduced to three types. I develop a unifying analysis that can explain the syntactic, semantic and pragmatic properties of the different types. Finally, I hypothesize that these types are not restricted to unembedded clauses and I propose that the complementizer in embedded clauses can be analyzed similarly.