

Ignorance and competence implicatures in central Sicilian polar questions

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Abstract

In this paper we examine the distribution and functions of two optional particles found in polar questions in the central Sicilian dialect of Mussomeli (Caltanissetta): *chi* and *cusà*. The import of these particles can best be understood by analysing their distribution in various types of ‘non-canonical’ questions, based on the typology outlined in Farkas (2020). In Farkas’s account, canonical questions are characterized by the default assumptions of speaker ignorance and addressee competence regarding the question’s propositional content, while at least one of these is missing in non-canonical questions. This characterization of (non)-canonical questions in terms of speaker ignorance and addressee competence allows us to capture the distribution of the two particles, which strengthen these assumptions to conventional implicatures. In particular, we show that *chi* is conventionally associated with addressee competence, while *cusà* is conventionally associated with speaker ignorance. We frame this analysis in a version of the inquisitive semantics model, according to which sentence types are characterized by two parameters: the informativeness of the propositional content relative to the participants’ information

state, and its inquisitiveness, that is, its potential to raise an issue. This perspective allows us to develop an explicit analysis of the meaning of the particles, which can in turn be successfully extended to capture their uses beyond polar questions.

Keywords: discourse particles, polar questions, speaker ignorance, addressee competence, conventional implicatures, Sicilian.

1. Introduction

An empirical phenomenon that has recently attracted a great deal of attention in Romance linguistics (and beyond) is the distribution of so-called ‘discourse particles’ in main questions. These differ from interrogative particles proper in being optional, rather than obligatory; at the interpretive level, they do not contribute to determining the question denotation or to the marking of the illocutionary sentence type, but instead convey non-at-issue meanings such as a presupposition, contrast against expectations, or a rhetorical effect (see, e.g., Munaro & Poletto 2003, 2008, Garzonio 2004, Obenauer 2004, on Italo-Romance dialects). These aspects of meaning are intrinsically tied to matters of context and discourse participants. In order to go beyond a descriptive characterization, we believe that it is important to adopt a formal model of the discourse context and to connect such pragmatic values to an explicit analysis of the semantics of questions.

In this paper we discuss the distribution and functions of two optional particles found in polar questions (PQs) in the Sicilian dialect of Mussomeli: *chi* and *cusà*. These particles can introduce canonical information-seeking questions, but they have a limited distribution in various ‘non-canonical’ types of questions. Following Farkas (2020), these types are characterized in terms of two properties related to the participants’ epistemic states: speaker ignorance and addressee competence regarding the content of the PQ. These two properties are assumed by default in canonical PQs, while at least one of them is suspended in non-canonical ones.

Adopting the framework of inquisitive semantics, we show that the two properties can be derived from a cooperativity principle akin to the Gricean maxim of quantity. Based on the above characterization of question types, we argue that each particle strengthens one of the two default assumptions to a conventional implicature: *chi* conveys addressee competence, *cusà* conveys speaker ignorance.

The characterization of questions and declaratives in inquisitive semantics also allows us to develop this core analysis in two ways. First, the particles are excluded from *wh*-questions and alternative questions because they require the host clause to highlight exactly one possibility: this is the case only in PQs. Second, the assumption that declaratives and interrogatives have the same denotational type allows us to explain the occurrence of the two particles in declarative contexts.

In particular, we show that in declaratives the import of speaker ignorance allows *cusà* to be used as a dubitative particle, in the sense of Brucale et al. (2019). On the other hand, *chi* is dependent on the ‘commitment anchor’, corresponding to the addressee in questions and to the speaker in declarative contexts; thus, *chi* can be used in a declarative reply to convey speaker competence. We then suggest that the anchoring of the two particles can be captured in the syntactic approach proposed by

Speas & Tenny (2003), whereby the clausal structure includes two Speech Act projections encoding the speech participants.

2. The Sicilian particles

In this section we provide an outline of the general properties and distribution of the two particles under examination. The use of these particles is subject to geographical variation, both with respect to their availability or usage frequency (in the case of *chi*) and their specific functions (especially for *cusà*); unless stated otherwise, the data discussed here come from the central Sicilian dialect of Mussomeli (Caltanissetta) and are based on the grammaticality judgements of seven native speakers, including one of the authors.

In Sicilian, a direct PQ is optionally introduced by the particle *chi* (Rohlf's 1969, Leone 1995, Cruschina 2012, Bianchi & Cruschina 2016).

- (1) (Chi) ci veni ta frati au vattisimu?
 PTC LOC comes your brother to-the christening
 'Is your brother coming to the christening?'

This interrogative particle could be analysed as an instance of the so-called 'complementizer' or 'complementizer-like' elements in root PQs, which are found in central and southern Italian dialects (Rohlf's 1969, Damonte & Garzonio 2009, Manzini & Savoia 2011, Cruschina 2012, Lusini 2013, Bianchi & Cruschina 2016), as well as in other Romance varieties such as Catalan (Rigau & Prieto 2005, Prieto & Rigau 2007, Kocher 2019): these typically occur in sentence-initial position, and are often homophonous with the declarative complementizer. Rohlf's (1969: §757) puts forward two hypotheses about their origins in central and southern Italian dialects. He first claims that the particle originates from the declarative complementizer in an expression comprising an implicit predicate inquiring about the truth of a proposition: '(is it true) that *p*?'. However, the Sicilian particle *chi* is also homophonous with the wh-word corresponding to English 'what', leading to the alternative hypothesis that it originates from a biclausal construction with *chi* 'what' expressing wonder or surprise: 'What? *p*?'. Reanalysis then converted this construction into a monoclausal structure (see Cruschina 2012, Lusini 2013). As a matter of fact, unlike in other dialects of the island, in central Sicilian the declarative complementizer is *ca*; hence *chi* is only homophonous with the wh-word.¹

Both these hypotheses capture an important distributional constraint: *chi* can introduce PQs but is incompatible with wh-questions and with alternative (closed list) questions with ascending-descending intonation (as indicated by the symbols ↑ and ↓ respectively):

- (2) a. (*Chi) a cu vitti Giovanni?
 PTC ACC who see.PST.3SG John
 'Who did John see?' (Bianchi & Cruschina 2016: 64)

¹ Cf. Cruschina (2012); see also Paesano (2013) for an overview of the current distribution of the complementizers *ca* and *chi* in Sicilian dialects.

- b. I picciotti (#chi) sunnu dintra ↑ o nisciuti ↓?
 The boys PTC are inside or gone-out
 ‘Are the boys at home or outside?’

As for the particle *cusà*, it is etymologically derived from the wh-word *cu* ‘who’ and the verb *sa* ‘know’, probably a truncated form of *sàpi* ‘knows’. It is used in a wide range of contexts to express doubt, lack of knowledge, or to introduce a possible condition: it can function as an interjection, as an adverb or as a subordinating conjunction (Piccitto & Tropea 1977–2002). As shown by Brucale et al. (2019), its synchronic uses reflect the different steps of a grammaticalization process from an interrogative clause² into a dubitative adverb (3a) or a dubitative connective (3b-c).

- (3) a. Cusà ti chiamu cchiù tardu.
 PTC you= call.PRS.1SG more late
 ‘Maybe I’ll call you later’
 b. Cusà nisciti, l’accattati.
 PTC go-out.PRS.2PL it=buy.PRS.2PL
 ‘If you go out, buy it.’ (Brucale et al. 2019)
 c. Trasi a machina nt’u magazzinu, cusà chiovi.
 enter.IMP.2SG the car in-the garage PTC rain.PRS.3SG
 ‘Put the car in the garage, in case it rains.’

As a dubitative particle, it can precede *chi* in an information-seeking PQ:

- (4) Cusà (chi) jà deci euro di mi mpristari?
 PTC (PTC) have.PRS.2SG ten euros to me= lend.INF
 ‘Can I borrow ten euros off you?’

Here *cusà* has the pragmatic effect of toning down the force of the interrogation or request, similarly to epistemic adverbs (e.g. *perhaps*, *maybe*; Sifianou 1999: 172). Like *chi*, *cusà* is unavailable in wh-questions and alternative questions:³

- (5) a. (*Cusà) a cu vitti Giovanni?
 PTC ACC who see.PST.3SG John
 ‘Who did John see?’ (Bianchi & Cruschina 2016: 64)
 b. I picciotti (#cusà) (#chi) sunnu dintra ↑ o nisciuti ↓?
 the boys PTC PTC are inside or gone-out
 ‘Are the boys at home or outside?’

In order to understand the import of the two particles, it is crucial to characterize the different types of PQs in which they may or may not occur. To this end, in the following section we introduce the typology of canonical and non-canonical questions proposed in Farkas (2020).

² In contemporary central Sicilian, *cusà* can no longer introduce an indirect question.

3. Default assumptions in canonical and non-canonical questions

A fundamental assumption in Farkas (2020) is that questions and assertions are canonically used to increase the information that is available to all participants about an open issue, which consists of a set of alternatives: in particular, they aim to reach a common commitment to the true alternative that resolves the issue. For this reason, canonical speech acts are characterized by some default pragmatic assumptions. In particular, for *canonical questions* Farkas proposes the following:

- (6) a. *Open issue*: The speaker assumes that the issue she is introducing is not yet resolved in the input context.
 b. *Speaker ignorance*: The speaker presents herself as having an epistemic state that does not support commitment to any of the alternatives in the issue.
 c. *Addressee competence*: The speaker presents herself as assuming that the Addressee's epistemic state supports her commitment to the true alternative.
 d. *Addressee compliance*: The speaker presents herself as assuming that the addressee will resolve the issue by committing to the true alternative.

These default assumptions imply that in a canonical question, the expected *source of information* is the addressee. Since the goal is to increase the shared information relative to a given issue P, this issue must be open in the context. *Speaker ignorance* follows from the fact that if the speaker knew the true answer (i.e., which alternative in P is true in the actual world), she should rather assert a declarative sentence as a public commitment to that alternative, as a more efficient way of increasing the shared information. At the same time, when asking a canonical question, the speaker assumes that the addressee will be able to provide the relevant information as a public commitment to the true alternative (*addressee competence* and *compliance*).

These assumptions do not hold in non-canonical questions. In particular, *quiz questions* involve the suspension of both speaker ignorance and addressee competence: their aim is not to increase information with respect to a given issue, but rather to test the addressee's knowledge regarding it.

- (7) *Teacher to Joey*: Joey, what is the capital of France?

Speaker ignorance and addressee competence are also suspended in *engaging questions*, also known as *inclusively self-addressed questions*, because the source of information is not assumed to be the addressee, but rather the conversational community consisting of speaker and addressee(s). In the context in (8), Alex does not assume that Bea will provide the true answer to the question, but he is setting the programme for their collaboration: they will work out the answer together.

- (8) *Alex and Bea are collaborating on a paper. At the beginning of a session Alex says*: So, the question now is: Why are these facts the way they are?

Another relevant type is *confirmation questions*: the speaker's bias towards one of the alternatives in the issue weakens the default speaker ignorance assumption; however, the speaker relies on the addressee's competence for a final resolution of the

issue. An example is the interrogative tag pronounced with a rising intonation, which marks the speaker's bias towards the truth of the preceding declarative:

(9) Maria is joining us, isn't she?

With this background, we can now test the distribution of the two Sicilian particles.

4. The distribution of *chi* and *cusà* across question types

4.1. *Chi* and addressee competence

We have already shown that *chi* is typically found in canonical questions like (1) above. On the other hand, *chi* displays mixed sensitivity with respect to non-canonical questions: it is incompatible with a quiz question (10)⁴ and with an engaging question (11), while it is possible in a confirmation question (12).

(10) (#Chi) a Sicilia (#chi) jè l'isula cchiù ranni d'u Mediterraneu?
 PTC the Sicily PTC is the-island more big of-the Mediterranean
 'Is Sicily the biggest island of the Mediterranean Sea?'

(11) (#Chi) putissimu pigliari a machina?
 PTC can.SBJV.PST.1PL take.INF the car
 'Could we take the car?'

(12) (Chi) viagnu cu vuantri?
 PTC come.PRS.1SG with you.PL
 'Am I coming with you?'

Recall that both the default assumptions of *speaker ignorance* and *addressee competence* are suspended in quiz questions like (10) – where the speaker tests the addressee's knowledge for purposes other than to increase information – and also in the engaging question (11), for which the expected source of information is the whole conversational community. In confirmation questions like (12) the speaker has a bias towards a positive answer and is hence not completely ignorant with respect to the open issue; however, addressee competence is assumed. We conclude that *chi* is conventionally associated with addressee competence.

This hypothesis is compatible with the distribution of *chi* in other marked PQs (Munaro & Obenauer 2002, Obenauer 2004, Garzonio 2004, Munaro & Poletto 2003, 2008, Cruschina 2012). In *surprise-disapproval questions* the speaker expresses incredulity or discontent towards an observed state of affairs:

(13) a. Chi mangi?
 PTC eat.PRS.2SG
 'Are you (really) eating?!'
 b. Chi dormi?
 PTC sleep.PRS.3SG
 'Is he (really) sleeping?!'

⁴ The question in (10) can be introduced by *chi* if it is intended as a canonical question.

Leaving aside the expressive meanings, we observe that these PQs lack an open issue (as per (6a)); hence speaker ignorance cannot be assumed, while addressee competence is automatically assumed (although a reply is not required). Here *chi* is allowed, consistently with our claim that it marks addressee competence.

A similar case is that of rhetorical questions: these presuppose that the issue is closed in the context (Farkas 2020: 16), and they are characterized by both speaker and addressee competence. Again, *chi* is allowed, as predicted by our proposal:

- (14) Chi si pazzu?
 PTC be.PRS.2SG crazy
 ‘Are you crazy?’

Finally, note that *chi* is also allowed in ‘imperative questions’ (Obenauer 2004, Garzonio 2004), whereby the speaker requires the addressee to perform an action:

- (15) Chi a finisci?
 PTC it=finish.PRS.2SG
 ‘Would you stop it!’

These questions are not information-seeking (witness the infelicity of a ‘yes’ answer), hence speaker ignorance is irrelevant. On the other hand, they carry a default assumption similar to addressee competence, in that the speaker assumes that the addressee is in a position to *make true* the question’s propositional content. To see this, consider the context of the movie *Joker* by Todd Phillips (2019), where the protagonist is affected by a neurological disorder that causes him to laugh uncontrollably. A speaker who uttered (15) as a reaction to the Joker’s laughing in her face would clearly imply that the Joker can voluntarily stop laughing, contrary to fact. This suggests that a version of addressee competence is indeed assumed, although it is not epistemic competence, but rather competence to act appropriately. For reasons of space, however, we will leave aside this type of non-canonical PQ.

Recall also from (2) above that *chi* is disallowed in wh-questions and alternative questions, despite the fact that these share with canonical PQs the default assumptions of speaker ignorance and addressee competence.

The observed distribution of *chi* is summarized in Table 1 below. This distribution leads to the following generalization:

- (16) *Chi* is only allowed in PQs, but not in wh-questions or alternative questions.
 In PQs, *chi* is associated with addressee competence.

4.2. Cusà and speaker ignorance

Turning to the particle *cusà*, we can see that its distribution across question types is much more limited. Example (4) above showed that it is compatible with canonical PQs; it is however incompatible with all the non-canonical question types discussed above, as shown in (17)–(21):

- (17) (#Cusà) a Sicilia jè l’isula cchiù ranni d’u Mediterraneu?
 PTC the Sicily is the-island more big of-the Mediterranean
 ‘Is Sicily the biggest island of the Mediterranean Sea? (Quiz PQ)

- (18) (#Cusà) putissimu pigliari a machina? (Engaging PQ)
 PTC can.SBJV.PST.1PL take.INF the car
 ‘Could we take the car?’
- (19) (#Cusà) (chi) viagnu cu vuantri? (Confirmation PQ)
 PTC PTC come.PRS.1SG with you.PL
 ‘Am I coming with you?’
- (20) (#Cusà) (chi) dormi? (Surprise/disapproval PQ)
 PTC PTC sleep.PRS.3SG
 ‘Is he (really) sleeping?!’
- (21) (#Cusà) (chi) si pazzu? (Rhetorical PQ)
 PTC PTC be.pres.2sg crazy
 ‘Are you crazy?’

In all these examples, *cusà* is acceptable to the extent that the PQs can be interpreted as canonical; it can occur in (20), for example, with the meaning of an epistemically down-toned question (*Is he perhaps sleeping?*), but not to express surprise or disapproval.

Recall also from (5) above that *cusà*, like *chi*, is disallowed in wh-questions and in alternative questions. This distribution leads to the following generalization:

- (22) *Cusà* is only allowed in PQs, but not in wh-questions or alternative questions.
 In PQs, *cusà* is associated with speaker ignorance.

The distribution of *chi* and *cusà* is summarized in Table 1, where the minus sign marks suspension or irrelevance of a given assumption.

Table 1. The distribution of *chi* and *cusà* in different question types

QUESTION TYPE	SPEAKER IGNORANCE	ADDRESSEE COMPETENCE	<i>chi</i>	<i>cusà</i>
Canonical PQs	+	+	✓	✓
Quiz PQs	-	-	#	#
Engaging PQs	-	-	#	#
Confirmation PQs	-	+	✓	#
Surprise PQs	-	+	✓	#
Rhetorical PQs	-	+	✓	#
Wh-questions	+	+	#	#
Alternative questions	+	+		

Summarizing so far, we have shown that Farkas's characterization of (non)-canonical questions in terms of speaker ignorance and addressee competence allows us to capture the distribution of the two particles in PQs. In the following section, we briefly introduce the inquisitive semantics model that we adopt as a framework for a formally explicit analysis of the meanings of the particles.

5. The analysis: Ignorance and competence implicatures

5.1. The theoretical approach: inquisitive semantics

Possible world semantics assumes a set W of possible states of the world ('(possible) worlds' for short). In a conversation, utterances are interpreted against a common ground of information that is shared by all the conversational participants; this circumscribes a subset of W , the *context set*, comprising the worlds that conform to all the common ground information. A sentence S is *informative* relative to a given context if and only if it is true at some but not all the worlds of its context set (Stalnaker 1978).⁵

In inquisitive semantics, both declarative and interrogative sentences denote a proposition consisting in a *downward closed set* of information states, where each information state is a set of worlds, and by downward closure, all its subsets are also members of the proposition. Notice that any subset of an information state I is *more informative* than I , in that (intuitively) it corresponds to a smaller portion of the 'logical space' represented by W .

In every proposition the maximal elements, called *alternatives*, are those information states that are not subsets of any other information state in it. To illustrate, consider a context set containing four possible worlds: $\{w_1, \dots, w_4\}$. A declarative like (23) denotes a proposition containing just one alternative: the set of all possible worlds in which Al invited Carl, e.g. $\{w_1, w_2\}$, as represented in Figure 1. This proposition is informative, since it excludes some worlds of the context set (i.e. w_3 and w_4); it is also non-inquisitive, since it contains only one alternative.⁶

(23) Al invited Carl.

This can be turned into a non-informative and inquisitive proposition by adding on top of the sentence radical the *non-informative closure* operator (designated $?$).⁷ Informally, this operator adds to the unique alternative of (23) the complement alternative $\{w_3, w_4\}$, comprising those worlds which were not covered by (23). This yields the denotation of the PQ (26), as depicted in Figure 2.

⁵ If S is true in all worlds of the context set, then adding it to the common ground would leave the context set unchanged. If S is true in none of the worlds of the context set, then it is logically inconsistent with the common ground information: adding S to the common ground would lead to an inconsistent information state.

⁶ In principle, a declarative sentence may contain inquisitive operators (disjunction and existential quantifiers) that introduce more than one alternative, but their inquisitive potential is suppressed by the non-inquisitive closure operator, which collapses all alternatives into one. We leave this point aside since it is not crucial.

⁷ We provisionally assume that the $?$ -operator is hosted in the complementizer head.

(24) a. Did Al invite Carl?

b. LF: [? [Al invited Carl]]

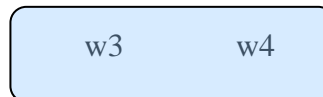
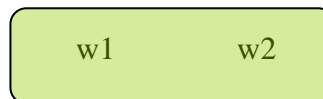
Figure 1. Denotation of (23)



w3 w4

Al invited Carl

Figure 2. Denotation of (24)



[? [Al invited Carl]]

Question (24) introduces in the context an open *issue*; the issue is resolved by selecting one of the two alternatives and discarding the other.

5.2. Canonical speech acts

With this background, we can now reconsider the default assumptions associated with canonical speech acts (cf. Section 3). We first introduce two ancillary notions:

(25) The *informative content* of a sentence *S*, designated $\text{info}(S)$, is the union of the alternatives denoted by *S*.

Recall that a sentence *S* is informative relative to a context set only if $\text{info}(S)$ contains some but not all the worlds of the context set. The informative content of question (24) (as per Figure 2) consists of the whole context set $\{w1, w2, w3, w4\}$, so the question is not informative. Moreover, by the definition of the ?-operator, an informative sentence *S* and its negation (*not S*) are strictly more informative (i.e., more restrictive) than the corresponding polar question ?*S*, because the complementary sets $\text{info}(S)$ and $\text{info}(\text{not } S)$ are both subsets of $\text{info}(?S)$.

For any information state (a set of worlds conforming to a given body of information) we define the relation of support as follows:

(26) An information state *I* *supports* a clause *S* iff *I* is a subset of $\text{info}(S)$.

Intuitively, in all the worlds of *I* at least one of the alternatives of *S* is true.

We can now propose a general principle for canonical declaratives and questions:

(27) Update the context with the most informative (relevant) sentence⁸ that is supported by your current epistemic state.

(27) can be thought of as a version of Gricean cooperativity. The aim of canonical speech acts is to increase the context's informative content: thus, a cooperative speaker must commit herself to the most informative sentence that she possibly can. The

⁸ I.e., a sentence whose informative content is not included in the informative content of any other sentence supported by her epistemic state.

informative content of the sentence restricts the context set only if it is accepted by the other participant(s).⁹

By (27), if a speaker utters a declarative sentence *S*, then *S* is supported by her epistemic state: namely, all the worlds compatible with her current knowledge belong in the unique alternative that *S* denotes. This yields the default assumption of speaker competence for declaratives.

Turning to questions, observe that if a speaker utters a non-informative PQ ?*S*, this move complies with (27) only if the speaker's epistemic state does *not* support the more informative declarative *S* nor its negation. This yields the default assumption of speaker ignorance for canonical PQs (cf. (6b) above).

Finally, a speaker who asks a canonical PQ? *S* introduces an issue into the context, rather than some non-trivial informative content. This move is not vacuous in that it projects an evolution of the context in which one of the two alternatives in ?*S* restricts the context set (Farkas & Bruce 2010). For this evolution to take place, the addressee must be willing to cooperatively resolve the issue in compliance with (27), and by (27), her epistemic state must support one of the alternatives in this issue. This yields the default assumptions of addressee competence (6c) and compliance (6d). Note that these assumptions are tentative on the part of the speaker, since she has no introspective access to the addressee's epistemic state.

Thus, the unified approach to declaratives and questions in inquisitive semantics allows us to define an informativeness scale which derives the default assumptions for canonical speech acts from the single cooperativity maxim (27). On the other hand, non-canonical questions can be characterized as not being subject to (27): when a speech act does not aim to increase the shared information, the participants are not constrained to utter the most informative epistemically supported sentence: hence, they can ask a question whose answer is already known to them (as in quiz questions) and possibly also to the addressee (as in surprise and rhetorical questions), or they can ask a question without assuming that an answer is supported by the addressee's epistemic state (as in quiz and engaging questions).

In order to define the status of a proposition relative to an information state, we adapt the notion of *decidedness* (from Farkas 2003 and subsequent work):

- (28) Given an information state *I* and a proposition *P*,
- (i) an alternative *A* in *P* is positively decided in *I* iff *I* is a subset of *A* (i.e., all the worlds in *I* are *A*-worlds)
 - (ii) an alternative *A* in *P* is negatively decided in *I* iff *I* is disjoint from *A* (i.e., no world in *I* is an *A*-world)
 - (iii) an alternative *A* in *P* is decided in *I* iff *A* is either positively or negatively decided in *I*. Otherwise, *A* is undecided in *I*.
 - (iv) A proposition *P* is resolved in *I* iff every alternative in *P* is decided in *I*.

5.3. Highlighting

Finally, another relevant theoretical notion is that of *highlighting*.

As discussed above in connection with (24), a PQ denotes a proposition with two alternatives. However, the two alternatives do not have the same status: the alternative

⁹ The informative content becomes part of the interlocutors' common ground. For reasons of space we have here simplified the model of the context, without distinguishing the context components proposed in Farkas & Bruce (2010), Roelofsen & Farkas (2015).

corresponding to the denotation of the sentence radical ($\{w1, w2\}$, comprising the worlds where Al invited Carl) is *more prominent* than the complementary alternative $\{w3, w4\}$, and it can be the antecedent of an anaphoric pronoun (Roelofsen & van Gool 2010, §3; Roelofsen & Farkas 2015: 376 ff.; Farkas & Roelofsen 2017: 254). This alternative is anaphorically picked up by the responding particles: *yes* confirms it, thus restricting the context set to $\{w1, w2\}$, while *no* excludes it, and restricts the context set to $\{w3, w4\}$. In this sense, the PQ only *highlights* the first alternative.

This notion allows us to capture the generalizations in (16) and (22), whereby the two Sicilian particles are allowed in PQs, but not in wh-questions or in alternative questions. The two latter types differ from PQs in that they do not highlight a unique alternative: an alternative question like (2b)/(5b) highlights both the disjoined alternatives (Roelofsen & Farkas 2015: 379);¹⁰ a wh-question highlights no alternative at all (Roelofsen et al. 2019: §3.1).

We can thus draw the desired distinction through the following constraint:

- (29) The particles *chi* and *cusà* carry the presuppositional requirement that the clause they compose with highlight a unique alternative.

5.4. Back to the Sicilian particles

With this background, we preliminarily propose that *chi* introduces the following conventional implicature (à la Potts 2005):

- (30) Import of *chi* (preliminary): *chi* applies to a question highlighting a unique alternative, and conveys the conventional implicature that the highlighted alternative is decided – either positively or negatively, (28iii) – in the addressee’s current epistemic state.

In other terms, the addressee’s epistemic state entails either the highlighted alternative or the complementary one: thus, the default assumption of addressee competence is strengthened to a *non-cancellable implicature*. This is why *chi* is excluded from those PQs where addressee competence is not granted (cf. Table 1).

Note that since the particle strengthens one of the two default assumptions, it is expected to occur in a subset of the PQs where it is in principle allowed; this yields the observed *optionality*.

Whether *chi* is inserted or not depends on the context and on the speaker’s communicative purpose. Admittedly, in many cases it is difficult for native speakers to identify the exact interpretive difference between two versions of a PQ with and without *chi*, since the particle strengthens an assumption that is in any case present by default. However, an appropriate context of informative asymmetry may favour or even require the presence of *chi*. Consider a situation in which a passenger steps onto a bus and asks the driver if that bus goes to a specific destination:

¹⁰ Native speakers report that in (2b) and (5b), the particles are acceptable if both disjuncts are pronounced with rising intonation, with a pause in between. Following Roelofsen & Farkas (2015: 379), this intonation could yield an open list question highlighting a single alternative.

- (31) ??(Chi) va a chiazza ranni, st' autobus?
 PTC goes to-the square big this bus
 'Does this bus go to the main square?'

In such a context, the passenger can fully rely on the addressee's competence: the bus driver certainly knows where the bus is going. Here *chi* is virtually obligatory.

As for *cusà*, we propose that it also introduces a conventional implicature strengthening the default assumption of speaker ignorance:

- (32) Import of *cusà*: *Cusà* applies to a question highlighting a unique alternative, and it conveys the conventional implicature that the unique highlighted alternative is undecided in the speaker's current epistemic state.

This import excludes the particle from those PQs that are incompatible with speaker ignorance (cf. Table 1 above). Note that when the speaker is ignorant about the true answer to a PQ, she typically has recourse to the addressee's competence: this is why *cusà* naturally co-occurs with *chi*. (We return to this point in Section 6).

5.5. Beyond polar questions

In our preliminary characterization, *chi* conveys that the alternative highlighted by the PQ is decided in the *addressee's* epistemic state. We now generalize the import of *chi* by appealing to the notion of the commitment anchor (Farkas 2020).

As discussed in §5.2 above, the context is updated by a sentence introducing a proposition. When the proposition is informative and non-inquisitive, the sentence can update the context in compliance with the cooperativity principle (27) only if it is supported by the speaker's current epistemic state; in fact, the speaker publicly commits herself to the truth of its informative content (or more precisely, she commits herself to behaving as if this content were true). For declarative sentences, then, the speaker is the commitment anchor.

In the case of questions, however, the proposition is uninformative: the speaker does not commit herself to any informative content, but she raises an issue and projects an evolution of the context in which an informative answer updates the context set. The addressee is expected to resolve the issue by publicly committing herself to the truth of one alternative in the question denotation. Hence, in this case the commitment anchor is the addressee.

- (33) The commitment anchor for a speech act is the participant whose public commitment is expected to enhance the informative content of the context.

In the light of this notion, we revise our initial characterization of *chi*:

- (34) Import of *chi* (final): *Chi* applies to a sentence highlighting a unique alternative and conveys the conventional implicature that the unique alternative is decided in the current epistemic state of the commitment anchor.

This revision is *prima facie* wrong, in that it seems to allow *chi* to also occur in asserted declarative sentences, where it is in fact excluded. The reason for this, we argue, is that in asserted declaratives its conventional implicature would be redundant. By

principle (27), a speaker asserts a declarative S that is supported by her current epistemic state. Since a declarative S contains a unique alternative, identical to $\text{info}(S)$, this alternative is positively decided in the speaker's epistemic state. Crucially, the speaker has introspective access to her knowledge, so that the default assumption triggered by (27) is equivalent to the import of *chi*.

There is, however, one context beyond PQs where the particle is used: in a reply particle.¹¹ As illustrated in (35B), the reply *a chi* can be pronounced with a falling intonation, which conveys speaker commitment (Gunlogson 2003: 33): the reply implicates that the speaker was *already aware* of the previously introduced content. A *chi* can also be pronounced with a high intonation, as in (35B'): we assume that this corresponds to the 'incredulity' contour signalling lack of speaker commitment (Gunlogson 2003: 20–23). In this case, the reply conveys a denial. The two intonational contours are represented in Figures 3 and 4.

- (35) A: Maria avi na simana ca un nesci di dintra,
 Maria has one week that not goes-out from inside
 studìa ùattu uri au jùarnu pirchí javi esami.
 studies eight hours at-the day because has exams
 'Mary hasn't gone out for a week, she's studying eight hours a day because she has exams.'
- B: A chi, veru, mi scurdavu nzina chi facci javi.
 PTC PTC true RFL forgot.1SG even which face has
 'Right, I even forgot her face.'
- B': A chi?! A vitti stamatina au mercatu.
 PTC PTC her= saw.1sg this morning at-the market
 'No way! I saw her at the market this morning.'

Figure 3. *A chi* in (35B) (one speaker)

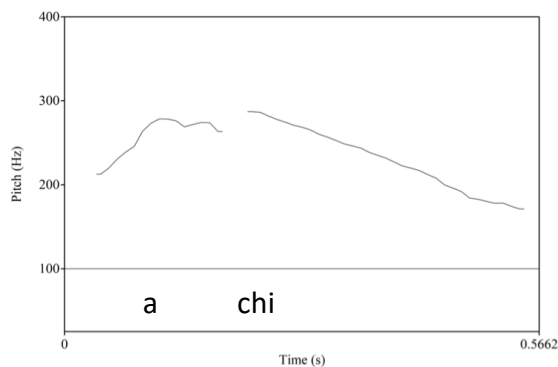
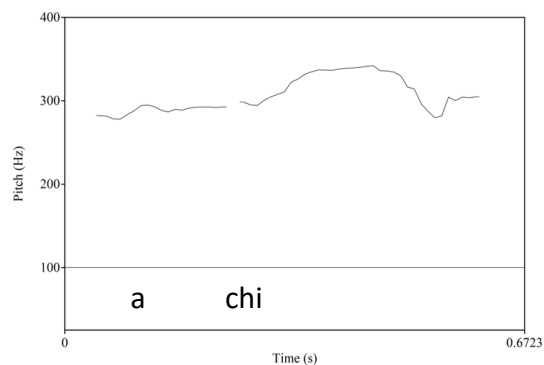


Figure 4. *A chi* in (35B') (one speaker)



In a reply to an asserted declarative, as in (35), the speaker does not add any novel informative content to the context; yet she expresses a commitment, which determines whether the previously introduced content is accepted as common ground or not. For

¹¹ In replies, *chi* is preceded by an 'emphatic' particle: *a*, *ca* or *nca* (depending on the dialect), whose origins and values are not fully understood (see dictionary entries in Piccitto & Tropea 1977–2002, Cruschina 2012: 190–192, Scivoletto 2020).

this reason, we assume that in a reply to an assertion, much as in the reply to a question,¹² the speaker is the commitment anchor.

Being a reply particle, *a chi* introduces an elided prejacent that anaphorically picks up the unique alternative highlighted by (35A).¹³ The falling intonation of (35B) conveys that speaker B, *qua* commitment anchor, commits herself to this alternative. By (34), *chi* carries the implicature that this alternative is either positively or negatively decided in B's current epistemic state. But speaker B could not commit herself to an alternative that is incompatible with her epistemic state; hence, the relevant alternative must be *positively decided* in it.

On the other hand, in (35B') the incredulity contour conveys that speaker B does not commit herself to the alternative highlighted in (35A). *Chi* again carries the implicature that the alternative is decided in B's current epistemic state; however, if it were positively decided, speaker B should have committed to it, so as to increase the common ground. It follows that the relevant alternative is *negatively* decided in B's epistemic state (i.e., inconsistent with it).¹⁴

Note that in the reply to an assertion, although speaker B is the commitment anchor, she is *not the source* of the relevant informative content: thus, there is no default assumption of speaker competence. Consequently, the implicature conveyed by *a chi* is not redundant in the first case (falling contour) and it is not in contrast with any default assumption in the second case (incredulity contour).

Turning to *cusà*, we proposed that in PQs its ignorance implicature concerns the speaker's epistemic state; we showed in (3) above that it is also used in declaratives, where it still conveys the speaker's ignorance.

Therefore, we maintain that the implicature of *cusà* is anchored to the speaker both in questions and in declaratives. In the case of declaratives, *cusà* blocks the default assumption of speaker competence and yields a *non-canonical assertion*, which is not subject to principle (27): the speaker does not commit herself to the truth of the relevant alternative, but the latter is highlighted as a relevant possibility. This corresponds to the use of *cusà* as a dubitative adverb in (3) above.

6. Anchoring the particles

In Section 5.4 we proposed that *chi* is anchored to the addressee in questions, and to the speaker in declarative replies. This shifting of the role of commitment anchor is an instance of the general phenomenon of 'interrogative flip' (Speas & Tenny 2003, a.o.). For another example, 'speaker-oriented' adverbs like *frankly* become addressee-oriented in questions:

- (36) a. Frankly, Al is unreliable. (The speaker is talking frankly)
 b. Frankly, is Al reliable? (The addressee is expected to answer frankly)

¹² *A chi* (in both meanings) is also used as a reply to a PQ:

(i) A: Maria si misi cu Luca?
 'Is Maria dating Luca?'
 B: A chi... / A chi !?

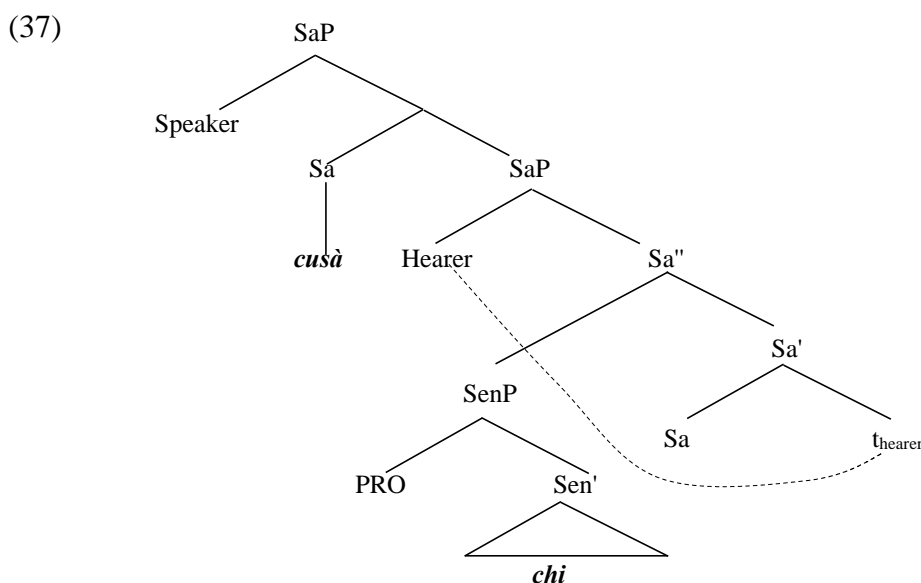
¹³ A declarative highlights the unique alternative in its denotation (Roelofsen & Farkas 2015).

¹⁴ The same analysis applies when *a chi* is used to answer a PQ (cf. note 12).

Speas & Tenny propose a syntactic analysis of the interrogative flip in terms of two Speech Act Projections in the topmost portion of main clauses, which encode the speaker as the agent of the speech act, the addressee as its goal, and a Sentience Phrase as its content (cf. (37)). The Sentience Phrase contains an empty pronoun (PRO) corresponding to the ‘seat of knowledge’: the person whose epistemic state provides an evaluation of the truth of the propositional content of the sentence radical. This notion is clearly parallel to the commitment anchor defined in (33).

In declaratives, the speaker is the closest element that controls PRO and becomes the seat of knowledge (as in (36a)); in interrogatives, the addressee is syntactically promoted and becomes the closest element that controls PRO (as in 36b).

Speas & Tenny’s proposal might be exploited for the anchoring of the Sicilian particles, as represented in (37):



Assume that *cusà* is located in the highest Speech Act head, hosting the speaker in its Spec: then, it remains anchored to the speaker both in declaratives and in interrogatives. On the other hand, if *chi* is contained the Sentience Phrase, it gets anchored to the PRO attitude holder, and is subject to the interrogative flip.¹⁵

This tentative syntactic approach can also account for the relative order of the two particles: in case of co-occurrence, *cusà* precedes *chi* (cf. (4) above), while the reverse order is impossible. Moreover, it can also account for the fact that the two particles are not found in embedded clauses that lack the Speech Act Projections.

¹⁵ In Bianchi & Cruschina (2016) it was assumed that *chi* spells out the Polar Question operator in a dedicated position of the CP area (the Int head of Rizzi 2001). This assumption, however, could not explain the non-interrogative use of *chi* discussed in §5.4. From the present perspective, when *chi* occurs in a PQ with focus fronting, the non-at-issue meanings that arise cannot be associated with the *chi* particle itself (see Bianchi & Cruschina 2016: 65–66 for discussion).

7. Conclusions

In this paper we have analysed two optional discourse particles, *chi* and *cusà*, that appear in PQs in central Sicilian. We have shown that their distribution is sensitive to the nature of various non-canonical question types, which can be characterized in terms of two properties related to the epistemic states of the discourse participants: speaker ignorance and addressee competence (Farkas 2020). The two properties constitute default assumptions in canonical information-seeking PQs, while in non-canonical PQs, one of them is suspended.

The observed distribution has led us to the conclusion that *chi* is associated with addressee competence, and *cusà* with speaker ignorance. Adopting the framework of inquisitive semantics, and a specific version of the Gricean quantity maxim, we have proposed that each particle strengthens the relevant default assumption to a non-cancellable conventional implicature, and we have characterized the latter in terms of decidedness of the PQ's highlighted alternative in the participant's epistemic state.

We have also shown that our analysis accounts for other uses of the two particles beyond PQs. *Chi* appears as a reply particle: in this case its conventional implicature is anchored to the speaker, conveying that the alternative introduced by the antecedent clause is already decided in her epistemic state. *Cusà* instead appears as a dubitative particle in declaratives, suspending for these the default assumption of speaker competence.

These results suggest that a proper analysis of discourse phenomena requires the assumption of an explicit semantic framework, in order to clearly define the interaction between the denotation of the host clause and the pragmatic properties of the discourse context.

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