Abstract: This article discusses the properties of interrogative structures biased in the set of their possible answers by the particle po in Camuno. In declarative structures, po signals that according to the speaker, a proposition $p$ is surprisingly controversial in the utterance world $w$. In interrogative structures, the same particle identifies the only subset of $\llbracket p \rrbracket_w$, the set of focus alternatives to $p$, that can satisfy the existential presupposition introduced by the question. However, po additionally signals that such a subset is non-factual, i.e., controversial, in $w$. A characterization of po as an element operating on sets of alternatives offers an important tool to investigate the numerous pragmatic readings conveyed by po and account for the restrictions in its distribution. The semantic properties of the po-interrogatives can, in fact, capture the mirative and counterfactual readings also attested in cognate forms in neighboring varieties. Thus, this analysis represents an important step in exploring a possible unified account.

Keywords: pragmatics, semantics, romance languages, interrogative structures

1 Introduction

This article discusses the role of the discourse particle po in biased interrogatives in Camuno, an endangered Gallo-Italic variety (Moseley and Nicolas 2015) spoken in the alpine valley “Valcamonica,” in northern Italy. In a nutshell, I propose that po biases the set of alternatives evoked by the hosting interrogative structure, resulting in a number of pragmatic interpretations identified for po and cognate forms, cross-linguistically.

The interpretation of the po-proposition follows from the semantic properties of the particle. Specifically, I propose that the import of po to the meaning of a proposition $p$ is related to the initial doxastic evaluation of the propositional content of $p$ by the speaker, who believes that the latter should be uncontroversial. In other words, at the utterance time, the speaker is not only committed to the truth of $p$, but surprised that such evaluation is not shared by the other participants to the conversation. The hosting proposition is, in fact, initially judged factual in the utterance world $w$. At the utterance time, however, $p$ is believed to be controversial, and the speaker expresses their surprise over the mismatch between their beliefs regarding the common ground and the actual state of affairs.

This article is articulated as follows: in Section 2, I introduce some preliminary background information regarding Camuno, a description of the functions of po, and the theoretical assumptions adopted in the article. Section 3 presents an analysis of interrogatives marked by the particle po. Finally, Section 4 summarizes the main points of the discussion, comments on their implication for future study, and concludes the article.
2 Background

Before discussing the patterns at the centre of the article, this section introduces an overview of relevant grammatical facts and theoretical foundations adopted throughout the discussion. While no structured grammar of Camuno is available, the reader is referred to Cresci (2014), Swinburne (2021), and Fiorini (2023) for more extensive overviews.

2.1 Interrogative structures in Camuno

Subject-clitic inversion represents the default strategy to express interrogative force, in polar (1-a) and wh-questions, both in argumental (1-b) and in adjoined (1-c) position, a property common to other Northern Italian dialects (Manzini and Savoia 2005, for an overview):

(1) a. e-t viht la partida?
   have.2SG.PRS=SCL.2SG see.PRT the match
   ‘Have you seen the game?’

b. htudie-la kè la ho htjèta?
   study.3SG.PRS=SCL.3SG what the her daughter
   ‘What does her daughter study?’

c. a-l viht kwando kèl htjèt le la to fonna?
   have.3SG.PRS=SCL.3SG see.PRT when that boy there the your wife
   ‘When did your wife see that boy?’

Two pan-dialectal strategies are attested for wh-interrogatives: (i) fronting via (semi-)clefting (2-a); (ii) clause-internal wh-phrases (2-b):

(2) a. kwand è-l ke l’ a iht kèl htjèt le la to fonna?
   when is.3SG.PRS=SCL.3SG that SCL.3SG have.3SG.PRS see.PRT that boy there the your wife
   ‘When did your wife see that boy?’

b. e-t hcrit a ki hta letera?
   have.2SG.PRS=SCL.2SG write.PRT to whom this letter
   ‘To whom did you write this letter?’

The clause-internal wh-phrase in (2-b) is hosted in a position targeted by A-bar movement at the edge of the vP phase. In other words, (2-b) is an instance of fake in situ distribution of wh-phrases (Bonan 2017). Two additional strategies are available for at least some dialects of Camuno: The Italian-like fronting in (3-a) and wh-doubling as in (3-b):

(3) a. ke laurà fe-t?
   what job do.2SG.PRS=SCL.2SG
   ‘What is your job?’

b. k’ e-t dat kwè al Paolo al sera?
   what have.2SG.PRS=SCL.2SG give.PRT what to.the Paolo the evening
   ‘What did you give to Paolo yesterday evening?’

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1 All propositions discussed in the article have been collected by the author by both elicitation and unstructured conversations with native speakers. There is no codified orthography for Camuno, and the conventions of standard Italian are usually adopted by the speakers. In this article, I used, instead, a simplified IPA notation when the representation would not otherwise be clear. In the glosses, SCL indicates a subject clitic and OCL an object clitic.
I consider (3-a) to be an Italianism since it mirrors exactly the Italian wh-phrases distribution. The order is also more frequently attested when the topic of the conversation is related to contexts where the speaker would use Italian in real-life situations. These are topics such as education, legal matters, and health in relation to medical professionals. (3-b) is only attested in a handful of dialects of Camuno and presents a number of descriptive challenges outside the scope of this work (Fiorini and Neagu 2023, for a descriptive analysis). For these reasons, and for the sake of clarity, here I only discuss (2-a) and (2-b), which represent the most frequent strategies employed by my informants. Nevertheless, the analysis of biased interrogatives proposed here is predicted to hold for any possible question-formation strategy, as not strictly correlated with a specific syntactic behavior. The particle po is, in fact, attested in all the dialects in Valcamonica, albeit with minor interpretative differences depending on its distribution.

2.2 The discourse particle po

Cognate forms of the particle po are attested in numerous Northern Italian Dialects. For instance, see Munaro and Poletto (2005), for Piedmont varieties; Hack (2014), and Dohi (2019) for Dolomitic varieties; Hinterholzl and Munaro (2015) for Bellunese; Coniglio (2008), Cognola and Cruschina (2021), and Fiorini (2022) for Italian. Their etymological source is invariably identified in the Latin adverb post ‘afterward,’ which undergoes a process of grammaticalization from purely temporal adverb to functional particle. Different stages of this process of Grammaticalization are visible as synchronic variation across varieties spoken in the eastern Alpine region (Hack 2014).

The origin of these particles is transparent in the Italian structures in (4). In particular, in (4-a), poi has the canonical function of creating a logic (in this case, temporal) relationship between the two clauses. In contrast, po can refer to a previous conversational event (Cardinaletti 2011) or a referent salient in the conversational context (4-b). Finally, poi can be used as a discourse marker, that is, a “sequentially dependent element which brackets units of talk” (Schiffrin 1987, 31) with an additive value or, frequently, with a contrastive, adversative, or dismissal meaning (4-c):

(4) a. Hanno salutato gli ospiti poi sono andati a letto.
   ‘They greeted the guests, then they went to bed.’

 b. Hanno poi comprato la macchina?
   ‘Did they end up buying the car?’

 c. Io chiamerei un taxi, voi poi fate come volete.
   ‘I would recommend calling a taxi, however/but you all do what you want.’

The literature discusses these elements as mainly attested in questions and as expressing a number of pragmatic values such as (i) astonishment (Croatto 1997), (ii) emphasis and focus (Poletto and Zanuttini 2003a), (iii) surprise and indignation (Hack 2014), (iv) ‘inability to find an answer’ or ‘concern or interest in the information being asked for’ (Coniglio 2008).

From a descriptive point of view, in the appropriate context, po in Camuno can express all these pragmatic values. Differently from cognate forms and from numerous particles attested in several Romance varieties spoken in the Italian peninsula, the distribution of po is not connected to either the type of the hosting sentence or a specific position in the clause.
2.2.1 Declarative structures

When appearing in out-of-the-blue declarative structure, po introduces a non-truth-conditional meaning indicating the surprise regarding the fact that the hosting proposition $p$ is not part of the common ground. Therefore, we can assume that there are no proper declarative structures hosting $po$; rather, they can be thought of as sentence exclamation with unusual properties. The speaker, in fact, does not express surprise about the content of the proposition itself. Rather, they convey surprise about the addressee’s lack of commitment to the truth of $p^2$.

This is crucially different from the import described for cognate forms of $po$. Consider, for instance, the examples by Poletto and Zanuttini (2003b) from Biadotto (a Rhaetoromance variety spoken in Val Badia) in (5):

(5) a. Al e pö bun!
\[ SCL.3SG \text{ be.3SG.PRS } pö \text{ good } \]
‘Sure it’s good! (contrary to what was said.)’

b. Al ne vëgn pö nia.
\[ SCL.3SG \text{ NEG come.3SG.PRS } pö \text{ NEG } \]
‘He’s not coming. (contrary to expectation.’) (Poletto and Zanuttini 2003b, 181)

In the examples, $pö$ is used to indicate that the content of the host proposition contradicts some other proposition active in the common ground. The particle is thus defined as a ‘presuppositional particle’ with the function of signalling “that the discourse contains a proposition which conflicts with the one denoted by the sentence in which it occurs” (Poletto and Zanuttini 2003b, 181). The meaning discussed by Poletto and Zanuttini (2003b) is the one generally identified for similar forms in other Northern Italian dialects.

Camuno expresses a similar counter-expectational and mirative value which, however, is not related to the content of the proposition but, rather, to the attitude of the speaker toward it. By uttering po, the speaker is indicating that they are surprised that a contrastive proposition to po- is being considered by the addressee at all. Take the Camuno counterpart of the Badotto examples above in (6):

(6) a. l’ è po bu!
\[ SCL.3SG \text{ be.3SG.PRS } pö \text{ good } \]
‘It’s good! (why would you think otherwise?)’

b. l’ ve po mia.
\[ SCL.3SG \text{ come.3SG.PRS } pö \text{ NEG } \]
‘He’s not coming. (what did you expect?!)

In other words, the speaker is not contrasting a proposition active in the context but, rather, marking the po-proposition as the only plausible in the utterance world. As other discourse particles, the use of po entails a level of negotiation of truth value (Abraham 2020). Nevertheless, and differently from cognate forms, po does not require the content the speaker to ever doubt the truth of the relevant proposition.

To obtain a reading as the one described by Poletto and Zanuttini (2003b), Camuno employs a sentence-initial disjunctive particle also available to other Northern Italian varieties (Hack 2014, Dohi 2019, Cruschina and Bianchi 2022, for an overview) and used in counter-expectational questions in Italian (Giorgi 2018).

2.2.2 Interrogative structures

The literature discusses several particles associated with interrogative structures. The meaning of these particles is closer to the one of po, and it is generally discussed as a particular interest in the answer and an inability to find an
answer based on the information in the common ground (Coniglio 2008, Cardinaletti 2011). In other cases, the particle is argued to be responsible for directly modifying the illocutionary force of the clause (Garzonio 2004).

Among others, Cruschina and Bianchi (2022) sketches a typology of interrogative particles in Sicilian based on Farkas (2020)'s proposal of a distinction based on speaker and/or addressee ignorance and/or competence. A detailed discussion of the proposal and its possible extension to Camuno requires additional data collections and, therefore, must be left to future works. For the time being, we can simply notice that some crosslinguistic asymmetries between po and other specifically interrogative particles emerge. Compare the examples in (7) and their Camuno counterpart in (8):

(7) a. (Chi) ci veni ta frati au vattisimu?
   PART CL.LOC come.3SG.PRS your brother to.the christening
   ‘Is your brother coming to the christening?’
   b. O indove ho messo le chiavi?
   PART where have.1SG.PRS put.PRT the keys
   ‘Where (the hell) did I put my keys?’

(8) a. ?ègne-l al to fredèl al batehem po?
   come.3SG.PRS=SCL.2SG the your brother to.the christening PART
   ‘Is your brother coming to the christening? (right?)’
   b. o mitit ndoe le tfaf po?
   have.1SG.PRS put.PRT where the keys PART
   ‘Where (the hell) did I put my keys?’

Differently from the Sicilian example in (7-a), the acceptability of po in polar question varies depending on the speaker (8-a). The semantic reasons for such limited acceptability are discussed in Section 3.2. From a descriptive point of view, the po-interrogative is interpreted as a question for which the speaker is expecting a positive answer. Conversely, the interpretation of (8-b) is the same as the one described for (7-b), that is, a question for which the speaker cannot find a plausible answer in the common ground nor the utterance context.

The main difference between po and the interrogative particles discussed in the works cited above lies in the fact that po is a particle that is not connected to a specific illocutionary force. The analysis I propose here is thus independent of the type of question that hosts the particle (see also Fiorini 2023).

2.2.3 Distribution of po

The distribution of po can be fairly flexible since any portion of a sentence can virtually enter its scope. Depending, mostly, on phonological constraints, the particle can scope over the constituent preceding it (when stressed) or following it (when unstressed). It can associate with the entire sentence (9-a), embedded clauses (9-b), or single constituents (9-c):

(9) a. l’ a fat tfaf al kunitf po.
   SCL.3SG have.3SG.PRS do.PRT here the rabbit po
   ‘S/he made rabbit (why would you think otherwise?!).’
   b. i m’ a dit ke [l’ a fat tfaf al kunitf]FOC po!
   SCL.3PL DCL.1SG have.3SG.PRS say.PRT that SCL.3SG have.3SG.PRS do.PRT here the rabbit po
   ‘They told me that (of course) s/he made rabbit yesterday.’
   c. l’ a fat tfaf [co le verza]FOC po al kunitf dger hera!
   SCL.3SG have.3SG.PRS do.PRT here with the cabbage po the rabbit yesterday evening
   ‘S/he made rabbit WITH CABBAGE yesterday (what else could it be?!).’
Differently from other interrogative particles in other Italian Dialects, po never surfaces in sentence-initial position. Several works on the topic assume the presence of a highly articulated left periphery of the clause (à la Rizzi 1997, et seq.) including specific projections hosting interrogative particles, or material dislocated via remnant movement (among others Munaro 1999, Obenauer 2004, Munaro and Poletto 2004, Cruschina and Bianchi 2022). As a matter of fact, the particle cannot surface before the inflected verb, a property shared by other scope-taking elements in Camuno such as negation and focus adverbials. The discussion of the syntactic distribution of po is beyond the scope of this article. For the time being, I argue that there is no evidence supporting an analysis in terms of movement of po to the left periphery of the clause when surfacing sentence-finally. Conversely, the order could be captured more straightforwardly by assuming free adjunction to the right of CP, as other focus associated particles. Further investigation, however, could reveal a direct relationship with the left periphery of the clause, which, therefore, cannot be excluded at the present time.

Importantly, po cannot be stressed independently, but it is parasitic to the main stress in the sentence. In interrogative structures, it can surface adjacent to a wh-phrase (10-a), to the element inquired about in polar questions (10-b), or sentence-finally in canonical polar questions with wide interpretation (10-c):

(10) a. e-t hcrit a ki po hta letera?
   have.3SG.PRS=SCL.2SG write.PRT to whom po this letter
   ‘To whom did you write this letter?’

   b. e-t hcrit ALA TO HPUDA po hta letera?
   have.3SG.PRS=SCL.2SG write.PRT to the your wife po this letter
   ‘Did you wrote this letter TO YOUR WIFE (, obviously not someone else)’?

   c. al Piero a-la tʃapat ho la to fiola a la hcola po?
   the Piero have.3SG.PRS=SCL.3SG take.PRT up the your daughter at the school po
   ‘Did Piero pick up your daughter up from school? (, right?)’

A flexible distribution based on the scope is a common property of focus associated particles (Konig 1993). For this reason, the higher acceptability with wh-phrases, and its association property with specific sub-constituents, I take po as belonging to this group.

Considering its distribution and semantic import, the particle could be described as the counterpart of even. The latter is generally analyzed as introducing the presupposition for which its hosting proposition is the less likely in the utterance world w. Conversely, po identifies its host proposition as the most likely in w. This characterization has significant pragmatic consequence, including the one specifically discussed in the article.

2.3 Alternative semantics

Here, I adopt an alternative semantic approach, which, for space constraints, cannot be fully described here. The following is a brief overview of the fundamental tenets of this framework: the reader is referred to Rooth (2016) for a comprehensive overview.

Hamblin (1973, 1976) builds upon the seminal work of Montague (1970) on English as a formal language, expanding his line of analysis to capture the properties of questions. More recently, Rooth (1985, 1992, 1996) adopted some of the basic intuitions of the previous works to develop a formal framework to analyze focus structures. The core idea introduced by these accounts is that sets of alternatives are evoked by non-truth-conditional elements. The framework became known as Alternative Semantics and applies to the analysis of a variety of objects requiring “semantic, pragmatic, or discourse-structural operations or constraints referring to ‘alternative’ phrasal meanings” (Rooth 2016, 1).

The alternatives activated by questions are formalized as ‘answerhood conditions,’ that is, the conditions under which an interrogative can be answered. Take a wh-question like (11-a), which introduces the presupposition in (11-b):
(11) a. **Who smokes?**
   b. $\exists x : x \in [\text{smoke}]$

The Hamblian set of alternatives evoked by the wh-pronoun can be represented as in (12-b), deriving from the condition in (12-a):

(12) a. $f(x) : f \in [\text{smoke}] \land x \in [\text{who}]$
   b. $\text{smokes}(x) = \{\text{Michael smokes; Angela smokes; Andy smokes; ...}\}$

Following a Roothian approach, every expression has an ordinary semantic value and a focus semantic one (traditionally represented via a superscript $f$). The answer to a question, i.e., an $f$-marked element, is selected by the presuppositional operator $\Rightarrow$, which adjoins to the focal-XP associating to a variable that gets its content from a target in the context. A simple NP like $\text{John}$ can thus be represented as (13-b), where $D_\text{p}$ is contextually defined set of individuals:

(13) a. $[\text{John}]^o = \text{John}$
   b. $[\text{John}]^f = [x \in D_\text{p}]$

In this view, the set of alternatives is quantified upon by $\Rightarrow$, which selects a discourse salient argument $C$. This ensures that the ordinary semantic value of the relevant proposition is a subset of its contextually defined focus semantic value, i.e., $\text{man}(\text{John}) \land \text{smoke}(\text{John})$, coherently with the presupposition introduced by the wh-phrase.

Focus associated particles like *only* or *even* play a similar role by operating on the relevant set of alternatives. In Roothian terms, *only* selects all and exclusively the alternative propositions true in $w$, and *even* orders the alternatives, and selects the least likely proposition in $w$.

Numerous proposals regarding the precise ways these operators manipulate the set of alternatives are present in the literature (e.g., Slade 2011, Liu 2018, Greenberg 2020). This article aims to explore the properties of $\text{po}$ in relation to the sets of alternatives activated by the hosting interrogative structure. In particular, I take $\text{po}$ to be a variable over choice functions (Cable 2007, Reinhart 1997, Slade 2011, 2019), defined as “a function which when applied to a set returns a member of that set” (Slade 2019, 21).

### 2.4 Semantic source for the interpretation of $\text{po}$

I argue that the possible interpretations discussed above are a by-product of the non-truth conditional (i.e., presuppositional) semantic import of $\text{po}$, which conveys the speaker’s doxastic evaluation of the $\text{po}$-proposition.

In particular, I argue that the meaning of $\text{po}$ is strictly connected to the interrelated concepts of factuality and uncontroversiality, informally defined as in (14-a) and (14-b):

(14) a. **Factuality**: a proposition $p$ is factual iff $p$ is true in the world $w$ and ‘verifiable on the spot’
   (Gutzmann 2015)
   b. **Uncontroversiality**: a proposition $p$ is uncontroversial iff factual, and it is not challenged in the utterance context $w$, i.e., $\sim p$ is not under consideration by any of the participants of a conversational event in $w$ (Lindner 1991, Zimmermann 2011, Grosz 2020)$^4$.

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3 On the difference between wh-alternatives and focus-alternatives and their role in the computation see Beck (2006) and Cable (2007) who argue that the difference between the wh-phrases and focus is that the former lack an ordinary semantic value. While theoretically appealing, the proposal faces some challenges related to the predictions it entails discussed in Slade (2011).

4 In this definition, and throughout the article, I follow Grosz (2010, 2020), in using the notation $\sim p$ to indicate any alternative proposition to $p$ belonging to its focus semantics, rather than the opposite of $p$, as standard in predicate logic.
The definitions above are rooted in the beliefs of the speakers regarding \( p \). Consequently, I argue that \( po \) operates on the Common Ground Management level, which “contain[s] information about the manifest communicative interests and goals of the participants” (Krifka 2008, 246). Initially proposed to handle the interaction between questions and common ground, this level of organization of the common ground operates over the speaker’s doxastic evaluation of the common ground, which can be asymmetric by definition. In other words, \( po \) refers to the way the common ground should develop according to at least one of the participants in a conversation, regardless of the actual state of affairs.

In the declarative/exclamative structure above, the use of \( po \) signals that the speaker believes that a proposition \( p \) should be uncontroversial (U). However, this does not hold at the utterance time. In other words, the speaker remains committed to the truth of \( p \), but they have reasons to believe the addressee is not. This results in the under-specified mirative (Delancey 1997) interpretation identified in the literature regarding cognate forms of \( po \) listed above.

The typical conversational progression licensing \( po \) is articulated as follows (\( Bs = \) Speaker’s beliefs; \( Ba = \) Addressee’s beliefs), (15):

\[
\begin{align*}
(15) & \quad \text{a. } T-1: Bs(U(p)) \\
& \quad \text{b. } T0: po \cdot Bs(Ba(\neg p)) = \text{PRESUPPOSITION FOR } po
\end{align*}
\]

At \( T-1 \), the speaker believes that \( p \) is uncontroversial and, crucially, that \( p \) should be uncontroversial (15-a). At the utterance time \( T0 \), however, they believe that the addressee is considering \( \neg p \), i.e., \( p \) is not uncontroversial in the utterance world \( w \). Consider (16):

\[
\begin{align*}
(16) & \quad \text{La ho } \text{htj}e\text{ta la } \text{laura } \{po\} \text{ ho à Bre } \{po\}. \\
& \quad \text{the her daughter SCL.3SG work.3SG.PRS po up in Breno po} \\
& \quad \text{‘Her daughter works in Breno [and you should know that].’}
\end{align*}
\]

The utterance in (16) is only felicitous if the speaker believes that the addressee is considering \( \neg p \) (i.e., that ‘her daughter’ works somewhere other than Breno). The speaker, in fact, believes that the addressee should know that \( p \) is factual, i.e., that \( p \) should be uncontroversial in \( w \).

Importantly, while the speaker usually has some evidence justifying their beliefs, this is not necessary for the particle to be licensed. Consider (17):

\[
\begin{align*}
(17) & \quad \text{a. context: In a conversation, someone brought up a newspaper article that talks about Turkish.} \\
& \quad \text{The speaker is aware of being the only participant with a background in linguistics} \\
& \quad \text{b. te he ke an turco tote le parole le ga le htehe vocai? SCL.2SG know.2SG that in Turkish all the words SCL.3SG have.3SG.PRS the same vowels} \\
& \quad \text{‘Do you know that in Turkish, all words have the same vowels?’} \\
& \quad \text{c. l’ è l’ armunia vocalica po! SCL.3SG be.3SG.PRS the harmony vowel po} \\
& \quad \text{‘It’s the vowel harmony! (you should know that).’}
\end{align*}
\]

There is no reason in the context in (17) for the speaker to believe that the addressee should know \( p \) (i.e., that vowel harmony is the typological property of Turkish resulting in the pattern that the addressee is describing). Nevertheless, the sentence, albeit impolite, is grammatical and felicitous. For instance, let us assume that the speaker is an expert in language typology. In that case, the categorization of \( p \) as uncontroversial and factual would be trivial for them in a professional setting, so \( po \) is licensed. The beliefs can be challenged by the addressee, whose reaction could be along the lines of ‘I’ve never studied linguistics, \( pol! \)’ since they consider the fact that they are not familiar with linguistic phenomena to be uncontroversial. In
other words, the use of po is not constrained by anything but the beliefs of the speaker, no matter how implausible they may be, and it is purely a conversational implicature.

The type of presupposition introduced by po can be captured by the concept of ‘expressive presupposition’ proposed by Sauerland (2007) and Schlenker (2007). This type of presupposition contains three indexical elements g, which refer to the speaker (s0), the addressee (a0), and the situation in the utterance context (w0). The speaker is the only authority regarding their beliefs on both the addressee and the context (Potts 2015), consequently, the presupposition is self-verifying (hence the felicity of (17). Modeling it after Grosz (2020)’s proposal for German ja, and the adaptation in Fiorini (2022), the (expressive) presupposition licensing po can be expressed as in (18):

\[ \langle \lambda p_{s,a,w}. g(s0) \text{ believes that } g(a0) \text{ actively considers the possibility of } \neg p \text{ in } g(w) \rangle \]

3 Biased interrogatives in Camuno

In the previous sections, we saw that the traditional semantic account for questions is modeled after their possible answer(s). We can thus define as biased those questions whose set of alternatives is different from the focus semantic value of an unmarked interrogative.

Since at least Bolinger (1978), it has been noticed that the way alternatives are computed can vary, resulting in biased interpretations of the question (see also, e.g., Gunlogson 2001, van Rooy 2003, Krifka 2008). In this kind of interpretation, speakers can introduce additional presuppositional content by indicating that a specific answer is (un-)expected, particularly relevant, or desired. In Camuno, po plays such a role by modeling the focus semantic value of its hosting proposition, eliminating one alternative or group of alternatives from the relevant set of possible answers. The negation of these propositions is, in fact, part of the set of the speaker’s beliefs.

As discussed above, the main function of po is to signal that the speaker believes that a proposition p should be uncontroversial but that it is not in the utterance context. Its use in interrogative structures stems from the same premises. However, in this case, the presupposition is believed to be controversial because non-factual. Consider, for instance, the wh-question in (19):

(19) a-la fat ho kè po la Carla?
    have.3SG.PRS=SCL.3SG prepare up what po the Carla
    ‘What (on earth) did Carla prepare?’

Uttering (19) is only felicitous in contexts in which the speaker holds a previous belief regarding what Carla prepared. The use of po signals that the speaker is not able to find an answer to the question since the only alternative(s) they previously considered to be true in w are no longer believed to be factual for some contextual reason. In other words, as for declarative structures, po is licensed by the presupposition of p to be no longer uncontroversial, but, in the case of interrogatives, because non-factual.

The conversational progression licensing the particle mimics, in fact, the one in (15), with the difference that the presupposition is satisfied by the non-factuality of p rather than by the attitude of the speaker toward the beliefs of the addressee (20):

(20) T-1: Bs(U(p))
T0: p . Bs(\neg p) = \text{PRESUPPOSITION FOR } po

---

5 I adopt the definition in Grosz (2020, 28) according to which ‘x actively considers the possibility of ϕ’ means: x believes that θ of x tries to resolve the question of whether θ or ¬θ.
Recall that in our definition, *factual* is not only to be interpreted as the property of a proposition to be true but also, essentially, as the possibility for the proposition to be inferred from the context, given the common ground shared by the participants to the conversation. This accommodates a specific but fairly common use of *po*, which can be defined as hyperbolic in that it identifies an exaggerated possibility not expected to hold in any plausible world (see also (21) below). Consider, for instance, (27):

(21) l’ è an ura ke te hpête, here-t en Frantsa po?
\[ \text{scl.3SG be.3SG.PST an hour that ocl.2SG wait.1SG.PRS be.2SG.PRS=ocl.2SG in France po} \]
\['I’ve been waiting for you for an hour, were you in France?!'\]

The speaker in (21) is commenting on the addressee’s delay by asking a rhetorical, hyperbolic question. The import of *po* can be paraphrased as ‘I cannot find a single plausible excuse for your delay.’ In other words, there is no possible alternative that can be considered a possible answer in the focus semantic value of the interrogative. The *po*-interrogative introduces a presupposition informally represented as in (22):

(22) \[ \exists x: \text{is.late.because.of(a, x) } \land x \in [p]/. \]

An analysis based on the (non-)uncontroversiality of a proposition can thus always successfully accommodate the licensing of *po* for both declarative and interrogative structures. Consequently, its numerous interpretations can be reduced to pragmatic implicatures without the need to propose additional properties for specific cases (differently from the structure in, e.g., Cognola and Cruschina 2021).

### 3.1 Manipulating sets of alternatives

In Section 2.2, I introduced the concept of common ground management as the level on which *po* operates. In the licensing utterance context, in fact, it signals that the host proposition (*po-p*) is no longer believed to be factual. However, the speaker believes that *po-p* should be true, albeit not factual and, more specifically, that it is the only appropriate alternative belonging to \([p]/.\) This situation is clearly paradoxical and cannot be captured within the common ground content since, at the purely epistemic level, \(p\) can only be either true or false. Conversely, at the doxastic level handled by the common ground management, the indication of \(p\) to be interpreted as the only possible true alternative(s) is identified as the source of the bias. The latter can be considered to be due minimally to the number of alternatives that the *po*-interrogative activates. Consider the unmarked version of (19) in (23-a), and an appropriate answer like (23-b):

(23) a. a-la fat ho kè la Carla?
\[ \text{have3SG.PRS=ocl.3SG prepare.PRT up what the Carla} \]
\‘What did Carla prepare?’

b. la Carla l’ a fat ho al kunitʃ.
\[ \text{the Carla scl.3SG have3SG.PRS prepare.PRT up the rabbit} \]
\‘Carla made rabbit.’

Following the Hamblian line of the analysis presented above, (23-a) activates the set of alternatives in (24), labeled \(D_{\text{food}}\), i.e., a contextually defined set of dishes:

(24) \[ D_{\text{food}} = \{ \text{C. prepared a soup; C. prepared polenta; C. prepared chicken; C. prepared rabbit; ...} \} \]

As standardly assumed, the wh-question introduces the existential presupposition in (25-a), where \(D_{c}\) is the set of contextually defined alternatives (i.e., possible answers). That is, in this case, \(D_{c} = D_{\text{food}}\). The variable
x is then solved by one of the propositions part of \([p]'/\), (25-b) (‘rabbit,’ in this case). In the answer, one of the alternatives is selected and the variable value defined, resulting in the answer in (25-c):

(25)  
  a. \(\exists x: \text{Carla } (c) \text{ prepared } x \land x \in D_C\)  
  b. \(\lambda x.\text{prepared}(c, x)(\text{rabbit})\)  
  c. Carla made rabbit.

An interrogative hosting po has the same properties of unmarked cases like (23-a). However, the particle must be interpreted by the semantic component as evoking a different set \([p]'\), consisting of the same members of \(D_{\text{food}}\), except for the alternative (or subset of alternatives) deemed non-factual by the speaker. One possible way to capture these facts is to assume that po-p simply refers to a different set of alternatives, in which case it could be thought of as an operator like "", which ensures the appropriateness of the set with respect to the context which, in this case, excludes the most likely proposition(s) from the set. A second possible line of analysis can be related to the quantifying properties of po, which in this case could be thought as operating on \([p]'\) independently, similarly to, in this case, only, which as mentioned above selects all and exclusively the true proposition in \(w\). Developing the exact semantic mechanism responsible for these operations must be left to future research. Focusing on the effects of the semantic import of po on the pragmatic interpretation, I believe that considering po as an operator over sets of alternatives is a more straightforward way to account for the data.

3.1.1 Semantic properties and interpretation of po

As described above, in interrogative structures po signals that the speaker believes that a proposition \(p\) belonging to \([p]'\) is the only plausible proposition in \(w\) satisfying the answerhood conditions of the po-interrogative. However, \(p\) is not factual. Hence, it cannot be a possible member of \([p]'\). The speaker thus inquires about which proposition is indeed true in \(w\).

The presupposition of a po-interrogative is thus the marked version (26) of the standard one for interrogative. In this case, it exists an element \(y\) in the set of alternative \(D_C\), such that Carla (c) prepare \(y\), which must be different from \(x\):

(26)  \(\exists y: \exists x \mid \text{prepared}(c, y) \land y \in D_C \land y \neq x\)

In unprompted conversations, it is fairly common that by using po, the speaker is excluding a subset of \([p]'\), sometimes corresponding to \([p]'\) itself. There are cases like (27):

(27)  
  a. [Coming back from a vacation abroad, my friend is telling me that the hotel was horrible: dirty, old, noisy, and located in a sketchy area.]  
  b. \(\text{e-t ndat po ndoe?}\)  
  is.2SG.PRS=SCL.2SG go.PRT po where  
  ‘Where (on earth) did you go?!”

While (27) arguably depicts a proto-idiomatic expression, it is a useful example of a case in which po indicates that the addressee surely did not go to a hotel meeting the standard for an acceptable accommodation. In other words, po-p presupposes that there is no hotel that can be as bad as the addressee is describing.

However, the use of po does not simply signal the exclusion of whatever non-factual propositions in \(w\). In fact, it signals that the most likely proposition cannot be considered a viable answer. We can say, informally, that po takes up the role of a particle like even, which, as discussed in Section 2.3, is argued to introduce an
additional scalar pragmatical presupposition to the interpretation by selecting the least likely proposition (Kay 1990, Giannakidou 2007).

Following Rooth (1985), I argue that the role of even can be reduced to the introduction of a presupposition for a proposition to be ‘unlikely.’ This is consistent with pragmatical analyses according to which even add mirative value (Delancey 1997, de Haan 2012) and not necessarily ordering. Take the representation of the presupposition introduced by even (Zimmermann 2011, 2) in (28):

\[(28) \quad \left[ \text{even} \right] (w) = \exists p \left[ C(p) \land p(w) \land p \neq a \land \text{unlikely}(p) \right] \]

where C is a (contextual) restriction containing focus alternatives to a.

The representation in (28) readily captures the main role of po, i.e., qualifying a proposition, or set of propositions, as unlikely in the utterance world w. The main advantage of this approach for the interpretation of po is related to hyperbolic cases like (27), which does not actively indicate any specific order. Rather, the ‘extreme’ conditions of the hotel are altogether unlikely, with no necessary ordering with respect to other relevant propositions.

3.1.2 Thresholds

Consider now more articulated contexts, exemplified in (29):

\[(29) \quad \begin{align*}
\text{a. & [Piero decided to send his son Andrea to boarding school: Speaker} \\
& \quad \text{and Addressee are talking about this decision.]}
\text{b. & foda a-l l’ a mandat al coledžo?} \\
& \quad \text{why have.3SG.PRS=SCL.3SG OCL.3SG have.3SG.PRS send.PRT to=the boarding.school} \\
& \quad \text{‘Why did he send his son to boarding school?’}
\text{c. & a-l fat kè al ho fiol?} \\
& \quad \text{have.3SG.PRS=SCL.3SG do.PRT what the his son} \\
& \quad \text{‘What did his son do?’}
\end{align*} \]

Both questions in (29-b) and (29-c) seek the same information, i.e., why Piero decided to send his son to boarding school. In both cases, the premise of an inferential relation is the portion of the complex proposition inquired about. The difference between the two is that (29-c) introduces an additional presupposition for the existence of an event related to Piero’s son, warranting the punishment of being sent to boarding school. The two presuppositions in (30-a) and (30-b) are thus introduced by (29-b) and (29-c), respectively (where q is a proposition like Andrea (a) will attend boarding school):

\[(30) \quad \begin{align*}
\text{a. & } \exists x: x \rightarrow q \\
\text{b. & } \exists x: x \rightarrow q \land \text{did(a, x)}
\end{align*} \]

The focus semantic value of p is thus defined as the propositions satisfying the inference, i.e., \( r = (x \rightarrow p = a. \text{will attend boarding school}) \).

In most cases, the context in (29) introduces a conversational implicature regarding the role of an event that Andrea is responsible for, resulting in his father’s decision. In other words, (30-a) and (30-a) are virtually equivalent since they both seek the same information. The consequence of the premise x is, thus, implicitly, a proposition q like a. deserves being sent to boarding school. Building on this premise, we can now turn our attention to the biased version of (29) containing po (31):
The use of po signals that not only the event resulting in q is not part of the speaker’s knowledge but also that the speaker is not aware of, nor can imagine, an event serious enough to result in q. The particle’s contribution to the meaning of the complex proposition r is again a mirative one since the speaker also manifests their surprise over the fact that such an event exists.

As mentioned above, one of the properties of discourse particles is their ability to ‘negotiate’ the truth values of the hosting proposition (Abraham 2020). In Camuno, biased interrogatives po can, in fact, introduce a further implicature, suggesting that the threshold for events warranting q may be higher than Piero’s.

Consider a possible reaction to the communication of Piero’s decision (i.e., the context in (31)) in (32):

(32) l’ a po biit na bira.
    SCL.3SG have.3SG.PRS po drink.PRT a beer
    ‘He (merely) drank a beer.’

In (32), the speaker cannot think of a single event warrant q, and they can only identify the proposition in (32) as the sole possible premise, in the addressee’s mind, to q. The set of alternatives to p consists of propositions that satisfy the contextually identified inference $x \rightarrow q$ (i.e., $A. \text{ is sent to boarding school}$). That can be described as $x \rightarrow A. \text{ is sent to boarding school}$.

### 3.2 Po in polar questions

One last meaning associated with po is attested exclusively in polar questions, and it is reminiscent of the one described for English echo questions. These types of interrogatives are characterized by a non-genuine nature in that they express surprise over a proposition newly introduced to the common ground (Sobin 2010: for an overview of the properties of echo questions). Consider (33):

(33) Laure-la a Brè la Carla po?
    work.3SG.PRS=SCL.3SG in Breno the Carla po
    ‘Does Carla work in Breno? (Really?!).’

The use of po in (33) conveys the usual mirative reading by seeking confirmation of the veridicality of the unlikely proposition p, which the speaker, however, has already accepted and added to the common ground.

I argue that this reading directly results from the presupposition introduced by po. Recall that in wh-questions, po signals that at least one of the propositions part of $[p]$ is non-factual. In Yes/No questions, $[p]$ consists of two alternatives (34):

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6 An anonymous reviewer correctly pointed out that echo-interpretations are generally discussed for wh-interrogative (including accounts for which polar questions cannot have an echo interpretation, e.g., Bolinger 1987). However, polar questions with an echo interpretation have been discussed in the literature (e.g., Artstein 2002, Sudo 2007). At the present time, I consider ‘echo polar questions,’ or at least polar questions with very similar properties to echo interrogatives, to be possible.
The speaker believes that the unlikely proposition \( p \) must be, indeed, surprisingly factual. In the majority of cases, this is inferred by the context. In particular, \( p \) is considered to be unlikely, but also the only possible true alternative in \( w \). The negation of \( p \) (i.e., \( \neg p \)) is, in fact, believed to be false, albeit more likely. In other words, as for the other types of interrogatives, \( po \) eliminates one of the focus alternatives to \( p \). In the case of polar questions, by eliminating one of the possible answers, only \( p \) can be true in \( w \), and the speaker expresses their surprise over this information.

The characteristics of the focus semantic of a polar question have immediate consequences on the distribution of \( po \)-interrogatives. In fact, some speakers do not accept \( po \) in yes/no questions because consider it to be redundant. While polar \( po \)-interrogatives are accepted by the vast majority of my informants, all the elicited occurrences are characterized by marked prosody. When prompted, (35a) is interpreted exactly as (35-b):

(35) a. a-la fat-ho al kunitʃ la Carla?
have.3SG.PRS=3CL.3SG prepare.PRT=up the rabbit the Carla

‘Did Carla prepare rabbit?!’

b. a-la fat-ho al kunitʃ la Carla po?
have.3SG.PRS=3CL.3SG prepare.PRT=up the rabbit the Carla po

‘Did Carla prepare rabbit?!’

The interpretation of both questions in (35) is marked similarly to the \( po \)-interrogatives in the previous sections. In this case, the speaker accepts the proposition and uses (35) to convey their surprise over the veridicality of the unlikely proposition Carla made rabbit. Prosody alone is sufficient to obtain an echo interpretation so that (35-b) can be perceived as redundant and not accepted by numerous speakers.

Conversely, wh-questions marked by \( po \) and wh-questions with echo interpretation are incompatible.

(36) a. a-la fat-ho KÈ la Carla?
have3SG.PRS=3CL.3SG prepare.PRT what the Carla

‘Carla prepared WHAT?!’

b. *a-la fat-ho kè po la Carla?
have3SG.PRS=3CL.3SG prepare.PRT=up what po the Carla

This is the direct consequence of the property of \( po-p \) to be considered to be non-factual. The licensing contexts for (36-a) and (36-b) are, in fact, incompatible. The former requires \( p \) to be known by the speaker at the utterance time, while the latter requires the speaker to believe \( \neg p \).

4 Summary and conclusions

In this article, I presented an analysis of biased interrogatives in Camuno based on the observation that, as for declarative structures, the role of \( po \) is to mark one or more of the focus alternatives of a proposition \( p \) as the

7 Hack (2014) suggests that the use of cognate forms of \( po \) in some Dolomitic Ladino varieties grammaticalizes to a point of becoming a pure question marker. A development in this direction could explain the different judgments on (35-b), which, when accepted, may not be for semantic reasons. The discussion cannot, however, be addressed here.
most likely in the utterance world \( w \). In both cases, the particle is licensed by the doxastic evaluation of the content of \( p \), which, according to the speaker, should be uncontroversial in \( w \). By definition, a proposition is uncontroversial if factual \((14-a)\) and its alternatives are not under consideration. The former property is crucial for the licensing of \( po \) in interrogative environments since \( p \) is believed to be controversial because false (or not immediately identifiable as true, see Gutzmann 2015). The speaker, however, believes that \( p \) should be factual and, by using \( po \), they add a mirative value to the proposition and signal that \( p \) cannot be the answer to the \( po \)-interrogative.

I proposed that the source of such an interpretation can be found in the correlation between focus alternatives and \( po \). In particular, I argued that a subset of \( \{p\}^f \) is selected as the most likely, but false, single or group of prepositions making up the regular semantic value of the answer \( \{p\}^s \). In other words, \( po \) quantifies over alternatives to constrain the available answers to the question. Clearly, the addressee can always cancel the implicature since the set of alternatives activated by the question does contain \( p \).

The main advantage of the line of analysis adopted here is related to its ability to capture different meanings and functions of \( po \) from the interpretative point of view. Depending on the context, the speaker can convey a variety of readings that, in other approaches to similar discourse particles, are discussed as independently motivated properties (e.g., Coniglio 2008, Cognola and Cruschina 2021). In particular, in many cases, cognate forms of \( po \) are considered to carry numerous meanings vaguely interconnected that cannot be boiled down to precise, elementary properties. If my hypothesis is correct, it is expected that whatever the context of use for \( po \) is, the relevant interpretation can be traced back to the fundamental properties described here. As Section 3.2 shows, the distribution of \( po \) is also accounted for without positing any exceptions or assumptions regarding the connection between force and particles (Grosz 2020, Fiorini 2022, 2023: for discussions of this point).

An important prediction that my analysis makes, which needs to be explored further, is that \( po \) can only appear in conjunction with sets of alternatives. While not an issue in principle, considering that every lexical node can be thought of as always introducing sets of alternatives (Rooth 2016), it is important to collect specific data outside the domain of focus structures, interrogatives, and akin structures, which could falsify this prediction.

To conclude, the article showed that an analysis of biased interrogatives in Camuno based on the interaction between presuppositional licensing and manipulation of sets of alternatives successfully accounts for the pragmatic interpretation and the discourse distribution of \( po \).

If the analysis is on the right track, it could be extended to the study of neighboring varieties, offering a new theoretical tool to explore the possibility of a unifying account.

Finally, the article discusses the property of a discourse particle as the source of bias of marked interrogative structures. An approach based on the interaction between purely semantic properties and pragmatic interpretation has the crucial advantage of offering a straightforward explanation for the necessary formal simplicity of the former and the heterogeneity of the latter.

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References


Bonacci, Caterina. 2017. Arguing against a one-fits-all derivation for Northern Italian ‘insitutness.’ *Quaderni di lavoro AsIt 20*, 49–79.


Giorgi, Alessandra. 2018. “Ma non era rosso? (But wasn’t it red?)” In *On Counter-expectational Questions in Italian*, editd by Repetti, Lori and Francisco Ordóñez. p. 69–84. John Benjamins Publishing Company. Publication Title: Romance Languages and Linguistic Theory 14: Selected papers from the 46th Linguistic Symposium on Romance Languages (LSRL), Stony Brook, NY.


