Evidentiality, Assertional Force and Common Ground Management in Conchucos Quechua

Evidencialidad, fuerza asercional y manejo del *common ground* en el quechua de Conchucos

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Abstract: The literature on Quechuan languages describes the enclitics *=mi* and *=chi* as markers of evidentiality, with the former indicating direct evidence and the latter marking conjecture or inference. In this paper, I argue that in Conchucos Quechua they can be better characterised as markers of two degrees of assertional force, which the speakers use for common ground management purposes. For this, I present an analysis of semi-controlled conversational data under the question-under-discussion model of discourse structure. Additionally, I offer a preliminary version of how these functions could be formalised in such a theoretical framework using the model of the Table.

Keywords: Conchucos Quechua; evidentiality; pragmatics; discourse structure; common ground management; Ancash; Peru.

Resumen: La literatura sobre las lenguas quechuas describe los enclíticos *=mi* y *=chi* como marcadores evidenciales: el primero indicando evidencia directa y el segundo marcando conjetura o inferencia. Sostengo que en el quechua de Conchucos estos enclíticos se pueden caracterizar mejor como marcadores de dos grados de fuerza asercional, los que son usados por los hablantes para el manejo del *common ground*. Para ello, presento un análisis de datos dialógicos semi-controlados bajo el modelo de estructura del discurso *question-under-discussion*. Adicionalmente, ofrezco una formalización preliminar de sus funciones en este marco teórico utilizando el modelo del tablero.

Palabras clave: quechua de Conchucos; evidencialidad; pragmática; estructura del discurso; manejo del *common ground*; Ancash; Perú.

Introduction[1]

Conchucos Quechua (henceforth CQ) belongs to the Quechua I branch of the linguistic family (Torero 1964; Cerrón-Palomino 2003) and it is spoken on the eastern slope of the Cordillera Blanca in the department of Ancash, in central Peru. The data employed here

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comes mostly from speakers of the Huari province (Figure 1). Typologically, it is an agglutinative language, exclusively suffixing, and has a flexible SOV (subject-object-verb) order.

Quechuan languages exhibit a relatively large class of discourse-related enclitics (Cerrón-Palomino 2008, ch. 6). A subset of these markers, usually composed of the enclitics =*mi*, =*shi* and =*chi* (or their corresponding variants), has been described in most of the literature as 'evidentials', that is, as indicating the source of information used by the speaker in their utterance (Aikhenvald 2004). In this context, =*mi* marks direct or first-hand evidence, =*shi* reported evidence or hearsay, and =*chi* conjecture or inference.[2]

Faller's (2002) description of the Cuzco Quechua evidential system has been highly influential. This is mainly due to her characterisation of these markers as illocutionary operators and the introduction of the category 'best-possible-grounds' (henceforth BPG), which captures the whole range of uses of =*mi*, including the ones that resist the 'direct evidential' label. Hintz and Hintz (2017) extrapolated this analysis to their South Conchucos Quechua data and added an individual/mutual knowledge distinction to account for the functions of the five markers in their proposed evidential system.

In this paper, I argue that we can obtain a better characterisation of the functions of =*mi* and =*chi* in CQ if we try to explain them based on the place the occupy in the discourse structure in dialogic settings. For this, I offer an analysis of conversational fragments taken from a corpus of semi-controlled speech data (collected in the city of Huari an its surroundings in 2015 and 2017) based on the model of discourse structure 'question-under-discussion' (henceforth QUD) proposed by Roberts (2012) and further developed in Farkas and Bruce (2010), Malamud and Stephenson (2015) and Riester (2019).

Given that the use of these enclitics is not obligatory, I assume that the fundamental linguistic fact that we need to explain is why do speakers choose to use them when the same (propositional) information can be transmitted without them. While in the case of the 'conjectural' =*chi* an explanation seems to be straightforward, we will see that this is not the case with the 'direct' =*mi*. I will show that we can better characterise the use of =*mi* as an assertional reinforcer and that of =*chi* as an assertional mitigator or hedge. In terms of the QUD model, =*mi* can be said to signal the speakers intention to settle the issue by directly updating the common ground, while =*chi* signals that the speaker is not ready to fully commit to the truth of the proposition (i. e., indicating a tentative commitment to it).

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2   Weber (1989, ch. 21); Muysken (1995); Faller (2002); Cerrón-Palomino (2003, ch. 9); Muntendam (2009); Sánchez (2010); Hintz and Hintz (2017). Exceptions to this trend are Floyd (1996; 1997), Adelaar (1977), Behrens (2012) and Grzech (2016a; 2016b; 2020). I will refer to the last two authors' proposals later on.

Figure 1. Huari Province (Ancash, Peru) (Bendezú-Araujo, 2023, using OpenStreetMaps, licensed under CC BY-SA 4.0).

The CQ data

The data used for this analysis was collected by the project "Zweisprachige Prosodie: Metrik, Rhythmus und Intonation zwischen Spanisch und Quechua"[3] (henceforth ZSP) in two fieldtrips to the city of Huari (Ancash, Peru) and its surroundings in 2015 (August-October) and 2017 (April-June). It was collected through the application of several elicitation tasks in conversational settings (two speakers at a time) with various degrees of control over the contextual variables and the knowledge distribution, and with minimal involvement of the researchers.

We recorded 36 Spanish-Quechua bilinguals (19f, 17m, 23.9yo (average age) and five monolinguals (3f, 2m, 51.3yo), with a total of 5 hours 34 minutes of audio. The data was transcribed and translated using ELAN (Wittenburg *et al.* 2006) by professor Leonel Menacho (Universidad Nacional Santiago Antúnez de Mayolo) and a team of his

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3   Part of the data have been published in open access format, see Bendezú-Araujo *et al.* (2019).

students. Morphological glosses were added by me and a team of Linguistics students from the Pontificia Universidad Católica del Perú.

In this paper, I use the data obtained from two elicitation tasks: a map task (Anderson *et al*. 1991) and *Cajas* (Boxes). With both of them, we aimed at eliciting means of expressing informational contrast. For the first task, we used pairs of maps, like the ones shown in Figure 2. One of the participants would receive the map on the left (with the road drawn) and the other the map on the right. They were not allowed to see each other's maps. To complete the task, participants needed to collaborate so the second one could draw the road on their own map. What they didn't know was that the maps were not identical (see the circled images in Figure 2). In this task, speakers found themselves in an epistemically asymmetric setting, where we could have maximal control over the contextual variables (that is, we reduced the universe of discourse to the referents on the map). We applied this task 17 times, and each application lasted five minutes on average. The second task, *Cajas* (Boxes), was again applied to pairs of participants. We gave them a closed box (of ca. 30 x 14 cm) with an unknown item inside. They were asked to find out what was hidden inside the box without opening it. They could only touch it and move it at will. In this case, the speakers were in an epistemically symmetric setting, and we had less control over the universe of discourse, as we could not predict what their guesses would refer to. We applied this task ten times, and each application lasted four minutes on average.

Figure 2. Map task, version A (Bendezú-Araujo, 2023, licensed under CC BY-SA 4.0).

Evidentiality in Quechuan languages

Most Quechuan languages exhibit a tripartite 'evidential' system, marking direct or first-hand evidence, reported or hearsay evidence, and conjecture or inference:[4]

1) **Cuzco Quechua evidential system** (Faller 2002, 122)[5]

    a) Para-sha-n-mi.
        rain-PROG-3-**mi**
        p= 'It is raining'
        EV= speaker sees that *p*

    b) Para-sha-n-**si**.
        rain-PROG-3-**si**
        p= 'It is raining'
        EV= speaker was told that *p*

    c) Para-sha-n-**chá**.
        rain-PROG-3-**chá**
        p= 'It is raining'
        EV= speaker conjectures that *p*

The literature on these enclitics has been mainly concerned with whether they are evidentials (in the narrow sense, that is, exclusively signalling source of information) or markers of epistemic modality (cf. Adelaar 1977; Weber 1989, ch. 21; Floyd 1997; Nuckolls 1993; Taylor 1996).[6] The analysis presented by Faller (2002) seemed to have settled the issue in favour of the first of these possibilities, offering a speech-act theoretical analysis of the Cuzco Quechua evidentials as illocutionary operators that modify the sincerity conditions of the propositions they attach to.

One of the most important contributions of Faller's work is accounting for all possible contexts of use of =*mi* under a single notion. The main problem with the characterisation of =*mi* as a 'direct' evidential is that its use is licensed in contexts where the speaker could not possibly have first-hand access to the information they are asserting, for example, when they are talking about the emotional or psychological state of a third person, when they use their encyclopaedic knowledge as a source or when they refer to biblical events (2002, 126 f., 133-143). Faller subsumes these uses under the category of BPG, which means that =*mi* indicates that "the speaker acquired the information from the best source out of all the sources a normal person is expected to have access to, for the kind of information

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4   Exceptions are Upper Napo Kichwa (Grzech 2016a), which lacks the reportative marker; Cochabamba Quechua (Muntendam 2009), where only =*mi* survives; and allegedly South Conchucos Quechua and Sihuas Quechua (Hintz and Hintz 2017), with five- and six-term systems, respectively.

5   For the abbreviations, see the list at the end of the article, page 94. Here, '*p*' refers to the utterance's propositional content and "EV" to the its evidential value.

6   These enclitics are also said to be (contrastive) focus markers (Wölck 1972; Adelaar 1977; Weber 1989; Nuckolls 1993; Muysken 1995; Muntendam 2009; Sánchez 2010). I won't discuss this issue here, but see Bendezú-Araujo (2021) for details.

conveyed" (Faller 2002, 135). Her other main contribution is the characterisation of these enclitics as illocutionary operators which modify the sincerity conditions of the speech act. Assuming that the default sincerity condition of any unmodified assertion is that the speaker believes that *p*, the effect of =*mi* consists in adding that the speaker has BPG for believing in *p*. This, in turn, increases the illocutionary force of the speech act, which corresponds to the additional emphasis perceived by the speakers in utterances with this enclitic (Faller 2002, 146). In the case of =*chá*, this amounts to adding that the speaker, through reasoning, considers the possibility of *p* being true lower than 100 %, which reduces the force of the speech act.[7]

Hintz and Hintz (2017) extrapolate the notion of BPG to their analysis of South Conchucos Quechua data, where they identify a five-term system: two BPG markers (=*mi* and =*chaa*), two conjecturals (=*chi* and =*cher*) and a reportative (=*shi*). To account for the differences among the first two groups, the authors also consider whether the speakers take the information to be factual or conjecture, and whether the knowledge is individual or mutual, under the assumption that these enclitics "are essentially interactional devices for the packaging and negotiation of information in discourse" (2017, 92). This results in the distribution shown in (2):

2) **South Conchucos evidential system** (adapted from Hintz and Hintz 2017, 91)

    a) Tushu-yka-ya-n
       dance-PROG-PL-3
       'They are dancing'

    b) Tushu-yka-ya-n=**mi**   'assertion of individual knowledge'
    c) Tushu-yka-ya-n=**chaa** 'confirmation/assertion of mutual knowledge'
    d) Tushu-yka-ya-n=**chi**   'individual conjecture'
    e) Tushu-yka-ya-n=**cher**   'mutual conjecture, appeal for consensus'
    f) Tushu-yka-ya-n=**shi**   'reported information'

As mentioned, these markers are not obligatory. Therefore, given that they do not contribute to the propositional content of the utterance, the basic linguistic fact that we need to explain is why speakers choose to make the effort of adding them (especially in the case of =*mi*). I believe that an explanation of their function that places this fact in the foreground is to be preferred over one that backgrounds it.

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7   Note, however, that this makes =*chá* both an epistemic modal and an evidential since what is asserted is not *p* but that *p* is a possibility ($\Diamond p$) and that the source of this believe is the speaker's own reasoning (Faller 2002, 171-189).

Faller's (2002) proposal falls in the second category. She argues that in assertions without evidentials, BPG is only 'implicated' (as opposed to 'conventionally encoded'):

> I propose deriving the indicated increase in strength from the implicature vs. encoding difference. […] the speaker must have a reason for making the extra effort of using -*mi* when (s)he could just as well have left it to the addressee to calculate the evidential value as an implicature. This reason may be that the speaker might already have been challenged or anticipates to be challenged. Using -*mi* to explicitly indicate that the speaker has the best possible grounds adds weight to the speaker's assertion. It pre-empts a potential challenge by saying that such a challenge will lead nowhere, because the speaker is in a position to back up his or her claim with convincing evidence (Faller 2002, 165).

As we can see in her proposal, =*mi* has a very clear discursive (or interactional) effect, but it is presented as a by-product of its role as BPG marker. Behrens (2012) also notices this and offers a reanalysis of Faller's data arguing that =*mi* serves as a marker of the metadiscursive category of force. For that, she uses Palmer's (2001, 204 f.) distinction between 'weak/strong assertions', which he proposed to account for the fact that in many languages with direct evidence markers, their use it's not obligatory:

> I will make the proposal that the difference between a weaker and a stronger version of assertions in some languages may lie precisely in the difference between what Grice considered as the standard property of assertions ("the hearer should come to think that the speaker believes that P") and what he described as an "ulterior" intention ("that the hearer should also come to believe that P himself") (Behrens 2012, 205).

According to Behrens (2012, 209), an utterance with =*mi* (a 'strong' assertion) signals that the speaker intends to convince their interlocutors of the truth of the proposition, which constitutes an attempt at manipulating the content of the common ground (henceforth CG).[8] On the other hand, an utterance without =*mi* (a 'weak' assertion) only marks that the speaker intends the hearer to believe that the speaker believes in the truth of the proposition. This 'multidimensionality' of truth in Behrens' proposal comes from Habermas' (1984) communicative model, where the notion of truth is associated to three different 'worlds' and their corresponding validity claims: the realist-style truth (from the 'objective' world), truth as sincerity (from the speakers' subjective world) and truth as rightness or appropriateness (from the social world) (Behrens 2012, 202). As I understand it, an utterance with =*mi* could correspond to any of the three levels of truth depending on context. The author argues that this characterisation of =*mi* is consistent not only with the range of contexts that license it but also with its use in directive speech acts expressed through declarative sentences and *in verum* focus marking (Behrens 2012, 210 f.).

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8   The CG is the component of the discourse structure that registers the information that the speakers take to be 'shared', that is, what they assume as their 'mutual knowledge' during the communicative interaction (Stalnaker 1978).

Grzech (2016a; 2016b; 2020) offers an analysis of the use of =*mi* Upper Napo Kichwa (henceforth UPK) with a similar focus on the interactional dimension of its use. First, she shows that in UPK, =*mi* cannot be a BGP marker because its use is licensed in conjectural statements, like in (3), where it is embedded under an epistemic modal:

3) **Upper Napo Kichwa** (Grzech 2016b, 89)

> [ñuka   yaya   shamu-w=mi]_{CP}   yachi-n
> 1sg   father   come-prog=mi   seem-3
> 'It seems my father is coming'
> [speaker hears footsteps outside, and was expecting his father to come home]

That would be impossible in Cuzco Quechua, where =*mi* is not allowed in partial evidence contexts, and the marker =*chu(s) hina* would be needed instead (Faller 2002, 174). To account for this range of possible uses, Grzech (2016b, 76) argues that =*mi* belongs to the dimension of epistemic primacy, which "has to do with the distribution of knowledge between participants of the speech event" and whose marking "is grounded in the speaker's subjective assessment of their knowledge state, rather than in how the speaker obtained the information." Thus, in using =*mi* the speaker is indicating their "relative right to know" or claiming "authority of knowledge." In a further development of her proposal, Grzech (2020, 92-94) argues that the optionality of =*mi* is linked to its role as a CG management device: speakers will use =*mi* when they anticipate problems with their proposition being incorporated to the CG. By claiming authority over knowledge, speakers intend to provide the hearer with explicit epistemic cues to make the informational exchange effective.

As we can see, in both Behrens' (2012) and Grzech's (2020) accounts, the optionality of =*mi* is explained in terms analogous to Faller's (2002) proposal. The main difference, however, is that in those accounts, the alternation between utterances with and without =*mi* is at the centre of the analysis. This strongly suggests that to explain its function, we need to move from the sentential level into the domain of discourse, and for that, a model of the discourse structure in which they occur seems to be indispensable. In the next section, I offer an analysis of CQ =*mi* and =*chi* that draws on some of Behrens' and Grzech's insights and places them into such a model.

A QUD-based analysis of CQ =*mi* and =*chi*
The QUD model
In the QUD theory (Roberts 2012), the aim of discourse is the 'communal inquiry' (i. e., the discovery and exchange of information about how the world is), and it is hierarchically organised by questions (explicit or implicit) and their respective answers. Under this conception, when we engage in discursive interactions, we are trying to answer the 'Big Question' ('what is the way things are?'), typically by answering some of its sub-questions.

In formal terms, then, the aim of discourse is to reduce the "context set" (i. e., the set of possible worlds that are compatible with the content of the common ground, Stalnaker 1978, 84 f.) to a "singleton set" (i. e., the 'real' world, Roberts 2012, 4 f.).

Questions in this model are represented as a stack, with the question at the top (at any time in the course of the discourse) being the 'immediate question-under-discussion'. If the discourse participants are cooperative, their goal is to resolve this QUD and take it out of the stack. To ensure discursive coherence, speakers follow a relevance principle, defined in terms of the QUD: relevant answers can only be (a) assertions that either fully or partially resolve the QUD or (b) questions whose respective answers would help to resolve it (Roberts 2012, 21).

To account for the discourse structure, Riester (2019) offers a tree-style discourse representation where both explicit and implicit questions are included. The main advantage of such a representation is that it spells out the hierarchical relations between the different parts of discourse, making them accessible. An example is shown in Figure 3, where the implicit questions are in brackets ({}), and the dependencies among questions and answer are given by subindexes.

Q_0: {What is the way things are?}

A_0: Piero had a wonderful day

$Q_{0.1}$: {What did Piero do on that wonderful day?}

$A_{0.1'}$: He had a delicious lunch.

$A_{0.1''}$: He won a billiards tournament.

$Q_{0.1.1}$: {What did Piero eat during this lunch?}

$A_{0.1.1'}$: He ate ceviche.

$A_{0.1.1''}$: He devoured a dessert.
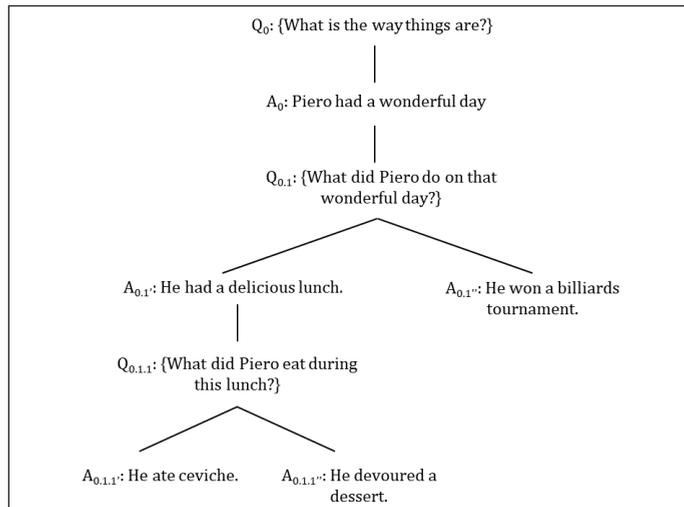
Figure 3. QUD-tree (adapted from Riester 2019, 168, fig. 3).

Riester (2019) takes explicit and implicit question to be entities of a different nature, as only the first type can introduce new information to the discourse. To account for this difference, he poses three restrictions to the reconstruction of implicit questions: 'Q/A-Congruence' (questions must be congruent with their answers), 'Q-Givenness'

(questions can only have given material) and 'Maximize-Q-Anaphoricity' (questions must have as much given material as possible). These restrictions ensure that the reconstructed implicit questions are coherent with the discourse that surrounds them, allowing for a more methodical (and reproducible) approach.

Farkas and Bruce (2010) offer a further enrichment to the QUD model, which they call 'the Table'. They propose to model the discourse structure not as a stack (like Roberts 2012) or a tree (like Riester 2019) but as a scoreboard where the different discursive components can be independently represented. This model has four components: the table itself (S), a discourse commitments partition for each speaker (DC_X), the common ground, and a 'projected set' (ps), as shown in Figure 4.

Speaker A	Table	Speaker B
DC_A	S	DC_B
Common Ground		**Projected Set**

Figure 4. The Table (adapted from Farkas and Bruce 2010, 89).

When speaker A utters an assertion, it is pushed onto the Table (both its syntactic form and its denotation are recorded in S) and it is also added to A's set of public discourse commitments DC_A. The ps then indicates the most canonical way of resolving the issues, which in the case of assertions is acceptance by the interlocutor and inclusion in the common ground. In a sense, the ps shows a preview of what the CG would look like if A's assertion were to be accepted by B. These additions to the QUD model allow Farkas and Bruce to capture the "proposal nature of assertions" and leave room to account for different conversational moves that can serve as reactions to them (2010, 82). Malamud and Stephenson (2015) offer an expanded version of this model by adding a 'projected discourse commitment' component ($DC_X{}^*$) for each participant, which registers the speakers' own tentative commitments but can also include the tentative commitments their interlocutors attribute to them.[9] This addition allows for a more fine-grained distinction in modelling the discursive effects of moves other than standard assertions. As we will see in § Translating assertional force into the Table (p. 91), both proposals are needed to formalise the functions of =*mi* and =*chi*.

The discourse functions of =*mi* and =*chi*

The analysis I offer here aims to explain the optionality in the use of =*mi* and =*chi* from the place they occupy in the discourse structure and with special attention to the participants' knowledge states. For this, I have reconstructed the discourse structure

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9   Note that, unlike the projected commitments ($DC_X{}^*$), the public DC_X only registers commitments explicitly made by the speakers (Malamud and Stephenson 2015, 288).

of a set of conversational fragments following Riester's (2019) restrictions for formulating implicit questions. I derive the functions of these markers both from their hierarchical dependencies in discourse and the inferences the speakers produce regarding the discourse commitments of their interlocutors (whether public or projected). Before proceeding, note that, although Hintz and Hintz (2017) propose a five-term system for CQ, here I work only with a subset of this system because we (the ZSP's team) could not corroborate the authors' claims in the field. Specifically, we could not elicit the 'individual-mutual' distinction they propose for the pairs =mi/=chaa and =chi/=cher. In the first case, speakers took them to be synonymous, and in the second, they didn't recognise =cher as a unit of their variety.[10] For this reason, here I focus on =mi and =chi, treating =chaa as equivalent to the first.[11]

As mentioned, Faller (2002) characterises Cuzco Quechua =mi as a BGP marker and =chá as both an epistemic modal and a conjectural evidential, and Hintz and Hintz (2017) extrapolate the first of these proposals to CQ =mi and =chaa. The first piece of evidence against such an analysis comes from the contexts that license the use of these markers in the ZSP data. As in Upper Napo Kichwa (Grzech 2016b, 89), in CQ =mi and =chaa can be embedded under an epistemic modal, as in (4) and (5):[12]

4) **Cajas_XQ33_LC34 / 01:14**

> Plumon=**mi** ayllu-u… aw-ku mana-ku? Ma
> marker=MI believe-1 yes-Q no-Q let's.see
> 'I think it's a marker… yes or no? Let's see'

5) **Cajas_XU31_OA32 / 04:16**

> Sapu=**chaa** ayllu-u, waqa-n
> frog=CHAA believe-1 sound-3
> 'I think (it's) a frog, it sounds (like that)'

These examples come from the *Cajas* task, and in both, the speakers are making inferences based on partial evidence (i.e., the sound the object inside the box makes when shaken, the weight of the box, etc.). For the BGP analysis to work, the speaker has to believe in the truth of the (unmodified) proposition p, but in (4) and (5), the speakers only believe that p is a possibility (i.e., they believe that $\Diamond p$). It is difficult to tell how

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10   Although the form /chir/ occurs in our data, it might be actually composed of two enclitics: =chi and =r. According to Parker (1976, 151), where this combination is attested, =r has a meaning similar to Andean Spanish 'pues'.

11   The reportative =shi was excluded from the analysis because it appears only marginally in the corpus and only in the least dialogical of our elicitation tasks.

12   The data labels include the type of task, the speakers' code and the initial time of the example in the audio file. All examples (audios, transcriptions, translations and glosses) are available at https://osf.io/gydwm/ (12.01.2023).

this would be explained in Behrens' (2012) analysis since her system only has two possibilities: an assertion is either strong or weak. This suggests that Grzech's (2016b; 2020) proposal might be preferable in this case, given that it can easily accommodate this fact under the notion of epistemic primacy. However, it is not yet clear how these cases could be modelled in terms of CG management while differentiating them from the unembedded uses of =*mi* in said approach.

The second piece of evidence comes from the analysis of the knowledge distribution among the participants in the context of the map task. In this setting, the knowledge roles of each participant are common ground: one has all the information needed, and the other has only partial information. The whole interaction is predicated upon this fact: without this assumption, the participants could not possibly engage in the task. The question is, then, what would be the speaker's communicative need that justifies making the required physical and cognitive effort of adding =*mi* when the fact that they have BGP is already common knowledge? Furthermore, if =*mi*'s function were to mark BGP, its occurrence in this setting could even be counter-productive. Remember Levinson's (2000, 136) M-Principle: marked messages indicate marked situations. In a context like the map task, the unmarked way of indicating BGP would be to do so by inferential means, while explicitly marking it would signal to the hearer that they should interpret the message in a non-stereotypical way in regards to the participants' knowledge distribution.

This becomes clearer when we reconstruct the structures underlying the discourse. In (6), I offer the transcription of a fragment of the data obtained from the application of the map task with participants ZR29 (f, 19) and HA30 (m, 19), two friends that study together at a local university. The text corresponds to a point in the task when they have already realised that the maps are different and are trying to inform each other of the position of certain figures in each of their maps, while simultaneously trying to carry out the task. The fragment starts immediately after they have agreed on the location of the figure of the fox. Note that HA30 has the map with the road.

6) **ZR29_HA30_MT_B_02:34**

a) **HA30:**   Atuq   witsay-pa   subi-yka-n
fox   above-GEN   go.up-PROG-3
'The fox is going up over there'

b) **ZR29:**   Aja
Ok

c) **HA30:**   y   tsay   hana laadu-n-chaw=na=**m** ka-n *este* huk manka
and   DEM.DIST   over side-3-LOC=DISC=MI COP-3 *ehm* a   pot
'And on that upper side there is ehm a pot'

d) **ZR29:**   Ya
              Ok

e) **HA30:**   Tsay   manka-pita   washa-man-pa-chaw**=mi**   vuela-yka-n
               DEM.DIST   olla-ABL   DEM.DIST-DEST-GEN-LOC=MI   fly-PROG-3
                           huk   *este*   anka…
                           a   *ehm*   eagle
               'From that pot, on the side over there an eagle is flying'

From the three possible utterances that could carry =*mi*, (a), (c) and (e), it only occurs in the last two. Given the context, if =*mi* were BGP, we should expect it to either appear in all of them or in none. When we look at the discourse structure of this fragment it becomes clear that the utterances with and without =*mi* correspond to different hierarchies.
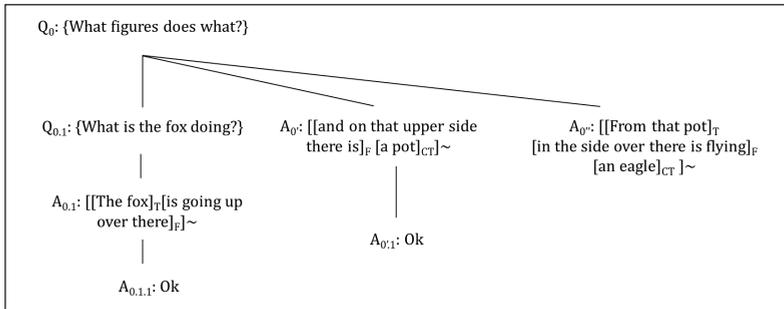
Figure 5. Discourse structure of (6).

In Figure 5, the question labelled Q_0 corresponds to the most relevant superordinate question to this fragment.[13] The formal differences we observe between utterances (a), (c) and (e) are coherent with this structure. First, while (a) has a given referent as subject, (c) and (e) have new referents in that function (marked by the indefinite *huk*). Second, while (a) exhibits the canonical SOV order, in (c) and (e) the subject is postposed. That is why (a) depends on $Q_{0.1}$, while (c) and (e) depend on a question superordinated to that one. In communicative terms, it is to be expected that only (c) and (e) carry =*mi*: in a context in which agreeing on the 'correct' location of the figures is proving to be difficult, HA30 wants to ensure that the propositions with new referents get added without problems to the CG, so they can continue with the task. This is not to say that the unmarked versions of (c) and (e) would definitely create additional communicative conflicts. It just means that the effort of adding =*mi* to these utterances is justified.

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13   Q_0 is subordinated to an implicit question of the form "how do I get from the sheep to the fox in the map?", which is the question that organises the whole interaction.

The epistemic dimension of the use of =*mi* can be appreciated more clearly in example (7), where it is used in an answer to a polar question and where it also interacts with the use of =*chi*. This fragment comes from the application of the map task with participants TP03 (m, 32) and KP04 (m, 29), who are brothers. The text corresponds to a point in the task when they have already realised that the maps are different and are trying to inform each other of the position of the figures in the upper half of the map. Note that KP04 has the map with the road.

7) **TP03_KP04_MT_A_04:05**

a) **KP04:** Ishkan-ku juntu ka-yka-ya-n *na* manka-wan tsiqtsi?
two-Q together be-PROG-PL-3 *na* pot-INS bat
'Are the two of them together, the pot and the bat?'

b) **TP03:** No, manka ichik hawa-n-chaw=**mi**
no pot bit below-3-LOC=MI
'No, the pot (is) a bit below (the bat)'

c) Izquierda-pa ka-yka-naa manka
left-GEN be-PROG-PST.REP pot
'It had been on the left the pot'

d) itsuq laadu-pa ka-yka-naa
left side-GEN be-PROG-PST.REP
'It had been on the left side (of the road)'

e) **KP04:** Tsiqtsi?
bat
'The bat?'

f) **TP03:** Tsiqtsi=qa hana-kaq-chaw=**chi** ka-yka-n
bat=qa above-FOC-LOC=CHI be-PROG-3
'The bat is above (the pot), I think'

g) na-chaw atuq hawa-n-chaw casi
PSSP-LOC fox below-3-LOC almost
there, almost below the fox.

h) **KP04:** Aja, atuq hawa-n-chaw
ok fox below-3-LOC
Ok, below the fox.

A crucial piece of information to understand this interaction is that there seems to be a misunderstanding regarding the meaning of *juntu* 'together' in this context. As we can see in Figure 2, the pot and the bat are next to each other. That is what KP04 is trying to confirm with the polar question in (a). Although these figures have the same positions in both maps, their relative locations don't seem to correspond to what TP03

understands by *juntu* (probably he assumes they need to also be at the same level), hence his negative answer in (b). This can also explain why he uses =*mi* here. As Farkas and Bruce (2010, 106) argue, positive polar questions can have a weak bias towards the truth of the (positive) propositions contained in them. Then it seems logical to assume that TP03 is attributing to KP04 the belief that the pot and the bat are together (i.e., at the same level), especially in a context with so many informational conflicts. Thus, with the use of =*mi*, TP03 wants to ensure that the information he is providing about his map is accepted without issues by KP04 and added to the CG.

Furthermore, notice that the hierarchical relationship between (a) and (b) is more complex than it seems at first sight. As shown in Figure 6, only the negative particle *no* is congruent with the question posed in (a), the rest of the utterance in (b) is not. Both (a) and the second part of (b) are relevant to the implicit QUD in Q_0 "Where are the pot and the bat?": the polar question in (a) tries to resolve it by asking if the figures are together, but this path of inquiry is closed by the negative answer in the first part of (b), while the rest of it goes back to Q_0 to try to resolve it. Given the context, it is plausible that TP03 is using =*mi* as an attention-seeking device to signal that the utterance should be interpreted in a non-stereotypical way (due to this shift within the discourse structure), thus ensuring that its contents are added to the CG.

Q_0: {Where are the pot and the bat?}

$Q_{0.1}$: Are the two of them together, the pot and the bat?

A_0: [[The pot]$_T$ [is a little below (the bat)]$_F$]~

$A_{0.1}$: [[No]$_F$]~
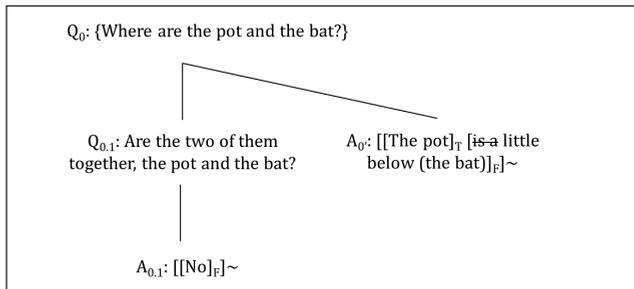
Figure 6. Discourse structure of (7a-b).

Now let's turn to the use of =*chi* in (f). First of all, we need to identify the question it is answering. Giving the linearity of discourse, one would be tempted to assume that (f) is a direct answer to (e). However, its formal features (namely, the use of =*qa*, the explicit copular verb and the focus marker -*kaq*[14]) are not congruent with that question, which suggest (f) occupies a different place in the structure. In Figure 7, I offer the reconstruction of the discourse structure underlying the text in (7).[15]

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14 For the role of -*kaq* in CQ, see Bendezú-Araujo (2021).
15 Utterances (c) and (d) have been omitted. They are represented by "…" under A_0.
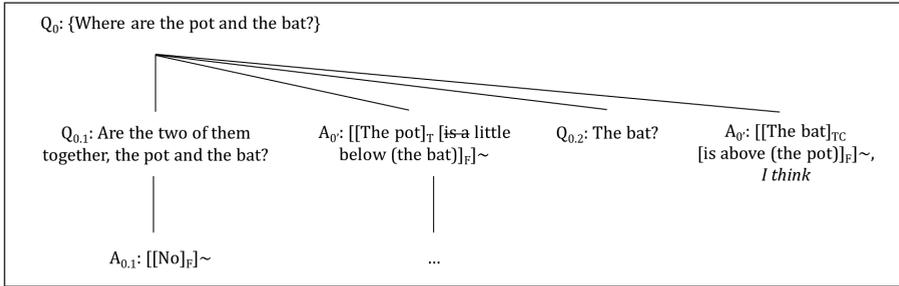
Figure 7. Discourse structure of (7a-f).

Note that the propositional contents of (b) and (f) are essentially the same: in both cases, TP03 is describing the relative positions of the bat and the pot, only from different perspectives. This explains why both of these utterances are directly subordinated by the QUD in Q_0 in the tree. However, this cannot explain why in the first case TP03 used =*mi* but in the second he used =*chi*. This apparent inconsistency can be explained in the following way. With (b), TP03 is attempting to close the issue relating to the relative position of the pot and the bat, but in his utterance, he only refers to this figure anaphorically (by the use of the third person possessive marker -*n* in *hawa-n-chaw,* lit. 'in its below'). It is clear that KP04 didn't understand this reference because he immediately asks again about the bat in (e). This must have been unexpected to TP03, as he thought he had already provided all the necessary information to close the QUD. The expected course of action for TP03 would be for him to repeat the contents of his utterance (b), including a direct reference to the bat this time, perhaps even using =*mi* again. Remember, however, that KP04 is the one with the map that serves as a guide for the task, and thus it is possible that TP03 is assuming that map to be the 'correct' one, while his would be defective. In this context, by using =*chi* TP03 would be signalling a reduced commitment to the truth of the proposition, not because he thinks it is no longer true (after all, it is in front of his eyes), but because he thinks it is true only with respect to the reality to which he has privileged access at the moment. In the terms of Behrens (2012), I argue that =*chi* is signalling a validity claim relative to the subjective world of the speaker (which in this case seems to be necessary to counter the effect of the validity claim relative to the objective world previously made by the use of =*mi*). In terms of CG management, the use of =*chi* would serve to make an assertion without fully committing to the truth of its proposition (i.e., a tentative commitment), which in turn reduces its possibilities of becoming part of the CG.[16]

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16   Note that in this case, an evidential analysis is also not suitable: if, in theory, TP03 has BGP when he asserts (b), why would the same piece of information be then transmitted as conjecture (i.e., as the product of a reasoning process)?

The analysis I have offered for the conversational fragments presented in this section (which also applies to those in Bendezú-Araujo 2021) is compatible with the notion of force, that is, the metadiscursive category that refers to "the manner in which speakers try to establish, regulate, and manipulate their relations to hearers, while coming across as dominant, hostile, submissive, friendly, etc. in the eyes of the hearers" (Behrens 2012, 192). Specifically, I propose to describe these enclitics as markers of two degrees of assertional force: =*mi* as an 'assertional reinforcer' and =*chi* as an 'assertional mitigator'. Assertions with one of these markers would enter into a paradigmatic relationship with unmodified assertions. In the simplest terms, an assertion with =*mi* would translate to 'You must believe that p', a plain assertion to 'I want you to believe that I believe that p' and one with =*chi* to 'I believe that p is a possibility, but I don't expect you to do so'.[17] In the next section, I offer a first attempt at a formalisation of these meanings in the Table model.

Translating assertional force into the Table

One of the main limitations of the use of QUD-trees for the study of discourse markers like =*mi* and =*chi* is that it is not possible to represent on it anything more than the hierarchical structure, which doesn't allow for an analysis of how the commitments and beliefs of the participants influence the course of discourse. As presented in § The QUD model (p. 82), the Table (Farkas and Bruce 2010; Malamud and Stephenson 2015) has specific components for modelling these factors. Here I offer preliminary versions of what =*mi* and =*chi* would look like in this model. Note that in all three cases, further work and more data is needed in order to validate these hypotheses.

I have two proposals for =*mi*. The first one is inspired by Schneider's (2018) analysis of the German particle *ja* in the Table. To account for the fact that anything that is under the scope of it is added to the CG but that its use is not felicitous in answers to direct questions, Schneider characterises *ja* as an assertional operator that places no issue on the Table and adds the contents of the attached proposition directly to the CG. I believe something similar happens with =*mi*, with the difference that it is felicitous in answers to direct questions. Under this analysis, =*mi* is an assertional operator that places an issue in the Table and then immediately moves to resolve it, adding it directly to the CG, like in (8).

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17   This is why this proposal is more than just a rebranding of Behrens' (2012) weak/strong opposition because the binary distinction proposed in her analysis doesn't leave space for modelling the effect of the uses of =*chi*, which could be also characterised as a type of 'weak' assertion.

8) =*mi* as an assertional operator (I)

=*mi* (M, α) = M' such that

a) Condition: if M has the effect
   (i) T_o = push (<s[D]>; {p}, T_i)
   (ii) $DC_{A,o}$ = $DC_{A,i}$ U {p}
   (iii) ps_o = ps_i U {p}

b) Change
   1. Delete effect (a(iii)) for α
   2. CG_o = CG_i U {p}

According to this, =*mi* combines with a move M with scope over α and results in the move M' if M has the standard effects of an assertion, that is, (i) to push *p* onto the Table, (ii) to add *p* to the public discourse commitments of the speaker (DC_A), and (iii) to add *p* to the projected set. If that is the case, then =*mi* (1) doesn't add anything to the *ps* and (2) adds *p* directly to the CG. Although this seems to capture the core of all the analyses presented in this paper regarding the CG management effects of =*mi*, it might be too strong of an effect. As Schneider (2018, 24) points out, "putting something into the CG directly is potentially dangerous, as the hearer would have any right to protest", and in that sense, it doesn't look like a very cooperative move. Thus, the validity of this analysis would need to be confirmed, first by identifying its predictions and then by checking them with acceptability tests.

My second proposal makes use of Malamud and Stephenson's (2015) projected discourse commitments component. Here I model =*mi* as an assertional operator whose only additional effect is to add a proposition to the *projected* discourse commitments set of the hearer (DC_B*), as shown in (9).

9) =*mi* as an assertional operator (II)

=*mi* (M, α) = M' such that

a) Condition: if M has the effect
   (i) T_o = push (<s[D]; {p}, T_i)
   (ii) $DC_{A,o}$ = $DC_{A,i}$ U {p}
   (iii) ps_o = ps_i U {p}

b) Add
   1. $DC_{B,o}$* = $DC_{B,i}$* U {p}

This proposal has the opposite problem to the previous one, as it might be too weak to capture the strength of the discursive effects of =*mi*. It is possibly best suited to account for the cases in which =*mi* is embedded under an epistemic modal. In any case, note that both proposals are limited in that they only refer to the use =*mi* in assertions, without explaining what happens when it appears in content questions.

Lastly, the case of =*chi* is less controversial, although its effects might be more complex. Here I propose to characterise =*chi* as an assertional operator that turns the speaker's public discourse commitments into 'projected' commitments and then blocks any update of the projected set, as shown in (10)

10) =*chi* as an assertional operator

=*chi* (M, α) = M' such that

a) Condition: if M has the effect
   (i) T_o = push ($<s[D]>$; {p}, T_i)
   (ii) $DC_{a,o}$ = $DC_{a,i}$ U {p}
   (iii) ps_o = ps_i U {p}

b) Change
   1. Delete effect (a(ii)) for α
   2. $DC_{a,o}^*$ = $DC_{a,i}^*$ U {p}
   3. Delete effect (a(iii)) for α

As in the previous cases, this means that =*chi* only combines with assertions and that it (1) deletes *p* form the public discourse commitments of the speaker, (2) adds *p* to their projected discourse commitments and then (3) erases *p* from the projected set, leaving it as it was before the current move. I believe this captures the intuition that by using =*chi* speakers are not (directly) proposing changes to the CG (that is, that they are not ready to fully commit to the truth of the proposition). At the same time, this analysis would differentiate the effects of =*chi* from those of tag-questions (which in CQ are made by adding *aw* to declarative sentences), as the latter would not block the update of the *ps* (that is, both *p* and *~p* would be added to it). Note, again, that this only concerns the role of =*chi* in assertions, not in content questions, and therefore is a very tentative proposal.

Summary

In this paper, I have offered an analysis of the functions of the CQ enclitics =*mi* and =*chi* in the QUD model of Roberts (2012) and with a focus on their non-obligatoriness. In this task, Riester's (2019) QUD-trees have been instrumental. Despite its limitations, the reconstruction of the discourse structure via QUD-trees proves to be extremely useful in the study of the function and distribution of discourse markers. I have also offered a brief and preliminary proposal for the analysis of =*mi* and =*chi* as assertional operators in the Table models of Farkas and Bruce (2010) and Malamud and Stephenson (2015). Although that analysis needs to be further developed (especially regarding its predictions and the use of these markers in content questions), it is a good starting point for bringing Conchucos Quechua into the realm of formal pragmatics.

Regarding =*mi*, this analysis shows that, whether we call it a marker of strong assertions (Behrens 2012) or epistemic primacy (Grzech 2016b; 2020) or an assertional

reinforcer, it is clear that its presence or absence is not random and depends on common ground management considerations and the hierarchical structure of discourse. Additionally, I have shown that an analysis of =*mi* as a marker of 'best-possible-grounds' doesn't seem to apply to Conchucos Quechua (contra Hintz and Hintz 2017). In the case of =*chi*, even though the analysis has been restricted to one data point, the in-depth examination of the context surrounding it has shown that it cannot be explained as an inferential evidential. As always, the validity of these hypotheses needs to be tested against more data, both naturalistic and experimental.

Abbreviations

1 = first person
3 = third person
DEM.DIST = distal demonstrative
COP = copula
DISC = discontinuative
DEST = destinative
FOC = focus marker

GEN = genitive
INS = instrumental
LOC = locative
PL = plural
PROG = progressive
PST.REP = reportative past tense
Q = polar interrogative

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