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A Complex ForceP for Speaker- and Addressee-oriented Discourse Particles in Cantonese

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Abstract

This study of syntax-pragmatics interface analyzes the meaning of two Cantonese question particles, namely *me1* and *ho2*, and contrasts their felicity conditions with that of neutral questions. Both particles introduce complex speech acts which exercise two illocutionary forces (*asserting* and *asking*), contrary to neutral questions which are simple speech acts. Co-occurrence patterns of question particles, scope facts and clause-typing restrictions suggest that the addressee-oriented particle *ho2* is higher than speaker-oriented *me1* in syntax. A complex ForceP structure is proposed, in which a higher head $\text{FORCE}_{\text{A(ddressee)}}$ hosts *ho2*, while $\text{FORCE}_{\text{S(peaker)}}$ hosts *me1*.

Keywords

Cantonese, utterance-final particles, questions, left periphery, syntax, pragmatics

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1. Introduction : *me1, ho2* and biased questions

This paper addresses pragmatic and syntactic issues concerning two question particles in Cantonese, namely *me1* and *ho2*. In this introductory section, I show the similarity of the two particles by explaining how they convey the speaker's biases in a question. I also contrast the two particles by presenting their co-occurrence patterns with interrogative constructions. Section 2 focuses on pragmatics, where I characterize biased questions formally by bringing in the notion of complex speech acts. In Section 3, I tackle the question of syntax by proposing a two-layered ForceP. Section 4 summarizes the discussion and suggests areas for future research.

1.1 The question of pragmatics

When performing the speech act of asking, one may expect a particular answer before hearing the addressee's response. If the speaker encodes the expected answer in the question via linguistic devices, this question is a *biased* question. A bias can be positive if the speaker expects *yes* as an answer; it can be negative if *no* is anticipated. (1b) is an example of a negative bias, encoded by the stressed negative polarity items *jam6ho4* 'any'. Another way to express a bias is intonation, a suprasegmental tool. (1a) is a neutral question if it is uttered with regular question intonation. However, when it is produced with a globally higher pitch, it can encode a negative bias.

(1) *Scenario: Jenny and Stephen are talking about Jimmy, a classmate who has contributed nothing to a group project. Jenny thinks the situation should be brought to the professor's attention. She says this to Stephen.*

a. zi3ming4 jau5 mou5 fu6ceot1 gwo3 si4gaan3 aa3?
Jimmy have not.have devote Asp time Prt?
'Has Jimmy spent time (on the project)?'

b. zi3ming4 jau5 mou5 fu6ceot1 gwo3 JAM6HO4 si4gaan3 aa3?
Jimmy have not.have devote Asp any time Prt?
'Has Jimmy spent ANY time (on the project)?'

In addition to A-not-A constructions in (1), an interrogative sentence can be formed by combining a declarative sentence with a question particle. Different particles add subtle nuances to the meaning of the question. For example, the particle *me1* conveys disbelief (Kwok 1984, Li 2006), surprise (Yau 1980, Law 1990) and negative presuppositions (Matthews & Yip 1994). In (2b), *me1* combines with a declarative (2a), resulting in a question. Another question particle *ho2* is described as coaxing (Yau 1980) and adhortative-reminding (Sybesma & Li 2007). It is used when the speaker expects confirmation from the addressee (Matthews & Yip 1994). In (2c), it attaches to a declarative, producing a question. The contrast between the meaning of (2b) and (2c) illustrates that the speaker expects a negative answer for *me1* questions, but a positive one for *ho2* questions. Therefore, the use of certain discourse particles is also a linguistic device for encoding biases of the speaker.

(2) a. zi3ming4 jau5 fu6ceot1 gwo3 si4gaan3
Jimmy have devote Asp time
'Jimmy has spent time (on the project).'
b. zi3ming4 jau5 fu6ceot1 gwo3 si4gaan3 me1?
Jimmy have devote Asp time Prt^{Q}?
'Jimmy hasn't spent time (on the project), has he?'
c. zi3ming4 jau5 fu6ceot1 gwo3 si4gaan3 gaa3 ho2?
Jimmy have devote Asp time Prt Prt^{Q}?
'Jimmy has spent time (on the project), right?'

Particle co-occurrence patterns with negative polarity items provide more evidence for the positive-negative contrast of bias. Although *me1* and *ho2* are both question particles, only *me1* is compatible with stressed negative polarity items, as in (3a). However, (3b) with *ho2* is unacceptable. A possible reason is that the positive bias encoded in *ho2* contradicts with the negativity conveyed by *JAM6HO4* 'ANY'. The fine meaning of the two particles is to be revisited in Section 2.

(3) a. zi3ming4 jau5 fu6ceot1 gwo3 JAM6HO4 si4gaan3 me1?
Jimmy have devote Asp any time Prt^{Q}?
'Has Jimmy spent ANY time (on the project)?'
b.* zi3ming4 jau5 fu6ceot1 gwo3 JAM6HO4 si4gaan3 ho2?
Jimmy have devote Asp any time Prt^{Q}?

So far two generalizations can be drawn. First, *me1* and *ho2* questions are different from neutral questions in terms of meaning. Second, *me1* marks a negative bias,[1] whereas *ho2* indicates a positive bias. These two observations lead to my first research question: how can neutral questions (1a) and the two types of biased questions (2b)-(2c) be characterized formally in one framework?

1.2 The question of syntax

Another research question of this paper concerns syntax. *ho2* can be preceded by an interrogative construction, be it an A-not-A question in (4), a *wh*- question in (5), or a particle question in (6). In these three datasets, only (b) sentences with *ho2* are acceptable. All (a) sentences with the structure [question + *me1*] are ungrammatical. The second observation is that when *ho2* forms a cluster[2] with another question particle, the particles must follow a specific order. (6a) and (6b) are minimal pairs that differ in terms of the order of the particles. (6a) containing the cluster **ho2 me1* is ungrammatical, but (6b) with *me1 ho2* is grammatical. No particles can follow *ho2*, meaning that *ho2* is always at the right edge of a sentence.

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[1] A weaker version of "negative bias" is not exactly expecting a *no*, but conveys the attitude *I would be surprised if your answer is positive*, which shows the speaker's non-commitment to a proposition prior to hearing the addressee's answer.

[2] Fang (2003:147) has pointed out that *ho2* can stack with other utterance-final particles, but the pattern of stacking is not discussed.

(4) a.* ting1jat6 wui5 m4 wui5 lok6 jyu5 le1 me1
tomorrow Fut Neg Fut down rain Prt Prt^{Q}

b. *Scenario: Jimmy and Mandy have been training for a marathon race that takes place tomorrow. Jimmy says this to Mandy.*
ting1jat6 wui5 m4 wui5 lok6 jyu5 le1 ho2
tomorrow Fut Neg Fut down rain Prt Prt^{Q}
'Will it rain tomorrow? I assume you'd agree this is a valid question, right?'

(5) a.* bin1go3 gam3 gwo3fan6 le1 me1
who so outrageous Prt Prt^{Q}

b. *Scenario: Jimmy and Mandy are classmates. Their class teacher announces that one student in the class got caught for shop-lifting. Jimmy says this to Mandy.*
bin1go3 gam3 gwo3fan6 le1 ho2
who so outrageous Prt Prt^{Q}
'Who's so outrageous? I assume you'd agree this is a valid question, right?'

(6) a.* daai6 seng1 zau6 dak1 gaa3 laa3 ho2 me1
loud voice then okay Prt Prt Prt^{Q} Prt^{Q}

b. *Scenario: Jimmy is the first of a long taxi queue. A taxi is coming, but someone not from the queue opens the door of the taxi, saying loudly that he is in a hurry. Everyone in the queue is angry. Jimmy says this to the second person in the queue.*
daai6 seng1 zau6 dak1 gaa3 laa3 me1 ho2
big voice then okay Prt Prt Prt^{Q} Prt^{Q}
'What, can one get by just by being loud? I assume you'd agree it's a valid question, right?'

The ordering restriction of particles in a cluster motivates my second research question: how can the question particle cluster *me1 ho2* be represented syntactically? What kind of syntactic structure can reflect the different distribution of *me1 and ho2*?

2. *me1* and *ho2* questions as complex speech acts

2.1 Illocutionary forces and the discourse context

The relationship among a proposition, illocutionary forces and the discourse context is crucial to explaining the pragmatics of biased questions. In a conversation, a speaker can perform various actions via speech (Austin 1962), such as making a statement, asking a question and giving a command. These three acts can be paraphrased as *asserting the truth value of a proposition, inquiring the truth value of a proposition*, and *demanding that a proposition be true* respectively. In other words, speech acts can be analyzed as the application of *force* onto a *proposition*

(or *mood* onto a *radical*, using the terms of Lewis 1970).

Each illocutionary force has different impacts on the discourse context (Portner 2004), summarized in (7). *Asserting* updates the Common Ground (CG), which is the set of propositions mutually shared among the participants in a conversation; *asking* adds a set of propositions to the Question Under Discussion (QUD), and *requiring* adds a property to the addressee's To-Do List.

(7) Analyzing speech acts (based on Lewis 1970, Portner 2004)

Proposition	Illoc. force		Utterance	Discourse component
you be late	asserting	→	*You are late.*	Common Ground
	asking		*Are you late?*	Question Under Discussion
	requiring		*Be late!*	To-do List

It should be noted, however, that there is no one-to-one mapping between illocutionary forces and clause types. It is not the case that *asserting* is only associated with declaratives, *asking* is only mapped to interrogatives, or *requiring* only pairs with imperatives. A sentence's clause type is solely a grammatical concept independent of the interlocutor's purpose of making an utterance. Illocutionary force, on the other hand, is a 'communicative-intentional' concept which depends on the intention of the interlocutor (Portner 2004). For example, the clause type of all sentences in (8) is interrogative. However, by uttering (8a), the speaker may intend to assert an obvious fact that the sun will rise tomorrow. Hence, the illocutionary force exercised is *asserting*. By uttering (8c), the speaker is not necessarily asking whether the addressee has the ability to clean up the room. Rather, the speaker is posing a request that the room be cleaned, and so the illocutionary force involved is *requiring*.

(8) Interrogative sentences with different illocutionary forces (Beyssade & Marandin 2006)

Illoc. force	Utterance	Clause type
asserting	(a) *Will the sun rise tomorrow?*	interrogative
asking	(b) *Has John ever voted for a democrat?*	interrogative
requiring	(c) *Can you clean up your room?*	interrogative

2.2 Simple and complex speech acts

Beyssade & Maradin (2006) propose a unified account for speech acts involving one type of illocutionary force and those with multiple illocutionary forces. In this approach, all speech acts have two elements, namely *speaker commitment* and *call on addressee*. If the update of the speaker's commitment is identical to the update of the speaker's call on the addressee, it is a simple speech act. For instance, in (9a), the speaker publicly commits to a proposition *p* that is in his or her set of beliefs; at the same time, s/he calls on the addressee to put *p* in his or her set of beliefs. The two updates are identical, so (9a) is a simple speech act. However, if

speaker commitment and the call on addressee are distinct, it is a complex speech act. In (9b), the speaker commits to *p*, and calls on the addressee to respond to *p*? simultaneously. Since the two elements are distinct, the tag question in (9b) is a complex speech act involving both *asserting* and *asking*.

(9) Simple and complex speech acts (based on Beyssade & Marandin 2006)

Utterance	Speaker Commitment	Call on Addressee	identical or distinct?	simple or complex?
(a) *Mary has arrived.*	add *p* to CG	add *p* to CG	identical *p* & *p*	simple (asserting)
(b) *Mary has arrived, hasn't she?*	add *p* to CG	add *p*? to QUD	distinct *p* & *p*?	complex (assertion+asking)

2.3 *me1*, *ho2* and complex speech acts

Having defined the keywords, I discuss the meaning of *me1* and *ho2* in details to show that both question particles involve the two illocutionary forces of *asserting* and *asking*. I then close the section by explaining how this bidimensional account of speech acts is related to biased questions.

Both *me1* and *ho2* questions cannot be asked in out-of-the-blue contexts, in which the speaker has no ground to have bias towards the truth value of a proposition. (10)-(12) are identical data sets with different scenarios. In all the three sets, (a) contains a plain A-not-A question, (b) has *me1*, whereas (c) has *ho2*. All of them share the element of a call on the addressee regarding the truth value of the proposition *Jimmy is American*. However, each of them is felicitous in a different context. In (10), the police interrogation context, only a plain question (a) is felicitous, while the *me1* question in (b) and *ho2* question in (c) are not.

(10) *Scenario: Jimmy is asked to take a seat in an interrogation room of a police station. A police officer asked for Jimmy's name and then says this.*

a. nei5 hai6 m4 hai6 mei5gwok3 jan4?
   2SG Cop Neg Cop USA person
   'Are you American?'

b.# nei5 hai6 mei5gwok3 jan4 me1?
   2SG Cop USA person Prt^{Q}
   'You aren't American, are you?'

c.# nei5 hai6 mei5gwok3 jan4 ho2?
   2SG Cop USA person Prt^{Q}
   'You are American, right?'

(11) and (12) show that *me1* and *ho2* are licensed only when the speaker already expects a particular answer when asking a question. In (11b), *me1* is felicitous when the speaker has enough knowledge of the addressee to expect a negative answer. This particle expresses the meaning that the speaker is committed to *it is not the case that Jimmy is American*, or ¬*p*. It exercises the illocutionary

force of *asserting*. At the same time, the speaker calls on the address to respond to the question *Is Jimmy American*? or *What do you think about p*? Since the two elements ¬*p* and *p*? are distinct, the particle *me1* introduces a complex speech act that consists of *asserting* and *asking*. A point to note is that (11c) is infelicitous if uttered with a neutral question intonation; when sarcasm is intended, it means *So you are American now, huh?* which is permissible.

(11) *Scenario: Rachel is Jimmy's mother and they are both Canadians. One day, they travel to the US together. At the immigration, Jimmy walks towards the line for US residents. Rachel says this to Jimmy.*
a. nei5 hai6 m4 hai6 mei5gwok3 jan4?
2SG Cop Neg Cop USA person
'Are you American?'
b. nei5 hai6 mei5gwok3 jan4 me1?
2SG Cop USA person Prt^{Q}
'You aren't American, are you?'
c.# nei5 hai6 mei5gwok3 jan4 ho2?
2SG Cop USA person Prt^{Q}
'You are American, right?'

ho2 also encodes bias, but the speaker expects a positive answer, as shown by the contrast of infelicitous (11c) and felicitous (12c). However, it does not necessarily require that the speaker is committed to the truth value of *p*. In (13), the speaker Karl should not find the news *Karl and Mandy are together* unexpected when he makes this utterance. Instead, he expresses the assumption that the addressee Jimmy finds this fact unexpected. Therefore, the first element of the meaning of *ho2* is to assert *I assume that p is in your set of beliefs* (or *I assume that p? is in your set of questions* when *ho2* is preceded by a question as in (4b), (5b) and (6b)). Next, the speaker seeks confirmation by posing a call on the addressee: *is the assumption right?* In this regard, *ho2* is similar to *me1*, as it introduces a complex speech act that consists of *asserting* and *asking*. In terms of the effect on the discourse component, these two particles function to update the Common Ground and Question Under Discussion simultaneously.

(12) *Scenario: Dorothy met Jimmy at a speed-dating event. Three days later, they are meeting up for lunch. Dorothy vaguely remembers that Jimmy said he was born in Seattle. She says this to Jimmy.*
a. nei5 hai6 m4 hai6 mei5gwok3 jan4?
2SG Cop Neg Cop USA person
'Are you American?'
b.# nei5 hai6 mei5gwok3 jan4 me1?
2SG Cop USA person Prt^{Q}
'You aren't American, are you?'
c. nei5 hai6 mei5gwok3 jan4 ho2?
2SG Cop USA person Prt^{Q}
'You are American, right?'

(13) *Scenario: Jimmy and Mandy just broke up. One day, while taking a walk in a park, Jimmy sees his best friend Karl kissing Mandy. Karl says this to Jimmy.*
gu2 m4 dou3 aa3 ho2?
guess Neg Asp Prt Prt^{Q}
'Unexpected, isn't it?'

The difference between neutral questions and biased questions, therefore, lies in the number of illocutionary forces involved. For an A-not-A question, speaker commitment and the call on addressee are identical. The speaker puts *p*? in Question Under Discussion and calls on the addressee to update accordingly. Only one illocutionary force, namely *asking*, is involved. Biased questions, as summarized in (14), have an additional illocutionary force of *asserting*, highlighted in shaded boxes. This additional element sets biased questions apart from neutral ones.

(14) A summary of the meaning of *me1* and *ho2*

	me1	*ho2*		
Input	declarative	declarative OR interrogative		
Meaning	¬*p* is in my set of beliefs	I assume *p* is in your set of beliefs OR I assume *p?* is in your set of questions	Illocutionary force: asserting	Effect on discourse component: update CG
	What do you think about *p*?	Is the assumption right?	Illocutionary force: asking	Effect on discourse component: update QUD
Output	interrogative			

3. The syntax of question particle clusters: the complex ForceP

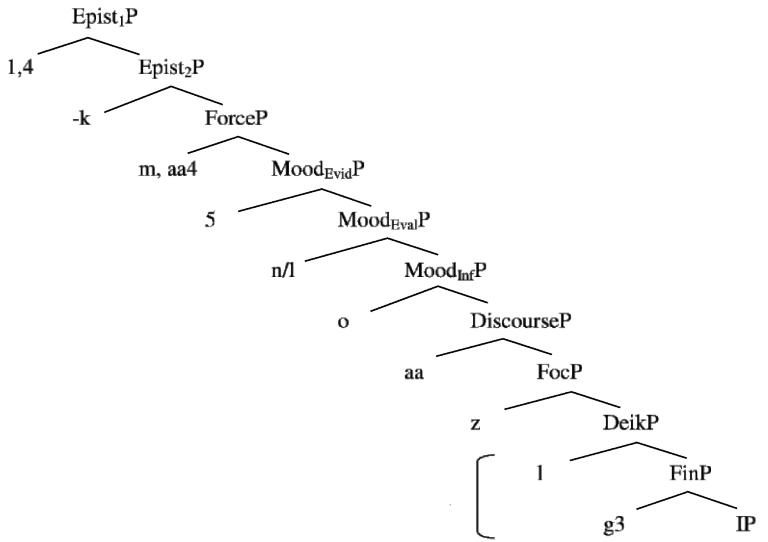
Having addressed the first research question regarding simple and complex speech acts, I investigate the second issue — how can a question particle cluster like (6b) be represented syntactically? In 3.1, I review previous works on the syntax of Cantonese particles. 3.2 presents my proposal — the complex ForceP. The last subsection 3.3 illustrates how this proposal makes correct predictions of clause-typing restrictions.

3.1 Previous approaches to the syntax of Cantonese particles

Little has been said about the co-occurrence patterns of particle clusters and their syntax. Previous works such as Fung (2000) have discussed the semantics of individual particles in details. As for syntax, Law (2004) argues that *maa3*, *me1* and *aa4* have clause-typing functions, and are thus hosted by a unique syntactic head FORCE, following Rizzi's (1997) Split-CP Hypothesis. Li (2006) and Sybesma & Li (2007) are extensive studies of the left periphery of Cantonese, which dissect particles into sub-syllabic semantic units, as in (15). The onset *m-* is hosted by FORCE. However, the onset *h-* and Tone 2 of the particle *ho2* are absent from the picture. Their approach is not adopted in the current study, because the dissection

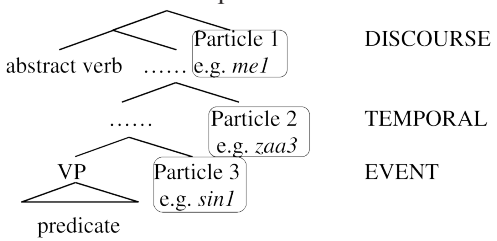
approach is motivated by the semantics of the sub-syllabic units; it is not intended to serve the purpose of predicting the linear order of units in a particle cluster.[3]

(15) The left periphery of Cantonese (Sybesma & Li 2007:1779)



Tang (2012) investigates the interaction among root clauses, subordinate clauses and utterance-final particles, proposing a syntactic structure for particle clusters based on the analysis of discontinuous constructions (Tang 2006). In a cluster like *sin1 zaa3 me1*, each particle can form a mirror image with adverbials, such as preverbal *sin1* 'first', *zing6hai6* 'only' and *mat1*. The insight of this approach is that the levels in the hierarchy of particles do not just stack on top of one another. Rather, they form a more complex structure that involves embedding, as in (16). Particles like *me1* in the discourse domain must be in the root clause. It occupies the highest level that is separated from the other two domains. While *ho2* is also a question particle of discursive functions, it remains a question how the cluster *me1 ho2* can be represented in the same domain.

(16)



Tang (2012)

[3] Take a legal cluster like *laak3 me1* as an example. The tree structure in (15) correctly predicts the relative order of *l-aa-k*, but not the relative order of the coda *-k* and the onset *m-*. The same issue arises for all cases where the first syllable in a cluster has *-k*.

The assumption that *ho2* is an utterance-final particle but not an interjection should be clarified. While most works (Matthews & Yip 1994, Fang 2003, among others) categorize *ho2* as an utterance-final particle, Cheung (2007) sees it as an interjection. Considering whether *ho2* can be an independent utterance and its degree of freedom in terms of its surface position in a sentence, I take the view of the former. Interjections are known to be able to stand alone as an independent utterance, as in (17a) and (17b). *ce2* and *ai1jaa3* are uncontroversial interjections. Both are acceptable single-word responses to Jimmy's statement. However, (17c) is an unacceptable response, even though *ho2* has the "dictionary meaning" of seeking confirmation. In this regard, *ho2* behaves similarly to utterance-final particles which are bound forms that must modify some preceding utterance.

(17) Jimmy: jap6 jat1 kau4 zaa3
enter one goal Prt
'(They) scored one goal only.'
Rachel: a. ce2!
'That's it!?'
b. ai1jaa3!
'What a pity!'
c. *ho2?
Intended: 'Confirm, please?'

Since interjections are independent, they enjoy a larger degree of freedom in terms of distribution. This is not the case for *ho2*. While *ce2* and *ai1jaa3* can either precede or follow an utterance in (18) and (19), *ho2* can only be utterance-final. Hence, *ho2* patterns with utterance-final particles but not interjections.

(18) a. **ce2!** jap6 jat1 kau4 zaa3
Itjn enter one goal Prt
'That's it? (They) Scored one goal only!?'
b. jap6 jat1 kau4 zaa3 **ce2!**
enter one goal Prt Itjn
'(They) Scored one goal only!? That's it?'

(19) a. **ai1jaa3!** jap6 jat1 kau4 zaa3
Itjn enter one goal Prt
'What a pity! (They) Scored one goal only!'
b. jap6 jat1 kau4 zaa3 **ai1jaa3!**
enter one goal Prt Itjn
'(They) Scored one goal only. What a pity!'

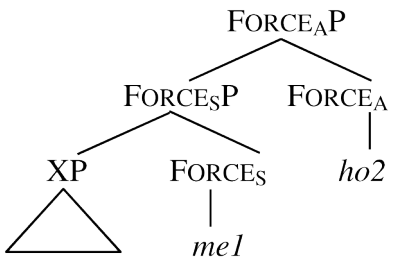
(20) a.* **ho2?** jap6 jat1 kau4 zaa3
Prt^{Q} enter one goal Prt
b. jap6 jat1 kau4 zaa3 **ho2**?
enter one goal Prt Prt^{Q}
'(They) Only scored one goal, right?'

3.2 Proposal: the complex ForceP

3.2.1 An overview of the proposal

To fill the gap in the literature for the particle *ho2*, I propose the complex ForceP structure in (21). Its first characteristic is the two FORCE heads, contrary to a unique FORCE head in previous works. Second, one of these FORCE heads hosts the particle *ho2*, and is syntactically higher than the other one. Third, the lower and higher FORCE heads are annotated as FORCE_S and FORCE_A respectively. I justify each of these points in the following subsections.

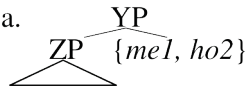
(21) The complex ForceP structure



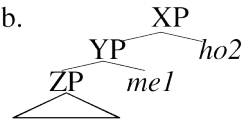
3.2.2 Evidence for a higher *ho2*

Logically, there are two possible structures to represent the cluster *me1 ho2*. In (22a), the two particles are sisters on the same level, so both of them have access to the lower proposition ZP. In (22b), however, *me1* and *ho2* are not on the same level. First, *me1* combines with ZP to form a question YP. Then, *ho2* takes the whole YP as complement. *Ho2*, which is structurally higher, has no access to the lower ZP.

(22) a.



b.



(23a) and (23b) present the same utterance, but each is uttered in a different context with a different interpretation. The validity of these interpretations is crucial to evaluating the two syntactic representations. The interpretation in (23a) reflects the structure in (22a). First, *me1* combines with ZP to form the question *Can one get by just by being loud? I don't think so.* Then, *ho2*, the sister of *me1*, combines with ZP, resulting in the question *I assume you think that one can get by just by being loud, right?* The fact that this interpretation is impermissible shows that *ho2* in fact has no access to ZP when preceded by *me1*. In contrast, the valid interpretation in (23b) shows the structure in (22b). First, *me1* combines with ZP to form the question YP *One cannot get by just by being loud, can s/he?* Next, *ho2* combines with YP to form the question XP *I assume you also have YP in your set of questions. Is that right?* A paraphrase of XP is *Do you also want to ask the rhetorical question 'Can one get by just by being loud?' I think you do. Confirm*.

(23) a. *Scenario: Jimmy is the first of a long taxi queue. A taxi is coming, but someone not from the queue opens the door of the taxi, saying loudly that he is in a hurry. Everyone in the queue is angry. Jimmy says this to the person who jumped the queue.*
daai6 seng1 zau6 dak1 gaa3 laa3 me1 ho2
big voice then okay Prt Prt Prt^{Q} Prt^{Q}
*'Can one get by just by being loud? I don't think so. I assume you think so, right?'

b. *Scenario: Jimmy is the first of a long taxi queue. A taxi is coming, but someone not from the queue opens the door of the taxi, saying loudly that he is in a hurry. Everyone in the queue is angry. Jimmy whispers to the second person in the queue.*
daai6 seng1 zau6 dak1 gaa3 laa3 me1 ho2
big voice then okay Prt Prt Prt^{Q} Prt^{Q}
'What, can one get by just by being loud? You'd agree it's a valid question, right?'

The comparison of felicitous and infelicitous answers leads to the same conclusion. In the infelicitous answer (24a), the speaker responds to whether the proposition *One can get by just by being loud* is true. In other words, the question is interpreted as (22a), in which *me1* and *ho2*, as sisters, take the proposition ZP as the complement. However, in the felicitous answer (24b), the speaker responds to whether *Can one get by just by being loud?* is a valid question. It is a question about another question. The felicity contrast of different answers concludes that *me1* and *ho2* cannot be sisters. Having no access to the proposition ZP, *ho2* must take the whole question YP as the complement, as in (22b).

(24) *Scenario: The second person in the taxi queue responds to (23b).*
a.# m4 dak1, daai6 seng1 mou5 jung6 gaa3!
Neg okay, big voice not.have use Prt
'No, it's no use being loud!'
b. hai6 laa1, gam3 mou5 ban2 gaa3!
Cop Prt so not.have manner Prt
'Ya, that's so rude!'

Having made clear the structure of *me1 ho2* sentences, I bring more complicated examples into the discussion. In general, *me1 ho2* questions with *you* as the subject, as in (25), do not make sense. Consider the tree in (22b). YP is a *me1* question about Jimmy, the addressee. When YP combines with *ho2*, it means *I assume that you, Jimmy, want to ask Jimmy a question about Jimmy. Please confirm*. The unacceptability of such a sentence is due to its problematic meaning, but not the general permissibility of the particle cluster.

(25) *Scenario: Rachel is the mother of Jimmy and Clara, and they are Canadians. One day, they travel to the US together. At the immigration, Jimmy walks towards the line for US residents. Rachel says this to Jimmy.*
?nei5 hai6 mei5gwok3 jan4 me1 ho2?
2SG Cop USA person Prt^{Q} Prt^{Q}
'You aren't American, are you? I assume you have the same question, right?'

In (26), the question is composed of the same words in (25), and is uttered in the same context, but it involves a switch of addressee. At the first glance, this example may pose a challenge to the analysis of *ho2* — is this *ho2* a different particle that can be independent? In fact, the same syntactic structure (22b) can be used to analyze this case. The only special thing here is that YP is a speech act. In other words, *ho2* is taking a speech act as complement. First, the speaker makes a speech act to Addressee A (Jimmy). Next, the speaker assumes that Addressee B (Clara) wants to make the same speech act and invites Addressee B to confirm if the assumption is true. Thus, the switch of addressee does not motivate the need to revise the current analysis.

(26) *(Look at Jimmy)* nei5 hai6 mei5gwok3 jan4 me1 *(look at Clara)* ho2?
2SG Cop USA person Prt^{Q} Prt^{Q}
'You_{Jimmy} aren't American, are you_{Jimmy}? I assume you_{Clara} have the same question, right?'

3.2.3 Annotating the two FORCE heads: SPEAKER and ADDRESSEE orientation

Given that *me1* and *ho2* need to be hosted by FORCE heads of different levels, the next issue is how to annotate the two FORCE heads. As illustrated in (21), I propose $FORCE_S$ and $FORCE_A$, where S and A refer to SPEAKER and ADDRESSEE orientation respectively. According to Zimmermann (2011), discourse particles organize discourse by expressing the epistemic state of SPEAKER or ADDRESSEE. By using a discourse particle in an utterance, a speaker discusses propositions from either the speaker's or the addressee's list of beliefs or list of questions. In other words, discourse particles lexicalize the contrast of SPEAKER and ADDRESSEE orientation. (27) is a list of discourse particles of different orientation from Cantonese, Bavarian (Thoma 2013) and Canadian English (Burton et al 2012).

(27)Particles in various languages lexicalizing the contrast between S and A orientation

Language	Particle	Meaning of [*p* + particle]	Orientation
Bavarian	*ja*	*p* is in **my** set of beliefs	SPEAKER
English	*right*	*p* is in **my** set of beliefs What do you think about *p*?	
(gap)		¬*p* is in **my** set of beliefs	
Cantonese	*me1*	¬*p* is in **my** set of beliefs What do you think about *p*?	
Cantonese	*ho2*	I assume *p* is in **your** set of beliefs Is the assumption right?	ADDRESSEE
Canadian English	*eh*	I assume *p* is in **your** set of beliefs Is the assumption right?	
Bavarian	*fei*	I assume ¬*p* is in **your** set of beliefs	
(gap)		I assume ¬*p* is in **your** set of beliefs Is the assumption right?	

Felicity test of follow-up sentences can diagnose SPEAKER and ADDRESSEE orientation. First, speaker-oriented particles encode the speaker's commitment to either *p* or ¬*p*. They can co-occur with either *I think so* or *I don't think so*, but not both. Since they do not express the speaker's assumption about the epistemic state of the addressee, speaker-oriented particles can co-occur with *I don't care what you think*. Addressee-oriented particles, on the other hand, can co-occur with both *I think so* and *I don't think so*. They cannot co-occur with *I don't care what you think*.

This diagnostic test confirms that *me1* is speaker-oriented and *ho2* is addressee-oriented. In (28), *me1* is compatible with *I don't think so* but not *I think so*, showing speaker commitment to ¬*p*. It is compatible with *I don't care what you think*, implying that it is not addressee-oriented. However, the opposite is concluded from (29) for *ho2*. *Ho2* is compatible with both *I think so* and *I don't think so*, not encoding any speaker commitment. It is incompatible with *I don't care what you think*, thus diagnosed as addressee-oriented.

(28) a.# nei5 daai6 go3 neoi2 laa3 me1? ngo5 gok3dak1 hai6
2SG big Cl girl Prt Prt$^{Q\text{-}S}$ 1SG think Cop
'Are you a big girl already? (I doubt it!) I think so.'

b. nei5 daai6 go3 neoi2 laa3 me1? ngo5 m4 gok3dak1 wo3
2SG big Cl girl Prt Prt$^{Q\text{-}S}$ 1SG Neg think Prt
'Are you a big girl already? (I doubt it!) I don't think so.'

c. nei5 daai6 go3 neoi2 laa3 me1? ngo5 m4 lei5 nei5 dim2 lam2!
2SG big Cl girl Prt Prt$^{Q\text{-}S}$ 1SG Neg care 2SG how think
'Are you a big girl already? (I doubt it!) I don't care what you think.'

(29) a. nei5 daai6 go3 neoi2 laa3 ho2? ngo5 gok3dak1 hai6
2SG big Cl girl Prt Prt$^{Q\text{-}A}$ 1SG think Cop
'Are you a big girl already? I assume you think so, right? I think so.'

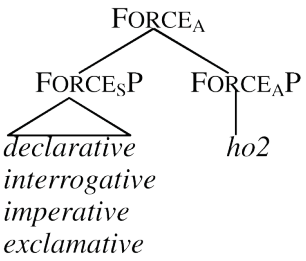
b. nei5 daai6 go3 neoi2 laa3 ho2? ngo5 m4 gok3dak1 wo3
2SG big Cl girl Prt Prt$^{Q\text{-}A}$ 1SG Neg think Prt
'Are you a big girl already? I assume you think so, right? I don't think so.'

c.# nei5 daai6 go3 neoi2 laa3 ho2? ngo5 m4 lei5 nei5 dim2 lam2!
2SG big Cl girl Prt Prt$^{Q\text{-}A}$ 1SG Neg care 2SG how think
'Are you a big girl already? I assume you think so, right? I don't care what you think.'

3.3 Predictions of the complex ForceP: clause-typing patterns

The proposed structure in which one FORCE is higher than the other predicts that fewer restrictions are imposed on *ho2* with regard to the types of inputs for clause typing. The higher FORCE_{A} selects FORCE_{S}P as complement. This FORCE_{S}P can be any one of the following clause types: declarative, interrogative, imperative and exclamative, as in (30). It predicts that *ho2* can co-occur with all the four clause types, whereas *me1* cannot.

(30)



The data sets in (31)-(34) show that this prediction is correct. *me1* is compatible with declaratives like (31b) only. It cannot combine with interrogatives, imperatives and exclamatives. However, *ho2* can co-occur with all the four types, as in all the (a) sentences. Among the four types, the [imperative + *ho2*] pattern is more restricted in terms of the semantic-pragmatic context. Only soft-toned imperatives like (33a) can combine with *ho2*. [Command + *ho2*] is problematic. All clause-typing patterns are summarized in (35).

(31) [declarative + particle]
Scenario: A father finds that his 13-year-old daughter is drinking beer in her room.He says this to her.
a. nei5 daai6 go3 neoi2 laa3 ho2?
2SG big Cl girl Prt Prt$^{Q\text{-}A}$
'Are you a big girl already? I assume you think so, right?'
b. nei5 daai6 go3 neoi2 laa3 me1?
2SG big Cl girl Prt Prt$^{Q\text{-}S}$
'You aren't a big girl yet, are you?'

(32) [interrogative + particle]
a. *Scenario: Jimmy and Mandy have been training for a marathon race that takes place tomorrow. Jimmy says this to Mandy.*
ting1jat6 wui5 m4 wui5 lok6 jyu5 le1 ho2?
tomorrow Fut Neg Fut down rain Prt Prt$^{Q\text{-}A}$
'Will it rain tomorrow? I assume you'd agree this is a valid question, right?'
b.* ting1jat6 wui5 m4 wui5 lok6 jyu5 le1 me1?
tomorrow Fut Neg Fut down rain Prt Prt$^{Q\text{-}S}$

(33) [imperative + particle]
a. *Scenario: Jimmy and Karl are in a shoe store, where a thanksgiving sale is taking place. Both of them find two pairs of shoes that they like. Karl says this to Jimmy.*
gam3 peng4, maai5 saai3 loeng5 deoi3 laa1 ho2?
so cheap buy all two pair Prt Prt$^{Q\text{-}A}$
'It's so cheap. Buy all the two pairs! You'd agree it's the right action to take, right?'
b.* gam3 peng4, maai5 saai3 loeng5 deoi3 laa1 me1?
so cheap buy all two pair Prt Prt$^{Q\text{-}S}$

(34) [exclamative + particle]

a. *Scenario: Jimmy and Mandy were almost knocked down by a car. Jimmy is telling this story to their friend Karl. Mandy is listening while Jimmy is talking. Jimmy says this to Mandy.*

zan1	hai6	hou2	him2	gaa3	ho2?
real	Cop	very	dangerous	Prt	$Prt^{Q\text{-}A}$

'How dangerous! You also had this feeling, right?'

b.*

zan1	hai6	hou2	him2	gaa3	me1?[4]
real	Cop	very	dangerous	Prt	$Prt^{Q\text{-}S}$

(35) Summary of input restrictions of *me1* and *ho2*

Input	*me1*	*ho2*
declarative	✓ output=interrogative	✓ output=interrogative
interrogative	*	✓ output=interrogative
imperative	*	✓ output=interrogative
exclamative	*	✓ output=interrogative

4. Conclusion and future research

In this paper, I have shown that *me1* and *ho2* encode the speaker's bias by exercising two illocutionary forces, namely *asserting* and *asking*. Both particles introduce complex speech acts, which distinguishes them from a neutral question. As for the particle cluster *me1 ho2*, scope facts and clause-typing restrictions conclude that *ho2* is syntactically higher than *me1*. More than one FORCE head is necessary to host these particles. Having shown that *me1* encodes the epistemic state of SPEAKER while *ho2* discusses that of ADDRESSEE, I annotate the two FORCE heads as $FORCE_S$ and $FORCE_A$ respectively. Selecting $FORCE_SP$ as complement, $FORCE_A$ has no access to the lower proposition.

This study has filled the gap in the literature with regard to *ho2* of the *h*-series of utterance-final particles. *he2* and *haa2* are left for future research. (36) presents the possible combinations of onset, rhyme and tone in Cantonese particles according to Li (2006), where the *h*- series is not included. (37), a row to be added to the table, shows that *h*- particles match with Tone 2 only, unlike other onset series that can match with various tones. It remains a question whether *h*- particles are dissectible. I speculate that the answer is positive: the onset *h*- expresses addressee orientation, while Tone 2 (high rising tone) is a question intonation that is "fossilized" as a lexical tone. This speculation is consistent with Tang (2008), in which *ge2* is understood as [*ge3* + H]. H is the high rising tone, conveying a question or doubt.

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[4] Declaratives and exclamatives are not structurally different; they can be differentiated by intonation. I assume that this sentence is produced with the intonation of an exclamative, which is unacceptable. However, it is acceptable when produced with the intonation of a declarative.

(36) Possible combinations of onset, rhyme and tone (Li 2006: 73)

	e	aa	o	-k
∅		1,_,3,4,5,_	_,_,3,4,5,_	aak3
g-	1,2,3,_,_,_	_,2,3,4,5,_		aak3
l-	1,_,_,4,5,_	1,_,3,4,5,_	1,_,3,4,_,_	aak3 ok3
m-	1,_,_,_,_,_	_,_,3,_,_,_		
n-	1,_,_,_,_,_			
z-	1,_,_,_,_,_	_,_,3,4,5,_		ek1

(37)

h-	_,2,_,_,_,_	_,2,_,_,_,_	_,2,_,_,_,_	

Another important question is to what extent the proposed complex ForceP is applicable to other languages. A striking fact is that *eh* in Canadian English, a particle that seeks confirmation from the addressee, can also take the four clause types as input, as in (38). Lam et al (2013) suggest that *eh* is higher than FORCE. It is yet to be explored whether such behaviour of addressee-oriented particles is universal. A cross-linguistic study of similar particles may shed light on the nature of this higher head above FORCE.

(38)

	Input	Example with Canadian *eh*	Output
a.	Declarative	*You have a new dog, eh?*	Interrogative
b.	Interrogative	*What's he talking about, eh?*	Interrogative
c.	Imperative	*Get me a beer, eh?*	Interrogative
d.	Exclamative	*What a surprise, eh?*	Interrogative

(Lam et al 2013)

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粵語的複合語氣詞短語

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提要

本文從語用學和句法學的角度探討粵語的疑問句末助詞“咩”和“嗬”。透過比較“咩”、“嗬”和普通疑問句之語境，本文指出“咩”和“嗬”同時發揮兩種語力（陳述和發問），是一個複雜的言語行為，與簡單疑問句有別。語義上，“咩”是個以說話者為中心的語氣詞，而“嗬”則以受話者為中心。另一方面，本文分析兩個語氣詞與各種疑問句的並存限制、轄域，及輸入之小句種類，發現句法結構上，一個語氣詞中心語並不足夠，而且“嗬”必須比“咩”高。因此，本文提出由兩個語氣詞中心語構成的“複合語氣詞短語”——“咩”為較低的中心語 $\text{FORCE}_{\text{S(peaker)}}$，而“嗬”則在第二層較高的 $\text{FORCE}_{\text{A(ddressee)}}$。

關鍵詞

粵語，句末語氣詞，疑問句，左緣結構，句法學，語用學