

Yes/no Question Particles Revisited: The Grammatical Functions of *mo4*, *me1*, and *maa3*

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This study reexamines the syntactic, semantic, and pragmatic roles of question particles in Cantonese. Whereas question particles have been studied extensively in terms of their pragmatics, the syntactic and semantic characterization deserves further investigation. A comparison is made between a previously unnoticed Cantonese question particle *mo4* and its counterparts *me1* and *maa3*. The particle *mo4* carries a linguistic implicature similar to that in *me1*.

It is found that Cantonese question particles in yes/no interrogatives interact with aspect and negation markers in interesting ways. While the neutral yes/no question particle *maa3* does not co-occur with these markers, *mo4* and other question particles do not show this restriction.

Adopting Rizzi's (1997, 2004) Split-CP Hypothesis, it is argued that question particles should be treated as the head of ForceP. The sentence final nature of such particles is derived by phrasal movement as a result of the clitic nature of sentence final particles and a formal feature in Force⁰ and Mod⁰. This study sheds light on our understanding of the complex and sometimes subtle differences among question particles attested in Spoken Cantonese.

1. Introduction

From the typological point of view, English and Cantonese (as well as other varieties of Chinese) differ significantly in the way in which a question is formed. Syntactically speaking, a regular yes/no question in English involves placing an auxiliary or a dummy *do* at the beginning of the question so that these grammatical items precede the subject in syntax. In open interrogatives (or the so-called wh-questions), the wh-expression has to undergo syntactic movement to the sentence-initial position, in addition to the operation of subject-auxiliary inversion, as shown in (1):

- (1) a. Can/Will/Did you tell Mary the news?
b. What can/will/did you tell Mary?

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Chinese does not have subject-auxiliary inversion. Interrogative expressions stay in the position where they are interpreted, hence the so-called Wh-in-situ phenomenon. Despite this, Chinese employs clause-final particles (also called sentence-final particles) in questions. These particles have the function of clause-typing an utterance in the sense of Cheng (1991) in such a way that this utterance is interpreted as interrogative. Some languages with question particles only have one or two forms, e.g. *ka* in Japanese. Chinese, on the other hand, has various question particles at its disposal.

In this paper, I will discuss question particles in Cantonese, particularly *mo4*, *me1* and *maa3*, focusing on their pragmatic, semantic, and syntactic commonalities and differences. I will show that *mo4* is a pragmatically non-neutral yes/no question particle that carries special implicature opposite to the proposition or truth condition of the sentence. In addition, I will demonstrate that *mo4* behaves similarly to *me1* in allowing the co-occurrence of aspect markers and negation markers, contrasting significantly with *maa3*. Furthermore, the syntactic characteristics of these question particles will be discussed. Finally, a proposal of their representation in syntactic structure will be presented.

2. Question Formation with Particles

A speaker typically asks a yes/no question when (s)he seeks a positive or a negative answer to the question. A careful study of yes/no questions in Cantonese (and other Chinese varieties) reveals that these questions are not formed in one way only. Rather, a yes/no question in Cantonese can take more than one form.² First, a question particle (*maa3*, *me1* or *aa4*)³ can be added at the end of a declarative sentence and the resulting clause is a yes/no question.

- (2) Lei5 yam2 gaa3fe1 maa3? (particle yes/no question)
 you drink coffee Q-PRT⁴
 'Do you drink coffee?'

Second, instead of using a question particle like *maa3*, a yes/no question can be formed by placing a negation marker at the end of clause. The resulting question is what Cheng, et. al. (1996) call a negative particle question (i.e. NPQ), illustrated in (3a). The third kind of yes/no question is formed by reduplicating the head of the predicate (formed by a verb phrase or adjective phrase), or the first syllable of this head, coupled with the addition of the negation marker *m4*, yielding a so-called A-not-A question, as in (3b):

² Cheng et al. (1996) consider the so-called disjunctive *haishi* questions, *ma*-questions A-not-A questions, VP-VP questions, and tag-questions as subtypes of yes/no questions in Mandarin.

³ In this paper, romanization of Cantonese follows the convention of the Linguistic Society of Hong Kong. See Matthews & Yip (1994) for different systems of romanization.

⁴ The abbreviations used in the glosses include: CL (classifier), Q (Question), PRT (Particle), EXP (Experiential aspect marker), PERF (Perfective aspect marker), and PROG (Progressive aspect marker).

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- (3) a. Lei5 yam2-zo2 gaa3fe1 mei6? (NPQ)
 you drink PERF coffee not-yet
 ‘Have you drunk/had coffee?’
- b. Lei5 yam2-m4-yam2 gaa3fe1? (A-not-A question)
 you drink-not-drink coffee
 ‘Do you drink coffee (or not)?’

We may borrow a general term “closed interrogative” from Huddleston and Pullum (2002) to refer to these three kinds of questions. As far as question particles are concerned, only the first group (i.e. particle yes/no questions) allows the use of *maa3* or *me1*. These two particles cannot be used in A-not-A questions or NPQs. This contrast is illustrated below:

- (4) a. Lei5 yam2 gaa3fe1 maa3/me1? (particle yes/no question)
 you drink coffee Q-PRT
 ‘Do you drink coffee?’
- b. * Lei5 yam2-zo2 gaa3fe1 **mei6** maa3/me1? (NPQ)
 you drink PERF coffee not-yet Q-PRT
 ‘Have you drunk/had coffee?’
- c. * Lei5 **yam2-m4-yam2** gaa3fe1 maa3/me1? (A-not-A question)
 you drink-not-drink coffee Q-PRT
 ‘Do you drink coffee?’

The particles that are attested in NPQs and A-not-A questions, as well as in wh-questions are *ne1* and *aa3*.

- (5) a. Lei5 yam2-zo2 gaa3fe1 mei6 **ne1/aa3**? (NPQ)
 you drink PERF coffee not-yet Q-PRT
 ‘Have you drunk/had coffee?’
- b. Lei5 yam2-m4-yam2 gaa3fe1 **ne1/aa3**? (A-not-A question)
 you drink-not-drink coffee Q-PRT
 ‘Do you drink coffee?’
- c. Si1 Hou6 sik6-zo2 mat1je5 **ne1/aa3**? (Wh-question)
 Si Hou eat PERF what Q-PRT
 ‘What has Si Hou eaten?’

It should be noted that in (4a), the sentence would be interpreted as declarative, rather than interrogative, in the absence the question particle (unless a rising intonation is used).

Q-particles in yes/no questions like *maa3*, *me1*, *ne1* and *aa3* are noted in the literature (e.g. Yuan 1960, Kwok 1984, Law 1990, Leung 1992, Matthews and Yip 1994,

Huang 1996, Kuong 2002). In the Cantonese variety spoken in Macau and some neighborhoods near Zhongshan, there is yet another particle that can be used in questions such as (2) and (4a). This is shown in the following example:

- (6) Si1 Hou6 zungji sik6 min6 **mo4**?
 Si Hou like eat noodles Q-PRT
 ‘Si Hou likes eating noodles? (I thought he doesn’t.)’

Although rarely attested in Hong Kong Cantonese, the particle *mo4* is fairly common in Macau Cantonese, especially among older speakers. The following is an excerpt from a dialogue between a seventy-year-old housewife (A) and a grocer (B):

- (7) A: Waa3, di1 mai5 gwai3-zo2 hou2 do1 wo3
 Wow, CL rice expensive-ASP very much PRT
 ‘Wow, the rice has become so expensive!’
 B: Gam2 lei5 maai5-m4-maai5 aa1?
 Then you buy-not-buy PRT
 ‘Well, are you (still) buying [it]?’
 A: m4 sik6 **mo4**?
 Not eat Q-PRT
 ‘As if we don’t eat [rice] anymore!’

Another example of *mo4* (taken from a radio phone-in program in Macau) is presented below:

- (8) m4tung1 co5 hai2dou6 dang2 sau1 gung1 **mo4**?
 as-if sit here wait get-off work Q-PRT
 ‘(As if) we just sit here and wait to get off work?’

This is an instance of a rhetorical question. According to Matthews and Yip (1994: 336), *m4tung1* in such contexts expresses skepticism and sarcasm.

One general property of question particles is that only one such particle may be used in a given question, thus disallowing combinations with another question particle. This generalization applies to *mo4*.

- (9) a. *Keoi5 lei4 me1 mo4 / mo4 me1?
 he come Q-PRT Q-PRT/ Q-PRT Q-PRT
 ‘He is coming?’

- b. * Keoi5 lei4 maa3 me1 / me1 maa3?
 he come Q-PRT Q-PRT / Q-PRT Q-PRT
 ‘He is coming?’
- c. * Keoi5 lei4 maa3 mo4 / mo4 maa3?
 he come Q-PRT Q-PRT/ Q-PRT Q-PRT
 ‘He is coming?’

Kuong (1999) refers to this property of question particles as individuality. Although clause-final particles can be used in combination (see, for instance, Kwok 1984, Law 1990, Matthews and Yip 1994, Tang 1998), question particles are special in that they are mutually exclusive. The above examples show that multiple question particles within one interrogative sentence are not permitted in Cantonese.

3. Pragmatic Functions of *mo4* and *me1*

After establishing the question particle status of *mo4*, I now move on to discuss the pragmatic functions of this particle and its comparison with *maa3*. As mentioned in the previous section, in the presence of the Q-particle *maa3*, a declarative sentence becomes a yes/no question. Questions formed with *maa3* are neutral in the speaker’s commitment to the truth condition of the sentence. The speaker simply requests information about whether a statement is true or not. On the other hand, the yes/no question formed with *mo4* (or *me1*) is not neutral in the speaker’s belief system. As far as their pragmatics is concerned, the speaker implies that (s)he is surprised or holds a belief that is opposite to the denotation of the sentence. Take the following yes/no questions for instance.

- (10) a. Si1 Hou6 lei4 mo4/me1?
 Si Hou come Q-PRT
 ‘Si Hou is coming? (I thought he’s not)’
- b. Si1 Hou6 m4 lei4 mo4/me1?
 Si Hou not come Q-PRT
 ‘Si Hou is not coming? (I thought he is.)’

Matthews and Yip (1994), and Kuong (2002) show that the Q-particle *me1* carries an implicature that is contrary to the proposition of the sentence. The speaker in (10a) asks whether Si Hou is coming or not. But this yes/no-question is not neutral in meaning. What the speaker expresses is his disbelief that Si Hou is coming. In other words, by saying (10a), the speaker is implicating that (s)he did not expect Si Hou to be coming.

Likewise, in (10b) the implicature contributed by the use of the Q-particle is also contrary to the proposition that Si Hou is not coming. The speaker is surprised that Si Hou is (probably) not coming even though he was thinking just the opposite.

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Linguistic implicature can be cancelled or modified, especially when the speaker tries to make an additional comment to correct or reevaluate his or her assumption. This can be seen in the following sentences with the speaker's afterthought.

- (11) Si1 Hou6 lei4 mo4? Keoi5 lei4 zik1 hai6 waa3 yat1 ding6 zou6 saai3 gung1 fo3
Si Hou come Q-PRT he come that-means definitely do all homework
'(What?) Si Hou is coming? His coming means that he definitely has finished
his homework.'

In this example, the speaker's question with *mo4* has the implicature that he was thinking that Si Hou would not come. The speaker adjusts this belief by saying that Si Hou's coming surely means that the latter person had already finished doing the homework, thus refuting or correcting the implicature that Si Hou is not coming.

One may ask in what ways *mo4* and *me1* differ, as opposed to *maa3*. The answers are not clear cut, but seem to lie in two aspects. First, in terms of attitudinal intensity, *me1* seems stronger in the speaker's tone of voice than *mo4*. According to Yuan (1960: 230), *me1* is used to express the speaker's surprise, or when the question is a rhetorical one. Matthews and Yip (1994), and Huang (1996) share this view. Huang (1996) further mentions that *me1* can be used to express the speaker's disagreement with a proposition. My observation is that *mo4* is similar to *me1* in its ability to express surprise and disagreement, hence opposite implicature. However, when they are used in rhetorical questions, *mo4* is less intense in the speaker's attitude than *me1*. In other words, *mo4* is lighter or less accusatory in the speaker's tone of voice. Consider the following examples:

- (12) Keoi5 hou2 lek1 me1? Ngo5 gau3 dak1 lok3.
s/he very clever Q-PRT I also able PRT
'As if he was so clever! I can also do that.'

(adapted from Matthews and Yip, p.348)

- (13) Keoi5 hou2 lek1 mo4? Ngo5 gau3 dak1 lok3.
s/he very clever Q-PRT I also able PRT
'As if he was so clever! I can also do that.'

The speaker's attitude in (12) is more dissatisfactory than in (13) even though the difference is somewhat subtle.

Another difference between *mo4* and *me1* seems to be correlated with the age of the speaker. Younger speakers tend to use *me1* much more often than *mo4*. For instance, in a radio talk show between two twenty-some-year-old hosts that airs on weekday afternoons in Macau, the use of *me1* was found, whereas *mo4* was not observed.

To summarize the discussion so far, *mo4* and *me1* are not neutral in meaning, whereas *maa3* shows neutrality in the speaker's attitude. The former two question particles carry opposite implicature. In the next section, I will discuss how the question

particles outlined so far interact with some semantic categories, namely aspect markers and negation markers.

4.1. Syntax-Semantics Interaction

Cantonese question particles interact with aspect markers and negation markers in very interesting ways. Some particles can co-occur with these semantically oriented markers, others cannot. Kuong (2002) points out that while the neutral yes-no question particle *maa3* does not co-occur with aspect markers (contrasting with its Mandarin cognate *ma*), *me1* and *aa4* in Cantonese do.⁵

Aspect markers

- (14) a. *Si1 Hou6 heoi3-zo2/-guo3/-gan2 hok6haau6 **maa3**?
 Si Hou go PERF/EXP/PROG school Q-PRT
 ‘Has Si Hou gone to school?/Is Si Hou going to school?’
- b. Si1 Hou6 heoi3-zo2/-guo3/-gan2 hok6haau6 **me1**?
 Si Hou go PERF/EXP/PROG school Q-PRT
 ‘Si Hou has gone to school?/Si Hou is going to school?’

The particle *mo4* behaves like *me1* in this respect. In other words, aspect markers are also possible in questions with *mo4*.

- (15) Si1 Hou6 heoi3-zo2/-guo3/-gan2 hok6haau6 **mo4**?
 Si Hou go PERF/EXP/PROG school Q-PRT
 ‘(What?) Si Hou has gone to school?/Si Hou is going to school?’

In addition to aspect markers, *maa3* also differs from *mo4* and *me1* in its co-occurrence with a negation marker. It is found that *maa3* does not appear in yes-no questions that contain a preverbal negation marker, whether it be the default *m4* ‘not’ or the aspectual *mei6* ‘not yet’ or *mou5* ‘have not’ in spoken Cantonese, as in (16a):

Preverbal negation

- (16) a. *Keoi5 **m4**-heoi3/**mei6**-heoi3/**mou5**-heoi3 hok6haau6 **maa3**?
 he not go /not-yet go /have-not go school Q-PRT
 ‘Isn’t he going to school?/Hasn’t he gone to school?’
- b. Keoi5 **m4**-heoi3/**mei6**-heoi3/**mou5**-heoi3 hok6haau6 **mo4/me1**?
 he not go /not-yet go /have-not go school Q-PRT/Q-PRT
 ‘(What?) He is not going to school?/He has not gone to school?’

⁵ Though *aa4* is not the focus of research in this study, its distribution, meaning, and functions in Cantonese seem to be similar to those of *mo4*. A quantitative study may be required to determine the extent of their similarity. I leave this for further research.

The contrast in (16) shows that unlike the pragmatically neutral *maa3*, the non-neutral particles *mo4* and *me1* can indeed co-occur with a preverbal negation marker.

A note should be emphasized here in relation to negative particle questions. By definition, an NPQ must have a negation marker, i.e. the one that occurs postverbally towards the end of the question. Similar to *maa3* and *me1*, *mo4* is also disallowed in an NPQ.

- (17) a. * Si1 Hou6 lei4-zo2 **mei6** **maa3/me1?**
 Si Hou come PERF not-yet Q-PRT/Q-PRT
 ‘Has Si Hou come already?’
- b. * Si1 Hou6 lei4-zo2 **mei6** **mo4?**
 Si Hou come PERF not-yet Q-PRT
 ‘Has Si Hou come already?’

The restriction against the presence of *me1* and *mo4* in NPQs is not purely semantic, since preverbal negation markers are attested in yes/no questions with *me1* and *mo4*. The explanation seems to be a syntactic one.⁶

A related restriction is found in A-not-A questions, as reported earlier. This is shown in the following example:

- (18) *Lei5 yam2-m4-yam2 gaa3fe1 **maa3/me1/mo4?** (A-not-A question)
 you drink-not-drink coffee Q-PRT/Q-PRT/Q-PRT
 ‘Do you drink coffee (or not)?’

The example shows that yes/no question particles, namely *maa3*, *me1* and *mo4*, are incompatible with A-not-A questions.

To summarize, *mo4* and *me1* have a similar distribution when it comes to the interaction with aspect and negation markers, differing from *maa3*. On the other hand, *mo4*, *me1* and *maa3* behave similarly when the negation marker occurs in the postverbal or A-not-A context.

4.2. Matrix Restriction in Syntax

As far as the syntax is concerned, this study finds that Cantonese question particles are restricted to direct questions, meaning that such particles only occur in main clauses, but not in embedded contexts. This generalization is likely to be related to the fact that embedded yes-no questions typically take the form of A-not-A questions or what Cheng et al. (1996) call Negative Particle Questions. Compare (19a-b) and (19c):

⁶ Cheng et al. (1996) analyze *mei6* in Cantonese NPQs as a Q-particle, thus occupying a syntactic position that would otherwise be filled by any other Q-particle.

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- (19) a. Keoi5dei6 m4 zi1 [ba4ba1 lei4-m4-lei4] (embedded A-not-A)
 they not know dad come-not-come
 ‘They don’t know if Dad is coming.’
- b. Keoi5dei6 m4 zi1 [ba4ba1 lei4-zo2 mei6] (embedded NPQ)
 they not know dad come ASP not-yet
 ‘They don’t know if Dad has come (or not).’
- c. *Keoi5dei6 m4 zi1 [ba4ba1 wui5 lei4 mo4/maa3] (embedded PRT YNQ)
 they not know dad will come Q-PRT
 ‘They don’t know if Dad will come.’

Note that (19c) per se is not an ungrammatical sentence. This sentence is grammatical only if the question particle is construed as occurring in the matrix context, hence a matrix interrogative sentence meaning “don’t they know that Dad will come?” However, (19c) is unacceptable if the question particle *mo4* or *maa3* is interpreted as occurring in the embedded question. This latter interpretation (i.e. an indirect question) can only be expressed using an A-not-A structure like the one in (19a).

Three diagnostic tests can be run to ascertain the matrix restriction of yes/no question particles (or question particles in general). The first test is to use a combination of a matrix A-not-A question and an embedded particle yes/no question. Since an A-not-A question can only co-occur with the particle *ne1* or *aa3*, the particle *mo4* or *maa3* in this context cannot be construed as belonging to the matrix A-not-A question. Consider (20):

- (20) *Keoi5dei6 zi1-m4-zi1 [ba4ba1 wui5 lei4 mo4/maa3]?
 they know-not-know dad will come Q-PRT
 ‘Do they know if Dad will come?’

If *mo4* or *maa3* can be used in the embedded context, a sentence like (20) should be well-formed; but it is not.

The second test that can be adopted to determine whether *mo4* and *maa3* can occur in the embedded context is fronting. An embedded question in Cantonese, as well as in many languages, can be fronted or topicalized to the sentence-initial position, as shown in the pair of examples below:

- (21) a. Keoi5dei6 m4 zi1 [ba4ba1 wui5-m4-wui5 lei4]
 they not know dad will-not-will come
 ‘They don’t know if Dad will come.’
- b. [Ba4ba1 wui5-m4-wui5 lei4] keoi5dei6 m4 zi1
 dad will-not-will come they not know
 ‘Whether Dad will come or not, they don’t know.’

Going back to (19c), if the particle *mo4* or *maa3* present in this sentence could be interpreted as belonging to the embedded question, the fronted counterpart in (22) should be grammatical. However, this is not the case.

- (22) ***[Ba4ba1 wui5 lei4 mo4/maa3]** keoi5dei6 m4 zi1 (cf. 19c)
 dad will come Q-PRT they not know
 ‘Whether Dad will come or not, they don’t know.’

The only well-formed alternative is the following, in which *mo4* is construed as belonging to the matrix question.

- (23) [Ba4ba1 wui5 lei4] keoi5dei6 m4 zi1 mo4?
 dad will come they not know Q-PRT
 ‘Don’t they know that Dad will come?’

This test again confirms the hypothesis that yes/no-question particles are confined to matrix contexts.

The third diagnostic is the so-called sentential subject. Indirect questions are possible within sentential subjects. This can be seen in the following example from English:

- (24) Whether Dad will come is not important.

In Cantonese, an A-not-A question or an NPQ is permitted in a sentential subject, as illustrated below:

- (25) a. [Si1 Hou6 wui5-m4-wui5 lei4] m4 gan2jiu3
 Si Hou will-not-will come not important
 ‘Whether Si Hou will come or not is not important.’
 b. [Si1 Hou6 lei4 zo2 mei6] m4 gan2jiu3
 Si Hou come PERP not-yet not important
 ‘Whether Si Hou has already come or not is not important.’

In contrast to A-not-A questions and NPQs, a yes/no-question with *mo4* or *me1* in a sentential subject appears to be unacceptable.

- (26) ***[Si1 Hou6 wui5 lei4 mo4/me1/maa3]** m4 gan2jiu3
 Si Hou will come Q-PRT not important
 ‘Whether Si Hou will come or not is not important.’

The ungrammaticality suggests that the particles *mo4*, *me1*, and *maa3* are exclusive to the matrix context, disallowing the interpretation where the yes/no question is an indirect interrogative.⁷

So far we have seen that syntactically speaking, *mo4*, *me1*, and *maa3* only occur in matrix yes/no-questions, but not in the embedded context. Next, let me discuss the possibility of the presence of a topic expression in yes/no-questions with clause-final particles, particularly in view of the fact that Cantonese, like other Chinese varieties, is topic-prominent in the sense of Li and Thompson (1976).

4.3. Interaction with sentence topics

It is a very common property of Chinese that a topic expression occurs in a sentence, whether the sentence is interrogative or declarative. The following are two examples of the co-occurrence of a sentential topic and the question particle *mo4*.

- (27) a. Go1 bun2 syu1 (aa3), lei5 mei6 tai2 mo4?
 that CL book PRT, you not-yet read Q-PRT
 ‘That book, you haven’t read [it] yet?’
- b. Go1 zeong1 so1fa2 (aa3), lei5 maai5-zo2 lo3 mo4?
 that CL sofa PRT you buy PERF PRT Q-PRT
 ‘That sofa, you have already bought [it]?’

Note that the topic expression, namely *that book* and *that sofa*, can be immediately followed by the pause particle *aa3*, which is sometimes referred to as a topic particle, as in Matthews and Yip (1994). It is possible for (27b) to end with the question particle *me1* even though the phonetics of the second last particle may be slightly different, as exemplified below:

- (28) Go1 zeong1 so1fa2 (aa3), lei5 maai5-zo2 la3 me1?
 That CL sofa PRT you buy PERF PRT Q-PRT
 ‘That sofa, you have already bought [it]?’

Such a difference in phonetics between the particle *la3* and *lo3* is not unusual. Given that these two particles have the same tone and share the same meaning, we may assume that *lo3* in the *lo3 mo4* sequence is the result of vowel harmony. What is important to note in this section is that topicalization is possible in yes/no questions involving question particles.

⁷ It should be noted that (26) could be a sequence of two grammatical sentences if *mo4* or *me1* is the question particle terminating the interrogative and *m4 gan2jiu3* ‘not important’ is interpreted as the second sentence with a null subject. In this case, the Q-particle would be followed by a longer pause.

5. Syntactic Structure of Question Particles

Having specified the major syntactic properties of yes/no question particles in Cantonese, I will discuss the syntactic representation of such particles in this section. As far as syntactic structure is concerned, the current generative approach to grammar assumes the presence of a functional category, namely CP, which is higher than TP (or IP) (see, for instance, Chomsky 1986). In English, subject-auxiliary inversion is derived by moving the element in T to the C head. This is referred to as T-to-C movement. The element that undergoes this kind of movement is an auxiliary (e.g. *have/has, is/are*), a modal (e.g. *can, could, will, or should*), or the dummy *do* (and its variants). In matrix wh-questions in English, the wh-expression (including *how*) moves to the specifier of CP, hence Wh-movement.

More recently, drawing on empirical data from Italian and English, Rizzi (1997) proposes that CP can, in fact, be split into several functional categories, particularly in the presence of a sentential topic and/or a syntactically focused element. This claim is often referred to as the Split-CP Hypothesis. The following sequence shows the functional categories proposed by Rizzi:

(29) ForceP Top(ic)P Foc(us)P Top(ic)P FinP IP ...

The above sequence is an oversimplified version of Rizzi's Split-CP. In his proposal, each of these categories has a specifier and a head. In addition, ForceP dominates TopP, which in turn dominates FocP. The Split-CP structure has been revised by various researchers, including Rizzi (2004).

As far as Cantonese is concerned, A. Law (2002) suggests that ForceP is present in the clause structure. More specifically, she claims that ForceP is also the highest function projection just like Italian. Since question particles have the illocutionary force of an interrogative, she proposes analyzing question particles as heading ForceP. In other words, question particles are in Force⁰ in syntax. This is compatible with earlier analyses of question particles as C⁰ (e.g. Cheng 1991, Cheng et al. 1996, Tang 1998, Cheng & Rooryck 2000). Since topicalization is indeed possible in an interrogative sentence, whether it be a yes/no question or a wh-question, incorporating TopP in the clause structure has its advantage. Therefore, I will adopt the hypothesis that question particles are elements in Force⁰.

In the literature on sentence-final or clause-final particles, two groups of particles are generally identified (see, for instance, Leung 1992, Matthews and Yip 1994, Tang 1998 and 2000, A. Law 2002). According to Tang (1998), the particle that occurs at the very end of the sentence (e.g. a question particle) is considered an "outer particle," whereas the one that precedes this final particle is referred as an "inner particle" since the inner particle is closer to the other lexical items in the sentence. Sometimes, the inner particles are referred at Class I particles, while the outer particles belong to Class II (see Leung 1992 and Tang 2000, 2002). Consider the following examples:

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- (30) Zingwaa lok-gwo jyu **lei4 me1?** (Tang 2000, ex.12)
 Just-now fall-EXP rain PAST Q-PRT
 ‘Did it rain a moment ago?’
- (31) Keoi5 maai5 lau2 **laa3 me1?** (Tang 2002, ex. 6)
 He buy flat PRT Q-PRT
 ‘He bought a flat already?’

According to Tang (2002), reversing the ordering between the inner particle and the outer particle would result in ungrammaticality, as shown below:

- (32) *Keoi5 maai5 lau2 **me1 laa3?** (Tang 2002, ex. 7)
 He buy flat Q-PRT PRT
 ‘He bought a flat already?’

Leung (1992) and Tang (1998, 2002) seem to be right in classifying clause-final particles into inner and outer particles. The co-occurrence between an inner and an outer particle indeed follows strict ordering constraints such that the inner particle must precede the outer particle. In this respect, the question particle *mo4* behaves similarly to *me1*.

- (33) Lei5 so4 ge3 mo4/me1?
 you dumb PRT Q-PRT/Q-PRT
 ‘Are you dumb (or what)?’
- (34) a. Keoi5 zou6 saai3 gung1fo3 lo3 mo4?
 He do all homework PRT Q-PRT
 ‘He has finished the homework?’
- b. Keoi5 zou6 saai3 gung1fo3 la3 me1 ?
 He do all homework PRT Q-PRT
 ‘He has finished the homework?’

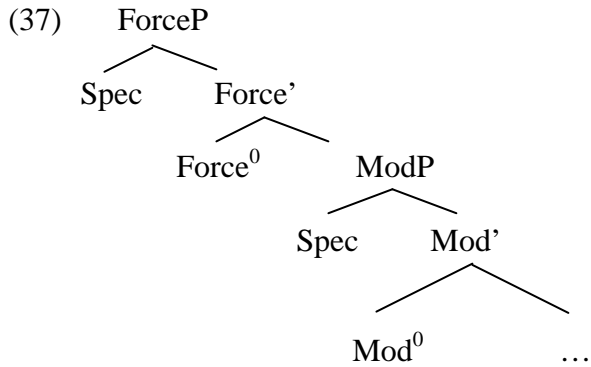
In these examples, the inner particles are *ge3*, *lo3*, and *la3*, respectively. Any reverse ordering would result in ungrammaticality as observed in Tang (2000, 2002). This is illustrated below:

- (35) *Lei5 so4 **me1/mo4 ge3?**
 you dumb Q-PRT/Q-PRT PRT
 ‘Are you dumb (or what)?’
- (36) a. *Keoi5 zou6 saai3 gung1fo3 **mo4 lo3**
 He do all homework Q-PRT PRT
 ‘He has finished the homework?’

- b. * Keoi5 zou6 saai3 gung1fo3 **me1 la3**
 He do all homework Q-PRT PRT
 ‘He has finished the homework?’

According to Matthews and Yip’s (1994) grouping, the inner particles can be further divided into adverbial (e.g. *sin1*), assertive (e.g. *ge3*), and evaluative or modificational (e.g. *ze1*, *la3*, and *lo3*). The outer particles, on the other hand, are associated with a question or an exclamative sentence.

Adopting the insights from the works of Leung, Tang, and Matthews and Yip, we can assume that *mo4*, *me1* and *maa3* are syntactic markers of sentential force, which head ForceP mentioned earlier, similar to Cheng’s (1991) claim regarding the question particle *ma* and *ne* in Mandarin.⁸ In addition, in the spirit of the analysis of Leung (1992) and Tang (2000, 2002), I propose that the inner clause-final particle occupies a functional head that is lower than Force⁰. More specifically, I assume that this head is what Rizzi (2004) calls Mod⁰ (which corresponds roughly to mood and modality). The tree diagram looks like the following structure:



Now let us tackle the word order issue. On the one hand, we need to capture the fact that the inner particle precedes the outer particle in overt syntax, allowing for the sequences of *ge3 mo4*, *lo3 mo4*, and *la3 me1*. On the other hand, if Force⁰ is higher than Mod⁰ and the question particle *mo4* is in Force⁰ and the inner particle *ge3* is in Mod⁰, then we have to explain why the sequence is not *mo4 ge3*, which is not attested (cf. 35). I suggest that this conflict can be reconciled if we assume that syntactic movement is

⁸ Kayne (1994) claims that the ‘specifier-head-complement’ sequence represents the universal word order of human languages. Tang (2000) adopts this claim and suggests that the C head in Cantonese and Mandarin is head-initial, which takes TP as the complement. Ann Law’s (2002) analysis of sentence final particles treats the projection (ForceP) hosting question particles as head-final. She also assumes that the functional head SFP⁰ is head-final. Her head-final analysis is similar to that in Law (1990). But this approach would assume mixed head-complement ordering in Cantonese since other phrases (e.g. VP or PP) are head-initial.

involved in the derivation of question particles in order to satisfy some grammatical constraint on the clitic nature of question-particles and other inner particles. This constraint can be formulated in the following way:

- (38) Sentence-final particles (including inner particles and outer particles) are clitics. Given this clitic nature, such a particle must attach to a phrasal host to its left in overt syntax.

This constraint forces some phrasal movement to the specifier of ModP and that of ForceP. Tang (2000) has suggested that the whole TP may move up to the specifier of CP. Now that we have adopted the Split-CP approach, moving the TP to Spec,ModP is conceivable. Adopting the minimalist terminology, we can say that Mod⁰ has a formal feature [EPP], which requires some phrasal element to be in the specifier position. To be concise, the sentence in (34a) has the following (simplified) structure after movement to Spec,ModP and the merge of the Q-particle *mo4* have taken place:

- (39) [_{ForceP} [_{Force⁰} mo4] [_{ModP} [_{TP} keoi zou saai gungfo] [_{Mod⁰} lo3]] t_{TP}]
 Q-PRT he do all homework PRT

After this step, the clitic nature of the question particle *mo4* and the [EPP] feature of Force⁰ will trigger the movement of the whole ModP to the specifier of ForceP, as represented below:

- (40) [_{ForceP} [_{ModP} [_{TP} keoi zou saai gungfo] [_{Mod⁰} lo3]] t_{TP}] [_{Force⁰} mo4] t_{MP}]
 he do all homework PRT Q-PRT

This analysis applies to *me1*, which also occupies Force⁰. The co-occurring inner particle *ge3* or *la3* is the head of ModP. To derive the *ge3 me1* and *la3 me1* sequences, successive phrasal movement is also required.

Now let us revisit the possibility of topicalization in yes/no questions discussed in the previous section. The following example is repeated for convenience:

- (41) Go1 zeong1 so1fa2 (aa3), lei5 maai5-zo2 lo3 mo4? (=27b)
 that CL sofa PRT you buy PERF PRT Q-PRT
 ‘That sofa, you have already bought [it]?’

According to Rizzi (1997, 2004), ForceP must be higher than TopP, the latter of which hosts the sentence topic (*that sofa* in this case). The functional categories at the left periphery include at least the following elements:⁹

⁹ TP is used here even though Rizzi (1997) uses IP.

(42) ForceP TopP ModP TP

Kuong (2006) has argued that topicalized expressions and sentence topics in Mandarin are in the specifier of TopP and that the possible topic particle is in Top⁰. Applying this idea to Cantonese, the question is how the sentence topic reaches the sentence initial position in the presence of ForceP, which dominates TopP. I mentioned above that Force⁰ has a formal [EPP] feature that needs to be eliminated in overt syntax, and that the question particle is like a clitic demanding a phrasal host to its left. We can hypothesize that attracting the closest phrasal category to the specifier of ForceP is most economical in the syntactic derivation. Therefore, moving TopP to Spec,ForceP would be more economical than moving ModP or TP to that specifier across the intervening TopP when the sentence topic is present.

Let us now recall that question particles only allow for matrix interpretation. Since this is a syntactic, rather than a semantic or pragmatic, restriction, an explanation in syntax must be sought. One important feature in Force⁰ is [Q]. Interrogatives are assumed to have the [+Q] feature, whereas declaratives and exclamatives have a Force⁰ that is [-Q]. This [Q] feature was previously proposed for C, as in Chomsky (1995) (before Rizzi's Split-CP Hypothesis was put forward). To explain why question particles in Cantonese (and Mandarin) can only occur in the matrix context, I suggest that the [Q] feature may have two instantiations or subfeatures, namely [+matrix] and [-matrix]. Question particles such *mo4* and *me1* have the [+Q: +matrix] feature specification. This analysis makes sense if we consider the syntactic distribution of the complementizer *that* in English. This complementizer only occurs in the embedded finite context, but not in the matrix context. Consider (43):

- (43) a. John said **that** he went to Africa.
 b. * John want **that** to go to Africa
 c. * **That** did John go to Africa?

A straightforward analysis of this restriction is to assume that the complementizer *that* has some formal syntactic feature [-matrix]. Given the [-matrix] feature specification of *that*, there would be a feature mismatch if *that* occurs in Force⁰ of the matrix or root sentence since Force⁰ in this case is [+matrix]. The interrogative *if* and *whether* in English are also known for their embedded nature. Comparing English and Cantonese in this respect, *mo4* and *me1* are [+Q: +matrix], while *if* and *whether* are [+Q: -matrix]. As a result, question particles in Cantonese only occur in the matrix context, but not in embedded clauses.¹⁰

¹⁰ In Kuong (2002), I argue, based on the distribution of question particles, that the [+Q] feature may be specified as [+YNQ] for particles that occur solely in yes/no questions such as *maa3*, *me1*, or [-YNQ] for particles that occur in Wh-questions, A-not-A questions, and Negative Particle Questions. These two subfeatures are not incompatible with the [+matrix] (or [-matrix]) feature proposed in the current study.

In sum, I have proposed in this section that question particles (and other outer particles) are located in Force⁰ in the syntactic structure. The so-called inner sentence final particles occupy the head of ModP, which is lower than ForceP. TopP is situated between ForceP and ModP. To derive the correct word order between the inner particle and the outer particle, I have suggested that the clitic nature of such particles, coupled with the formal feature [EPP] in Mod⁰ and Force⁰, triggers two phrasal movements, with the first targeting Spec,ModP and the second targeting Spec,ForceP. I have also claimed that question particles in Cantonese have the [+matrix] property in the specification of the [+Q] feature.

6. Concluding Remarks

In this paper I have reexamined the syntactic, semantic, and pragmatic roles of yes/no question particles in Cantonese. The question particle *mo4* is non-neutral in pragmatic meaning and carries a linguistic implicature similar to those in *mei1*, contrasting with *maa3*, which is neutral or unmarked. The particle *mo4* is found to be lighter in the tone of voice, and is used more extensively in older speakers than in young ones.

It is observed that Cantonese question particles in yes/no interrogatives do not interact with aspect and negation markers in a uniform manner. While the neutral yes/no question particle *maa3* does not co-occur with the negation marker *m4* (unlike Mandarin *ma*), *mo4* and other question particles in Cantonese do. In terms of the co-occurrence of question particles and aspect markers, *maa3* fails to appear in yes/no questions that contain the perfective aspect marker *zo2*, or *mei6* ‘not yet’, or *mou5* ‘have not’ in spoken Cantonese, whereas neither *mo4* nor *mei1* shows this restriction.

As far as the syntactic properties of question particles are concerned, it was shown that question particles only occur in the matrix context, and that they follow inner particles if they occur in a sequence. Another observation was that topicalization can occur in yes/no questions with sentence final particles. Adopting Rizzi’s (1997, 2004) Split-CP Hypothesis, I follow A. Law to suggest that question particles should be treated as the head of ForceP. I further claim that the sentence final nature of such particles is derived by phrasal movement triggered the clitic nature of sentence final particles and a formal feature in Force⁰ and Mod⁰.

The analysis presented here unifies the head directionality of functional heads in Cantonese, suggesting that the functional projections in the left periphery, including ForceP, TopP, and ModP, are head-initial, just like other phrases.

It is hoped that this study sheds light on our understanding of the complex and sometimes subtle syntactic, semantic, and pragmatic differences among common question particles attested in Spoken Cantonese.

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