

# ***Cantonese sentence-final particles and the CP domain\****

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## **Abstract**

This paper proposes two syntactic positions for the wide range of Cantonese sentence-final particles that occur in the CP domain. The first position that I argue for is identified with the Force head ( $SFP_1$ ) of the C space (à la Rizzi 1997) which hosts particles that express speech acts and speaker-oriented modality. The second position ( $SFP_2$ ) is an iterative head located lower than the higher Topic. This proposal not only captures facts about the co-occurrence and ordering restrictions of particle clusters, but also some previously unobserved behaviours of particles with quantified noun phrases and different types of questions.

## **1 Introduction and scope of the paper**

Cantonese sentence-final particles (SFPs) are bound forms attached to the end of sentences and constitute an important grammatical category in the language. The number of SFPs in Cantonese ranges from 30 (Kwok 1984) to 95 (Leung 1992), depending on how one counts them. Functionally, especially in the early studies, they are often said to be similar to intonation in non-tonal languages (e.g. Chan 1998, Cheung 1972, Kwok 1984), mainly because many SFPs carry emotive meanings. Some studies (e.g. Luke 1990) prefer the term ‘utterance particles’, suggesting that these particles are attached to utterances rather than sentences. Numerous studies have found that SFPs express a wide range of meanings such as aspect, focus, modality, speech acts and temporal order (cf. Chan 1998, Cheung 1972, Fung 2000, Kwok 1984, Law 1990, Luke 1990, Leung 1992, Matthews and Yip 1994, Lee and Yiu 1998a, 1998b, 1999 and Lee and Law 2000, 2001). Some examples are given below, which exemplify the range of contributions of Cantonese sentence-final particles.

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- (1) keoi heoi zo syuguk **zaa3**  
 s/he go ASP<sup>1</sup> bookshop SFP  
 ‘S/he only went to the bookshop.’
- (2) keoi heoi zo syuguk **gwaa3**  
 s/he go ASP bookshop SFP  
 ‘S/he probably went to the bookshop.’
- (3) keoi heoi zo syuguk **wo5**  
 s/he go ASP bookshop SFP  
 ‘They say that s/he went to the bookshop.’
- (4) keoi heoi zo syuguk **lo1**  
 s/he go ASP bookshop SFP  
 ‘It is obvious that s/he went to the bookshop.’
- (5) keoi heoi zo syuguk **me1?**  
 s/he go ASP bookshop SFP  
 ‘Did s/he go to the bookshop?’

A number of studies of Cantonese sentence-final particles, such as Kwok (1984), Leung (1992) and Matthews and Yip (1994), offer a good outline of the entire inventory of SFPs; however, they tend to fall short of giving more elaborate and precise accounts of individual particles. Sporadic work has been done on subsets of the particles, most of which concerns their semantics, pragmatics and conversational functions, e.g. Fung (2000), Luke (1990), Lee and Yiu (1998a, 1998b, 1999) and Lee and Law (2000, 2001). There are only a few studies on their syntactic properties (Law 1990, Tang 1998) and acquisition by children (Lee et al 1996, Lee and Law 2000, 2001).

The goal of this paper is to give a more comprehensive syntactic analysis of Cantonese sentence-final particles. I shall concentrate on SFPs occurring in the CP domain and, adopting Rizzi’s (1997) split-CP framework, propose two structural positions for SFPs in the C space: one in the Force head ( $SFP_1$ ) and the other lower than the higher Topic ( $SFP_2$ ). In the next section, I shall summarise some previous studies of the syntax of SFPs. Section 3 is my proposal for the clausal structure of the Cantonese CP domain. In Section 4, the distributions of SFPs, their co-

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<sup>1</sup> The following abbreviations are used: ASP = aspect marker; CL = classifier; SFP = sentence-final particle; TOP = topic marker. The number following a particle indicates its tone: Tone 1 = high level; Tone 2 = high rising; Tone 3 = mid level; Tone 4 = low falling; Tone 5 = low rising; Tone 6 = low level.

occurrence and ordering restrictions, scope properties and behaviours in different types of questions will be examined and I shall show how the proposed configurations capture these facts. Section 5 concludes the paper.

## 2 Previous studies of the syntax of SFPs

Research on the syntax of SFPs is scarce and as yet there doesn't seem to be any definitive account of where SFPs are base-generated. Nevertheless, they are usually assumed to occupy some position in C, possibly after Tang's (1989) treatment of Mandarin sentence-final particles. However, it seems that SFPs may not be uniformly generated in one position. It has been observed that some particles can only occur in the root clause while some in both root and embedded clauses (cf. Tang 1998, Lee and Law 2001 for example). So it is likely that different particles may be generated in different positions. For instance, as will be reviewed shortly, Tang (1998) proposes two positions for SFPs and Law (1990) has three. As for the scope of SFPs, it has been widely accepted that they have clausal scope. However, closer examination of some particles shows that it may not be true of all particles. For example, Lee and Yiu (1998a, 1998b, 1999) argue that *lei4* and *ge3* are 'verbaliser' and 'nominaliser' respectively and hence most likely do not have clausal scope, but they do not propose any positions for them. Besides these two, the domain of focus of the restrictive focus particle *zaa3* ('only') is also controversial as there seem to be conflicting facts and analyses. Next, I shall evaluate two studies, Law (1990) and Tang (1998), which have comparatively extensive discussions on the syntax of SFPs.

Law (1990) proposes three syntactic positions for SFPs. The question particles<sup>2</sup> are said to be base-generated in [Spec,CP] as they are claimed to behave like wh-words and A-not-A constructions which express yes-no questions. The particle *ge3* ('assertion') is generated in COMP ( $C^0$ ), evidence of which comes from the fact that it occurs in clause-final position in relative clauses, noun-complement clauses and the *hai* ('be') ... *ge3* construction. *Tim1*, which means 'also' or 'even', occurs within VP and is argued to be part of the discontinuous construction *zung* ... *tim1*, where *zung* is a focus adverb meaning 'also'. However, the precise position has not been pinpointed.<sup>3</sup>

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<sup>2</sup> Law's (1990) analysis has six question particles but it is open to question whether there are indeed that many question particles in Cantonese. The status of some of her so-called question particles is dubious. For instance, *laa3bo3/laa3wo3* is said to be a 'confirmation seeking' question particle. However, it seems that the confirmation-seeking function is either inferred from the context or contributed by intonation rather than the particle in her examples.

<sup>3</sup> In fact, Law (1990), in a footnote, has made a suggestion that the *zung* ... *tim1* construction

Law's proposal raises some questions. First, only a small set of SFPs, namely the six question particles and two non-question particles (*ge3* and *tim1*), is discussed in greater detail. Although she briefly mentions that *laa3*, *laak3*, *lo3* ('irrevocability') and *zaa3* ('only') also occupy C, she does not provide any evidence to support this claim. A few of the SFPs that indicate speaker-oriented modality appear in some places occasionally but their syntactic positions are not systematically justified. Furthermore, there are problems with her argumentation and inaccuracy with facts.

Tang (1998) classifies SFPs into two types: 'inner particles' and 'outer particles'. According to him, inner particles are 'associated with either temporal information or focalization' while outer particles are 'used to indicate the clause type and illocutionary force of a sentence'. Inner particles include, for instance, *laa2*<sup>4</sup> ('current relevant state'), *lei4* ('recent past') and *zaa3* ('restrictive focus *only*'). Outer particles are also known as 'typing particles', e.g. question particles *maa3*, *me1*, *aa4*, *ne1*<sup>5</sup> and the 'exclamative and appreciative' *bo3*.

Inner particles are overt realisations of T<sup>0</sup> where the semantic features [Tense] and [Focus] may be inserted. Tang argues that the restrictive focus particle *zaa3* ('only') is a member of the inner particles. He claims that it has *zaa4* (interrogative), *ze1* and *zek1* (both emphatic) as 'variants' and hence, being 'morphologically rich', is said to be assigned the 'inflectional affix feature' when it enters the numeration and undergoes T-to-C movement in the phonological component. Furthermore, as *zaa3* ('only') is generated in T, it cannot focus the subject or topics because they are not in its c-command domain. There are several problems with this analysis. Firstly, it is dubious whether *zaa3*, *zaa4*, *ze1* and *zek1* are 'variants' as they have very different syntactic distributions. For instance, only *zaa3* can be followed by other SFPs, e.g. the question particle *me1* or the surprise particle *wo4*, while the other three must occur at the edge. Secondly, with respect to focusing the subject, my judgements, confirmed by two other native speakers, deviate from Tang's. In short, the particle *zaa3* can actually focus the subject, contra Tang's observations. I shall elaborate on this in the subsequent sections. Apart from these, Tang's postulation of *zaa3* as an overt realisation of T rests on

occurs pre-verbally in the underlying structure and *tim1* moves to the final position of VP in S-structure. Still, it is not said in the thesis which position 'pre-verbally' actually denotes in the clausal structure.

<sup>4</sup> Tang probably means *laa3*, with a mid level tone, rather than *laa2*, with a high rising tone, as there doesn't seem to exist such a particle *laa2* in Cantonese and *laa3* is generally thought to be the counterpart of the Mandarin *le* which means 'current relevant state'. But unfortunately, in the few examples that Tang gives in subsequent sections, the tones of all particles are missing altogether. So it is hard to tell whether he indeed means *laa2* or it is just a typographical error.

<sup>5</sup> It is dubious that *ne1*(/*le1*) is really a question (typing) particle. See section 4.3.1 for objections.

the assumption that the head T can have the features [Tense] and [Focus], apparently supported by facts like the emphatic *do* in English, as in his example *She DID come*. So as a focus marker, *zaa3* ('only') could be generated in T, bearing the [Focus] feature. Curiously though, there is no mention of what happens to the *actual* focused constituent, i.e. whether it also bears the feature [Focus], as generally assumed in accounts that make use of the [Focus] feature. Furthermore, the notion of focus in his analysis is rather obscure: the kind of 'focus' found in the English emphatic *do* and that associated with *only* or *zaa3* ('only') do not seem to be quite the same. However, no definition is provided and hence it is difficult to evaluate.

As for outer particles, Tang does not say much about them except that they are claimed to be overt realisations of C and can only occur in the root clause, whereas inner particles can occur either in the root clause, the embedded clause or both. This generalisation is probably right, but like Law (1990), Tang only surveys a few examples of SFPs.

### 3 Proposal

Along the lines of Rizzi's (1997) split-CP system, I propose two positions for Cantonese sentence-final particles in the C space: SFP<sub>1</sub> and SFP<sub>2</sub>. SFP<sub>1</sub> is base-generated in the Force head and SFP<sub>2</sub> is a head lower than the higher Topic. The CP domain of Cantonese that I argue for is represented schematically below.

(6) Force[SFP<sub>1</sub>] Topic SFP<sub>2</sub>\* Focus Topic ...

Since there is one unique Force head, only one SFP<sub>1</sub> is generated in each clause. SFP<sub>2</sub> is an iterative head, as indicated by the asterisk. The two classes of SFPs are differentiated by the feature [Q]: SFP<sub>1</sub> can be either [+Q] or [-Q] while SFP<sub>2</sub> lacks the [Q] feature. SFP<sub>1</sub> are typically those that encode speech acts, speaker-oriented modality and epistemic knowledge.<sup>6</sup> The [+Q] subclass includes the question particles *aa4*, *maa3* and *me1*. The [-Q] SFP<sub>1</sub>s are the following: *aa1maa3* ('reminder'), *aa3* ('softener or neutral particle'), *bo3* ('reminder'), *ge3* ('assertion'), *gwaa3* ('probably'), *laa1* ('lack of definiteness'), *le1/ne1* ('tentative'), *lo1* ('obviousness'), *lo3* ('irrevocability'), *lok3* ('irrevocability'), *wo3* ('reminder'), *wo4* ('surprise'), *wo5* ('hearsay'), *ze1* ('downplay') and *zek1* ('intimate'). SFP<sub>2</sub> is a

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<sup>6</sup> This is in accord with Mui and Chao's (1999) analysis of Cantonese adverbs. In their proposal, speech acts and speaker-oriented adverbs are subcategories of the supercategory ForceP. Cinque (1999) though does not identify his Mood<sup>0</sup> speech act with Rizzi's Force<sup>0</sup>.

relatively small class which includes the two focus particles *zaa3* ('only') and *tim1* ('also') and the inchoative particle *laa3*.

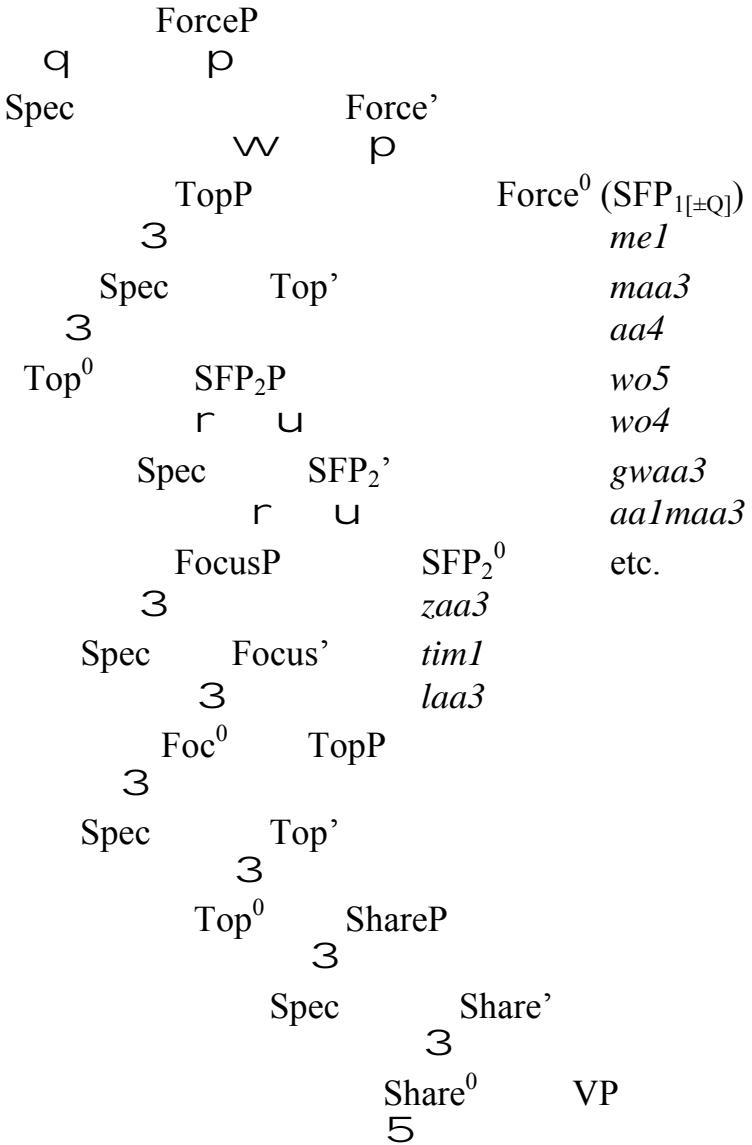
Four particles, *ge3* ('nominaliser'), *lei4* ('recent past' / 'verbaliser'), *sin1* ('first') (cf. Law and Lee 1998) and *zyu6* ('temporary') are excluded here for various reasons. *Ge3* and *lei4* seem to be much closer to the VP (see Lee and Yiu 1998a, 1998b, 1999 for discussions) and most probably do not occur in the C space. As for the latter two particles, *sin1* and *zyu6*, I have reservations about classifying them as SFPs. Previous studies do not seem to agree on their status. *Sin1* is included in Cheung (1972), Cheng (1990), Leung (1992) and Matthews and Yip (1994) but not Kwok (1984). *Zyu6* is perhaps even more controversial: it is only discussed in Cheung (1972) and Leung (1992) but not Kwok (1984) and Matthews and Yip (1994). Their status aside, these two particles are likely to be within the VP as well and hence not in the C space.

(7) below is a table showing the sentence-final particles in the CP domain. For the sake of convenience, SFP<sub>1</sub> is put in the second column because when SFP<sub>1</sub> and SFP<sub>2</sub> co-occur, SFP<sub>1</sub> ([±Q]) follows SFP<sub>2</sub>, i.e. the former is always at the right edge of a sentence. Incorporating Chao and Mui's (2000) Cantonese clausal structure and Beghelli and Stowell's (1997) proposal for the syntax of quantifier scope, (8) is the proposed structure of the Cantonese CP domain. (Only relevant projections are shown.)

(7) Table showing all sentence-final particles in CP

SFP <sub>2</sub> *	SFP <sub>1</sub> [±Q]
<i>zaa3</i> ('only')	<i>aa4</i>
<i>tim1</i> ('also/even')	<i>maa3</i>
<i>laa3</i> ('inchoative')	<i>me1</i>
	<i>aa3</i> ('neutral softener')
	<i>bo3</i> ('reminder')
	<i>ge3</i> ('assertion')
	<i>gwaa3</i> ('probably')
	<i>laa1</i> ('lack of definiteness')
	<i>le1/ne1</i> ('tentative')
	<i>lo1</i> ('obviousness')
	<i>lo3</i> ('irrevocability')
	<i>lok3</i> ('irrevocability')
	<i>wo3</i> ('reminder')
	<i>wo4</i> ('surprise')
	<i>wo5</i> ('hearsay')
	<i>ze1</i> ('downplay')
	<i>zek1</i> ('intimate')

- (8) Structure of the Cantonese CP domain (cf. Beghelli and Stowell 1997, Rizzi 1997, Chao and Mui 2000)



In the next section, I shall show how the proposed configurations account for a range of facts about SFPs.

## 4 Some observations

### 4.1 Co-occurrence restrictions and ordering of SFP clusters

It is well known that Cantonese SFPs can co-occur to form clusters at the end of sentences. There can be two or even three SFPs co-occurring. However, SFPs are

not completely free to co-occur or co-occur in any order (cf. e.g. Matthews and Yip 1994, Law 1990, Leung 1992). Examples (9) to (13) show some well-formed SFP clusters.

- (9) nei heoi zo Baalai zaa3 me1?  
 you go ASP Paris SFP SFP  
 ‘Did you only go to Paris?’
- (10) keoi zung heoi zo Baalai tim1 gwaa3  
 s/he also go ASP Paris SFP SFP  
 ‘S/he probably also went to Paris.’
- (11) keoi zung heoi zo Baalai tim1 zaa3  
 s/he also go ASP Paris SFP SFP  
 ‘S/he only also went to Paris.’
- (12) keoi tai jyun bun syu tim1 laa3  
 s/he read finish CL book SFP SFP  
 ‘S/he has also finished the book.’
- (13) keoi zung heoi zo Baalai tim1 zaa3 me1?  
 s/he also go ASP Paris SFP SFP  
 ‘Did s/he only also go to Paris?’

The configuration in (6) predicts that particles from the SFP<sub>1</sub> class should be able to co-occur with those from the SFP<sub>2</sub> class. This is indeed true, as seen from examples (9) and (10) in which *zaa3* and *tim1* are SFP<sub>2</sub>s while *me1* and *gwaa3* are SFP<sub>1</sub>s. The SFP<sub>2</sub> head can iterate; hence, two SFP<sub>2</sub>s can be generated, as shown by the cluster *tim1 zaa3* in (11) and *tim1 laa3* in (12) where *tim1*, *zaa3* and *laa3* are all SFP<sub>2</sub>s. Three-particle clusters are well-formed as long as there is only one SFP<sub>1</sub> (if any) in the sequence. So *tim1 zaa3 me1* in (13) is a possible cluster.

In contrast to (9) and (10), the following particle clusters with the order reversed are ill-formed.

- (14) \*nei heoi zo Baalai me1 zaa3  
 you go ASP Paris SFP SFP
- (15) \*keoi zung heoi zo Baalai gwaa3 tim1  
 s/he also go ASP Paris SFP SFP

It is impossible to reshuffle the sequence *tim1 zaa3 me1* in (13) freely too. So the order *me1 tim1 zaa3*, as in the following example, is ill-formed.

- (16) \*keoi zung heoi zo Baalai me1 tim1 zaa3?  
       s/he also go ASP Paris SFP SFP SFP

As  $SFP_1$  is structurally higher than  $SFP_2$  and is head-final in the proposed structure in (8),  $SFP_1$  necessarily follows  $SFP_2$ . Thus, examples (14), (15) and (16) are ungrammatical because the  $SFP_1$ s *gwaa3* and *me1* precede the  $SFP_2$ s *tim1* and *zaa3*.

There are some particles which cannot co-occur at all, in whatever order. For instance, two (or more) question particles cannot co-occur.

- (17) \*nei heoi zo Baalai aa4 me1?  
       you go ASP Paris SFP SFP
- (18) \*nei heoi zo Baalai me1 aa4?  
       you go ASP Paris SFP SFP

(19) to (22) are more examples of  $SFP_1$ s that cannot co-occur.

- (19) \*nei heoi zo Baalai me1 gwaa3  
       you go ASP Paris SFP SFP
- (20) \*nei heoi zo Baalai gwaa3 me1  
       you go ASP Paris SFP SFP
- (21) \*nei heoi zo Baalai aa1maa3 gwaa3  
       you go ASP Paris SFP SFP
- (22) \*nei heoi zo Baalai gwaa3 aa1maa3  
       you go ASP Paris SFP SFP

The ungrammaticality of (17) – (22) can be explained by the fact that no combination of SFPs from the  $SFP_1$  class, whether they are [+Q] or [-Q], is possible in any order because the Force head is unique.

So far the co-occurrence and ordering restrictions have been shown to follow from the relative structural positions of  $SFP_1$  and  $SFP_2$ . However, there seem to be exceptions. Below are two examples.

- (23) \*keoi tai jyun bun syu zaa3 laa3  
       s/he read finish CL book SFP SFP
- (24) \*keoi tai jyun bun syu laa3 le1  
       s/he read finish CL book SFP SFP

The sequence *zaa3 laa3* in example (23) is not well-formed but we have seen that *tim1 laa3* in example (12) is fine. All three particles *zaa3*, *laa3* and *tim1* are SFP<sub>2</sub>s, so they should in theory be able to co-occur. In example (24), the sequence *laa3 le1* is not good either, though *laa3* is an SFP<sub>2</sub> and *le1* is an SFP<sub>1</sub> and this cluster should be syntactically legitimate. I shall offer a speculation here. Cases of phonologically identical adjacent morphemes have been observed in Mandarin and Cantonese and are argued to be a violation of the Obligatory Contour Principle (OCP) or the \*REPEAT constraint (Yip 1998, Tang 2000). The ill-formedness of *zaa3 laa3* or *laa3 zaa3* in example (23) could be due to a ban on the adjacent identical vowel 'aa' in the vowel tier, whereas example (24) is unacceptable because there is a ban on the adjacent identical consonants 'l' in the consonant tier. This is an extension of the previously observed facts about identity avoidance in Cantonese in the sense that the OCP or \*REPEAT constraint has to be obeyed not only at the morphemic level but also at the level of autosegmental tiers. There are also other syntactically well-formed SFP sequences that share the same vowel but sound very odd, e.g. *zaa3 maa3*, *zaa3 gwaa3*, *zaa3 laa1*, *laa3 maa3*, *laa3 gwaa3* and *laa3 laa1*. As noted in Tang (2000), omission or haplogy is a possible remedy of violations of the OCP or \*REPEAT constraint in sentence-final particle sequences. Although he only deals with cases of adjacent identical particles, I suggest that haplogy is also responsible for avoiding identical segments on the vowel tier. For example, the particle sequence *zaa3 + aa4* is actually phonetically realised as the monosyllabic '*zaa4*', in which case the vowel and tone of the first particle *zaa3* are omitted. However, such omission is only possible when the second SFP begins with a zero consonant because, in the case of *zaa3 laa3* or *laa3 zaa3*, for instance, when the vowel of the first SFP is omitted, the resulting consonant clusters 'zl' and 'lz' are not phonologically well-formed in the language.

Another mystery is the ungrammatical sequence *zaa3 tim1* ('only also'). Recall that *tim1 zaa3* ('also only') is fine, as in example (11). However, reversing the order of the two SFP<sub>2</sub>s seems odd. The restriction could be due to some selectional properties and I shall leave this to future research.

## 4.2 Scope of SFPs

**4.2.1 Clause-final or utterance-final?** There have been controversies over whether sentence-final particles are attached to sentences or utterances. Luke (1990), for instance, argues for the latter and hence adopts the term ‘utterance particles’. There are good reasons to believe that sentence-final particles, even those that have been claimed to occur in outer positions, are sentence-final and not just utterance-final. Evidence comes from the fact that they can occur in both conjoined clauses in coordination structures, as in (25), and in main clauses and adjunct clauses introduced by subordinating conjunctions such as *janwai* (‘because’), as in (26).

- (25) keoi faan zo ukkei wo5 daanhai keoi beng zo me1?  
 s/he return ASP home SFP but s/he sick ASP SFP  
 ‘They said that s/he went home, but was s/he sick?’
- (26) keoi faan zo ukkei wo5 janwai keoi beng zo gwaa3  
 s/he return ASP home SFP because s/he sick ASP SFP  
 ‘They said that s/he went home, probably because s/he was sick.’

In (25), *wo5* (‘hearsay’) and the question particle *me1* are both SFP<sub>1</sub>s and are generated in the Force head of each of the conjuncts respectively. I assume that the two Force phrases are conjoined. In (26), the subordinate *because*-clause is argued to have independent illocutionary force (cf. Haegeman 2002), and here we indeed find an SFP<sub>1</sub> *gwaa3* (‘probably’), which is generated in the Force head. Moreover, following Haegeman (2002), I take this subordinate *because*-clause to be merged to a root CP. Thus an SFP<sub>1</sub>, e.g. *wo5* (‘hearsay’), can occur in the main clause, as evidenced in example (26). These two examples not only show that SFPs are really clause-final rather than utterance-final, but also provide support for the status of SFP<sub>1</sub>s.

**4.2.2 Root vs. embedded clause.** As suggested in Tang (1998), his ‘outer particles’ can only occur in root clauses while ‘inner particles’ can occur in either the root clause or the embedded clause. However, he does not say why there is such a difference between the two classes of particles. I shall suggest that those *speaker-oriented* particles (SFP<sub>1</sub>s) necessarily occur in the root clause because Force must be anchored to the speaker to be licensed and root clauses are anchored to the speaker by default (cf. Haegeman 2002). So postulating that SFP<sub>1</sub> is generated in the Force head can capture this fact. This is also reminiscent of other speaker-oriented elements, e.g. sentential adverbs, which must occur in the root clause. For example, in (27), the speaker-oriented adverb *unfortunately* must occur in the

sentence-initial position. When it occurs in the embedded clause, the evaluation of the unfortunate fact cannot be attributed to the speaker, but to the subject *Peter* instead, in which case the adverb has become subject-oriented rather than speaker-oriented.

- (27) Unfortunately, Peter believes that (#unfortunately) life is like a box of chocolates.

Returning to Cantonese sentence-final particles, although SFP<sub>1</sub>s apparently comprise particles of different natures, I shall argue that they are all inherently speaker-oriented and thus must occur in the root clause. First, there are several SFP<sub>1</sub>s whose meanings are very similar to some speaker-oriented sentential adverbs, e.g. *gwaa3* ('probably') and *honang* ('probably'), *lo1* ('obviously') and *houminghin* ('obviously'), *wo5* ('allegedly') and *tenggong* ('allegedly'), and *wo4* ('surprisingly') and *gwumdou* ('surprisingly'). It has been observed in Lee and Law (2001) that, for instance, *gwaa3* ('probably') necessarily takes matrix scope. So, in (28), only the (a) reading is possible where the modal evaluation is that of the speaker and 'probably' modifies Mary's act of saying rather than Billy's going to Paris, which is inside the embedded clause. The (b) reading is not available.

- (28) Mary waa Billy wui heoi Baalai gwaa3  
       Mary say    Billy will go      Paris      SFP  
       a. 'Probably, Mary said that Billy would go to Paris.'  
       b. # 'Mary said that Billy would probably go to Paris.'

Question particles, e.g. *me1*, which are also SFP<sub>1</sub>s and encode the interrogative force, also show similar patterns. In (29), again only the question reading (a) is possible, i.e. (29) can only be construed as a matrix yes-no question, whereas the indirect question reading (b) is unavailable.

- (29) Mary man Billy heoi Baalai me1?  
       Mary ask    Billy go      Paris      SFP  
       a. 'Did Mary ask Billy whether he went to Paris?'  
       b. # 'Mary asked Billy whether he went to Paris.'

Furthermore, when a wh-element co-occurs with a question particle, as in (30a), the wh-element *matje* ('what') cannot take matrix scope. Like (29), (30a) must be interpreted as a matrix yes-no question.

- (30) a. Mary soeng zidou Billy sik zo matje me1?  
     Mary want know Billy eat ASP what SFP  
     'Did Mary wonder what Billy ate?'  
 b. Mary soeng zidou Billy sik zo matje?  
     Mary want know Billy eat ASP what  
     (i) 'What did Mary wonder that Billy ate?'  
     (ii) 'Mary wondered what Billy ate.'

Notice that it is not impossible for a wh-element to take matrix scope. In (30b) where there is no question particle, the wide scope reading of *matje* ('what') is available, as in (i). So when two question elements, a question particle and a wh-element, co-occur, the wh-element is forced to take narrow scope. This serves as further evidence that the question particle must occur in the root clause.

Other SFP<sub>1</sub>s are quite mixed but they are inevitably very closely tied to the speaker. For example, the 'reminders' *aa1maa3*, *bo3* and *wo3*, in Relevance-theoretic terms, encode procedural meanings that constrain the manifestness of the speaker's and hearer's contextual assumptions (cf. Blakemore 1987, Sperber and Wilson 1986/95). Emotive particles such as *zek1* ('intimacy') are, of course, speaker-oriented in the sense that they express the speaker's perceived intimate relationship with the hearer.

In sum, SFP<sub>1</sub>s can only occur in the root clause because they are inherently speaker-oriented and Force, where these particles are generated, is anchored to the speaker in the root clause by default.

SFP<sub>2</sub>s, on the other hand, are not speaker-oriented, nor are they generated in the Force head. Hence, there should be no restriction on which type of clause they can occur in. This is indeed supported by empirical facts. SFP<sub>2</sub>s, such as *zaa3* ('only'), can certainly appear in the root clause. Example (31) shows that it may also occur in the embedded clause, as indicated by the translation of reading (a) where negation occurs in the higher clause while *zaa3* ('only') in the embedded clause.

- (31) John m soengseon bou gongkam maai jicin bong zaa3  
     John not believe CL piano sell 2000 pounds SFP  
 a. 'John does not believe that the piano only costs £2000.'  
 b. 'John does not only believe that the piano costs £2000. (He believes other things, such as the violin costs £500.)'

Reading (b) is also available where *zaa3* ('only') is now in the matrix clause. This example shows that the particle may be generated in the root clause or the embedded clause.

**4.2.3 Scope of SFP<sub>2</sub>s.** SFP<sub>1</sub>s are generated in the highest projection ForceP, so they have scope over the entire clause. We have already seen examples of speaker-oriented modal particles in the previous section. As for SFP<sub>2</sub>s, I shall illustrate their scope with the restrictive focus particle *zaa3*.

There does not seem to be any consensus with respect to the scope of *zaa3* ('only'). As reviewed earlier, Tang (1998) contends that *zaa3* cannot focus the subject or any preverbal elements. Here are two of his examples. (Judgements are his.)

- (32) ngo tai zo ni bun syu zaa3 (= his (37)) [\*Subj/V/Obj]  
 I read ASP this CL book SFP  
 'I only read this book.'
- (33) Camyat ngo tai syu zaa3 (= his (43)) [\*Temp/\*Subj/V]  
 yesterday I read book SFP  
 'Yesterday I read only.'

According to Tang, the particle *zaa3* cannot focus the subject *ngo* ('I') in (32) and (33). Furthermore, it cannot focus the preverbal temporal adverb *camyat* ('yesterday') in (33) either. However, my judgements, confirmed by two informants, differ from his. With sufficient contextual support and stress placed on *ngo* ('I') in (32) and (33), the reading '(Yesterday) It was only I (not Billy) who read this book', where the subject *ngo* ('I') is contrasted with other alternatives, is in fact available. Other researchers such as Lee (2000) and Kwok (1984), explicitly or implicitly, support the view that the particle can actually focus the subject. For example, Kwok (1984:51) asserts that *zaa3* can 'apply to the whole sentence'. Below are two more examples which confirm that the scope of *zaa3* is not limited to the VP only. In (34), imagine a teacher has found that the wall is covered in graffiti and she asks her students.

- (34) Teacher: bingo waak faa bung coeng?  
 who draw scratch CL wall  
 'Who did the graffiti?'  
 Billy: m-gwaan ngo si aa3.  
 Not-related I business SFP  
 Aaming waak faa bung coeng zaa3  
 Aaming draw scratch CL wall SFP  
 'It's not me! It's only Aaming who did it.'

When stress is placed on *Aaming* in Billy's utterance, the reading 'It was only Aaming who did the graffiti' is perfectly acceptable, which shows that the particle

*zaa3* can actually focus the subject. Another example is given in (35) which expresses the meaning ‘It is just that someone has broken the vase’ in response to, for instance, the question ‘What happened?’.

- (35) jaujan daa laan zo go faazeon zaa3  
 someone hit broken ASP CL vase SFP  
 ‘It’s just that someone has broken the vase.’

By contrast, the restrictive focus adverb *zinghai* (‘only’), which is uncontroversially a VP-adverb, cannot be used here to convey the same meaning. This is shown in (36).

- (36) jaujan zinghai daa laan zo go faazeon  
 someone only hit broken ASP CL vase  
 a. # ‘It’s just that someone has broken the vase.’  
 b. ‘Someone has only broken the vase (not the glass menagerie).’

So these two examples show that the particle *zaa3*, unlike the VP-adverb *zinghai* (‘only’), can indeed have clausal scope and focus the subject, contra Tang’s (1998) analysis. The present proposal can capture these facts, as  $SFP_2$  is located in the CP domain and therefore the focus particle *zaa3* (‘only’) has scope over the whole clause.

As for (33), I share Tang’s judgement that *camjat* (‘yesterday’) cannot be focused by the particle *zaa3* (‘only’), even if stress is put on *camjat* (‘yesterday’). This is due to the fact that *camjat* (‘yesterday’) is in the higher Topic position, which is higher than  $SFP_2$  as proposed here in structure (8), and therefore falls outside the scope of the restrictive focus particle *zaa3*. The temporal adverbial cannot be the lower Topic though because the lower Topic is for [+N] topics only (Chao and Mui 2000). I suggest that the lower Topic is the position for non-quantified referential arguments while the higher Topic is for adverbials or (argument) topics marked by the topic marker *le*. The higher Topic may or may not associate with a gap in the sentence. (37) is an example in which *si* (‘poetry’) marked by the topic marker *le* is the higher Topic.

- (37) si le, ngo tai gwo zaa3  
 poetry TOP I read ASP SFP  
 a. # ‘I have only read poetry (not novels).’  
 b. ‘I have only read poetry (but not written any).’

Here, we find that the meaning in (a) ‘I have only read poetry (not novels)’ is unavailable while only reading (b) ‘I have only read poetry (but not written any)’ is

possible. This shows that the topic *si* ('poetry') falls outside the scope of the particle *zaa3* ('only') and lends support to the proposed structure in (8) in which SFP<sub>2</sub> is merged lower than the higher Topic. In (38), the topic *dungmat* ('animal') is base-generated in the higher Topic position and does not associate with any gap in the sentence. As expected, the particle *zaa3* ('only') cannot focus it.

- (38) dungmat le, ngo zungji touzai zaa3  
 animal TOP I like rabbit SFP  
 'As for animals, I only like rabbits.'

Another interesting case is example (35), repeated below, which has only two readings out of the possible four.

- (35) jaujan daa laan zo go faazeon zaa3  
 someone hit broken ASP CL vase SFP  
 a. 'It's just that someone has broken the vase.' [indefinite/\*specific]  
 b. 'Someone has only broken the vase.' [\*indefinite/specific]

In reading (a), *jaujan* ('someone') is under the scope of *zaa3* ('only') and must be interpreted as indefinite. On the other hand, in reading (b), when the relative scope is reversed, *jaujan* ('someone') can only be interpreted as a specific individual but not as indefinite. This is in fact predicted if we adopt the theory of the syntax of quantifier scope developed by Beghelli and Stowell (1997) in which the referentially independent quantified noun phrase *someone* is in the specifier position of the highest projection RefP while the indefinite quantified noun phrase *someone* occupies the [Spec, ShareP] position lower down in the clausal structure. (35a) has the following structure.

- (39) [ForceP [SFP2 zaa3 [ShareP *jaujan<sub>i</sub>* [VP *t<sub>i</sub> daa laan zo go faazeon*]]]]]

The indefinite noun phrase *jaujan* ('someone') is moved to the [Spec, ShareP] position which is lower than the focus particle *zaa3* ('only'). Hence, *zaa3* ('only') has scope over the indefinite *jaujan* ('someone') and reading (a) is obtained. On the other hand, if the noun phrase *jaujan* ('someone') is to be interpreted as specific, according to Beghelli and Stowell (1997), it has to move to [Spec, RefP], here taken to be the specifier position of the higher Topic phrase. So (35b) has the following structure.

- (40) [ForceP [TopP *jaujan<sub>i</sub>* [SFP2 zaa3 [VP *t<sub>i</sub> daa laan zo go faazeon*]]]]]

We can see that now the specific *jaujan* ('someone') is in a higher position than the focus particle *zaa3* ('only'), so the former takes scope over the latter. Thus, reading (b) is obtained where *zaa3* ('only') appears to have VP scope only. Since SFP<sub>2</sub> sits between the higher TopicP and ShareP, the other two possible readings are not available.

### 4.3 SFPs and questions

**4.3.1 Wh-questions.** Cantonese is a wh-in-situ language, so there is no overt movement of the wh-element. The question particles (SFP<sub>1[+Q]</sub>) *me1*, *maa3* and *aa4* in (41) and most SFP<sub>1[-Q]</sub>s, e.g. *aa1maa3*, *gwaa3* and *lo1* in examples (42), (43) and (44), are incompatible with wh-questions.<sup>7</sup>

- (41) \*bingo zin zo di cou me1/maa3/aa4?  
who cut ASP CL grass SFP
- (42) \*bingo zin zo di cou aa1maa3?  
who cut ASP CL grass SFP
- (43) \*nei heoi zo bindou gwaa3?  
you go ASP where SFP
- (44) \*bingo zin zo di cou lo1?  
who cut ASP CL grass SFP

As proposed here, only three particles carry the [+Q] feature, namely *aa4*, *maa3* and *me1*, so only these three are genuinely 'question particles' in the sense that they do the clause-typing, contra Law (1990) who names six question particles (see footnote 2). Following Cheng (1991) and Chomsky (1995), the [Q] feature in C (Force in the present framework) has to be checked by either Merge (of a question particle, for example) or Move (of a wh-phrase, for example). In Cantonese (yes-no) particle questions, the checking of [Q] is achieved by merging a particle carrying the [+Q] feature (*aa4*, *maa3* or *me1*).

Wh-phrases stay in situ in Cantonese wh-questions, so no overt wh-movement is involved. No matter whether the Q-operator associated with the wh-phrase is

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<sup>7</sup> 'Wh-questions' throughout this paper refer to those which truly (intend to) convey a question force. As in Mandarin, wh-elements in Cantonese can sometimes be interpreted as indefinite variables. (Cf. Huang 1982, Aoun and Li 1993, Tsai 1994 and many others) The ungrammatical examples here are actually grammatical when the indefinite reading of the wh-elements is intended.

moved covertly to the [Spec,CP] (or [Spec,ForceP]) (Huang 1982) or base-generated in that position (Tsai 1994), it should be predicted that the three question particles cannot occur in wh-questions for economy reasons. Hence, (41) is ungrammatical.

The present classification of SFPs should predict that SFP<sub>1</sub>s with the [-Q] feature cannot occur in a wh-question because there is a clash of feature value in the same head. It seems to be true, as shown by the ill-formedness of (42), (43) and (44).

However, there are three SFP<sub>1</sub>s *aa3* ('softener'), *le1/ne1* ('tentative') and *zek1* ('intimacy') which are compatible with wh-questions, as shown in examples (45), (46) and (47).

- (45) nei heoi zo bindou aa3?  
 you go ASP where SFP  
 'Where did you go?'

- (46) bingo zin zo di cou le1/ne1?  
 who cut ASP CL grass SFP  
 'Who has mown the lawn?'

- (47) nei heoi zo bindou zek1?  
 you go ASP where SFP  
 'Where did you go?'

The particle *aa3* has been labelled as a 'neutral' particle in all previous studies, in the sense that it functions as a 'softener' (Matthews and Yip 1994) and does not carry much semantic content (Kwok 1984). The particle *le1/ne1* ('tentative'), on the other hand, has received different analyses. Kwok (1984) states that it can be 'suffixed' to questions (all wh-questions in her examples) as well as statements and suggests 'a sense of tentativeness'. Tang (1998) simply states that it is an 'interrogative' particle 'with presuppositions' but he doesn't give any examples. In my view, question particles are only those which can clause-type a question. So even if *le1/ne1* can occur in a wh-question, it does not fulfil this requirement and is therefore not 'interrogative'. One reason is that *le1/ne1* is not obligatory in wh-questions. For example, (46) is also grammatical and still has interrogative force if *le1/ne1* is replaced by another particle such as *aa3*. The other reason is that if it did clause-type a question, it would belong to the same class as the question particles *me1*, *maa3* and *aa4*, but then empirically they behave very differently, e.g. attaching *le1/ne1* to a statement does not result in a question, unlike *me1*, *maa3* and *aa4*. The particle *zek1* is often seen as simply conveying a sense of intimacy (Kwok 1984, Chan 1998). So intuitively, *aa3*, *le1/ne1* and *zek1* are very similar in the sense that they carry very little semantic content.

Turning back to the question why *aa3*, *le1/ne1* and *zek1*, which are [-Q], can occur in wh-questions while other [-Q] SFP<sub>1</sub>s cannot. One could view SFP<sub>1[-Q]</sub> as just shorthand for the class of particles that do not clause-type a question, rather than clause-type a declarative or imperative since there are no overt markings of declarative or imperative in the language.<sup>8</sup> As most of the particles in this class encode the speaker's modal and epistemic knowledge, their semantics often dictates that they need a true proposition as argument (cf. Ernst 2002). For instance, the obviousness particle *lo1* embeds the proposition 'Mary went to Paris' in example (48).

- (48) Mary heoi zo Baalai lo1  
       Mary go   ASP Paris   SFP  
       'It is obvious that Mary went to Paris.'

So *lo1* is ungrammatical in a wh-question in example (44) because it makes no sense for *lo1* to embed a wh-question which is not a true proposition. This holds true for all other particles expressing speaker-oriented modality. However, as the three exceptions *aa3*, *le1/ne1* and *zek1* are relatively semantically empty, it is not obvious that they do the kind of embedding found in *lo1* ('obviousness') or *wo5* ('hearsay'). This is perhaps why they can occur in a wh-question.

As for SFP<sub>2</sub>s, which lack the [Q] feature, *tim1* ('also') and *laa3* ('inchoative') are good (example 49 and 50) but *zaa3* ('only') (example 51) seems rather odd in wh-questions.

- (49) nei sik zo matje tim1?  
       you eat ASP what SFP  
       'What else did you eat?'

- (50) bingo faan zo lai laa3?  
       who return ASP come SFP  
       'Who has come back?'

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<sup>8</sup> Although the particle *laa1* is said to be characteristically used in requests and instructions (Matthews and Yip 1994), it should not be considered as a morphological marker of imperative because its presence is actually optional and it can also occur in non-imperatives. Like the 'softener' *aa3*, the role of *laa1* is really to moderate the requests and commands in such ways that the utterance is to be perceived as polite or abrupt, etc. The particle *ge3*, though glossed as 'assertion', does not really clause-type a declarative. It is more appropriately translated as 'it is the case that'.

- (51) ??/\*nei sik zo matje zaa3?  
       you eat ASP what SFP

Feature clash cannot explain the ungrammaticality of (51). I shall return to it in the discussion of A-not-A questions in the next section.

**4.3.2 Yes-no questions.** Yes-no questions in Cantonese are expressed by either a question particle (*me1*, *maa3* or *aa4*) or the A-not-A form, where *A* can be a verb, adjective or preposition. As seen in previous examples, some particles, such as *zaa3* ('only'), can co-occur with a question particle, e.g. (9), and when they do, the question particle always comes last, so (14) is ungrammatical. Some particles such as *gwaa3* ('probably') cannot co-occur with a question particle at all, cf. (19) and (20). We have also seen that it is impossible to have more than one question particle, e.g. (17) and (18).

Although A-not-A questions also function as yes-no questions, their syntactic behaviours are similar to wh-questions rather than particle questions (see Huang 1982, Aoun and Li 1993, Tsai 1994 and Law 2001 for empirical facts but different accounts). So it is no surprise to find that the occurrence restrictions of SFPs in A-not-A question are also similar to those of wh-questions. No question particle (*me1*, *aa4* and *maa3*) can occur in an A-not-A question (example 52).

- (52) \*nei heoi-m-heoi Baalai me1/aa4/maa3?  
       you go-not-go Paris SFP/SFP/SFP

Particles from the class SFP<sub>1[-Q]</sub> that typically express speaker-oriented modality are also incompatible with A-not-A questions (example 53).

- (53) \*nei heoi-m-heoi Baalai lo1/gwaa3/wo5/aa1maa3?  
       you go-not-go Paris SFP/SFP/SFP/SFP

Again, there are three exceptions: *aa3*, *le1/ne1* and *zek1*, as shown in examples (54), (55) and (56).

- (54) nei heoi-m-heoi Baalai aa3?  
       you go-not-go Paris SFP  
       'Are you going to Paris?'

- (55) nei soeng-m-soeng heoi Baalai le1/ne1?  
       you want-not-want go Paris SFP  
       'Do you want to go to Paris?'

- (56) nei zung-m-zingji ngo zek1?  
 you like-not-like me SFP  
 'Do you love me?'

Interestingly, these are the same three particles that can occur in wh-questions. The explanations for these are essentially the same for wh-questions, so they are not repeated here.

With respect to SFP<sub>2</sub>s, it is found that *zaa3* ('only') is incompatible with both wh-questions (example 51) and A-not-A questions (example 57a). The particle *tim1* ('also') is better with wh-questions (example 49) than A-not-A questions (example 57a).

- (57) a. nei heoi-m-heoi Baalai \*zaa3/?tim1?  
 you go-not-go Paris SFP/SFP  
 b. nei hai-m-hai heoi Baalai zaa3/tim1?  
 you be-not-be go Paris SFP/SFP  
 'Are you only/also going to Paris?'

*Laa3* ('inchoative') is good with wh-questions (example 50) but not A-not-A questions (example 58a).

- (58) a. \*nei tai-m-tai saai bun syu laa3?  
 you read-not-read all CL book SFP  
 b. nei hai-m-hai tai saai bun syu laa3?  
 you be-not-be read all CL book SFP  
 'Have you read the book?'

However, the three particles are all good in A-not-A questions if the *A* is the copula verb *hai*, as shown in (57b) and (58b).

The proposed position for SFP<sub>2</sub> can account for the incompatibility of focus particles with A-not-A questions. As proposed in Law (2001), the Q-operator and variable of an A-not-A question are base-generated in the head Neg<sup>0</sup> and the Q-operator undergoes movement to [Spec,CP] ([Spec,ForceP] here) to check the [Q] feature. Since the Neg head is lower than the SFP<sub>2</sub> head in the clausal structure, the focus particle in the SFP<sub>2</sub> head, being quantificational in nature, blocks the movement of the Q-operator due to violation of Relativised Minimality (Rizzi 1990). This should hold true for wh-questions as well on the assumption that there is such movement of the Q-operator. It is not known though why *tim1* ('also') is not as incompatible with wh- and A-not-A questions as *zaa3* ('only'). The

grammaticality of example (57b) where the copula is used (*hai-m-hai* ‘be-not-be’) is due to the fact that the focus particles *zaa3* and *tim1* are now lower down in the embedded clause while the Neg head is in the matrix clause. Hence, the focus particles do not act as interveners between Neg and Force and therefore the movement of the Q-operator is successful and example (57b) is grammatical. See Law (2001) for more details.

The incompatibility of the inchoative *laa3* with A-not-A questions (example 58b) is probably because *laa3* requires perfective aspect but the negator *m* used in the A-not-A form is imperfective. Hence, there is a clash of the aspectual values. Replacing the imperfective *m* with the perfective negator *mou* is impossible because the Cantonese A-not-A form only allows the negator *m* but not others. So a rescue would be again to use the copula *hai* as the A of the A-not-A form, as shown in example (58b), in which case the imperfective negator *m* is in the higher clause while *laa3* is in the embedded clause and therefore no requirement of compatibility of aspect is at issue.

## 5 Conclusion

I have argued for two syntactic positions for Cantonese sentence-final particles in the CP domain: one, which hosts SFP<sub>1</sub>s, is generated in the Force head and the other, which may iterate, is lower than the higher Topic for SFP<sub>2</sub>s. Two classes of SFPs are identified: SFP<sub>1</sub>s typically express speech acts, speaker-oriented modal and epistemic knowledge and SFP<sub>2</sub>s include two focus particles *zaa3* (‘only’) and *tim1* (‘also’) and the ‘change-of-state’ particle *laa3*. Facts about the co-occurrence and ordering restrictions of SFP clusters, their scope and behaviours with quantified noun phrases, wh- and A-not-A questions have been examined and accounted for by the proposed configurations.

## References

- Aoun, Joseph and Yen-hui Audrey Li (1993) *Wh-elements in Situ: Syntax of LF?* *Linguistic Inquiry* 24,199-238.
- Beghelli, Filippo and Tim Stowell (1997) Distributivity and negation: the syntax of *each* and *every*. In A. Szabolcsi (ed.), *Ways of Scope Taking*. Dordrecht: Kluwer, pp.71-107.
- Blakemore, Diane (1987) *Semantic Constraints on Relevance*. Oxford: Blackwell.
- Chan, Marjorie K.M. (1998) Sentence particles *je* and *kek* in Cantonese and their distribution across gender and sentence types. In Suzanne Wertheim, Ashlee Bailey, and Monica Corston-Oliver (eds.), *Engendering Communication: Proceedings of the Fifth Berkeley Women and Language Conference (April 24-26, 1998)* U.C. Berkeley, Berkeley: Berkeley Women and Language Group. pp.117-128.

- Chao, Wynn and Evelynne Mui (2000) Clausal adverbs and clausal structure in Cantonese. *Cahiers de Linguistique – Asie Orientale* 29(1): 3-39.
- Cheng, Lisa Lai-Shen (1991) On the Typology of Wh-questions. Doctoral dissertation, MIT.
- Cheng, Ting-Au (1990) An analysis of Cantonese ‘sin1’. *Proceedings of the Second International Conference on Yue Dialects*. Guangzhou: Jinan University Press.
- Cheung, Hung-Nin Samuel (1972) *Cantonese as Spoken in Hong Kong*. Hong Kong: Chinese University of Hong Kong Press.
- Chomsky, Noam (1995) *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Cinque, Guglielmo (1999) *Adverbs and Functional Heads: A Cross-linguistic Perspective*. Oxford: Oxford University Press.
- Ernst, Thomas (2002) *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Fung, Roxana Suk-Yee (2000) *Final Particles in Standard Cantonese: Semantic Extension and Pragmatic Inference*. PhD dissertation, Ohio State University.
- Haegeman, Liliane (2002) Anchoring to speaker, adverbial clauses and the structure of CP. Paper circulated at the Syntax-Semantics Interface in the CP-Domain workshop, ZAS, Berlin, March 2002.
- Huang, C.-T. James (1982) Logical relations in Chinese and the theory of grammar. Doctoral dissertation, MIT.
- Kwok, Helen (1984) *Sentence Particles in Cantonese*. Hong Kong: Centre of Asian Studies, University of Hong Kong.
- Law, Ann (2001) A-not-A questions in Cantonese. *UCLWPL* 13, 295-318.
- Law, Ann and Thomas Hun-tak Lee (1998) Time, Focus and Evidentiality in the Final Particles of Child Cantonese. Paper presented at the First Asia-Pacific Conference on Speech, Language and Hearing, 1-3 Oct, University of Hong Kong.
- Law, Sam-Po (1990) The syntax and phonology of Cantonese sentence-final particles. Doctoral dissertation, Boston University.
- Lee, Thomas Hun-tak (2000) Restrictive focus in Cantonese: how acquisition meets semantics. Paper presented at the LSHK Workshop on Cantonese Particles, 18 Nov 2000.
- Lee, Thomas Hun-tak and Ann Law (2000) Evidential Final Particles in Child Cantonese. In Eve V. Clark, (ed.) *The Proceedings of the Thirtieth Annual Child Language Research Forum*, Stanford: Center for the Study of Language and Information, pp. 131-138.
- Lee, Thomas Hun-tak and Ann Law (2001) Epistemic Modality and the Acquisition of Cantonese Final Particles. In Mineharu Nakayama (ed.), *Issues in East Asian Language Acquisition*, Tokyo: Kuroshio Publishers, pp. 67-128.
- Lee, Thomas H.T., Colleen H. Wong, Samuel Leung, Patricia Man, Alice Cheung, Kitty Szeto and Cathy S P Wong (1996) “The Development of Grammatical Competence in Cantonese-speaking Children”, Report of RGC earmarked grant 1991-94.
- Lee, Thomas Hun-tak and Carine Yiu (1998a) Focus and Aspect in the Cantonese Final Particle ‘lei4’. Paper presented at the 5th Annual Research Forum. YR Chao Center for Chinese Linguistics, UC Berkeley, March 21-22, 1998.
- Lee, Thomas Hun-Tak and Carine Yiu (1998b) Final ‘de’ and ‘ge3’ – a nominalization analysis for cleft sentences in Mandarin and Cantonese. Paper presented at the 1998 Annual Research Forum, Linguistic Society of Hong Kong, 5-6 Dec, Hong Kong Polytechnic University.
- Lee, Thomas Hun-tak and Carine Yiu (1999) Temporal Marking, Verbalization and Nominalization in the Cantonese Particles *lei4* and *ge3*. Paper presented at the Annual Research Forum of the Linguistic Society of Hong Kong, December 11-12, 1999, Chinese University of Hong Kong.

- Leung, Chung-Sum (1992) *A Study of the Utterance Particles in Cantonese as Spoken in Hong Kong*. M.Phil. Thesis, Hong Kong Polytechnic.
- Li, Charles N. and Sandra A. Thompson (1981) *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press.
- Luke, Kang Kwong (1990) *Utterance Particles in Cantonese Conversation*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Matthews, Stephen and Virginia Yip (1994) *Cantonese: A Comprehensive Grammar*. London: Routledge.
- Mui, Evelynne and Wynn Chao (1999) Adverbs in Cantonese and the Universal Base Hypothesis. *SOAS Working Papers in Linguistics* 9: 489-508.
- Rizzi, Luigi (1990) *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Rizzi, Luigi (1997) "The Fine Structure of the Left Periphery". In Liliane Haegeman (ed.) *Elements of Grammar: Handbook in Generative Syntax*. Dordrecht:Kluwer, pp.281-337.
- Sperber, Dan and Deirdre Wilson (1986/95) *Relevance: Communication and Cognition*. Oxford: Blackwell.
- Tang, Sze-Wing (1998) *Parametrization of Features in Syntax*. Doctoral dissertation, University of California, Irvine.
- Tang, Sze-Wing (2000) Identity avoidance and constraint interaction: the case of Cantonese. *Linguistics* 38:1, 33-61.
- Tang, Ting-Chi (1989) *Studies in Chinese Morphology and Syntax* 2. Taipei: Student Book Co., Ltd.
- Tsai, Wei-Tien Dylan (1994) *On Economizing the theory of A-bar Dependencies*. Doctoral dissertation, MIT.
- Yip, Moira (1998) Identity Avoidance in Phonology and Morphology. In Steven G. Lapointe, Diane K. Brentari & Patrick M. Farrell (eds.), *Morphology and Its Relation to Phonology and Syntax*. Stanford, California: CSLI Publications: pp. 216-246.