Chinese final particles and the syntax of the periphery
Li, B.

Chinese Final Particles

and the Syntax of the Periphery

Cover illustration: A winter view of Rapenburg, the street where the author of this thesis lived and walked everyday from her home to the university. It is also the place where the doctoral defense takes place. This photo was taken by Eugénie Bosch, in December 1995, Rapenburg, Leiden.

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ii

TABLE OF CONTENTS

ROMANIZATION AND TONE MARKS

The romanization system used for Mandarin and Cantonese are Hanyu Pinyin and Jyutping, respectively. The phonetic transcription of Wenzhou is Ipapan. Transcriptions in publications that use other systems have been converted into the three systems mentioned above.

Tone marks have been added in examples except for final particles if the original source does not have them. In Mandarin, tones are indicated by diacritics. In Cantonese and Wenzhou tones are represented in numeric figures.

Table 1. The tones in Mandarin

Tone mark	Tone value
ˉ	55
´	35
ˇ	214
`	51

Table 2. The tones in Cantonese

Tone mark	Tone value
1	55/53
2	35
3	33
4	21/11
5	13
6	22

Table 3. The tones in Wenzhou

Tone mark	Tone value
1	33
2	31
3	35
4	24
5	42
6	11
7	313
8	212

ABBREVIATIONS AND CONVENTIONS

1S	first person singular pronoun
1PL	first person plural pronoun
2S	second person singular pronoun
2PL	second person plural pronoun
3S	third person singular pronoun
3PL	third person plural pronoun
ASP	aspect marker
CL	classifier
CP	complementizer phrase
EXP	experiential aspect marker
NEG	negative morpheme
NP	noun phrase
PERF	perfective aspect marker
PROG	progressive aspect marker
PRT	particle
VP	verb phrase
~~A~~	A undergoes deletion
A > B	A dominates B
[$_{FP}$ …]	functional phrase
(PRT)	particle is optional
*	ungrammatical structure
?	odd structure
#	grammatical but infelicitous structure

1. INTRODUCTION

1.1 CHINESE FINAL PARTICLES

The central concern of this dissertation is the function of Chinese final particles and how they relate to the structure of sentence.

Final particles occur at the end of a sentence or an utterance. Most of them do not have a denotative or referential meaning, but are mainly used to convey emotive and/or epistemic nuances within a particular discourse context. So although their presence in ordinary conversations is massive, final particles are hardly used in expository writings or in scientific reports. Consider the following examples (excerpted from 'Chinese Corpus Retriever for Language Teaching and Research', henceforth CCRL[1]), which illustrate the use of some final particles in Mandarin Chinese.

(1) Dāng guǒyuán de máowū-lǐ   zhǐ shèngxià Hū Tiānchéng yí gè rén
    when orchard   DE hutch-inside only leave   Hu Tiancheng one CL person

    de shíhòu, Xiùyā jiù   lái   de gèng qín   le. Kě tā yìzhí   bù
    DE time   Xiuya then come DE more often PRT but 3S all-through NEG

    zhīdào tā shēn-hòu hái gēn   zhe yí gè "shēngyīn" **ne**. Měi dāng
    know   3S body-back still follow PROG one CL sound   PRT every when

    tā tà-jìn   guǒyuán shí, nà "shā shā …" de shēngyīn jiù   gēn
    3S step-enter orchard time that rustle   DE sound   then follow

    zhe   xiǎng up-come PRT
    PROG ring   qǐ-lái   le.
    'When Hu Tiancheng was left alone in the hutch of the orchard, Xiuya then came more often. But she never knew that behind her followed a "sound". Every time when she stepped in the orchard, the "rustle" sound came about right after her.'

(2) Dìdi,   wǒ de hǎo dìdi ---
    younger-brother 1S DE good younger-brother

    nǐ yào zhīdào jiějie   zhè xiē nián yě bù róngyì **a** ---
    2S need know   elder-sister this some year also NEG easy   PRT

    zánmen jiě-dì   kě dōu shì kǔ-mìng rén   **a** …
    1PL   elder-sister-younger-brother yet all be bitter-life people PRT
    'Brother, my dear brother, you should know that these years your sister also didn't have an easy life --- we sister and brother are both miserable.'

In (1) and (2), the boldfaced final particles, i.e., *ne* and *a*, do not affect the truth conditions of the sentences, nor do they add anything to the propositional content. How-

ever, leaving them out will make the utterances sound overly terse, unnatural or un-real.

Li and Thompson (1981) point out that the semantic and pragmatic functions of final particles are elusive, and "linguists have had considerable difficulty in arriving at a general characterization of each of them" (Li and Thompson 1981: 238). Such difficulty is mainly due to the fact that one final particle can occur in different contexts, and seems to convey a variety of meanings. In traditional descriptive grammars, scholars most often study the use of final particles in different contexts and list an array of meanings for each of them. For instance, Chao (1968) assigns the Mandarin final particle *ne* that appears in declarative sentences four different meanings, and the Mandarin final particle *a* eight different meanings. This approach encounters serious problems. As Wu (2004) points out, even though there seems to be a connection between the distribution of a final particle and the functions that it is proposed to have, it is unclear whether the usage comes solely from the particle, or from the environments of its occurrences, or from an interaction of both.

Scholars such as Li and Thompson (1981), Hu (1981), and Chu (1998) adopt a different approach. They endeavor to extract general, context-free semantic functions for final particles from their apparently bewildering uses in various contexts. I will review their works in chapter 2.

The distinction between the two approaches can be characterized as the contrast between "meaning maximalists" and "meaning minimalists" (Wu 2005a: 48). The former tend to attribute a number of different meanings to the semantics of an individual particle, whereas the latter attempt to isolate a general semantic core from the various uses of a single particle in different contexts. In this thesis, I will look at the semantics of final particles from the meaning minimalists' point of view. That is, I take the basic stand that each final particle possesses a general, unspecified meaning, and the seemingly different interpretations are in fact contextually derived.

While there is extensive discussion on the semantic and pragmatic properties of final particles, the syntax of final particles has attracted very little attention. They are usually considered to perform no grammatical function. However, it is not true that final particles are of no syntactic importance. First of all, given the fact that they are present in sentences, it is reasonable to assume that they occupy certain positions in the sentence structure just like any other words that appear in the sentence. Secondly, some particles do perform grammatical functions. For example, some particles are related to tense or aspect marking and some related to question marking. Even for the particles that seem to not affect the grammaticality of a sentence, their occurrences are not totally random. We observe that when more than one particle is attached to a sentence, they are arranged in a rigid order.

This thesis attempts to motivate a syntactic analysis of Chinese final particles. The proposal that I will make conforms essentially to the recent hypotheses on the split CP system. In the next section, I will sketch the theoretical framework and introduce the methodology.

1.2 THEORETICAL BACKGROUND AND METHODOLOGY

The syntactic analysis presented in this thesis follows the research trend, often referred to as "cartographic approach", which attempts to draw maps as fine-grained as possible of the clause structure with the identification of a number of distinct positions that are dedicated to different interpretations (Belletti 2004). A significant contribution is made by Rizzi (1997, and subsequent works) to the understanding of the "richness" of the functional structure of the left periphery (traditionally CP).[2] He argues that what was traditionally conceived of as CP actually constitutes a structural zone where contentful and non-interchangeable functional projections are situated. In his (1997) framework, the complementizer system is closed off upward by "Force" and downward by "Finiteness". Force encodes "clausal typing" information (in the sense of Cheng (1991)), which distinguishes various clause types, e.g., declarative, interrogative, imperative. Finiteness specifies the distinction between finite and non-finite clauses. In between Force and Finiteness, Topic and Focus may be activated.[3]

I assume that the split CP hypotheses hold in Chinese languages as well. I will concentrate on one specific type of word, i.e., final particles, which I consider to represent functional categories that belong in the periphery.[4]

Since Tang (1988/1989), Chinese final particles have often been analyzed as complementizers occupying the C position. However, it is not plausible that final particles are uniformly generated in one position. First of all, different final particles make different contributions to the interpretation of the sentence that they are attached to. More importantly, final particles can actually co-occur, and when they do, they obey a certain order. The basic assumption of this thesis is that Chinese final particles are heads of distinct functional projections in the C-domain.

To explore the structural position of final particles, I will follow two methods. First, I will examine the semantic property of final particles, according to which I decide which final particle corresponds to which functional category. Then I will establish a hierarchy of the functional projections headed by the final particles on the basis of their relative order.

1.3 OUTLINE

The languages of interest are Mandarin, Cantonese, and Wenzhou. Mandarin is spoken across Northern China and part of Southwestern China. In this thesis, I pay special attention to the varieties spoken in Beijing and Northeast China. Cantonese (or Yue) is spoken in the southern coastal area of Guangdong, Hong Kong and Macao. I focus on the variety spoken in Hong Kong. Wenzhou is a variety of the Wu dialect, which is spoken in Wenzhou city in Zhejiang Province.

In chapter 2, I discuss the final particles in Mandarin. I will look at five final particles, i.e., *ne*, *ba*, *ma₁*, *ma₂*, and *a*. I argue that despite their apparent distinctions, the two *ma*-particles are in fact one and the same element. Namely, there is only one final particle *ma*. I assign each final particle a core semantic function and map them into the sentence structure, proposing that they are heads of three distinct functional projections, i.e., EvaluativeP (headed by *ne*), DegreeP (headed by *ba* and *ma*), and DiscourseP (headed by *a*). I further establish a hierarchy of the functional projections on the basis of the relative order of the corresponding particles.

In chapter 3, I examine the final particle system in Cantonese. Compared with Mandarin, Cantonese seems to have a much larger inventory of final particles. However, by taking an extreme approach of dissecting them into smaller semantic units, I diminish the number dramatically, ending up with eleven final particles, which I consider semantically and structurally simplex. I proceed to map the simplex particles into sentence structure, proposing that they are heads of functional projections in the periphery, and establish a hierarchy of the functional projections by examining the relative order of the final particles in clusters.

Chapter 4 offers a discussion on the final particle system in Wenzhou. The observation is that Wenzhou final particles are similar in their meaning and use to Mandarin and Cantonese final particles, suggesting that the functional categories displayed by Mandarin and Cantonese also exist in Wenzhou. Like their Mandarin and Cantonese counterparts, Wenzhou final particles can co-occur. I establish a hierarchy of the functional projections headed by Wenzhou final particles on the basis of their relative order.

In addition to final particles, a group of negation forms are found in sentence final position, which appear to help form questions. In chapter 5, I discuss the formation of the special type of question that is characterized by a negation form in sentence final position. I suggest that this type of question is derived from a base structure of juxtaposed IPs which undergoes anaphoric ellipsis. The negation form is base generated inside one IP conjunct. I argue that the sentence final position of the negation form does not result from movement or merge to C. Rather, it results from the deletion of the constituent that immediately follows the negation form.

Chapter 6 presents the conclusion.

NOTES

1. CCRL (Chinese Corpus Retriever for Language Teaching and Research) is created by Department of Computer Science and Technology, Beijing Language and Culture University. I thank Guo Rui for introducing the database to me.

2. Another important contribution is done by Cinque (1999), whose hierarchy of adverbs and functional heads brings to light the articulated IP internal system of inflectional heads. I will take Cinque's conclusions on adverbials and functional heads into consideration as well.

3. In Rizzi (2002), the complementizer system is further expanded, which is schematically presented in (i) ("*" signals optional recursion).

   (i) Force > Top* > Int > Top* > Foc > Mod* > Top* > Fin

4. In this thesis, I do not pursue the issue whether Chinese final particles are head-final or head-initial. My conclusions will be compatible with both approaches. If we assume that Chinese final particles are head-final, they are located in the right periphery. This option can derive straightforwardly the

surface position of final particles, i.e., they typically occur at the end of a sentence (see (i)).

An alternative is to assume that final particles are head-initial and belong in the left periphery (see (ii)). This option conforms to Kayne's (1994) antisymmetric view of syntax, which postulates a highly specific word order: complements must always follow their associated head and specifiers and adjoined elements must always precede the phrase that they are sister to. In this case, in order to derive the correct surface order, one has to assume that the entire clause moves up to some higher position above the final particles (Sybesma 1999). When more than one final particle is attached to a sentence, successive movement will take place.

(i)   (ii)

PRT_1 PRT_1

PRT_2 PRT_2

FP PRT_3 PRT_3 FP
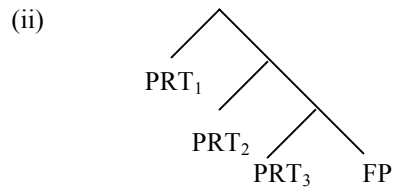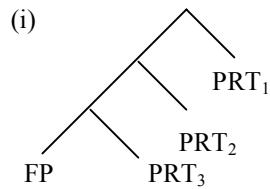
2. MANDARIN FINAL PARTICLES

2.1 INTRODUCTION

This chapter discusses the final particle system in Mandarin Chinese. In particular, I will look at five final particles, i.e., *ne*, *ba*, *ma₁*, *ma₂* and *a*. Examples are given in (1) (excerpted from Zhu (1982: 207-14)).

(1) a. Tā huì kāi   fēijī **ne**.
        3S can steer plane PRT
        'He can steer a plane.'

     b. Zánmen kuài   zǒu **ba**!
        1PL   quick go   PRT
        'Let's leave immediately.'

     c. Xià yǔ le   **ma₁**?
        fall rain PRT PRT
        'Does it start raining?'

     d. Wǒ shuō jīntiān shì xīngqīsān   **ma₂** --- (nǐ shuō bú   shì).
        1S   say today be Wednesday PRT   3S say NEG be
        'I said it was Wednesday today --- (you said it wasn't).'

     e. Wǒ yòu   bú shì gùyì   de **a**.
        1S on-the-contrary NEG be deliberate PRT PRT
        '(Contrary to what you think) I didn't do it on purpose.'

It was mentioned in chapter 1 that early studies on final particles usually consider each particle to be associated with an array of different meanings, but some meanings actually do not come from the particle itself, but arise from the interaction of the literal meaning of the sentence and specific contextual features. In recent years, more studies endeavor on a consistent analysis of the semantic properties of final particles despite their occurrences in different contexts. I will adopt the second approach, assuming that each final particle possesses a general, unspecified meaning, while the seemingly different interpretations are contextually derived. Therefore, the task set up for the coming discussion is to find out the semantic core that a final particle shares in all its occurrences in different contexts.

In addition to examining their semantic properties, I will propose a syntactic analysis of the final particles. The basic proposal that I will make is that Mandarin final particles are heads of functional projections in the CP domain. In particular, I map each final particle to a distinct functional head according to its semantic function. Then by testing their relative order, I establish a hierarchy of the corresponding functional projections.

This chapter is organized as follows. In sections 2.2, 2.3, and 2.4 I examine the semantic function of *ne*, *ba* and *ma* (including *ma₁* and *ma₂*), and *a*, respectively. In

section 2.5 I propose a syntactic analysis of the final particles. Section 2.6 presents the conclusion.

2.2 FINAL PARTICLE *NE*
2.2.1 INTRODUCTION
The final particle *ne* can occur in declarative and interrogative sentences. Examples are given in (2) (from CCRL).

(2) a. Nà   yì   tiān, tā shuō yào cā   xié, wǒ hái yǐwéi   tā yào
  that one day 3S say   will polish shoe 1S   still thought 3S will

  cā   'háizi' **ne**.
  polish child PRT
  'That day she said she'd polish shoes, I thought she'd polish "kids".'

b. Dàodǐ   shì shénme shì   **ne**?
 on-earth be what   matter PRT
 'What on earth is the matter?'

c. A: Zhè shì nǐmen niánqīng rén   de xiǎngfǎ.
  this be 2PL   young   people DE thought
  'This's what you young people think about it.'

 B: Nǐmen 'lǎonián rén'   **ne**?
  2PL   old   people PRT
  'What about you "old people"?'

From the meaning maximalists' point of view, Chao (1968) assigns three semantic functions to the *ne* used in declarative sentences. See (3) (Chao 1968: 802-803).[1,2]

(3) a. "Continued state: 'still … -ing'"

  Shuō zhe   huà **ne**.
  speak PROG word PRT
  'They are talking, --- line busy.'

b. "Assertion of equaling degree: 'as much as'"

  Yǒu yì-bǎi   chǐ **ne**, shēn-de-hěn **ne**
  have one-hundred feet PRT deep-DE-very PRT
  'It's as much as 100 feet, it's quite deep.'

c. "Interest in additional information"

Tāmen hái   mài gǔ-qín   **ne**
3PL   also sell ancient-zither PRT
'They are even selling the ancient zither (among other exotic things).'

It was mentioned in chapter 1 that this approach had serious problems. Li and Thompson (1981) argue that the multiple uses attributed by Chao either can be subsumed by the core function of *ne*, which they propose to be marking "response to expectation", or are actually derived from the semantics of other sentential components. For instance, they point out that the "continued-state" meaning of (3a) is actually conveyed by the durative aspect marker *zhe* rather than by the final particle *ne*.

Others who endeavor to search for a central meaning or function of *ne* include Hu (1981), who suggests that *ne* performs the function of inviting the hearer to pay special attention to a specific point of what is being claimed. Following Hu (1981), Shao (1989) proposes that the basic function of *ne* is "*tíxǐng*" 'reminding'; other functions such as conveying further investigation and marking topics are derived from the core function.

Chu (1984, 1985a, 1985b) in a serial of studies arrives at the conclusion that *ne* is "a particle of relevance", later specified as "a particle of inter-clausal/sentential linking" (Chu 1998). King (1986) considers *ne* to be an "evaluative device", in the sense that "by using *ne* the speaker is making a metalinguistic comment on the descriptive 'background' information in the 'narrative world' from his vantage point in the 'speaker/hearer world' or here-and-now; information marked with *ne* is thus mentioned as being of particular importance to the point the speaker is trying to make in his interaction with the hearer" (King 1986: 21).[3] Most recently, Wu (2005a) proposes that *ne* performs the discourse function of "hearer engagement", that is, "by using *ne*, the speaker draws the hearer's attention to the information marked by the particle and urges the hearer to adjust shared common ground (CG) accordingly with regard to the current interaction" (Wu 2005a: 47).

Although the analyses mentioned above can all be seen as taking the 'meaning minimalist' approach, their conclusions still vary. This is not surprising given that the proposals are made within different frameworks and driven by different motivations. Leaving aside the apparent diversity, these scholars have pointed out something in common. Hu (1981), Shao (1989) and Wu (2005a) all emphasize the interactive function of *ne*, suggesting that its usage helps draw the hearer's attention to the information that is being claimed. King (1986) arrives at the same conclusion, but he considers the interactive effect to be induced from the more fundamental evaluative function of *ne*, i.e., marking the information as being of particular importance. Similarly, Chu (1984, 1985a, 1985b) observes that the information marked by *ne* usually deviates from the context, and thus he suggests that using *ne* is a strategy to make the current utterance more relevant to the discourse unit.[4]

Another longstanding issue in the research of *ne* concerns the question whether a distinction should be made between the *ne* used in declaratives and the one used in other sentence types. This debate exists not only between meaning maximalists and meaning minimalists (the former unanimously make the distinction), but also among

scholars who take the 'meaning minimalist' stand. Hu (1981), Chu (1984, 1985a, 1985b, 1998), King (1986) and Shao (1989) all advocate that there is only one *ne*, whereas Li and Thompson (1981) differentiate two *ne*-particles, i.e., the one used in declaratives and the one used in questions. The latter is considered a question particle of non-yes/no questions.[5] In Cheng (1991) and Aoun and Li (1993), the question particle *ne* is further argued to play an important role in the syntactic derivation of wh-in-situ questions.[6] Wu (2005a) confines his discussion to the *ne* used in declaratives, making no assumption whether or not the two *ne* are the same particle with the same function in different contexts. However, he suggests that the two particles probably should be treated differently, as diachronically they are developed from different origins.

To further complicate the issue, Wu (2005b) argues that a distinction should be made between wh-questions and A-not-A questions ending with *ne* on the one hand (see (2b)) and what he calls "thematic questions" on the other (see (2c)). The latter are formed by attaching *ne* to a non-interrogative element. In the traditional view, the latter are considered the truncated form of the former.

In this thesis, I propose that *ne* is an evaluative marker. In section 2.2.2 I discuss the use of *ne* in declaratives. In section 2.2.3 I focus on the *ne* appearing in wh- and A-not-A questions. Besides, following Wu (2005b), I distinguish the *ne* used in "thematic questions" from the one used in other types of questions. I suggest that the former functions as a topic marker. Section 2.2.4 draws the conclusion.

2.2.2 THE *NE* USED IN DECLARATIVE SENTENCES

In this section I will first briefly introduce Chu's (1984, 1985a, 1985b, 1998) analysis of the final particle *ne*. I think that Chu has made insightful observations, but his conclusion is too general to fully capture the semantic property of the particle. I will draw a somewhat different conclusion with respect to the core function of *ne*.

2.2.2.1 CHU (1984, 1985a, 1985b, 1998)

Chu observes that the general property of *ne* is that it is felicitously used in an utterance, the content of which "deviates" from the "topic framework"[7]. He classifies from the collected data three typical cases of using *ne*: (i) in the utterances that convey information which is contradictory to the hearer's expectation (see (4), excerpted from Chu (1998: 167)), (ii) in rhetorical questions[8] (see (5), excerpted from Chu (1998: 167-168)), and (iii) in the utterances that convey information which is beyond the hearer's expectation (see (6), excerpted from Chu (1998: 168-169)). He finds that the three situations share the same property, i.e., the contents of the *ne*-attached utterances all deviate from the existing "topic framework", though in different degrees. He finds that the more deviant the content is, the more felicitously the particle *ne* is used.

(4) "Talking about a very old recent immigrant."

    A: Tā zhème dà niánjì, dao měiguó lái   zěnmo guò a!
       3S this old age   to U.S.   come how   pass PRT
       'At his old age, how is he going to get around in the U.S.?'

B: Nǐ nándào yǐwéi tā bú   huì   shuō yīngyǔ ma?
   2S isn't-it think 3S NEG know-how-to speak English PRT

Tā-de yīngyǔ shuō de bǐ   nǐ hái hǎo **ne**.
3S-DE English speak DE than 2S still good PRT
'You don't think he doesn't know English, do you? Actually, he speaks
better English than you.'

In (4), the *ne*-suffixed sentence conveys a piece of information that contradicts the
hearer's expectation. Chu notes that, in this case, which is of the farthest deviance
from the existing topic framework, the use of *ne* is almost unanimously approved by
native speakers.

(5) "Speaker A is a Kungfu master and Speaker B is his pupil."

A: Xiǎo de shíhòu bù   zhōngyòng, jiānglái dà le
   small DE time   NEG useful   future   big ASP

zěnmo chéng-cái   **ne**?
how   become-useful-person PRT
'(If one) doesn't make himself useful while young, how can he grow up
to be a useful person?'

B: Nín bié   shēngqì, yěxǔ   nín shuō de duì,
   2S don't upset   perhaps 2S say DE right

kěshì bù   yídìng   yàng-yàng dōu duì   ya.
but   NEG necessarily kind-kind   all   right PRT
'Please don't feel offended. You may be right, but not necessarily right
all the time.'

A: Ou? Zhèmo shuō, nǐ shì quáncái le. Nǐ dào
   oh   thus   say   2S be genius   PRT 2S inversely

jiàoxùn-qǐ-wǒ-lái le! …
teach-up-1S-come PRT

Wǒ dào yào   lǐngjiào-lǐngjiào.
1S   then want seek-advice-seek-advice
'So? Being smart, aren't you? If you mean to teach me a lesson, … I'm
ready for it.'

B: Shīfu,   túdì zěnmo gǎn   jiàoxùn nín lǎorénjiā   **ne**?
   master pupil how   dare teach   2S old-person PRT
'How could I dare to do anything like that, sir?'

Chu notes that the first *ne*-suffixed sentence can be regarded either as a rhetorical question or as a further statement. In either case, the speaker intends to say that "if one does not make himself useful while young, he may not grow up to be a useful person". He points out that the second *ne*-suffixed sentence is a rhetorical question, meaning "I dare not do it". It contradicts the preceding comment made by Speaker A, i.e., "if you want to teach me a lesson, … I'm ready for it".

  (6) "Two students talking about the end of the semester."

      A: Nǐ xiànzài děng zhe bìyè   le, zhēn kāixīn.
         2S now   wait DUR graduate PRT really happy
         'How lucky you are! Just waiting to graduate.'

      B: Wǒ hái děi xiě   yì piān lùnwén **ne**.
         1S   still must write one CL   thesis   PRT
         'I still have a thesis to write.'

In (6), Speaker A assumes that Speaker B needs not do anything but waits to graduate. The statement made by Speaker B, i.e., there is still a thesis to write, however, exposes information which is out of Speaker A's expectation.

On the basis of this observation, Chu proposes that the core function of *ne* is to mark "relevance", or more specifically, to indicate "inter-clausal/sentential linking". The underlying reasoning is as follows: "when the content of an utterance is not obviously relevant to the topic framework, a particle of relevance is more needed than when an utterance is obviously relevant. The reason that a speaker bothers to use such a particle is to show that an effort is being made to render his/her contribution relevant when what he/she says might not appear to be so" (Chu 1998: 166).

2.2.2.2 *NE* AS AN EVALUATIVE MARKER

In my view, the deviant property extracted by Chu of the *ne*-attached sentences correctly characterizes the felicity conditions for using this particle. Nevertheless, his proposal that *ne* serves to mark "relevance" seems to be too general to capture the precise semantic property of this particle. Many other final particles as well as discourse-related elements have been claimed to perform the same function. For instance, in Chu (2002) the final particle *a* is assigned the function of marking the utterance that it is attached to as relevant to its discourse context (see section 2.4 for the discussion on *a*).

Moreover, if we follow Chu's proposal, the contrast between (B1) and (B2) in the question-answer pair (7) is unexpected.

  (7) A: Yǒu shénme xīnwén?
       have what   news
       'Any news?'

B1: Nà-biān chū   chēhuò   le (#**ne**).
    that-side happen car-accident PRT PRT
    'There's a car accident over there.'

B2: Xiānggǎng zuìjìn   xià xuě le **ne**.
    Hong-Kong recently fall snow PRT PRT
    'It snowed in Hong Kong lately.'

If *ne* performs the function of marking "relevance", or indicating "inter-clausal/sen-tential linking", the prediction is that its use in (B1) and (B2) should be equally infelicitous, because in this case, neither the answer (B1) nor the answer (B2) displays any incongruity with respect to the preceding question. However, the prediction is not completely borne out. As we can see, although *ne* is not felicitous in (B1), it is in (B2).

Instead of treating *ne* as a marker of discourse linking, I suggest that the use of *ne* has to do with the speaker's attitude towards the propositional content of the utterance. More specifically, I propose that by using *ne* the speaker expresses his evaluation of the information status, i.e., he considers the information that is being claimed to be unusual or of particular importance. The reason why *ne* is felicitous in (B2) is not because (B2) is less relevant to the preceding question, but because the content of the information that is conveyed by (B2) is considered by the speaker to be unusual (going against the common knowledge that Hong Kong is a place where it seldom snows). Note that put in a special context, the attachment of *ne* in (B1) could also be felicitous. For instance, suppose the place in question is known to both interlocutors as a place where is unlikely for a car accident to occur. In this case, the content of the utterance would be considered as uncommon as well. As a result, the use of *ne* would become felicitous.

Cinque (1999) identifies the functional category of "evaluative mood", which expresses the speaker's evaluation of the state of affairs described in the proposition. The category of evaluative mood usually includes surprisals, approvals, disapprovals, etc. In different languages, it is expressed by different morphemes, like suffixes, modals or particles. Following Cinque (1999), I propose that the final particle *ne* is the marker of the functional category 'evaluative mood'; its presence indicates that the speaker considers the content conveyed by the utterance to be extraordinary.

It should be noted that I consider 'extraordinary' as a notion against 'ordinary'. In Cinque's (1999) framework, every functional category comes with two values: an "unmarked" value and a "marked" one. In regard to the functional category of evaluative mood, the "negative" value (e.g., *unfortunately*) is considered to be the marked value, and the unspecified or the "positive" value to be the default one. In a similar vein, I suggest that with respect to the *ne*-related functional category of evaluative mood, the unspecified value (i.e., *ordinary*) is the default value, and the negative value (i.e., *unordinary*, *extraordinary*) is the marked value. The evaluation is made on the basis of the speaker's assumption of the background knowledge, including the hearer's assumption, belief, expectation, or the common knowledge shared by the interlocutors. Therefore, when *ne* is present in a sentence, it indicates that the evaluative mood is associated with a marked value.

Under the current proposal, the felicity condition characterized by Chu follows naturally. Namely, "deviant" information is most naturally evaluated as being extraordinary. Besides, given *ne*'s evaluative function of marking extraordinariness, it explains Hu (1981), Shao (1989) and Wu's (2005a) observation that a *ne*-attached sentence is usually concomitant with a sense of noteworthiness, indicating that the speaker is inviting the hearer to pay special attention to the information. In this sense, my proposal is similar to King's (1986); namely, I agree with King that the discourse function of *ne*, i.e., drawing the hearer's attention, results from the more fundamental modal function of marking 'evaluation'.

To summarize this section, I reviewed Chu's analysis of the semantic function of the final particle *ne*. Based on his observation that *ne* is felicitously used in sentences, the content of which deviates from the discourse context, I propose that *ne* is a marker of evaluative mood, which indicates that the speaker considers the information that is being conveyed as extraordinary in character.

So far I have focused only on the *ne* used in declarative sentences. In the next section, I will discuss the *ne* used in interrogative sentences, including the *ne* attached to wh- and A-not-A questions and the one attached to non-interrogative elements.

2.2.3 THE *NE* USED IN INTERROGATIVE SENTENCES

In this section I will first argue that the *ne* used in wh-questions is not a wh-question particle; it is semantically related to the *ne* used in declaratives. Then I will discuss Wu's (2005b) analysis of the "thematic question", which is formed by a non-interrogative constituent suffixed with *ne*. I agree with Wu that the wh-question ending with *ne* and the 'thematic question' are different types of questions. Following Wu (2005b), I suggest that the *ne* occurring in the 'thematic question' is a topic marker.

2.2.3.1 *NE* IS NOT A WH-QUESTION PARTICLE

In Mandarin the final particle ma_1 goes with yes/no questions, whereas the final particle *ne* goes with wh-questions. Consider (8a) and (8b).

(8) a. Hóngjiàn xǐhuān zhè běn shū **ma₁/*ne**?
     Hongjian like   this CL book PRT PRT
     'Does Hongjian like this book?'

  b. Hóngjiàn xǐhuān shénme **ne/*ma₁**?
     Hongjian like   what   PRT PRT
     'What does Hongjian like?'

The yes/no question reading is available with (8a) only when the sentence ends with ma_1, and the wh-question reading is available with (8b) only when the sentence ends with *ne*.

Many scholars distinguish ma_1 from *ne* by assuming that the former is a yes/no question particle, whereas the latter a wh-question particle. For instance, in her Clausal Typing Hypothesis (see (9)), Cheng (1991, 1997) suggests that in Mandarin *ne* is a typing particle for wh-questions, whose presence indicates that the clause

type of the sentence is a wh-question. As a typing particle, *ne* is generated in C. Clausal Typing is satisfied by the merge of the wh-particle, and thus does not require overt wh-movement.

(9) **Clausal Typing Hypothesis** (Cheng 1997: 22):

"Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C^0 is used or else fronting of a wh-word to the Spec of C^0 is used, thereby typing a clause through C^0 by Spec-head agreement."

However, treating *ne* as a wh-question particle raises several problems. The first problem is that, as shown in (10), a wh-question can be formed with or without *ne*.

(10) Xiǎofú xiǎng mǎi shénme (**ne**)?
    Xiaofu want buy what   PRT
    'What does Xiaofu want to buy?'

Compared with other wh-in-situ languages mentioned by Cheng, Mandarin seems to be the only one that allows an optional wh-particle. If we look at table (11), we see that these in-situ languages can be classified into two types: those in the left column only have a non-overt wh-particle, and those in the right column only have an overt one.

(11) "Languages with in-situ wh-words" (Cheng 1997: 15)

languages	wh-particles	languages	wh-particles
Hindi	Ø	Palauan	special agreement
Egyptian	Ø	Navajo	-lá/-sh
Swahili	Ø	Hopi	ya
Indonesian	Ø	Janapense	ka/(no)-ka
Turkish	Ø	Korean	ci

Another problem of assuming that *ne* is a wh-particle is that when *ne* is present, it actually brings in extra information. The intuition of native speakers is that the interrogative reading of the wh-questions ending in *ne* is more intensified than that of their counterparts without *ne*. We will come back to this shortly.

Thirdly, *ne* occurs only in matrix wh-questions (see (12)). Again, compared with other wh-in-situ languages mentioned by Cheng, Mandarin seems to be the only one whose wh-particle displays the matrix-clause property (see (13)).

(12) Hóngjiàn xiǎng zhīdào [Xiǎofú xǐhuān shénme shū (*ne)].
    Hongjian want know Xiaofu like   what   book PRT
    'Hongjian wonders which book Xiaofu likes.'

(13) Distribution of wh-particles in matrix and embedded questions
     (Cheng 1997: 26)

languages	matrix wh-questions	embedded wh-questions
Egyptian	Ø	Ø
Indonesian	Ø	Ø
Navajo	-lá/-sh	-lá/-sh
Japanese	-ka	-ka
Korean	ci	ci

Finally, it is worth mentioning that the occurrence of *ne* is not confined to wh-questions. It can occur in A-not-A questions and disjunctive questions as well. See (14) and (15).

(14) Hóngjiàn xǐ-bù-xǐhuān   zhè běn shū (**ne**)?
     Hongjian li(ke)-NEG-like this CL book PRT
     'Does Hongjian like this book?'

(15) Hóngjiàn xǐhuān zhè běn shū háishì bù xǐhuān zhè běn shū (**ne**)?
     Hongjian like   this CL book or   NEG like   this CL book PRT
     'Does Hongjian like this book or not like this book?'

The performance of *ne* in A-not-A and disjunctive questions resembles its performance in wh-questions. Namely, whether *ne* is present or absent does not affect the formation of the questions; when it does occur, it brings in extra information; it displays matrix clause property. Treating *ne* as a typing particle for wh-questions would lead to the assumption that wh-questions, A-not-A questions and disjunctive questions are the same type of questions. Whether this is plausible needs further investigation.[9]

Considering the problems mentioned above, I conclude that the *ne* used in wh-questions is not a wh-particle. A question that follows naturally is what the function of this *ne* is. In the next section, I will show that the *ne* used in questions are semantically related to the one used in declaratives.

2.2.3.2 THE CONTRIBUTION OF *NE* USED IN WH-QUESTIONS

As mentioned before, some scholars who take the 'meaning minimalist' approach attempt a unified analysis for the *ne* used in declaratives and the one occurring in questions. For instance, Hu (1981) suggests that the use of *ne* in questions still indicates that the speaker invites the hearer to pay special attention to, in this case, what is being asked. Following Hu, Shao (1989) claims that the function of *ne* in questions is the extension of the "reminding" function that it performs in declaratives, namely, conveying the speaker's intention of getting to the bottom of the answer to the question (in his words, "*shēnjiū de yǔqì*"). Comparing (16a) and

(16b) (excerpted from Shao (1989:174)), Shao (1989) points out that while (16a) conveys a strong inquiry, (16b) is plain and neutral.

(16) a. Ya, zěnme tí   zhè-yàng de wèntí   **ne**?
          oh how   pose this-kind DE question PRT
          'Oh, why did you ask such a question?'

     b. Ya, zěnme tí   zhè-yàng de wèntí?
          oh how   pose this-kind DE question
          'Oh, why did you ask such a question?'

King (1986) proposes that *ne* is an evaluative device; with the addition of *ne*, information is marked as highly significant, whereas without it the information may be less significant. He suggests that this analysis can cover the use of *ne* in various types of questions, including its use in what he calls "rhetorical question" and "direct address". See (17) and (18) (adapted from King (1986: 35-6)).

(17) "Rhetorical question"

     … shíjì   shàng jiù   shì 'political westernization'.
        in-fact on   then be   political westernization

     Zhè gè 'political westernization' yìsī   shì shénme **ne**?
     this CL political westernization   meaning be what   PRT
     'In fact it is "political westernization". What then does this term mean?'

(18) "Direct address"

     Wǒ zěnyàng cái néng zhìzhǐ tā de xuányào **ne**?
     1S how   then can stop   3S DE show-off PRT
     'What can I do to stop her from showing off?'

Finally, Chu (1998) proposes that the uses of *ne* in different contexts can all be generalized as marking "relevance" or "inter-clausal/sentential linking". In the previous section we already mentioned the problem of treating *ne* as a linking particle.[10]

In section 2.2.2, I proposed that the *ne* appearing in declaratives is an evaluative marker, which indicates that the speaker considers the information that is being claimed to be extraordinary. What has been shown is that there is a semantic connection between the *ne* used in wh-questions and the evaluative marker. That is, as King has observed, the *ne* in questions is used as an evaluative device, indicating that the speaker considers the matter that is being inquired to be of particular importance, and that the speaker is highly concerned with the issue and endeavoring to find out the answer. I suggest that the *ne* used in wh-questions (as well as in A-not-A and disjunctive questions) performs the same function as the one used in statements, i.e., it serves as an evaluative marker.[11]

2.2.3.3 "THEMATIC QUESTION"
Ne can be attached to a non-interrogative constituent to form a question. Wu (2005b) calls this type of question the "thematic question". See (19) (adapted from Wu (2005b: 2)).[12] (19b) is usually considered the truncated form of (19a).

(19) a. Wǒ zài Běijīng jiàn guò tā; nǐ zài nǎ'er jiàn guò tā ne?
      1S at Beijing see EXP 3S 2S at where see EXP 3S PRT
      'I met him in Beijing. Where did you meet him?'

     b. Wǒ zài Běijīng jiàn guò tā; nǐ ne?
      1S at Beijing see EXP 3S 2S PRT
      'I met him in Beijing. What about you?'

Wu argues that thematic questions are not derived from wh- or A-not-A questions ending in *ne*. First of all, when an interrogative sentence undergoes deletion, the focus that is being questioned, e.g., the wh-words in wh-questions, cannot be deleted. Consider (20) (adapted from Wu (2005b: 2)).

(20) a. Nǐ zuótiān wèishénme méi qù ne?
      2S yesterday why NEG go PRT
      'Why didn't you go yesterday?'

     b. Zuótiān wèishénme méi qù ne?
      yesterday why NEG go PRT
      'Why didn't (you) go yesterday?'

     c. Wèishénme méi qù ne?
      why NEG go PRT
      'Why didn't (you) go?'

     d. Wèishénme ne?
      why PRT
      'Why?'

If the interrogative focus is deleted, the meaning of the question is changed. (21) does not have the same meaning as (20).

(21) Nǐ zuótiān méi qù ne?
    2S yesterday NEG go PRT
    'What if you hadn't gone there yesterday?'

Secondly, Wu points out that *ne* is not a wh-question particle or A-not-A question particle; it is compatible with wh-questions and A-not-A questions, but not every question ending in *ne* has to be a wh-question or an A-not-A question. For instance, he suggests that the question given in (22) has the same communicative effect as any of the questions given in (23) (Wu 2005b: 3), including yes/no questions (see (23a)).

(22) Wŏ xĭhuān, nĭ ne?
　　　1S　like　　2S PRT
　　　'I like it, what about you?'

(23) a. Wŏ xĭhuān, nĭ xĭhuān ma?
　　　　　1S　like　　2S like　　PRT
　　　　　'I like it, do you like it?'

　　　b. Wŏ xĭhuān, nĭ xĭ-bù-xĭhuān?
　　　　　1S　like　　2S li(ke)-NEG-like
　　　　　'I like it, do you like it or not?'

　　　c. Wŏ xĭhuān, nĭ zĕnmeyàng?
　　　　　1S　like　　2S how-manner
　　　　　'I like it, how about you?'

Finally, Wu points out that assuming a derivational relation between thematic questions and wh-/A-not-A questions presupposes that there always has to be a full-form wh-/A-not-A question, from which the question with the truncated form can be derived via deletion. However, this is not necessarily the case. Consider (24) (Wu 2005b: 3).

(24) Wŏ cái yìshí　dào,　yĭwăng　　wŏmen liă　tánhuà, kàn qĭlái
　　　1S　just realize arrive previously 1PL　　two talk　　look up-come

　　　hĕn rèliè,　　qíshí　tā búguò shì yào　xuānxiè tā de, bìng bù　yídìng
　　　very passionate in-fact 3S only　be want vent　　3S DE　and NEG definitely

　　　yào　tīng　wŏ de, wŏ ne?
　　　want listen 1S DE 1S　PRT
　　　'I just realize that previously when we two talked to each other, it looked very passionate, but in fact she just wanted to vent her feelings, not necessarily listened to me. What about me?'

Wu points out that it is not easy to pin down what full-form question the question '*wŏ ne*' in (24) corresponds to. In fact, the speaker may not have any specific question in mind, but simply uses '*wŏ ne*' to convert the topic from 'her' to 'myself'.

Due to these considerations, Wu concludes that thematic questions are not the truncated form of wh-questions or A-not-A questions. He suggests that thematic questions are an independent type of question, which functions to bring up a new theme, and invites the hearer to provide an appropriate rheme for it according to the preceding discourse or situation.[13] He discusses the components of thematic questions, i.e., the non-interrogative constituent and the particle *ne*, respectively.

He proposes that the non-interrogative constituent in the "thematic question" expresses a new theme, which is posed against the old theme mentioned in the

previous context. It could be an NP, a VP, or a complete clause. Examples are given in (25), (26), and (27) (taken from Wu (2005b: 2)), respectively.

(25) Zhè běn shū   nǐ yǐjīng   kàn guò le;   nà   běn shū   ne?
     this CL book 2S already see EXP PRT that CL book PRT
     'You already read this book. What about that book?'

(26) Nǐ bù xiǎng hē   chá, nà   hē   kāfēi ne?
     2S NEG want drink tea   then drink coffee PRT
     'You don't want to drink tea. Then what about drinking coffee?'

(27) Wǒ zhīdào rúguǒ tā míngtiān   lái,   nǐ kěndìng   huí qù.
     1S   know if   3S tomorrow come 2S definitely will go

     Yàoshì míngtiān   tā bù   lái   ne?
     if   tomorrow 3S NEG come PRT
     'I know if he comes tomorrow, you definitely will go. What if he doesn't come tomorrow?'

In (25), the NP *nà běn shū* 'that book' expresses a new theme contrasting the old theme *zhè běn shū* 'this book'. Wu mentions that the fact that the NP preceding *ne* is usually definite further supports its status of being a theme. An indefinite NP like *yì běn shū* 'one book' can occur in a thematic question, i.e., *Yì běn shū ne?* 'What about one book?', only in the number reading, e.g., *Liǎng běn shū mài 50 yuán; yì běn shū ne?* 'Two books cost 50 dollars; what about one book?'

(27) shows that *ne* is attached to a conditional clause introduced by the conjunction *yàoshì* 'if'. Wu points out that in the literature it has been argued that conditional clauses can function as topics in discourse, e.g., Haiman (1978), Tsao (1990).[14] The conjunction can be covert. See the following examples (excerpted from Shao (1989: 171)).

(28) a. Wǒ bú yào qián   ne?
       1S NEG want money PRT
       'What if I don't want the money?'

    b. Biérén   zhīdào le   shuō xiánhuà ne?
      other-people know PERF speak gossip   PRT
      'What if they find out and there will be talks?'

As for the particle *ne*, Wu suggests that it is not a question particle, but functions as both a theme marker and a marker for discourse continuation. That is, it marks a new theme, and invites the hearer to provide a rheme of it according to the discourse context.

I agree with Wu that thematic questions are not the truncated form of wh-questions or A-not-A questions ending with *ne*, and I consider the *ne* used in thematic questions and the one attached to wh- and A-not-A questions to be two different particles.

In the last section, I suggested that the *ne* occurring in wh-questions is an evaluative marker, indicating that the speaker considers the issue that is being questioned to be of particular importance. However, the *ne* used in thematic questions does not perform such a modal function, i.e., it does not serve to convey the speaker's evaluation on the content of the utterance. Rather, as Wu points out, it performs the discourse function of marking a new theme.

It is worth mentioning that in Mandarin there exists an internal particle *ne*, which is generally treated as a topic marker. Fang (1994), Zhang and Fang (1996) and Wu (2005b) among others observe that there is a close link between the internal particle *ne* and the *ne* attached to thematic questions. Consider the following examples (from Fang (1994: 133)).

(29) a. A: Bàba   ne?
         father PRT
         'What about father?'

   B: Tā gāncuì jiù bù lǐ   nǐ.
      3S simply then NEG pay-attention-to 2S
      'He simply doesn't talk to you.'

   b. A: Lǎo-Wáng ne?
         old-Wang PRT
         'What about old-Wang?'

   B: Tā lái   bù lái   dōu méi guānxì, yǒu nǐ zài jiù   xíng.
      3S come NEG come all NEG matter have 2S at   then okay
      'It doesn't matter whether he comes, as long as you are here.'

(30) a. Bàba ne, tā gāncuì jiù bù lǐ   nǐ.
        father PRT 3S simply then NEG pay-attention-to 2S
        'As for father, he simply doesn't talk to you.'

   b. Lǎo-Wáng ne, tā lái   bù   lái   dōu méi guānxì,
      old-Wang PRT 3S come NEG come all NEG matter

      yǒu nǐ zài jiù   xíng.
      have 2S at   then okay
      'As for old-Wang, it doesn't matter whether he comes, as long as you
      are here.'

Fang points out that the only difference between the two *ne*-attached phrases is that in (29) the speaker invites the hearer to provide a rheme of the theme marked by *ne*, whereas in (30) the speaker himself provides the rheme in the subsequent clause.

The affinity between the internal particle *ne* and the *ne* used in thematic questions suggests that the latter may not belong in the category of final particles.[15] In the discussion that follows, I will confine my attention to the final particle *ne*, which is an evaluative marker.

2.2.4 CONCLUSION

In this section, I discussed the core function of the final particle *ne*. I proposed that the *ne* used in declarative sentences, wh-questions and A-not-A questions is an evaluative marker. When it occurs in declaratives, it indicates that the speaker considers the content that is being claimed to be extraordinary; when it occurs in wh- and A-not-A questions, it indicates that the speaker considers the matter that is being questioned to be of particular importance. As for the *ne* appearing in thematic questions, following Wu (2005b), I suggested that it functions as a topic marker.

2.3 FINAL PARTICLE *BA* AND *MA*

In this section I will discuss the semantic function of three final particles, i.e., *ba*, *ma₁* and *ma₂*. Examples are given in (31) (repeated from (1b), (1c) and (1d)).

> (31) a. Zánmen kuài zǒu **ba**!
>   1PL   quick go   PRT
>   'Let's leave immediately.'
>
> b. Xià yǔ le **ma₁**?
>   fall rain PRT PRT
>   'Does it start raining?'
>
> c. Wǒ shuō jīntiān shì xīngqīsān **ma₂** --- (nǐ shuō bú shì).
>   1S say today   be Wednesday PRT   2S say NEG be
>   'I said it was Wednesday today --- (you said it wasn't).'

It is generally agreed that *ma₁* is a yes/no question particle. The analyses of *ba* and *ma₂* are more varied. *Ba* has been claimed to indicate suggestion, express speculation, make mild questions, etc. (e.g., Chao 1968: 807-8, Zhu 1982: 211, Dow 1983: 151-2, Chu 1983: 105-7). *Ma₂* is usually associated with indicating 'obviousness' and 'impatience' (e.g., Liu 1964: 253, Kubler and Ho 1984: 76).

In the following, I will first review some previous studies which attempt to generalize core, context-free functions for the final particles. This task is taken up in section 2.3.1. In section 2.3.2 I propose my own analysis of *ba*, *ma₁* and *ma₂*. The basic idea is that the three final particles represent the same functional category. I will argue that *ma₁* and *ma₂* are actually the same element; namely, Mandarin has only one final particle *ma*. Besides, I will show that *ba* and *ma* are a pair of particles performing the same function, i.e., marking degrees. Finally, in section 2.3.3 I draw the conclusion.

2.3.1 PREVIOUS STUDIES

'Meaning maximalists' and 'meaning minimalists' agree that *ma₁* is a particle that functions to mark yes/no questions. We will leave aside this particle for a moment. In the following I will introduce some previous studies on *ba* and *ma₂*, which examine the particles from meaning minimalists' point of view.

2.3.1.1 PREVIOUS STUDIES ON *BA*

Li and Thompson (1981)

Li and Thompson suggest that *ba* has "the effect of soliciting the approval or agreement of the hearer with respect to the statement to which *ba* is attached" (Li and Thompson 1981: 307). They claim that the uses of *ba* in the following sentences all display the same function, i.e., "solicit agreement".

> (32) a. Nĭ xiăng-yì-xiăng **ba**   (Li and Thompson 1981: 308)
>   2S think-one-think PRT
>   'Why don't you think about it a little?'
>
>   b. Tā bú huì zuò zhè-yàng   de shì **ba**   (Li and Thompson 1981: 309)
>   3S NEG will do this-manner DE thing PRT
>   'S/He wouldn't do such things, don't you agree?'
>
>   c. Tā hĕn hăokàn   **ba**   (Li and Thompson 1981: 310)
>   3S very good-looking PRT
>   'S/He is very good looking, isn't s/he?'
>
>   d. Nĭ dàodĭ   yào shénme **ba**?   (Li and Thompson 1981: 310)
>   2S ultimately want what   PRT
>   'Tell me, what do you want?'

(32d) is an example originally given by Chao (1968: 807). Although Li and Thompson regard the presence of *ba* in this particular sentence as grammatical, they think that in general *ba* cannot be used in wh-questions or A-not-A questions. Note that in fact *ba* has no problem occurring with wh- and A-not-A questions. This use of *ba* has been mentioned in many studies, e.g., Chao (1968), Zhu (1982), Han (1995), Chu (1998). We will discuss the occurrence of *ba* in wh- and A-not-A questions in section 2.3.2.4.

Li and Thompson suggest that the most natural context to use (32d) is when two people are quarreling, and one finally says the sentence in exasperation. They elaborate on the full message conveyed by (32d) as follows:

> (33) OK, don't you think you should let me know what in the world you want?
>
> (Li and Thompson 1981: 311)

Chu (1998)

Chu points out that although Li and Thompson's proposal works in most cases, there still remain some problems. First, it does not quite fit the interpretation of the special case shown in (32d). He argues that in (33) neither the added meaning "don't you think", which is supposed to reflect the agreement-soliciting function of *ba*, nor the meaning "you should let me know", comes from the final particle. Both portions of the added meaning are actually from the question itself.

Besides, he claims that some uses of *ba*, e.g., indicating the speaker's acceptance or agreement, as exemplified in (34) (from Chu (1998: 135)), cannot be covered by the function of "soliciting agreement".

(34) Cuò-le   jiù cuò **ba**.
    wrong-PERF then worng PRT
    'If it's wrong, it's wrong.'

Chu proposes that the basic function of *ba* is to indicate the "speaker's uncertainty". As for the use of *ba* in wh-questions, he suggests that it also expresses the modality of speakers' uncertainty, and this modality meaning is superimposed over the entire question. That is, *ba* indicates that the speaker is not quite sure about the act of asking the question rather than about the content of the question. Thus (32d) can be interpreted as follows: "I am not quite sure if the question should be asked, though I am asking what you want, after all" (Chu 1998: 136).

As for (34), Chu states that *ba* conveys the information that "I am not quite sure that it is wrong, though if that's the case, I would/you might accept it as wrong" (Chu 1998: 135).

Chu shows that his hypothesis is applicable to other commonly recognized uses of *ba* as well. Consider (35) and (36) (both from Chu (1998: 137)).

(35) Nǐ bié guǎn   zhè-gè xiánshì   **ba**.
    2S don't meddle this-CL idle-matter PRT
    'You better not meddle with this damn thing!'

(36) Tǎng zài   shàngxué, zhōngxué   yǐ
    if   PROG go-to-school middle-school already

    gāi bìyè   le **ba**.
    should graduate PRT PRT
    'If (he) had gone to school, (he) should have graduated from high school.'

(35) is an imperative sentence. Chu mentions that when an imperative is accompanied by a marker of uncertainty, it becomes a request or piece of advice. As for (36), he mentions that it is a statement about some present situation; it is regarded as an estimate or guess when the speaker is not quite sure about the current situation, and this modality of "speaker's uncertainty" is expressed by *ba*.

Han (1995)

Han attempts to provide a unified analysis of *ba* from a pragmatic perspective. She examines the use of *ba* in declaratives, imperatives and interrogatives. Consider (37) first, which is excerpted from Han (1995: 103).

(37) a. Zhāngsān shì lǎoshī.
    Zhangsan be teacher
    'Zhangsan is a teacher.'

b. Zhāngsān shì lǎoshī **ba**.
Zhangsan be teacher PRT
'(I think) Zhangsan is a teacher (Am I right?).'

Following Hare (1970) (cf. Lyons 1977: 749), Han assumes that there exist hierarchies in the classification of illocutionary forces on the basis of the combination of the "neustic" and "tropic". "The tropic is that part of the sentence which correlates with the kind of speech-act that the sentence is characteristically used to perform", and the neustic "is that part of the sentence which expresses the speaker's commitment to the factuality, desirability, etc., of the propositional content conveyed by the phrastic" (Lyons 1977: 749-50, cf. Han 1995: 104). She suggests that according to Hare's scheme the representation of (37a) would be (38) (Han 1995: 104).

(38) *I-say-so* (*it-is-so* (*Zhangsan is a teacher*))
   neustic   tropic   phrastic

She explains that the illocutionary force of (37a) is an unqualified assertive. The "I-say-so" neustic indicates "the speaker's total commitment to the truth of the proposition" and gives "no indication of speaker's offering an option for the hearer to either confirm or deny the proposition" (Han 1995: 104).

She suggests that when *ba* is added to the assertion, it weakens the neustic of the sentence. The representation of (37b) is (39) (Han 1995: 105).

(39) *I-think-so* (*it-is-so* (*Zhangsan is a teacher*))
   neustic   tropic   phrastic

She claims that the "I-think-so" neustic indicates that the speaker is "withholding his total commitment to the actuality of Zhangsan's being a teacher, and leaving the hearer the option of challenging the proposition in case the speaker's belief is incorrect" (Han 1995: 105).

Han suggests that *ba* induces the same effect when it is added to an imperative sentence. Compare (40a) with (40b) (Han 1995: 107). (40a) expresses an unqualified directive force, the hierarchical structure of which is schematized in (41a) (Han 1995: 107). When *ba* is added (see (40b)), it weakens the neustic of the directive force, converting "I-say-so" to "I-think-so", as shown in (41b) (Han 1995: 108).

(40) a. Nǐ kuài zǒu!
      2S fast   go
      'Move!'

   b. Nǐ kuài zǒu **ba**!
      2S fast go   PRT
      '(I think) you'd better hurry up!'

(41) a. *I-say-so* (*so-be-it* (*you go*))
  neustic tropic phrastic

 b. *I-think-so* (*so-be-it* (*you hurry up*))
  neustic tropic phrastic

As we can see, Han's analyses of *ba* in declaratives and in imperatives are very consistent. She tries to extend the same analysis to the use of *ba* in wh-questions and A-not-A questions. However, she ends up with a somewhat different story. Compare (42a) (Han 1995: 111) with (42b) (Han 1995: 102).

(42) a. Nǐ shuō bù shuō?
  2S speak NEG speak
  'Are you going to tell me or not?'

 b. Nǐ shuō bù shuō **ba**?
  2S speak NEG speak PRT
  'Are you going to tell me or not (if you still refuse to tell me, a severe punishment is on its way!)?'

Han thinks that (42a) and (42b) differ in three aspects: (i) while (42a) indicates the speaker's ignorance of the answer, (42b) conveys the speaker's strong determination to make the hearer take an action as required; (ii) while the hearer of (42a) may respond by simply telling the speaker that 'I don't know', the hearer of (42b) has no choice of his own but to offer the answer; (iii) while (42a) is neutral with respect to the speaker's emotion, (42b) expresses the speaker's anger.

 Considering the differences, Han suggests that while the representation of (42a) is (43) (Han 1995:110), which represents the general structure of the illocutionary force of questions, the combination of *ba* with the question somehow "gives rise to a strong directive force, indicating the speaker's fierce determination to get the hearer to perform a future action" (Han 1995: 112). Thus (42b) has a very different representation from (42a), as shown in (44) (Han 1995: 112).

(43) *I-wonder/I-can't-say-so* (*it-is-so* (*p*))
  neustic   tropic phrastic

(44) *I-insist-so* (*so-be-it* (*you do A*))
  neustic tropic phrastic

Finally, Han offers an explanation for the incompatibility between *ba* and particle-ending questions. The most commonly used particle-ending question is the *ma₁*-suffixed question. See (45) (Han 1995: 113).

(45) a. *Zhāngsān shì lǎoshī **ma ba**?
  Zhangsan be teacher PRT PRT

    b. *Zhāngsān shì lǎoshī **ba ma**?
      Zhangsan be teacher PRT PRT

She suggests that since ma_1 performs the function of turning a declarative into a question, assuming that "I-say-so (it-is-so (p))" represents declaratives, and "I-wonder-so (it-is-so (p))" represents questions, she proposes that the addition of ma_1 alters the "I-say-so" neustic into the "I-wonder-so" neustic. Therefore, like the particle *ba*, which has the function of "neustic weakening", ma_1 also functions on the neustic part, i.e., "neustic altering". That is why the two particles cannot co-occur.

Above we looked at three different analyses, all of which endeavor on a unified account for the various uses of *ba*. Li and Thompson's proposal that *ba* functions to "solicit agreement" can explain some occurrences of *ba*, but fails to explain others. Chu suggests that the core function of *ba* is to convey "speaker's uncertainty". His conclusion is basically correct, but as I will show in the coming discussion there is a further explanation for why *ba* expresses such a modality reading. Finally, Han's work is very inspiring, as it looks at *ba* in relation to the hierarchical structure of sentence force. In section 2.5.1 I will propose an analysis that resembles Han's in that I will also examine *ba* in relation to the sentence structure, though from a more strictly syntactic perspective. We saw that Han did not manage to achieve a consistent analysis of the *ba* used in wh- and A-not-A questions. The problem will be solved in my analysis. As for the incompatibility between *ba* and ma_1-ending questions, my explanation is related to and yet different from Han's.

2.3.1.2 PREVIOUS STUDIES ON MA_2[16]

Chappell (1991)

Ma_2 has not received as much attention as *ba*. However, a detailed semantic analysis of ma_2 can be found in Chappell (1991).

    Chappell (1991) singles out two main uses of the final particle ma_2. One is to remind the listener "that the entire proposition is obvious or self-evident from the preceding discussion or from their shared cultural knowledge" (Chappell 1991: 47). This is exemplified by (46) (originally from the Chinese Pear/Guava Stories, see Chappell (1991:48)), in which a storyteller explains why a little boy, who is the hero of the story, is not careful on his bike, bumps into a rock and falls off.

(46) Yīnwéi xīn … xīn huāng **ma**. Tā tōu-le dōngxi.
    because heart heart upset PRT 3S steal-PERF thing
    'Because he was feeling upset, after all. He'd stolen something.'

Chappell claims that the other use of ma_2 is "to express disagreement, possibly combined with indignation or impatience at the hearer's opposite point of view" (Chappell 1991: 47). In (47) (originally from a conversational text --- 'China's Education System', see Chappell (1991:55)), Speaker C disagrees with Speaker B by viewing that 'so many people going abroad' is something good in response to B's disapproval of it.

(47) B: Xiànzài shòu   zhèi zhǒng chūguócháo   yǐngxiǎng de
       now   suffer this kind   go-abroad-trend influence DE

       rén   tài duō le.
       people too many PRT
       'There are far too many people being influenced by the trend to
       go abroad.'

    C: Zhè yě shì hǎo shì   **ma**!
       this also be good matter PRT
       'That's something good too!'

Chu (1998)

In his review on Chappell's semantic analysis of *ma₂*, Chu suggests that her proposal alludes to the conclusion that *ma₂* indicates that the content of the utterance is presupposed, which is in compliance with his earlier proposal in Chu (1985b). The meanings such as obviousness, self-evidence, disagreement, impatience and indignation can all be seen as derived from the interaction of this semantic function with other pragmatic factors.

Chu proposes that *ma₂* has two basic functions performing on different levels. On the semantic level, *ma₂* has a "presupposition function", indicating that the proposition of the utterance is factual. On the discourse level, it has an "insistence function", indicating that the speaker wants the hearer to accept what is being said as factual. He claims that all the other meanings are derivable from the two basic functions jointly with the propositional meaning of the utterance. Consider (48) (Chu 1998: 151).

  (48) A: (Holding his nose at the dinner table)
          Wǒ shì pà   huì dǎpēnti.
          1S be afraid will sneeze
          'I am afraid I would sneeze.'

      B: (Turning to C)
          Bǎ napkin ná   yì zhāng gěi tā.
          BA napkin take one CL   give 3S
          'Get a napkin for him.'

      A: Napkin wǒ yǒu **ma**.
          napkin 1S have PRT
          'Napkin, I've got one.'

Chu notes that the sentence *Napkin wǒ yǒu* 'Napkin, I've got one' expresses a situation. The speaker uses *ma₂* to emphasize that the situation is factual.

  (49) (excerpted from Chu (1998: 152)) is originally given by Dow (1983: 161).

(49) Nǐ zìjǐ juédìng de **ma**.
    2S self decide   DE PRT
    'You made the decision by yourself.'

Chu suggests that what ma_2 conveys in this sentence is that the speaker insists that the hearer should accept the content of the utterance as factual.

The use of ma_2 in (50) (from Chu (1998: 150)) is considered another manifestation of the "insistence function", which expresses an exhortative meaning.

(50) Aiya, nǐ cái hē   le   nàmo yìdiǎr jiǔ,   zěnmo huì zuì **ne**?
    well 2S just drink PERF that   little   booze how   can drunk PRT

    Zài hē   yì bēi **ma**!
    again drink one cup PRT
    'Well, you've had very little, how can you be drunk? You sure can have
    another drink.'

To sum up, in this section we looked at Chappell's and Chu's analyses of the final particle ma_2. I agree with Chu that the indication of "obviousness", "disagreement" and "indignation" claimed by Chappell can all be derived from more basic meanings of ma_2. Chu suggests that the core function of ma_2 is to indicate that the content is factual and to convey the speaker's insistence. In the following discussion I will show that even these two functions can be analyzed as derived from a more fundamental function of ma_2.

2.3.2 THE CONTRIBUTION OF *BA* AND *MA*

The studies mentioned above suggest that *ba* and ma_2 contribute special meanings to the sentence that they are attached to. The other particle ma_1, however, is considered to perform a purely grammatical function, i.e., marking yes/no questions. The first question that I will raise here is if we really have to distinguish two *ma*-particles in Mandarin. In section 2.3.2.1 I will challenge the traditional view and argue that Mandarin has only one final particle *ma*. Section 2.3.2.2 through 2.3.2.5 examine the semantic contributions of *ba* and *ma* to the sentences that they occur in. It will show that they perform the same type of function, i.e., marking degrees. Based on this observation, in section 2.3.2.6 I propose that *ba* and *ma* are a pair of degree markers.

2.3.2.1 WHY TWO *MA*-PARTICLES?

It has long been taken for granted that Mandarin has two different *ma*-particles. One is the well-known yes/no question particle. In the formal syntax, for instance, in Cheng (1991, 1997) it is treated as a typing particle for yes/no questions. The other *ma* is considered a modal particle (e.g., Chappell (1991), Chu (1998)).

In this thesis I argue that the two *ma*-particles are indeed the same element; namely, Mandarin has only one final particle *ma*.

Here are some basic observations. First, although in the ideographic system the two particles are represented by different characters, they have the same phonological form.[17] Besides, it has been proven that they have the same etymological source. Ōta (1987:332-5) claims that the two particles used to be the

same element derived from an earlier negative adverb. Moreover, in nowadays Chinese, we find that the two particles are in complementary distribution. They never co-occur. Ma_1 is found only in yes/no questions (see (51)), and ma_2 in all the other types of sentences (see (52)).

(51) Hóngjiàn zài bàngōngshì **ma**?
  Hongjian at office   PRT
  'Is Hongjian in his office?'

(52) a. Hóngjiàn zài bàngōngshì **ma**.
   Hongjian at office   PRT
   '(Obviously/certainly) Hongjian is in his office.'[18]

  b. Jìn lái **ma**!
   enter come PRT
   '(I insist you) come in!'

  c. Xiǎofú wèishénme bù lái **ma**!
   Xiaofu why   NEG come PRT
   '(I insist you tell me) why Xiaofu isn't coming!'

  d. Hóngjiàn qù-méi-qù xuéxiào **ma**!
   Hongjian go-NEG-go school PRT
   '(I insist you tell me) whether Hongjian went to school!'

These observations suggest that ma_1 and ma_2 may have an underlying connection.

In fact, the distinction between the two particles has been made mainly because they are considered performing different functions. In the following I argue against this view. First of all, I argue that the so-called yes/no question particle ma_1 does not really function to mark yes/no questions. Treating ma_1 as a yes/no question particle raises the same problems as treating *ne* as a wh-question particle.

First, whether ma_1 is present or absent does not affect the grammaticality of yes/no questions. As shown by (53), in Mandarin a yes/no question can be constructed without any final particle.

(53) Xiáofú dú-guo zhè běn shū?
  Xiaofu read-EXP this CL book
  'Xiaofu read this book?'

Besides, ma_1 is not the only final particle that can occur in yes/no questions. *Ba* and *a* can be used in yes/no questions as well, and the meanings of these questions are different. Compare (54a), (54b) and (54c).

(54) a. Xiáofú dú-guo zhè běn shū **ma**?
   Xiaofu read-EXP this CL book PRT
   'Did Xiaofu read this book?'

b. Xiáofú dú-guo   zhè běn shū **ba**?
   Xiaofu read-EXP this CL   book PRT
   'Xiaofu read this book, right?'

c. Xiáofú dú-guo   zhè běn shū **a**?
   Xiaofu read-EXP this CL book PRT
   '(So) Xiaofu read this book, right?'

(54a) indicates that the speaker has no idea what the answer is, and expects the hearer to give a reply. However, (54b) indicates that the speaker already sort of knows the answer, and what he wants from the hearer is a confirmation. Like (54b), (54c) also indicates that the speaker has an assumption about the answer. More specifically, the speaker just realizes that this might be the situation, and wonders whether it is indeed true (see section 2.3.2.5 and 2.4.4 for further discussion).

Finally, like *ne*, *ma₁* occurs only in matrix clauses. (55) does not have an embedded question reading. It is interpreted only as a matrix yes/no question.

(55) Hóngjiàn xiǎng zhīdào Xiǎofú huì zuò   yú **ma**
     Hongjian want know   Xiaofu can cook fish PRT
     (i) *'Hongjian wonders if Xiaofu can cook fish.'
     (ii) 'Does Hongjian want to know that Xiaofu can cook fish?'

If *ma₁* is not a syntactic marker of yes/no questions, a question that follows immediately is what the function of *ma₁* is. In the next few sections I will show that *ma₁* performs the same function as *ma₂*. Once we remove the preempted idea that *ma₁* and *ma₂* are different elements, we will find that they are in fact the same particle that performs the same function in different types of sentences.

Interestingly, if I am right that the *ma*-particle occurring in yes/no questions and the one in the other types of sentences are the same particle, we see in Mandarin a pair of particles, i.e., ba and ma, the distribution of which run exactly parallel.

Like *ma*, *ba* can occur in declaratives, yes/no questions, imperatives, wh-questions and A-not-A questions. The examples are given in (56).

(56) a. Hóngjiàn zài bàngōngshì **ba**.
        Hongjian at   office   PRT
        '(Probably) Hongjian is in his office.'

     b. Hóngjiàn zài bàngōngshì **ba**?
        Hongjian at   office   PRT
        'Hongjian is in his office, right?'

     c. Jìn   lái   **ba**!
        enter come PRT
        '(I suggest you) come in!'

    d. Xiǎofú wèishénme bù   lái   **ba**!
       Xiaofu why   NEG come PRT
       '(I suggest you tell me) why Xiaofu isn't coming!'

    e. Hóngjiàn qù-méi-qù   xuéxiào **ba**!
       Hongjian go-NEG-go school   PRT
       '(I suggest you tell me) whether Hongjian went to school!'

The parallel performance of *ba* and *ma* makes us wonder if they are functionally related. Below I will show that this is indeed the case.

2.3.2.2 THE USE OF *BA* AND *MA* IN DECLARATIVE SENTENCES
From now on, I will examine the use of *ba* and *ma* in pairs. Let us start with declarative sentences.

    Both *ba* and *ma* can occur in the final position of declarative sentences. Consider (57).

    (57) a. Hóngjiàn zài bàngōngshì.
         Hongjian at   office
         'Hongjian is in his office.'

        b. Hóngjiàn zài bàngōngshì **ba**.
         Hongjian at   office   PRT
         '(Probably) Hongjian is in his office.'

        c. Hóngjiàn zài bàngōngshì **ma**.
         Hongjian at   office   PRT
         '(Obviously/certainly) Hongjian is in his office.'

A declarative like (57a) is usually called 'categorical assertion' or 'unqualified assertion' (Lyons 1977, Palmer 2001), in the sense that it is modally unmarked. According to Palmer, an unqualified assertion simply asserts without indicating the reasons for that assertion or the speaker's commitment to it. In English, an unqualified assertion can be modally qualified by modal verbs such as *may*, *must*, *will*. See (58) (Palmer 2001: 25).

    (58) a. John may be in his office.
        b. John must be in his office.
        c. John'll be in his office.

In Mandarin, epistemic modality can be expressed by different means. For instance, the three sentences given in (58) can be translated into Mandarin as follows, by using the modal adverbs *kĕnéng* 'probably', *kĕndìng* 'definitely', and the modal verb *huì* 'will', respectively.

(59) a. Hóngjiàn kěnéng   zài bàngōngshì.
　　　 Hongjian probably at   office
　　　 'Hongjian is probably in his office.'

　　 b. Hóngjiàn kěndìng   zài bàngōngshì.
　　　 Hongjian definitely at office
　　　 'Hongjian is definitely in his office.'

　　 c. Hóngjiàn (zhè-gè shíhòu) huì zài bàngōngshì.
　　　 Hongjian this-CL time   will at   office
　　　 '(This time) Hongjian will be in his office.'

A full exploration of the modal system in Mandarin is beyond the scope of the present study. What I would like to point out is that, when *ba* and *ma* are added to a declarative sentence, they induce a semantic effect that is similar to that induced by modals.[19] Namely, while (57a) makes a simple assertion without indicating the speaker's commitment to it, (57b) with the presence of *ba* conveys that the speaker scales down his commitment to the assertion. (57c) ending with *ma*, on the other hand, indicates that the speaker is totally committed to the assertion, and that he accepts it as a matter of fact.

Considering their semantic contributions, I suggest that in declarative sentences *ba* and *ma* indicate different degrees of the speaker's commitment to the assertion. In particular, *ba* marks a low degree of commitment, indicating that the speaker is not wholly certain about the factual status of the proposition, whereas *ma* marks a high degree of commitment, indicating that the speaker has a firm judgment about the factual status of the proposition.

2.3.2.3 THE USE OF *BA* AND *MA* IN IMPERATIVE SENTENCES
Ba and *ma* can both occur in imperative sentences as well. We find that the performance of *ba* and *ma* in imperatives is consistent with their performance in declaratives. See (60).

　(60) a. Jìn   lái!
　　　　 enter come
　　　　 'Come in!'

　　 b. Jìn   lái **ba**!
　　　　 enter come PRT
　　　　 '(I suggest you) come in!'

　　 c. Jìn   lái **ma**!
　　　　 enter come PRT
　　　　 '(I insist you) come in!'

Like bare declaratives which are not attached by any final particle, bare imperatives such as (60a) are neutral and modally unmarked. When the speaker utters (60a), he simply issues a command without taking into account the hearer's will. Compared

with (60a), (60b) and (60c) are not neutral. (60b) with *ba* is interpreted as a suggestion or a piece of advice. It indicates that although the speaker's intention is to have the hearer carry out the action, he will also accept the hearer's refusal if the hearer is not willing to do so. (60c) carries a strong flavor of persuasion. It is used when the speaker sort of knows that the hearer is not willing to take the action, but he urges the hearer to do it anyway. In this sense, we can say that when added to imperative sentences, *ba* induces a weakening effect whereas *ma* a strengthening effect to the directive interpretation.

I suggest that in imperative sentences *ba* and *ma* indicate different degrees of the strength of the speaker's intention to have the action carried out. In particular, *ba* marks a low degree of strength, implying that the speaker is more flexible in terms of whether the action will actually be carried out, whereas *ma* marks a high degree of strength, implying that the speaker is not willing to accept the hearer's refusal.[20]

2.3.2.4 THE USE OF *BA* AND *MA* IN WH- AND A-NOT-A QUESTIONS

Ba and *ma* can also occur with wh- and A-not-A questions. The semantic effect that they induce in these questions is similar to the effect they induce in imperative sentences. Consider the following examples.

(61) a. Nǐ zěnme xiū-hǎo   zhè liàng chē de **ba**!
       2S how   repair-good this CL   car PRT PRT
       '(I suggest you tell me) how you managed to repair this car!'

   b. Nǐ zěnme xiū-hǎo   zhè liàng chē de **ma**!
       2S how   repair-good this CL   car PRT PRT
       '(I insist you tell me) how you managed to repair this car!'

(62) a. Hóngjiàn qù-méi-qù xuéxiào **ba**!
       Hongjian go-NEG-go school   PRT
       '(I suggest you tell me) if Hongjian went to school!'

   b. Hóngjiàn qù-méi-qù xuéxiào **ma**!
       Hongjian go-NEG-go school   PRT
       '(I insist you tell me) if Hongjian went to school!'

As mentioned in the literature (e.g., Chao 1968, Zhu 1982, Han 1995, Chu 1998), those wh- and A-not-A questions ending with *ba* and *ma* somehow have an imperative reading rather than a direct question reading, i.e., they express the speaker's intention to have an action carried out --- in this case, to have the hearer offer the answer. Besides, we observe that like in imperative sentences, in wh- and A-not-A questions *ba* conveys a weak strength of intention, whereas *ma* conveys a stronger strength of intention.

I suggest that when attached to wh- and A-not-A questions, *ba* and *ma* perform the same function as they do in imperatives. That is, *ba* marks a low degree and *ma* marks a high degree with respect to the strength of the speaker's intention to have an action carried out --- in this case, to have the hearer offer the answer.[21]

A question follows naturally: why do wh- and A-not-A questions display such an affinity with imperatives when attached by the final particles *ba* and *ma*? We will turn to this question in section 2.5.

2.3.2.5 THE USE OF *BA* AND *MA* IN YES/NO QUESTIONS
Finally, let us consider the use of *ba* and *ma* in yes/no questions. In English, yes/no questions can be expressed in different forms. The typical yes/no question involves subject-auxiliary inversion. The example is given in (63a). The declarative question shown in (63b) does not apply inversion, but is marked merely by intonation. The third type is known as the tag-question ending in '*right?*', which is shown in (63c).

(63) a. "Inversion question"

　　　　Is it raining?

　　b. "Declarative question"

　　　　It is raining?

　　c. "Tag question"

　　　　It is raining, right?

Haan and van Heuven (2003) point out that the three subtypes of yes/no questions differ in their meaning and use. They suggest that the distinction can be characterized by the degree of predictability as suggested by the speaker of the corresponding response. Specifically, they propose that on a continuum from maximally unpredictable to maximally predictable, the inversion question occupies one polar, which indicates that, for a given speaker, the reply is maximally unpredictable, whereas the tag-question occupies the other, the answer to which is maximally predictable. The declarative question is on the intermediate level, indicating a higher degree of predictability than the inversion question, but still a lower degree of predictability than the tag-question.

We find a similar variation in Mandarin yes/no questions. Consider (64).

(64) a. Hóngjiàn zài bàngōngshì **ma**?
　　　　Hongjian at office　　　PRT
　　　　'Is Hongjian in his office?'

　　b. Hóngjiàn zài bàngōngshì?
　　　　Hongjian at　office
　　　　'Hongjian is in his office?'

　　c. Hóngjiàn zài bàngōngshì **ba**?
　　　　Hongjian at　office　　　PRT
　　　　'Hongjian is in his office, right?'

Similar to the English inversion question, (64a) ending with *ma* indicates that the speaker has no idea what the answer is; that is, the answer is maximally unpredicatable to the speaker. Similar to the English declarative question, (64b) indicates that the speaker has a predication of the corresponding answer, and he requires a confirmation. (64c) with *ba* also indicates that the speaker has a prediction, but it differs from (64b) in that the speaker shows more certainty.[22] In other words, if we follow Haan and van Heuven assuming a continuum from maximally unpredictable to maximally predictable, the yes/no question ending with *ma* occupies one polar, indicating that, for a given speaker, the reply is maximally unpredictable, whereas the yes/no question ending with *ba* occupies the other, indicating that for a given speaker the answer is maximally predictable. The yes/no question without any particle is on the intermediate level, indicating a higher degree of predictability than the question ending with *ma*, but still a lower degree of predictability than the question ending with *ba*.

Furthermore, I suggest that we can look at the issue the following way. When a speaker has a very low predictability of the answer, it means that he barely knows, and thus strongly requires the answer, whereas when the speaker has a high predictability of the answer, it means that he already sort of knows and thus does not want the answer so badly. In this sense, the three questions given in (64) differ in how much the speaker wants the answer.

I propose that in yes/no questions *ba* and *ma* perform the same function as they do in wh-questions, A-not-A questions, and imperatives. That is, *ba* marks a low degree and *ma* marks a high degree with respect to the strength of the speaker's intention to have an action carried out, i.e., to elicit the answer from the hearer. Yes/no questions without *ba* or *ma* stay on the intermediate level, marking a stronger intention to elicit the answer than the yes/no questions ending with *ba*, but still a weaker intention than the yes/no questions ending with *ma*.

2.3.2.6 THE PROPOSAL

What has been shown above is that *ba* and *ma* function consistently to mark degrees. I propose that they are a pair of degree markers. The table given below summarizes their parallel performances in different sentence types.

(65) The contribution of *ba* and *ma*:

	Declaratives		Imperatives		Wh-, A-not-A, Yes/no questions	
ba	low degree	of 'the speaker's commitment to the assertion'	low degree	of 'the speaker's intention to have an action carried out'	low degree	of 'the speaker's intention to have the hearer provide the answer'
ma	high degree		high degree		high degree	

Under the current analysis, we can solve the problems raised before by treating *ma₁* as a yes/no question particle.

First, the optional occurrence of *ma₁* in yes/no questions is no longer a problem, because it is not a typing particle, but functions as a degree marker.

Secondly, excluding the possibility that *ma₁* is a yes/no question particle leads to the conclusion that, like other types of sentences, Mandarin yes/no questions are not marked overtly. Previously I showed that like other types of sentences, Mandarin yes/no questions could occur with different final particles. The meaning difference is attributed to the specific contribution that each particle makes to the sentence.

As for why *ma₁* has the matrix clause property --- in fact, we find that most final particles display this property, e.g., *ne*, *ba* (of which I give an example below) and *a*, I conjecture that they all convey speaker-anchored information. Haegeman (2002) suggests that root clauses are speaker oriented by default, whereas embedded clauses are not.

(66) Hóngjiàn rènwéi Xiǎofú huì zuò   yú   **ba**
     Hongjian think   Xiaofu can cook fish PRT
     (i) *'Hongjian thinks that (probably) Xiaofu can cook fish.'
     (ii) '(Probably) Hongjian thinks that Xiaofu can cook fish.'

2.3.3 CONCLUSION

In the preceding discussion, I examined the semantic function of the final particles *ba* and *ma*. I argued that the so-called yes/no question particle *ma₁* and the modal particle *ma₂* are the same particle. I showed that *ba* and *ma* both can occur in different sentence types and function to mark degrees. I proposed that *ba* and *ma* are a pair of degree markers.

Under the current analysis, the various meanings attributed to *ba* and *ma* in the previous studies follow naturally. Recall that Li and Thompson (1981) suggest that *ba* functions to "solicit agreement", Chu (1998) considers *ba* to convey "speaker's uncertainty", and Han (1995) proposes that *ba* performs the core function of weakening the "neustic" of the sentence. These meanings can be derived given that *ba* marks a low degree of the speaker's commitment when occurring in declaratives, and a low degree of strength with respect to the speaker's intention to have an action carried out when occurring in imperatives, as well as in various types of questions. Chu (1998) suggests that *ma* in declaratives has a "presupposition" function, indicating that the speaker considers the content of the utterance to be factual. In our analysis, this is due to *ma*'s function of marking high degree of the speaker's commitment to the assertion. The "insistence" meaning can also be derived from this function of *ma*, i.e., marking high degree either with respect to the speaker's commitment to the assertion, or with respect to the speaker's intention to have an action fulfilled.

2.4 FINAL PARTICLE *A*[23]

Compared with *ne, ba* and *ma*, the final particle *a* displays a greater variation in terms of the contexts in which it may occur and the interpretations that it may evoke. Along the same line of the previous discussion, I assume that *a* has a core function, which is consistent through its various uses in different contexts.

Section 2.4.1 introduces previous studies on *a*. I will first review Wu's (2004) analysis. Special attention will be paid to Chu (2002). Section 2.4.2 discusses the pitch variation observed with *a*. In section 2.4.3 I put forward my proposal of the semantic function of *a*, which is mainly based on Chu's analysis, but my conclusion differs slightly from his. Section 2.4.4 provides a comparative study on the uses of *a* and the other three final particles. Section 2.4.5 draws the conclusion.

2.4.1 PREVIOUS STUDIES

In the literature, the final particle *a* has been studied from various perspectives. In traditional descriptive grammars, *a* is usually associated with a bundle of different meanings (Chao 1968, Zhu 1982, Dow 1983, and among others). Scholars who adopt the functional approach like Li and Thompson (1981) and Chu (1998), however, suggest that a core function can be generalized from its various uses in different contexts. Besides, in the framework of conversation analysis, Shie (1991) and Wu (2004) both provide extensive discussions on the discourse functions of *a*. A review of previous studies and assessment on different approaches can be found in Chu (2002). In the following, I will briefly introduce Wu's (2004) analysis, which for the obvious reason is not mentioned in Chu (2002). Then I will turn to Chu (2002)'s own work on the core function of *a*.

Wu (2004)

Wu proposes that *a* generally exhibits a "contrast-invoking" property. She examines the uses of *a* in yes/no questions, wh- and A-not-A questions, and declarative sentences.

Wu considers the *a* appearing in yes/no questions to help construct the questions (hence "*a*-formulated questions"). She finds that "*a*-formulated questions" are regularly used as understanding checks initiated as a result of problems in hearing or understanding the preceding talk. This is illustrated in (67) (adapted from Wu (2004: 130))[24].

    (67) L is inquiring about the academic progress of a mutual friend.

        L: Ei, nà   Julie shénme shíhòu bìyè?
           hey then Julie what   time   graduate
           'By the way, when will Julie graduate?'

        T: Julie **a**?
           Julie PRT
           'Julie?'

> L: Hen.
>   PRT
>   'Yeah.'

> T: Dàgài   shíyuè ba.
>   probably October PRT
>   'Probably October.'

Wu suggests that the use of *a* implies the speaker's less-than-full grasp of what has just been delivered or intended by the prior speaker, so *a* can be viewed as invoking a contrast in the current knowledge or information state between the speaker and the listener.

I would like to point out that, first, *a* does not serve to construct yes/no questions. In section 2.3 it was shown that in Mandarin a yes/no question can be formed without any final particle. Besides, in the above context the contrast reading arises anyway, no matter whether *a* is present or not. The very action of posing a question, asking about some content mentioned in the preceding speech already signifies the speaker's lack of understanding. Consider (68).

(68) L: Ei,   nà   Julie shénme shíhòu bìyè?
         hey then Julie what   time   graduate
         'By the way, when will Julie graduate?'

    T: a. Julie **a**?

       b. Julie **ma**?

       c. Julie?

The three questions given in (68) are all grammatical and equally felicitous, suggesting that *a* does not function to mark yes/no questions nor to indicate contrast in its own right (we will compare the use of *a* and *ma* in yes/no questions in section 2.4.4).

While all the "*a*-formulated questions" discussed by Wu occur in the middle of conversations, these questions can be used to start conversations as well. See (69). Suppose a child sees his father's coat on the coat rack; he asks his mother:

(69) Bàba huì-lái   le **a**?
     father return-come PRT PRT
     'Father's back?'

In (69), the child has a presupposition that his father has come back and launches the *a*-suffixed question to get it confirmed. In this case we can hardly say that any contrast is evoked.

As for the *a* occurring in wh- and A-not-A questions, since these questions are overtly marked as interrogatives, Wu suggests that *a* does not serve to construct the question, and she refers to these questions as "*a*-attached questions". She proposes

that *a* in the "*a*-attached questions" marks "deviance". The "deviance" is "generally circumstantial in nature, and is commonly associated with what the speaker perceives as a problematic and/or unexpected aspect of a situation in the local conversation environment" (Wu 2004: 153). Consider (70) (adapted from Wu (2004: 155)). Speaker C is trying to open a bottle of sparkling cider while the other participants are engaged in telling a joke.

(70) W: Tā hái jiānchāi   ou.
       3S still work-part-time PRT
       'He also has a part-time job.'

   C: Zhè gè zěnme kāi?
      this CL how   open
      'How to open this?'

   W: Sān   tiān zài táidà,   sān   tiān zuò jì.
      three day at   Taiwan-University three day do   prostitute
      'Three days at Taiwan University, and three days as a prostitute.'

   C: Zhè yào   zěnme kāi   **a**?
      this require how   open PRT
      'How do I open this?'

Wu claims that the *a* used here serves to register a difficult situation or a predicament, indicating a negative stance toward the current problem, and serves to bring the problematic status into focus.

   Recall that in section 2.2.2.1 we mentioned that Chu (1998) used the term "deviant" to describe the felicity condition of using the final particle *ne*. A question arises: is there any distinction between *ne* and *a*, as both seem to occur in some sort of deviant contexts? I suggest that the deviance activating the use of *ne* and that activating the use of *a* are of different kinds. As noted above, Wu emphasizes that the "deviance" marked by *a* is generally circumstantial, whereas in Chu (1998), the "deviant" property is proposed in terms of the content conveyed by the utterance suffixed with *ne*. We will compare the use of *ne* and *a* in section 2.4.4.

   Wu suggests that the *a* attached to declarative sentences also serves to mark "deviance". She characterizes two major sequential contexts in which the *a*-appended declaratives regularly occur. The first is called the "informing" sequential context, where "Speaker A asks a question, or makes a claim or an assertion in a prior turn; in that turn, Speaker B notices that there is something which he or she knows but Speaker A does not; Speaker B then delivers an utterance which carries with it the information Speaker A has displayed to not know, and then suffixes that information with a final *a*" (Wu 2004: 180). This is demonstrated by example (71) (Wu 2004: 181). The participants are about to start dinner. Speaker H notices an additional bowl of rice on the table, and thus launches the following question:

(71) H: Ei, wèishénme huì duō yì wǎn fàn zài nàbiān?
　　　PRT why 　can additional one CL rice at there
　　　'Hey, how come there is an additional bowl of rice over there?'

　　 X: Hái yǒu Victor **a**.
　　　still have Victor PRT
　　　'There is still Victor.'

Wu points out that the addition of *a* expresses an overtone that the speaker X considers that H should have known the answer, since he is one of the two party hosts who are supposed to have primary access to the arrangements for the party. She suggests that *a* marks "deviance" in the sense that it serves to problematize the legitimacy of the question, which is an inquiry into supposedly known-in-common information.

　　The other major context is the "disagreeing" sequential context, where "Speaker A asks a question, does not inform, or make a claim or an assertion in a prior turn; in it, Speaker B notices that there is something which he or she does not agree with; Speaker B then delivers an utterance to disagree with Speaker A, or counter his or her position in some way, and then suffixes that utterance with final *a*" (Wu 2004: 202). This is demonstrated in (72) (Wu 2004: 206-7).

(72) C: Kěshì huáháng gēn chángróng dōu shì bǐjiào guì de.
　　　but China-Airlines and EVA-Airlines all be relatively expensive PRT
　　　'But both China Airlines and EVA Airlines are more expensive.'

　　 X: Jùshuō huáháng hěn piányí **a**.
　　　hearsay China-Airlines very cheap PRT
　　　'I heard that China Airlines was very cheap.'

　　 C: Tāmen gèng piányí.
　　　3PL more cheap
　　　'They are cheaper.'

　　 W: Bú huì ba. Huáháng hái shì hěn guì **a**.
　　　NEG can PRT China-Airlines still be very expensive PRT
　　　'Not likely. China Airlines are still very expensive.'

　　 X: Jùshuō xiànzài yǐjīng bǐjiào piányí le **a**,
　　　hearsay now already relative cheap PRT PRT

　　　kěshì yào rěnshòu shēngmìng --- rěnshòu shēngmìng de wēixiǎn.
　　　but need bear life bear life DE danger
　　　'I heard that it has already become cheaper now, but you need to tolerate the risk of life.'

In (72), the three tokens of *a* all appear in statements that convey the speakers' disagreement. Wu suggests that although we cannot say that the disagreement

reading is particularly provoked by *a*, due to its intrinsic property of evoking contrast or marking deviance, in the "disagreement" sequential context, *a* serves to strengthen the disagreeing stance.

Although I think that Wu is right in claiming that there is a connection between the use of *a* and the deviant circumstances, I do not think that the particle per se serves to mark deviance. Instead, I think that it is the problematic situation that triggers the production of *a*. In (70), the difficult situation exists no matter whether there is an *a* or not, but the addition of *a* helps solve the problem. As pointed out by Wu herself, the use of *a* is prompted by the speaker's failure in pursuing the response at the first time, so she makes a second effort by repeating the same question plus attaching *a* to it.

It seems that in (71) the overtone is indeed implied by *a*. However, note that this token of *a* is associated with a high pitch. If the high pitch is switched to a low pitch, the overtone becomes unavailable and the utterance becomes infelicitous. Although in the beginning of her discussion Wu mentions that in the data there are two phonetically different *a*-tokens: *a* with a notably low pitch and *a* with a flat or a slightly higher pitch, she does not make any assumption about the pitch variation. I will discuss this issue shortly.

As for the *a* used in (72), obviously the particle does not serve to convey the disagreement reading. Thus, instead of suggesting that *a* directly marks deviance, Wu suggests that it functions to enhance the disagreeing stance. However, we observe that comparing the *a*-suffixed sentences with their counterparts without *a*, it is the latter that convey a stronger force. They sound more definitive and blunt, showing no concern whether the refutation makes any sense to the hearer.

Summarizing, in the preceding discussion I introduced Wu's (2004) analysis of the final particle *a*. While I agree with Wu that *a* often occurs with utterances which imply "contrast" or "deviance", I do not think that the "contrast" or "deviance" is particularly marked by the final particle. Rather, I suggest that it is the difficult or problematic situation that provokes the attachment of *a*. In the following discussion, we will see why this is the case.

Chu (2002)

Chu proposes that the final particle *a* is a discourse marker with the core property of expressing "speaker's involvement", which serves to indicate that the utterance in which it occurs is functionally relevant to the discourse context.

As for the notion 'relevance', he follows Sperber and Wilson's (1986: 118-26) definition: "An assumption is relevant in a context if and only if it has some contextual effect in that context." Sperber and Wilson distinguish three kinds of contextual effects: (i) contextual implication, (ii) contradiction, and (iii) strengthening. For example, if you are reading a book and someone says any of the following, each of them is different in terms of relevance. Consider (73) (Chu 2002: 11).

    (73) a. It took me a long time to write this book.
        b. You are not reading a book.
        c. You certainly are reading a book.

        d. You are now reading a book. (with no special stress on any part)
        e. You are fast asleep.
        f. May 5, 1881 was a sunny day in England.

The utterance (a), (b) and (c) are all relevant to the context in that (a) has some contextual implication, (b) contradicts the context, and (c) strengthens it, whereas the utterance (d), (e) and (f) are not relevant to the context.

    In addition, according to Sperber and Wilson, 'relevance' is not a discrete notion, but it is gradient. They formulate two conditions to determine the degree of relevance of a given utterance.

    (74) <u>Extent Condition 1</u>: An assumption is relevant in a context to the extent that
                                    its contextual effect in this context is large.

         <u>Extent Condition 2</u>: An assumption is relevant in a context to the extent that
                                    the effort required to process it in this context is small.

    Chu paraphrases the two conditions in plain English as follows: "if the hearer doesn't have to make an effort to see the relation between an utterance and the context in which it is uttered, the utterance is highly relevant. On the other hand, if the hearer wonders why an utterance is made in the given context, the utterance is low in degree of relevance" (Chu 2002: 12). The following example, which is provided by Chu (2002: 12), shows that the addition of *a* increases the degree of relevance.

    (75) A: Xiànzài jǐ-diǎn   le?
            now   what-o'clock PRT
            'What time is it now?'

         B: Nǐ zìjǐ yǒu   biǎo   **a**!
            2S self have watch PRT
            '(But) you have a watch yourself!'

Chu notes that if the utterance by Speaker B is not attached by *a*, it would not be as natural a response as it is. It would mean something like "I'm not going to tell you the time" instead of "I wonder why you are asking". In other words, the response ending in *a* is relevant to the context in a more obvious way than its counterpart without it.

    As for treating *a* as a discourse particle, Chu points out that *a* fits in well with the general properties of discourse markers. He cites four properties characterized by Jucker (1998:3): "(i) they do not affect the truth conditions of an utterance; (ii) they do not add anything to the propositional content of an utterance; (iii) they are related to the speech situation and not to the situation talked about; and (iv) they have an emotive, expressive function rather than referential, denotative, or cognitive function" (Chu 2002: 13). Examining the existing data, Chu claims that *a* "can definitely be regarded as a full-fledged discourse marker in every sense of the term" (Chu 2002: 13). He especially mentions the cases where *a* is alleged to turn a

declarative into a yes/no question. Consider (76) (originally from Shie (1991), taken from Chu (2002: 13))²⁵.

(76) T: Nĭ zhēn hútu   a! Bù xiăodé shénme shíhòu fàng dào
        2S really muddled PRT NEG know   what   time   put arrive

    wŏ de xīzhuāng kŏudài lĭ   de.
    1S DE suit   pocket inside PRT
    'You are really mixed up! I don't know when it was put in my
    jacket pocket.'

L: Ou, wŏ jì   qĭ-lái   le. Jiù nà cì wŏmen zài
   oh 1S remember up-come PRT then that CL 1PL   at

    shuìjiào de shíhòu.
    sleep   DE time
    'Oh, I remember now. It was when we were sleeping.'

T: Ei, nĭ xiăng hài-sĭ   wŏ **a**? Yàoshì Mĕifāng kàn-dào, tā bú shì
   hey 2S want harm-die 1S PRT if   Meifang see-arrive 3S NEG be

    yòu yào wèn-cháng-wèn-duăn de.
    again will ask-long-ask-short   PRT
    'Hey, are you setting me up? If Meifang saw it, she would ask
     questions to no end of it.'

Chu argues that the *a* in bold does not turn a statement into a question (contra Shie (1991: 202-3)), since the sentence still remains a question even without the particle. He points out that as a discourse marker, *a* indeed "does not affect the truth condition, nor does it add anything to the propositional content, but it does relate to the speech situation and perform an emotive or expressive function" (Chu 2002: 13). He suggests that the emotive function of *a* is to express "speaker's involvement", in this case, "I am concerned with the state of affair that you are setting me up" (Chu 2002: 14).

2.4.2 PITCH VARIATION
It is worth mentioning that in addition to discussing the particle itself, Chu (2002) proposes an insightful analysis of the pitch variation associated with *a*. As noted before, *a* may appear with a high pitch or a low pitch (e.g., Shie 1991, Chu 2002, Wu 2004). Chu proposes that the high pitch and the low pitch perform semantic functions independent of the final particle. Inspired by Li's (1999) analysis of the Taiwanese final particle *a*, Chu suggests that the low pitch on the Mandarin final particle *a* signals for "speaker orientation", whereas the high pitch for "addressee orientation".

He defines "speaker orientation" as indicating that "the utterance is primarily meant for the speaker himself or herself" (Chu 2002: 26). Under this category most typically falls the function of conveying agreement. Consider (77) (Chu 2002: 26-7)

(the symbol '↓' is added by me to signal the low pitch, and '↑' to signal the high pitch).

(77) CY: Xiàng CH dào   wǒmen jiā,   yì   chī jiù   chī de
       like   CH arrive 1PL   home once eat then eat DE

       zuò bú   xià-lái   de.
       sit   NEG down-come PRT
       'Like when CH comes to our house, he would eat till he can't
       even sit down.'

    F: Wǒ jìdé   tā mán pàng de   ma.
      1S   remember 3S very fat   PRT PRT
      'I remember he's quite big.'

    CY: Shì **a** ↓
       be PRT
       'Right.'

Chu states that the low pitch indicates that the message conveyed in the sentence is mainly directed to the speaker himself, implying that "this is what I am telling myself" (Chu 2002: 27). Here is another example from Chu (2002: 34).

(78) Y: Rào   le   bàn-tiān quānzi, nǐ jiùshì yào   gēn wǒ shuō
      revolve PERF half-day circle   2S just   want to   1S   say

      nǐ gēn 'Měiguó' yǒu xīwàng **a** ↓
      2S and America have hope   PRT
      'Beating around the bush, you just want to tell me you are
       hopeful with "America"?'

    D: Aiya, rénjiā hàixiū ma!
      PRT   1S   shy   PRT
      'Well, I just don't want to embarrass myself!'

Chu points out that in this case the low pitch also marks "speaker orientation", indicating that the speaker has just come to the realization of the matter that is being stated in the question, as if he or she is thinking aloud.

Compared to the low pitch, the implications that can be evoked by the high pitch are more varied. Chu defines "addressee orientation" as indicating that "the utterance with *a* attached to it is intentionally directed to the addressee" (Chu 2002: 26). He suggests that the functions such as requesting information, urging, persuading, and presenting information all share the property of signaling "addressee orientation".[26] (79), (80) and (81) (Chu 2002: 19-20) exemplify some cases where the high pitch is employed.

(79) "Request for information"

    F: Zhè bǎ qiāng wǒ shì ná-lái,   zhǔnbèi yào qù dǎ   *moose* de …
      this CL gun   1S be bring-come prepare will go shoot moose PRT
      'This gun, I used to, want to shoot a moose with …'

    C: Dǎ   gè *moose* gàn shénme ne? *Moose* de ròu   néng-bù-néng chī **a** ↑
      shoot CL moose do what   PRT moose DE meat can-NEG-can   eat PRT
      'Shoot a moose for what? Moose meat, can you eat it?'

    F: Kěyǐ.
      can
      'Yes, you can.'

(80) "Urging/Persuasion"
    (Talking about aerobic exercise)

    F: Nà, C míngtiān   zǎoshàng qǐ-lái …
      then C tomorrow morning   get-up
      'In that case, C gets up tomorrow morning …'

    C: Wǒ tàitai …
      1S wife
      'My wife …'

    J: [Agreeing with his father, C, and teasing his mother]
      Māma yào   zuò **a** ↑
      mother need do PRT
      'Mom, you got to do it!'

(81) "Presentation of information"

    F: Jiùshì rénjiā chèn   tā tàitai bú zhùyì duō
      Just   others seize-the-chance 3S wife NEG notice additional

      gěi tā yí kuài.
      give 3S one CL
      'You know, when his wife was not watching, they served him an extra
      piece.'

    CY: En…
      mm
      'Mm …'

    F: Tā jiù chèn   tā tàitai bú   zhùyì, pīlǐpālā dōu chī-diào le.
      3S then seize-the-chance 3S wife NEG notice cracking all eat-up   PRT
      'He then, when his wife was not watching, gulped it all up.'

CY: Wǒmen dōu zài xiào.
    1PL   all at laugh
    'We were all chuckling.'

F: [Turning to C]
    Lǎo C! Zhèyàng de rén   yě   hěn nándé **a** ↑
    old C this-kind DE person also very rare PRT
    'Old C! (I say) such a person is very hard to find!'

CY: Yǒude shíhòu, chūqù chī de shíhòu, tā jiù   pīnmìng   chī ma.
    some time   out-go eat DE time   3S then desperately eat PRT
    'Sometimes, eating out, he simply pigs out.'

I think that Chu's analysis of the pitch variation associated with *a* is correct. Moreover, I suggest that this analysis can be extended to other final particles which display the variation as well. In the following discussion I attempt to provide a general account for the pitch variation associated with Mandarin final particles. In chapter 3, I will apply this analysis to explain the tonal variation of Cantonese final particles.

Compare the following pairs of sentences. The final particles in the (a) sentences are associated with a high pitch, and those in the (b) sentences with a low pitch. We start with the final particle *ne*.

(82) a. Māma hái méi-yǒu huílái **ne** ↑
        mother still NEG-have return PRT
        'What if mom's not come back yet?'

    b. Māma hái méi-yǒu huílái **ne** ↓
        mother still NEG-have return PRT
        'Mom hasn't come back yet.'

(82a) is a thematic question, which poses a new theme, and invites the hearer to provide a corresponding rheme. (82b), however, is a statement, conveying the speaker's own evaluation on the propositional content, which is considered unknown or unexpected to the hearer.

Compare (83a) with (83b).

(83) a. Xiǎofú huì zuò yú **ba** ↑
        Xiaofu can cook fish PRT
        'Xiaofu knows how to cook fish, right?'

    b. Xiǎofú huì zuò yú **ba** ↓
        Xiaofu can cook fish PRT
        '(Probably) Xiaofu knows how to cook fish.'

(83a) and (83b) both convey the speaker's uncertainty. However, while the speaker of (83a) is soliciting confirmation from the hearer, the speaker of (83b) simply conveys his own opinion, without inviting any response from the hearer.

(84) a. Hóngjiàn qù xuéxiào le   **ma** ↑
      Hongjian go school PERF PRT
      'Did Hongjian go to school?'

    b. Hóngjiàn qù xuéxiào le   **ma** ↓
       Hongjian go school   PERF PRT
       '(Obviously/certainly) Hongjian went to school.'

The distinction between (84a) and (84b) is more radical. (84a) indicates that the speaker has no idea whether it is true that Hongjian went to school, and expecting an answer from the hearer. On the contrary, (84b) implies that the speaker is completely certain about the factual status of the proposition, and that he considers the judgment so well grounded that there is no need for further discussion.

Finally, let us reconsider the final particle *a*. In section 2.4.1 I mentioned that in example (71) (repeated below) switching the high pitch to a low pitch would yield a different implication.

(71) H: Ei, wèishénme huì duō   yì wǎn fàn zài nàbiān?
       PRT why   can additional one CL rice at   there
       'Hey, how come there is an additional bowl of rice over there?'

    X: Hái yǒu Victor **a** ↑
       still have Victor PRT
       'There is still Victor.'

In fact, the sentence ending with the low-pitch *a* can occur in the same conversation. Suppose after X offers the explanation, H says the following:

(85) H: Ou, hái yǒu Victor **a** ↓
       oh   still have Victor PRT
       'Oh, there is still Victor.'

The first *a*-suffixed sentence indicates that the speaker X thinks that H should have known the answer, and expects an explanation for his ignorance. In this sense X is saying something like '*There is still Victor. --- How come you don't know?*' In contrast, the speaker of the second *a*-suffixed sentence, i.e., H, is expressing his own sudden realization of the situation, claiming that '*There is still Victor. I see the reason now.*'

These examples show that each final particle can be associated with a high pitch or a low pitch, and the combinations give rise to different implications. It seems that Chu's (2002) proposal not only works for the pitch variation associated with *a,* but also for that associated with *ne*, *ba*, and *ma*. Generally speaking, the (a) sentences usually imply that the speaker is inviting the hearer's response or expecting further

discussion, whereas the (b) sentences usually convey the speaker's own opinion, sound more definitive and tend to close the conversation.

Remarkably, a similar phenomenon is observed in other languages as well. Pierrehumbert and Hirschberg (1990) mention that there exist a high boundary tone and a low boundary tone in English, which mark the right-hand boundary of a complete utterance. The high boundary tone is realized by a high tone (marked as **H%**), and the low boundary is realized by a low tone (marked as **L%**). Pierrehumbert and Hirschberg propose that choice of boundary tone conveys whether the current utterance is "forward-looking" or not; more specifically, a high boundary tone indicates that the speaker wishes the hearer to interpret an utterance with particular attention to subsequent utterances, while a low boundary tone does not convey such directionality. Consider the following examples (both from Pierrehumbert and Hirschberg (1990: 305)).[27]

(86) a. My new car manual is almost unreadable
                                                 L L%
     b. It's quite annoying
                     L H%
     c. I spent two hours figuring out how to use the jack
                                                 L L%

(87) a. My new car manual is almost unreadable
                                                 L H%
     b. It's quite annoying
                     L L%
     c. I spent two hours figuring out how to use the jack
                                                 L L%

They suggest that in the sequence of (86), the high boundary tone on (86b) conveys that (86b) is to be interpreted with respect to a succeeding utterance, i.e., (86c). This is also the case of (87a), the high boundary tone on which indicates that it is to be interpreted with respect to (87b). On the other hand, the low boundary tone on (87b) indicates that the current utterance is not "forward-looking". Pierrehumbert and Hirschberg note that a consequence of this distinction is that, while the pronoun *it* in (86b) is likely to be interpreted as referring to 'my spending two hours figuring out how to use the jack', *it* in (87b) is likely to refer to 'my new car manual'.

Pierrehumbert and Hirschberg point out that the use of high boundary tones in yes/no question contours can be subsumed by the function that they propose here, i.e., conveying "forward reference", but the reference is cross-speaker. To put it plainly, the high boundary tone on yes/no questions can be understood as indicating that the current utterance is to be completed by a subsequent utterance, but in this case, it is the hearer who is supposed to implement the task. The following question-answer pair is adapted from Pierrehumbert and Hirschberg (1990: 306).

(88) A: Does it snow a lot in New Jersey
                          H H%
     B: It does this year
          L L%

Very much along the same line, Steedman (2000) suggests that the distinction between the high boundary tone and the low boundary tone lies in whether the ownership is the hearer's or the speaker's. Specifically, the high boundary tone tends to indicate ownership of, or responsibility for, the information unit conveyed in the utterance by the hearer. He notes that the rather diverse collection of speech acts such as questioning, polite requesting, ceding or holding the turn, which have been ascribed to the high boundary tone in previous studies, can all be derived by the implicature from the marking of information unit as the hearer's. On the other hand, he suggests that the low boundary tone indicates ownership of the information unit by the speaker.

(89) and (90) are given by Steedman (2000: 665). In his examples, words bearing nuclear pitch accents are printed in small capitals, and phrase boundaries are marked by parentheses. Pierrehumbert's (1980) notation for the tones appears beneath each sentence.

(89) A: I know who proved SOUNDNESS. But who proved COMPLETENESS?
     B: #(MARCEL)   (proved COMPLETENESS).
          H* LH%   **L+H* LL%**

(90) A: I know which result Marcel PREDICTED. But which result did
          Marcel PROVE?
     B: #(Marcel   PROVED) (COMPLETENESS).
          L + H   L   H*   LH%

Steedman states that the **H* LH%** tune which comprises the high boundary tone, i.e., **H%**, on *MARCEL* and *COMPLETENESS* in the responses is infelicitous, because the answer to a wh-question cannot under normal circumstances be the responsibility of the original questioner, i.e., the hearer.

Besides the analyses mentioned above, there are plenty of studies on this subject. For instance, Cruttenden (1997) proposes that final high pitch is associated with a continuative 'open' meaning, whereas final low pitch is with a non-continuative 'closed' meaning. Following Pierrehumbert and Hirschberg (1990), Herman (2000) suggests that the high boundary tone signals that the phrase to come forms some kind of unit with the previous one, whereas the low boundary tone indicates that the information just given can be dismissed from the interlocutors' attention.

It is not possible for the current study to provide a complete introduction to all these analyses, nor is our purpose to get into the intricacies of the precise interpretation of intonation. Rather, I would like to suggest that we can look at the pitch variation displayed in Mandarin final particles in association with the boundary tones that have been detected cross-linguistically. I suggest that the high pitch is the perception of a high boundary tone on the final particle, and the low pitch is the perception of a low boundary tone on the final particle. Without making

any assumption as to whether one proposal has advantages over another, I will continue to use Chu's (2002) terms "addressee orientation" (or 'hearer orientation') and "speaker orientation" to refer respectively to the general meanings indicated by the high boundary tone and the low boundary tone.

2.4.3 *A* AS A DISCOURSE MARKER

Now turning back to the core function of the final particle *a*, following Chu (2002), I consider *a* to be a discourse marker, which functions to highlight the relevance of the utterance in which it occurs to the discourse context. Treating *a* as a discourse connective, we can explain Wu's (2004) observation, i.e., there is a connection between the use of *a* and the contexts where "contrast" or "deviance" exists. The reasoning is very much in line with Chu's (1998) explanation of the motivation for using *ne*. Namely, when an utterance is not obviously relevant to the discourse unit, the particle of relevance is especially needed to exhibit the speaker's effort to make his utterance relevant to the given context.

　　Reconsider some of the examples given by Wu. (70) is repeated below.

>　(70) W: Tā hái jiānchāi　　　　 ou.
>　　　　　3S still work-part-time PRT
>　　　　　'He also has a part-time job.'
>
>　　　 C: Zhè gè zěnme kāi?
>　　　　 this CL how　 open
>　　　　 'How to open this?'
>
>　　　 W: Sān tiān zài táidà,　　　　　　　 sān tiān zuò jì.
>　　　　　 three day at Taiwan-University three day do prostitute
>　　　　　 'Three days at Taiwan University, and three days as a prostitute.'
>
>　　　 C: Zhè yào　　 zěnme kāi　 **a**?[28]
>　　　　 this require how　 open PRT
>　　　　 'How do I open this?'

As noted by Wu, (70) shows a difficult situation where the speaker fails to get a response at the first time and tries to pursue it for the second time. Obviously, the predicament is attributed at least partly to the low degree of relevance of the question to the given context, i.e., there is no apparent connection between the content of the question delivered by C and the conversation that is going on between W and his audiences. The discourse marker *a* is thus employed to help increase the relevance, displaying that the speaker is making an effort to relate her question to the conversational environment, in this case, to call the hearers' attention to what is being asked.

　　The following example is repeated from (72).

>　(72) C: Kěshì huáháng　　　 gēn chángróng　　 dōu shì bǐjiào　　 guì　　　 de.
>　　　　　 but　 China-Airlines and EVA-Airlines all be relatively expensive PRT
>　　　　　 'But both China Airlines and EVA Airlines are more expensive.'

X: Jùshuō huáháng   hěn piányí **a**.
   hearsay China-Airlines very cheap PRT
   'I heard that China Airlines was very cheap.'

C: Tāmen gèng piányí.
   3PL   more cheap
   'They are cheaper.'

W: Bú   huì ba. Huáháng   hái shì hěn guì   **a**.
    NEG can PRT China-Airlines still be very expensive PRT
    'Not likely. China Airlines are still very expensive.'

X: Jùshuō xiànzài yǐjīng   bǐjiào   piányí le   **a**,
   hearsay now   already relative cheap PRT PRT

   kěshì yào rěnshòu shēngmìng --- rěnshòu shēngmìng de wēixiǎn.
   but   need bear   life   bear   life   DE danger
   'I heard that it has already become cheaper now, but you need to
    tolerate the risk of life.'

Different from (70), in (72) the contents of the *a*-suffixed sentences are evidently
relevant to the context. However, I mentioned earlier that if the particle was left out,
the utterances would sound more abrupt and definitive, whereas with *a* the speakers
seemed more concerned with the hearers' reaction. In other words, the addition of *a*
makes the speakers' participation in the conversation more activated. I suggest that
this effect is induced because *a* functions to increase the degree of relevance of the
utterance to the discourse unit.

    It should be noted that, in addition to the discourse function, Chu (2002) assigns
to *a* the core property of conveying "speaker's involvement". I think that this
addition is unnecessary. First of all, the function of highlighting relevance can fully
cover the various uses of *a*. Besides, establishing a particular connection between *a*
and the indication of "speaker's involvement" is disfavored for several reasons.

    Chu chooses to use "speaker's involvement" to characterize the core property of
a, partly because he considers Li's (1999) proposal to be inadequate. Li suggests
that the core property of the Taiwanese final particle *a*, which has a similar function
to the Mandarin final particle *a*, is to mark "information activation". Chu argues that
"most utterances, with or without the particle, seem to serve the function of
activating information equally well, in the sense that the speaker is indicating to the
addressee that the particular piece of information contained in the utterance is being
used for the purpose of communication within the context" (Chu 2002: 24).
However, as pointed out by Wu (2004), Chu's own proposal is not itself immune to
the problem, since "so far as a speaker chooses to produce an utterance about, or a
response to, a particular matter, he or she can be seen as indicating his or her
involvement in that matter" (Wu 2004: 33).

    Wu (2004) also mentions that there is always a wide array of possible ways in
which the speaker's involvement is well displayed, and yet many of them do not
involve *a*. This is indeed the case. For instance, it seems that *ne*, *ba* and *ma*, which

indicate speakers' particular attitudes towards the content of the utterance, all express a stronger sense of "speaker's involvement" than *a*. In the next section, we will look at all together the four final particles that we have discussed so far to compare their semantic contributions.

2.4.4 A COMPARATIVE SURVEY

Examining the distribution of *ne*, *ba*, *ma* and *a*, we find that *ne* can occur only with a few sentence types, whereas *a* can occur with almost all types of sentences; the distribution of *ba* and *ma* are less restricted than *ne* but more restricted than *a*. The following examples are excerpted from Chao (1968:804-5) (the labels are added by me), which demonstrate the occurrence of *a* in various sentence types.

(91) a. Declarative

    Wǒ bìng   méiyǒu zuò cuò   **a**.
    1S   on-the-contrary NEG-have do wrong PRT
    'I didn't do it wrong.'

  b. Yes/no question

    Nǐ bú qù **a**?
    2S NEG go PRT
    'You are not going?'

  c. A-not-A question

    Nǐ míng'er   chū-bù-chū-qù **a**?
    2S tomorrow out-NEG-out-go PRT
    'Are you going out tomorrow?'

  d. Wh-question

    Zhè gè bāoguǒ shì dǎ   nǎ'er lái   d'**a**?[29]
    this CL package be from where come PRT-PRT
    'Where did the package come from?'

  e. Imperative

    Shuō **a**! Bié   hàipà **a**!
    say   PRT don't afraid PRT
    'Say it! Don't be afraid!'

f. Exhortative

Zhè gè rén   de huà shì kào-bú-zhù d'**a**!   Nǐ bié
this CL person DE word be rely-NEG-on PRT-PRT 2S don't

shàng-tā-de-dàng **a**!
get-3S-DE-cheated PRT
'This man's word is unreliable, mind you! Don't you be fooled by him!'

g. Exclamative

Wǒ jiù   pǎo **a**,   pǎo **a**,   pǎo **a**! Pǎo dào tāmen
1S   then run PRT run PRT run PRT run till 3PL

gǎn-bú-shàng jiù   hǎo l'**a**!
catch-NEG-up then good PRT-PRT
'I ran and ran and ran! How nice it would be if I could run until they
couldn't catch up with me!'

These examples show that *a* is compatible with declaratives, interrogatives, imperatives, exhortatives, and exclamatives. However, *ne* cannot occur in imperatives, exhortatives, or exclamatives, and *ba* and *ma* are not allowed in exclamatives.

A question that arises is why there is such a distributional distinction among the final particles. I suggest that if a particle has a relatively specific meaning, its occurrence with different sentence types will be less flexible, presumably because incompatibility may arise between the semantics of the particle and the semantic nature of certain sentence types. Comparing *ne*, *ba*, *ma* and *a*, *ne* has the most specific meaning, expressing the evaluative mood on the part of the speaker. *Ba* and *ma* are more flexible than *ne*. They generally function to mark degrees, as long as the component is gradable. As for *a*, we have shown that it does not express any specific meaning, but is mainly pragmatically driven.

In the following, I will take a closer look at the difference between these final particles by comparing their uses in the same types of sentences. I will use Wu's (2004) data as the basis for our comparison. The four particles can all appear in declaratives and interrogatives. Let us first consider yes/no questions. (92) is excerpted from Wu (2004: 129-30).

(92) X: Nà gè lǐbài lǎobǎn bú zài a.
        that CL week boss   NEG at PRT
        'The boss won't be here that week.'

    T: Nà gè lǐbài lǎobǎn bú zài **a**?
        that CL week boss   NEG at PRT
        'The boss won't be here that week?'

     X: Duì   a.
        right PRT
        '(That's) right.'

     T: A   shénme shíhòu huílái?
        INTERJ what   time   return
        'And when (will you) come back?'

In section 2.3.2.1, I mentioned that in Mandarin a yes/no question does not need to be marked by any particular particle. In (92) the *a* in bold can be left out or replaced by *ba* or *ma*. See (93). The sentences are all grammatical, and maintain the yes/no question reading.[30]

(93) a. Nà gè lĭbài lăobăn bú zài?
       that CL week boss   NEG at
       'The boss won't be here that week?'

     b. Nà gè lĭbài lăobăn bú   zài **ma**?
       that CL week boss   NEG at   PRT
       'Will the boss not be here that week?'

     c. Nà gè lĭbài lăobăn bú   zài **ba**?
       that CL week boss   NEG at   PRT
       'The boss won't be here that week, right?'

In section 2.3.2.5, I mentioned that yes/no questions ending with *ma* indicate that the answer is highly unpredictable to the speaker, whereas those ending with *ba* indicate that the answer is highly predictable to the speaker. Yes/no questions without any degree marker stay at the intermediate level. This is what we see in (93). (93b) indicates that the speaker is not sure about the answer, whereas (93c) indicates that the speaker is quite sure about the answer. (93a) conveys more certainty than the *ma*-attached question and less certainty than the *ba*-attached question.

The observation is that the *a*-attached question given in (92) resembles (93a) in this respect. Namely, unlike *ba* and *ma*, the addition of *a* does not have any effect on the degree of predictability of the corresponding reply. Being a discourse particle, *a* serves to mark relevance to the speech situation and mainly performs an emotive or expressive function. What *a* contributes to the question in (92) is the indication that the speaker has just realized the situation claimed by the prior speaker, as if he is thinking aloud.

Note that while the *ba*-attached question is grammatical, it is infelicitous in the given context. It was mentioned earlier that in the context of (92) the question was posed because of the speaker's less-than-full grasp of what was just delivered by the prior speaker. In such a context it is not felicitous to produce a *ba*-attached question, which implies the speaker's strong belief or high confidence in the matter that is being questioned.

Now let us compare the uses of different final particles in wh-questions. (70) is repeated below.

(70) W: Tā hái jiānchāi   ou.
         3S still work-part-time PRT
        'He also has a part-time job.'

    C: Zhè gè zěnme kāi?
       this CL how   open
       'How to open this?'

    W: Sān tiān zài táidà,   sān tiān zuò jì.
       three day at   Taiwan-University three day do   prostitute
       'Three days at Taiwan University, and three days as a prostitute.'

    C: Zhè yào   zěnme kāi   **a**?
       this require how   open PRT
       'How do I open this?'

The *a* in bold can be replaced by *ne*, *ba* or *ma* (see (94)). The sentences are all grammatical, but they have different implications.

(94) a. Zhè yào   zěnme kāi   **ne**?
       this require how   open PRT
       'How do I open this?'

    b. Zhè yào   zěnme kāi   **ba**!
       this require how   open PRT
       '(I suggest you tell me) how I open this!'

    c. Zhè yào   zěnme kāi   **ma**!
       this require how   open PRT
       '(I insist you tell me) how I open this!'

Let us first compare *a* with *ne*. I mentioned earlier that both particles are felicitous in contexts where 'deviance' exists, but the 'deviance' related to *a* and to *ne* are of a different nature. As pointed out by Wu (2004), the 'deviance' that triggers the use of *a* is mainly circumstantial. In (70) the addition of *a* is triggered by the difficult situation that the speaker fails to get a response the first time, so she uses *a* as a strategy to highlight the relevance of the current question to the conversational situation. On the other hand, as pointed out by Chu (1998), the 'deviance' provoking the use of *ne* is in terms of the content of the utterance. In section 2.2.3.2, I suggested that the *ne* attached to wh-questions is an evaluative marker, which indicates that the speaker considers the matter that is being asked to be of significant importance. Thus while the addition of *a* shows the speaker's concern with other people's reaction, the addition of *ne* conveys the speaker's deep concern with the question proper. The former expresses something like '*Could any*

of you tell me how to open this?', whereas the latter conveys '*How to open this? ---This is really a question.*'

In the given context, the *ma*-attached sentence (i.e., (94c)) is as natural as the *a*-attached sentence, but the *ba*-attached sentence (i.e., (94b)) is less felicitous. In section 2.3.2.4 I showed that when attached to wh-questions, *ba* and *ma* mark different degrees with respect to the strength of the speaker's intention to have the hearer offer the answer. In particular, *ba* marks a low degree and thus a weak intention, whereas *ma* marks a high degree and thus a stronger intention. This explains why *ma* is more felicitous than *ba* in this context where a difficult situation or a predicament exists.

Although *ma* and *a* are both good in the given context, there is still a difference. With *ma*, the speaker tries to remedy the problem by overtly expressing her own insistence on pursuing the answer, whereas with *a* the speaker makes an effort to cut into the on-going conversation and attract the hearer's attention.

Finally, let us compare the uses of the four particles in declarative sentences. (71) is repeated below.

(71) H: Ei, wèishénme huì duō   yì wǎn fàn zài nàbiān?
         PRT why   can additional one CL rice at there
         'Hey, how come there is an additional bowl of rice over there?'

    X: Hái yǒu Victor **a**.
       still have Victor PRT
       'There is still Victor.'

The *a* in (71) can be replaced by *ne*, *ba* or *ma*. See (95).

(95) a. Hái yǒu   Victor **ne**.
        still have Victor PRT
        'There is still Victor.'

    b. Hái yǒu Victor b**a**.
       still have Victor PRT
       '(Probably) there is still Victor.'

    c. Hái yǒu Victor **ma**.
       still have Victor PRT
       '(Obviously/certainly) there is still Victor.'

Due to their distinct functions, when the same sentence ends with different final particles, it has different implications. The *a*-suffixed sentence conveys the overtone that the speaker thinks that the hearer should have known the answer and should not have posed the question in the first place. On the contrary, the *ne*-suffixed sentence indicates that the speaker considers what is being claimed to be unknown or unexpected to the hearer. The *ba*-suffixed sentence conveys the speaker's uncertainty, indicating that he is not totally committed to the assertion, whereas the

ma-suffixed sentence conveys the speaker's certainty, indicating that he is totally committed to the assertion.

2.4.5 CONCLUSION

What we have discussed in this section is the core function of the final particle *a*. Following Chu (2002), I suggest that *a* is a discourse marker, which functions to highlight relevance of the utterance in which it occurs to the discourse context. This analysis is confirmed by comparing the semantic function of *a* with that of the other three final particles, i.e., *ne*, *ba* and *ma*.

It has been observed that *a* may occur with a low pitch or a high pitch. I suggest that Chu's (2002) analysis of the pitch variation associated with *a* can be extended to the pitch variation associated with other final particles. In particular, I suggest that the low pitch is the perception of a low boundary tone that denotes "speaker orientation", and the high pitch is the perception of a high boundary tone that denotes "hearer orientation".

2.5 STRUCTURAL MAPPING OF MANDARIN FINAL PARTICLES

In this section I propose a syntactic analysis of the Mandarin final particles. Following the recent split CP hypothesis, my starting point is that what was traditionally conceived of as CP actually constitutes a conglomerate of functional projections. The basic assumption is that the final particles, which have been analyzed as complementizers since Tang (1988/1989), are heads of functional projections in the CP domain.

In the preceding sections I have argued that *ne* has the core function of marking evaluative mood, *ba* and *ma* have the core function of marking degrees, and *a* has the core function of highlighting discourse relevance. Mapping to the sentence structure, I propose that *ne* is generated in the head position of the functional projection, which I label 'EvaluativeP', *ba* and *ma* in the head position of the functional projection, which I label 'DegreeP', and *a* in the head position of the functional projection, which I label 'DiscourseP'.

In the following I try to establish a hierarchy of the functional projections headed by *ne*, *ba*, *ma* and *a*. Section 2.5.1 focuses on the syntax of the degree markers *ba* and *ma*. Section 2.5.2 examines the four particles together.

2.5.1 THE SYNTAX OF *BA* AND *MA*

Below I will first re-examine the CP system established by Rizzi (1997). Two functional projections will be focused on, which are crucial to the present discussion. Other projections will be mentioned when it is necessary. Then I will discuss the semantic interaction between the degree markers and different sentence types, which finally leads to my proposal of the syntactic derivation of *ba* and *ma*.

2.5.1.1 SENTENCE FORCE AND SENTENCE MOOD

In Rizzi's (1997) framework, he proposes that the complementizer system is closed off upward by Force and downward by Finiteness. Force encodes "clausal typing" information (in the sense of Cheng (1991)), distinguishing various sentence types: declarative, interrogative, imperative, etc. Finiteness specifies the distinction

between finite and non-finite clauses. In between Force and Finiteness, Topic and Focus may be activated. The structure is schematized as follows (cf. Rizzi 1997: 297):

(96) "The Fine structure of the left periphery"

    Force > (Top*) > (Foc) > (Top*) > Fin

In this thesis, I argue that the Force head proposed by Rizzi (1997) should be further split up into two distinct heads: Force and Mood. I suggest that Force is the functional head representing illocutionary force and conveying speech-act information. Following Lohnstein's (2000, 2001) definition of sentence mood[31], I assume Mood specifies the semantic content as well as the syntactic information, that is, the "clausal typing" information, which identify sentence types.

There is evidence suggesting that Force and Mood are not identical.

First, different types of sentences can be associated with the same illocutionary force potential, indicating the same range of speech acts that the sentences are used to perform. It is generally accepted that while declarative sentences perform assertive speech acts, imperative and interrogative sentences both perform directive speech acts, i.e., requesting action and information from the hearer, respectively. In the early performative analysis, which suggests that the grammatical and semantic structure of all sentences should be accounted for in terms of the embedding of a subordinate clause within an outer, or higher, performative main clause (e.g., Boyd and Thorne 1969, Householder 1971, Lakoff 1969, Ross 1970, Sadock 1974), a declarative sentence is considered to be dominated by a superordinate clause, which indicates an assertion, e.g., 'I say …', or 'I tell you …', while a question is considered to have a superordinate clause which has the effect of an imperative, e.g., 'You tell me …'.

Another piece of evidence is that every clause needs to be typed --- this is in the definition of the Clausal Typing Hypothesis (Cheng 1991, 1997), but not every clause conveys illocutionary force. For instance, Haegeman (2002) argues that an important distinction between two types of conditional clauses, as shown in (97), lies in the presence vs. absence of illocutionary force.

(97) a. "Premise-conditional"

    <u>If, as Bush and Blair maintain, they aim to leave Afghanistan better than it was when they found it</u>, then the west is committed to defend it against all oppressors, whoever they might be.   (Haegeman 2002: 121)

    b. "Event-conditional"

    <u>If your back-supporting muscles tire</u>, you will be at increased risk of lower-back pain.   (Haegeman 2002: 120)

She mentions that the premise-conditional often has an echoic interpretation, which comes down to saying that they echo a speech act, whereas the event-conditional does not have a speech-act potential.

The contrast exists between matrix clauses and embedded clauses as well. As pointed out by Haegeman (2002), clauses with Force cannot be embedded, unless they merge with a verb of speech, which can encode a speaker. Therefore, while matrix clauses are always associated with an illocutionary force, embedded clauses are not.

Furthermore, it is found that clause-type markers do not always occupy the highest position in the CP layer (Rizzi 1997: 328 (note 6), Rizzi 2001, Haegeman 2002). For instance, Haegeman (2002) provides evidence that 'Force', which she assumes to host clausal typing elements, occupies a lower position than other functional heads like Subordinator, Topic and Focus. This seems to diverge from Rizzi's original intention. He proposes Force to occupy the outermost position so that it can interact with the articulation of discourse. If we make a distinction between Force and Mood, we can maintain the assumption that Force is in a very high position, whereas it is Mood that occupies a lower position.

Due to these considerations, I propose that the complementizer system contains at least three functional heads, i.e., Force, Mood and Finiteness, which is schematized as follows:

(98) Force > Mood > Fin

Following Rizzi (1997), I consider Finiteness the specification distinguishing between finite and non-finite clauses. I further define Force as the functional head representing illocutionary force and conveying speech-act information. I suggest that the clausal typing information is not carried by Force but encoded on a distinct head, i.e., Mood. That is, Mood is the functional head which expresses the semantic and syntactic information that identify different sentence types.

I consider the relation between Force and Mood to be comparable to that between Finiteness and Tense. Namely, Force and Mood are correlated. The former represents a more abstract concept, whereas the latter conveys more specific information and displays more variation. I suggest that in the case of Mandarin there exist at least two types of Force, i.e., assertive and directive, and five distinct sentence moods.[32] I propose that the corelation between Force and Mood is as follows: except declaratives, which are associated with the assertive force, various interrogatives and imperatives are all associated with the directive force.

(99) Force > Mood

Ass	DEC
Dir	Y/N
Dir	WH
Dir	A-not-A
Dir	IMP

According to what we have seen so far, in Mandarin neither Force nor Mood is overtly marked.

2.5.1.2 DEGREEP

In section 2.3 I proposed that *ba* and *ma* are a pair of degree markers. Mapping to the sentence structure, I propose that the degree markers are base generated in the head position of the functional projection DegreeP. Now let us consider where DegreeP is located in the functional structure.

Previously I showed that when added to a declarative sentence, *ba* marks a low degree and *ma* marks a high degree with respect to the speaker's commitment to the assertion. In other words, with *ba* the speaker is not wholly certain about the factual status of the proposition and makes a weak assertion, whereas with *ma* the speaker has a firm judgment about the factual status of the proposition and makes a strong assertion. I suggest that in declarative sentences what is being scaled by the degree markers is sentence force. In particular, *ba* marks a low degree and *ma* marks a high degree in terms of the strength of the assertive force.

I showed that when *ba* and *ma* are attached to imperatives, they indicate different degrees with respect to the strength of the speaker's intention to have an action carried out. I suggest that in imperative sentences what is being scaled by the degree markers is also sentence force. In particular, *ba* marks a low degree and *ma* marks a high degree in terms of the strength of the directive force.

Recall that when occurring in yes/no questions, wh- and A-not-A questions, *ba* and *ma* make the same contribution as they do in imperative sentences. Namely, they indicate different degrees with respect to the strength of the speaker's intention to have an action carried out, more specifically, to have the hearer provide an answer.

This is not surprising given that while yes/no questions, wh-questions, A-not-A questions, and imperative sentences have different types of sentence moods, they are associated with the same kind of sentence force, i.e., the directive force. I suggest that in interrogative and imperative sentences what is being scaled by the degree markers is the directive force.

To sum up, I propose that what is being scaled by the degree markers is sentence force; in particular, *ba* marks a low degree and *ma* marks a high degree with respect to the strength of the assertive or directive force. Mapping to the sentence structure, I propose that the Degree head, which hosts the degree marker *ba* and *ma*, selects ForceP as its complement. The two functional heads are schematically presented as follows.

(100) Degree > Force

   ba, *ma* Ass
         Dir

2.5.2 THE STRUCTURE OF CP

In the beginning of this section I proposed that *ne* occupies the head position of EvaluativeP, *ba* and *ma* the head position of DegreeP, and *a* the head position of DiscourseP. Below I will establish a hierarchy of the functional projections. The

proposal that I will make is based on the evidence that when the final particles co-occur, they display a rigidly fixed order. I will first examine the relative order of *ne*, *ba*, *ma* and *a*. Then I will map the linear order into a hierarchical structure.

2.5.2.1 ON THE RELATIVE ORDER OF *NE*, *BA*, *MA* AND *A*

In the previous discussions we looked at the final particles separately. In fact, they can co-occur, and when they do, they obey certain order.

Let us first consider the co-occurrence of the evaluative marker *ne* and the degree marker *ba* and *ma*. *Ne* precedes both *ba* and *ma*. See the following examples (from CCRL).

(101) Jiē-shàng xíngrén   bù duō, dàgài   dōu zài jiā-zhōng
       street-up pedestrian NEG many probably all at   home-middle

       kàn   diànshì **ne ba/*ba ne**.
       watch TV
       'There are not many people in the street. Probably they are all at
        home watching TV.'

(102) Lǐ Miǎnníng hái méi gěi nǐ jièshào   wǒ shì shéi **ne ba/*ba ne**?
       Li Mianning still NEG to   2S introduce 1S be who
       'Li Mianning hasn't told you yet who I am, right?'

(103) Zhè yǒu rénjiā   Wáng Yùxiáng gè pì shì   **ne ma/*ma ne**.
       this have the-person Wang Yuxiang CL fart matter
       'This has damned nothing to do with Wang Yuxiang.'

(104) Zhè bù   hái rènshí   jiějie,   hái zhīdào jiùmìng **ne ma/*ma ne**?
       this NEG still recognize elder-sister still know save-life
       'Isn't it the case that you still recognize your elder-sister, still know to ask
        for help?'

These examples show that whether occurring in declarative sentences or in yes/no questions, *ne* always precedes *ba* and *ma*. The reverse order leads to ungrammaticality.

Ne precedes the discourse particle *a* as well. Since *a* begins with a vowel, it always links freely with the preceding consonants or vowels (Chao 1968: 796-7, 803). Thus when *ne* and *a* co-occur, phonological fusion may take place, yielding the form *n'a*. This is shown in (105) and (106) (from CCRL).

(105) Xiǎo-Wáng hái cáng zhe   zhè bǎobèi **n'a (ne a)/*a ne**.
       little-Wang still hide PROG this treasure
       'Little Wang's still kept this treasure.'

(106) Nǐ lǎogōng yě   zài pǎo-chuán **n'a (ne a)/*a ne**?
       2S husband also at   run-ship
       '(So) your husband is also working on the ship?'

In section 2.3.1.1, I mentioned that Han (1995) considered that *ba* and the *ma* used in yes/no questions could not co-occur, because both particles functioned on the "neustic" part, i.e., the former performed the function of "neustic weakening", and the latter the function of "neustic altering". In fact, the two particles can never co-occur, whether in yes/no questions, or in other types of sentences. See (107).

(107) a. *Hóngjiàn zài bàngōngshì **ba ma/ma ba**.
　　　　Hongjian at   office

　　　b. *Hóngjiàn zài bàngōngshì **ba ma/ma ba**?
　　　　Hongjian at   office

　　　c. *Jìn　　lái　　**ba ma/ma ba**!
　　　　enter come

　　　d. *Xiǎofú wèishénme bù　 lái　　**ba ma/ma ba!**
　　　　Xiaofu why　　　　 NEG come

　　　e. *Hóngjiàn qù-méi-qù xuéxiào **ba ma/ma ba!**
　　　　Hongjian go-NEG-go school

This follows naturally given our analysis that *ba* and *ma* are both degree markers, and thus in sentence structure they compete for the same position, i.e., the head of DegreeP.

Finally, let us consider the relative order between *ba* and *ma* on the one hand, and *a* on the other. Native speakers' judgment is as follows: the sequence '*ba a*' and '*ma a*' sound unnatural, but a deliberate prolonging of the vowel in *ba* and *ma* is possible. When the vowel is prolonged, the sentence sounds more serious and emphatic. On the other hand, native speakers consider the sequence '*a ba*' and '*a ma*' to be unacceptable.

(108) a. *Hóngjiàn zài bàngōngshì **a ba/a ma**.
　　　　Hongjian at office

　　　b. *Hóngjiàn zài bàngōngshì **a ba/a ma**?
　　　　Hongjian at   office

　　　c. *Jìn　 lái　 **a ba/a ba**!
　　　　enter come

　　　d. *Xiǎofú wèishénme bù　 lái　　**a ba/a ma!**
　　　　Xiaofu why　　　　 NEG come

　　　e. *Hóngjiàn qù-méi-qù xuéxiào **a ba/a ma!**
　　　　Hongjian go-NEG-go school

I suggest that the degree markers occur preceding the discourse particle. As for why '*ba a*' and '*ma a*' sound unnatural, I suggest that when the two particles co-occur, since both of them comprise the vowel [a], phonological fusion tends to take place, yielding the incorporated form *b'a* and *m'a*. This explains why when *ba* and *ma* are pronounced with a prolonged vowel, the sentence sounds more expressive and emphatic. This is an effect typically induced by the discourse particle *a*.

To summarize, I have shown that the final particle *ne*, *ba*, *ma* and *a* can actually co-occur, and when they do, the relative order is rigidly fixed. This can be seen by looking at the relative order of any pair of them, i.e., *ne* precedes *ba*, *ne* precedes *ma*, *ne* precedes *a*, *ba* and *ma* both precede *a*. By transitivity, the general order is the following: *ne* precedes *ba* and *ma*, which precede *a*. In the next section, I will establish a hierarchy based on this linear order.

2.5.2.2 TOWARD A HIERARCHY OF THE FUNCTIONAL HEADS

In the previous section I established the relative order of the final particles *ne*, *ba*, *ma* and *a*. The linear order of the final particles maps into the following hierarchy of the corresponding functional heads, which is schematically presented in (109).

(109) Discourse > Degree > Evaluative
      a   *ba*, *ma*   *ne*

In section 2.5.1.1, I proposed that the complementizer system comprises three basic functional heads. (98) is repeated below.

(98) Force > Mood > Fin

Let us consider how to incorporate the functional heads represented by the final particles into the framework of the complementizer system.

In section 2.5.1.2, I proposed that the Degree head is located above the Force head. Therefore we have the following scheme.

(110) Degree > Force > Mood > Fin

I have shown that the Discourse head is above the Degree head. The location of Discourse is illustrated in (111).

(111) Discourse > Degree > Force > Mood > Fin

I have shown that the Evaluative head is lower than the Degree head. As for the relative position of Evaluative and the other three functional heads, i.e., Force, Mood, and Finiteness, assuming that Finiteness is the starting point of the complementizer system, I suggest that Evaluative is higher than Finiteness. Besides, I suggest that Evaluative is higher than Mood for the following reason.

Gasde and Paul (1996) suggest that Mandarin final particles, which they generally treat as complementizers occupying the head position of CP, have scope over topics; namely, CP dominates TopP. Following their analysis, while I consider different final particles corresponding to different functional categories, I assume

that the functional categories headed by the final particles all have scope over the topics. That is, I assume the following hierarchy:

(112) Discourse > Degree > Evaluative > Top*

Previously I mentioned that Haegeman (2002) provided evidence suggesting that functional heads such as Topic and Focus are above the functional head that hosts clause-typing elements, which following Rizzi (1997) she calls 'Force'. The following scheme is adapted from Haegeman (2002: 164). [33]

(113) Sub > Top* > Foc > <u>Force</u> > Mod* > Fin

In section 2.5.1.1, I argued that the functional head that hosts clause-typing elements is not Force but Mood. If this is the case, then according to Haegeman (2002) it is Mood that is below Topic. Now if Evaluative is above Topic (as suggested in (112)), and Topic is above Mood, it leads to the conclusion that Evaluative is above Mood.

Finally, let us consider the relative position between Evaluative and Force. Cinque (1999) proposes that in the IP domain the functional category representing speech-act information is structurally higher than the functional category representing evaluative information, i.e., $Mood_{speech\ act} > Mood_{evaluative}$. I assume the same hierarchy in the CP domain; that is, the Force head which encodes speech-act information is higher than the Evaluative head which encodes evaluative information, i.e., Force > Evaluative.[34]

At this stage, we can sketch out a complete picture of the functional structure that comprises the Mandarin final particles *ne*, *ba*, *ma* and *a*.

(114) Discourse > Degree > Force > Evaluative > Mood > Fin
     a   *ba, ma*   *ne*

2.6 CONCLUSION

In this chapter I investigated the final particle system in Mandarin Chinese. Firstly, I examined the semantic functions of the Mandarin final particles *ne*, *ba*, *ma* and *a*, and contended that each particle conveys a core meaning. I proposed that *ne* is an evaluative marker, indicating that the speaker considers the content that is being claimed to be extraordinary or of particular importance. I proposed that *ba* and *ma* are degree markers, which scale on sentence force. More specifically, I suggested that *ba* marks a low degree and *ma* marks a high degree of the strength of the assertive or directive force. As for the final particle *a*, I suggested that it is a discourse marker, which functions to highlight relevance of the utterance in which it occurs to the discourse context.

I then mapped the final particles into sentence structure. I assumed that the final particles are heads of functional projections in the CP domain. Considering their semantic functions, I proposed that *ne* is generated in the head position of the functional projection EvaluativeP, *ba* and *ma* in the head position of the functional projection DegreeP, and *a* in the head position of the functional projection

DiscourseP. By examining their linear order, I established a hierarchy of the functional projections headed by the final particles. I concluded that the articulated structure of CP in Mandarin is as follows:

Discourse > Degree > Force > Evaluative > Mood > Fin
    a   *ba, ma*   *ne*

NOTES

1. Chao (1968: 801-2) distinguishes two *ne*-particles, but he does not specify the reason for the division. Besides the *ne* given in example (3), the other *ne* mentioned by Chao occurs in the final position of questions, in sentence-internal positions, and conveys "mild warning" (see (i)). In Li and Thompson (1981) (repeated in Chu (1998) and Wu (2005a)), (i) is considered to manifest a declarative use of *ne*.

   (i) "Mild warning: 'mind you!'"

       Zhè dào   hĕn wēi-xiăn **ne**
       this actually very dangerous PRT
       'This is rather dangerous, mind you!'

2. The examples in Chao (1968) are represented in Chinese characters, transcribed in GR system, and provided with English translations. The Pinyin transcriptions and English glosses are from me.

3. King states that evaluation "refers to the phenomenon of the speaker pointing out parts of his narrative as more crucial than others" (King 1986: 25). In the following discussion I will also use the notion 'evaluation' to define the core function of *ne*. But my definition is a little different from King's.

4. Readers may refer to Chu (1998) and Wu (2005a) for comprehensive reviews on the previous studies on *ne*.

5. While Li and Thompson (1981) make the distinction, they think that the question particle *ne* is semantically related to its declarative counterpart. For the details see Li and Thompson (1981: 300-307).

6. Neither Cheng (1991) nor Aoun and Li (1993) mention the declarative use of *ne*.

7. Chu (1998: 187) mentions that the term "topic framework" is adopted from Brown and Yule (1984: 73-78), according to whom it refers to the content of a discourse. Chu uses the term to mean something more along the line of the traditional "theme" of a discourse up to a given point.

8. Chu does not make a distinction between the *ne* used in declaratives and the one used in questions. The two uses of *ne* are discussed together. It should be noted that a rhetorical question differs from a typical question in that it has the illocutionary force of an assertion, which is of the opposite polarity from what is apparently asked (Sadock 1971). In this sense we may say that the use of *ne* in rhetorical questions is similar to its use in declarative sentences.

9. Huang (1991) suggests that A-not-A questions are on a par with wh-questions in syntax, but disjunctive questions should be treated differently.

10. The wh-questions ending in *ne* which are examined in Chu (1998) are all rhetorical questions. Note that rhetorical questions differ from typical wh-questions. See note 8.

11. I claim that the *ne* used in declaratives and the one in interrogatives are the same element, but note that they have the following two differences. First, Ōta (1987) and Sun (1999) among others point out that the two *ne* are developed from different origins. The *ne* in declaratives is developed from the locality word *lǐ* 'inside', whereas the one in questions from an Ancient Chinese final particle, i.e., *ěr*, which occurs in wh-questions.

    Besides, in nowadays Chinese, the *ne* in declaratives can occur with other final particles, such as *ba* (for the discussion on *ba* see section 2.3), whereas the *ne* in wh-questions cannot. This is shown in (i) and (ii).

    (i) Tā hái bù zhīdào zhè jiàn shì **ne ba**.
        3S still NEG know   this CL matter PRT PRT
        '(Probably) he still doesn't know this yet.'

    (ii) a. Nǐ dàodǐ   xiǎng zhīdào shénme **ne**?
            2S on-earth want know   what   PRT
            'What on earth do you want to know?'

        b. Nǐ dàodǐ   xiǎng zhīdào shénme **ba**!
            2S on-earth want know   what   PRT
            '(I suggest you tell me) what on earth you want to know!'

        c. *Nǐ dàodǐ   xiǎng zhīdào shénme **ne ba**!
            2S on-earth want know   what   PRT PRT
            INTENDED READING: '(I suggest you tell me) what on earth
            you want to know!'

    (iib) shows that the particle *ba* can occur with wh-questions. Thus the ungrammaticality of (iic) is not due to the incompatibility between *ba* and wh-questions. I do not have an explanation for this.

12. The examples given by Wu (2005b) are written in Chinese characters. The Pinyin transcriptions, the English glosses and translations are mine.

13. See Wu (2005b: 6-8) for the analysis of the thematic questions that are used as a conversation opener, e.g., *Māma ne?* 'Where's mum?', *Wǒ de bǐ ne?* 'Where's my pen?'.

14. For the syntactic analysis of conditional clauses that are used as topics, see Gasde and Paul (1996).

15. In Mandarin, there exists a group of internal particles which have the same phonological forms as their sentence-final counterparts. Besides the internal particle *ne* mentioned here, there are also *ba*, *ma* and *a*. They are usually considered topic (or theme) markers (cf. Chao 1968, Zhu 1982, Li and Thompson 1981, Fang 1994). In this thesis, I leave the internal particles out of the discussion.

16. In the literature the final particle *ma₂* is sometimes represented as *me* to avoid confusion with *ma₁* that occurs in yes/no questions, e.g., Chappell (1991), Chu (1998). Note that, like *ma₂*, *ma₁* can also be pronounced as *me*, ending with the unstressed vowel, i.e., a schwa. In this thesis, I will consistently represent the particle as '*ma₂*'.

17. Note that there is a difference in pronunciation between *ma₁* and *ma₂*: the former is perceived with a high pitch and the latter with a relatively low pitch. I will discuss the pitch variation associated with the final particles in section 2.4.2.

18. In my examples, I add modal adverbs and phrases to the English translations to signify the overtone induced by the final particles, but it does not mean that the final particles are functionally equivalent to the modal adverbs or modal phrases.

19. There is supporting evidence for the analysis that *ba* and *ma* perform modal functions. Tsai (2002) mentions that the final particle *ba* may license the polarity construals of the numerals *yī* 'one' and *èr* 'two'. Consider the following examples.

    (i) a. Wǒmen hē-le   yì-bēi jiǔ.
           1PL   drink-PERF one-CL wine
           'We drank a cup of wine.'

      b. Wǒmen hē   yì-bēi (jiǔ) **ba**.
         1PL   drink one-CL wine PRT
         'Let's drink some cups/#a cup of wine!'

(ii) a. Wǒmen hē-le   liǎng-bēi jiǔ.
　　　1PL   drink-PERF two-CL   wine
　　　'We drank two cups of wine.'

　b. Wǒmen hē   liǎng-bēi (jiǔ) **ba**.
　　　1PL   drink two-CL   wine PRT
　　　'Let's drink a couple/#two cups of wine!'

As pointed out by Tsai, in the scope of *ba*, *yī* is interpreted as an existential operator rather than a cardinal predicate, meaning 'some' or 'at least one', and *èr* is interpreted as 'a couple of' rather than 'two'. The final particle *ma* works in the same way. The solution seems to lie in the fact that *ba* and *ma* always involve intensional contexts or modality of some sort.

20. What should be noted is that *ma*-attached imperatives are often uttered in a coquettish tone, and *ba*-attached imperatives sometimes in an impatient tone. However, this does not lead to the conclusion that *ba* may mark a stronger directive than *ma*. Neither the sense of coquettishness nor the sense of impatience is inherent in the semantic contents of the two particles. A *ba*-attached imperative may also be expressed in a coquettish tone, so can a *ma*-attached imperative convey the speaker's impatience.

21. Recall that Han (1995) considers that a primary property of the *ba*-attached wh- and A-not-A questions is that they convey speaker's anger. She suggests that these questions imply that "the hearer had better watch out, and if he wants to avoid trouble, he should not do the contrary of what the speaker wants him to do" (Han 1995: 111). It is true that *ba*-attached wh- or A-not-A questions may convey a strong mood, such as impatience or exasperation. However, under certain circumstances, they can also be suggestive and tentative. Consider (i), which is uttered by a mother to her little child.

　(i) Nǐ xiǎng qù nǎ'er **ba**, bǎobao. Māma yídìng   dài nǐ qù.
　　　2S want go where PRT baby   mother definitely bring 2S go
　　　'(I suggest you tell me) where you'd like to go, baby. Mom will
　　　 definitely take you there.'

This sentence is most felicitously expressed in an affectionate way. It shows that the sense of indignation is not inherent in the semantic content of *ba*, but probably contextually derived.

22. It should be noted that Mandarin has tag questions as well. See (i).

　(i) Hóngjiàn zài bàngōngshì, duì-bú-duì?
　　　Hongjian at   office   right-NEG-right
　　　'Hongjian is in his office, is that right?'

    The tag can also be *duì ma* 'right PRT', *duì ba* 'right PRT', *shì-bú-shì* 'be-NEG-be', *shì ma* 'be PRT', or *shì ba* 'be PRT'. I will not go into the details. Generally speaking, Mandarin tag questions resemble the *ba*-attached questions in that they indicate that the answer is highly predictable to the speaker.

23. *A* has several phonological variants. The basic form is composed of a single vowel segment [a]. As a result of assimilation with the immediately preceding phoneme, [a] may be realized as [ia], [ua], [na], [ra], etc. (Chao 1968). For expository reasons, I ignore the phonological variants.

24. In Wu's examples, in addition to the regular three lines, i.e., the transcribed Mandarin sentence, the English gloss and translation, various aspects of interaction, such as overlapping talk, silence and other specifics are also noted. For the sake of convenience, I make some modifications in the excerpted examples, but care has been taken that the modifications do not affect the interpretation of the data.

25. The original example is represented in Chinese characters and has an English translation. The Pinyin transcription and the English gloss are mine.

26. Chu puts 'exclamation' in the list of the interpretations related to the high pitch. My informants as well as myself do not agree with his judgment (cf. Shie 1991). Consider (i).

    (i) Zhè ge háizi hěn cōngmíng **a** ↓
       this CL child very clever   PRT
       'This child is very clever!'

The above sentence is interpreted as an exclamative only if it is associated with a low pitch. If the low pitch is switched to a high pitch, it is not an exclamative, but interpreted as a refutation, e.g., 'This child is very clever. --- (how come you thought he's retarded!)'.
    In fact, that exclamatives go with the low pitch supports Chu's own analysis. Namely, exclamatives are speaker-oriented in the sense that they express the speaker's own opinion or realization of something that is remarkable.

27. In the sequence '**L L%**' and '**L H%**', '**L%**' and '**H%**' mark boundary tones, and '**L**' marks a low "phrase accent". Please refer to Pierrehumbert and Hirschberg (1990) for the discussion on "phrase accent".

28. Wu (2004) mentions that the boldfaced *a* in (70) is associated with a low pitch. My informants agree with me that this *a* can be associated with a high pitch as well, in which case the utterance expresses a stronger sense of eagerness on the part of the speaker who is urging the hearer to provide the

answer. This follows naturally given that the high pitch signals for "hearer orientation" (see the preceding section).

According to my informants (and I agree), except for *ma*, which is typically associated with a high pitch when occurring in yes/no questions and with a low pitch in other types of sentences, the pitch variation on *ne*, *ba* and *a* is rather flexible. For instance, in the same declarative sentence the final particle *ba* can be associated with either a low pitch or a high pitch. Consider the following examples (I thank Dylan Tsai for reminding me of this).

   (i) a. (Kàn-qǐ-lái)   Xiǎofú huì zuò yú **ba↓**
        look-up-come Xiaofu can cook fish PRT
        'It seems that Xiaofu probably can cook fish.'

     b. (Nǐ kàn,) Xiǎofú huì zuò yú **ba↑**
       2S see Xiaofu can cook fish PRT
       'You see, Xiaofu can cook fish.'

Both being declaratives, (ia) simply expresses the speaker's own opinion, while (ib) implies that the speaker wants to solicit agreement from the hearer.

Since a final particle that is used in the same context and attached to the same sentence may be associated with either a low pitch or a high pitch, as a result, expressing different overtones, for the sake of convenience, I will not mark the pitch variation in every example.

29. As mentioned by Chao, *d'a* is the fusion of the particle *de* and *a* (see also (f)). Similarly, *l'a* in (g) is the fusion of the particle *le* and *a*.

30. When *a* is replaced by *ne*, the yes/no question reading is no longer available. The sentence may either have a declarative reading (*ne* associated with a low pitch), or have a 'thematic question' reading (*ne* associated with a high pitch). See (i).

   (i) Nà gè lǐbài lǎobǎn bú zài **ne**
     that CL week boss   NEG at PRT
     LOW: 'The boss won't be here that week.'
     HIGH: 'What if the boss is not here that week?'

It is worth mentioning that the evaluative marker *ne* can appear in yes/no questions. See (ii).

   (ii) a. Nà gè lǐbài lǎobǎn bú   zài **ne** **ba**?
        that CL week boss   NEG at PRT PRT
        'The boss won't be here that week, right?'

b. Nà gè lǐbài lǎobǎn bú zài **ne ma**?
   that CL week boss   NEG at PRT PRT
   'Won't the boss be here that week?'

c. Nà gè lǐbài lǎobǎn bú zài **n'a**?
   that CL week boss   NEG at PRT-PRT
   'The boss won't be here that week?'

   However, when *ne* occurs alone, the yes/no question reading somehow becomes unavailable. I do not have an explanation for this.

31. Since in Rizzi's (1997) definition Force is related to clausal typing, Lohnstein considers Mood and Force to be different names for the same concept.

32. I am aware of the fact that a more careful study on the classification of Force and its relation to Mood is needed. I was reminded by Dylan Tsai that a wh-question may also perform the speech act of denying, e.g., *Tā zěnme huì shì lǎoshī?* 'How come he's a teacher?'. The speaker is actually rebutting, saying that 'he cannot be a teacher --- contrary to what you think'. Besides, I ignore exclamative sentences, which I hope to return to in future research. As far as *ba* and *ma* are concerned, hopefully the current analysis is sufficient.

33. For the discussion on Subordinator, see Bhatt and Yoon (1992), Bennis (2000), Haegeman (2002). For the discussion on Modifier, see Rizzi (2002).

34. Cinque (1999) notes that $\text{Mood}_{\text{speech act}}$ is located in the IP "space". It should be distinguished from Rizzi's (1997) Force, which is located in the CP "space". Nonetheless, Cinque mentions that adverbs such as 'frankly', 'honestly', 'sincerely', which are taken as specifiers of the speech-act mood head, may move to the spec of ForceP. Besides, he mentions that in languages like French evaluative and epistemic adverbs that are taken as specifiers of $\text{Mood}_{\text{evaluative}}$ and $\text{Mod}_{\text{epistemic}}$ in the IP "space" may also move to the CP "space". I assume that there is an inherent connection between $\text{Mood}_{\text{speech act}}$ in IP and Force in CP, so is there a close connection between $\text{Mood}_{\text{evaluative}}$ in IP and Evaluative in CP.

3. CANTONESE FINAL PARTICLES*

3.1 INTRODUCTION

In this chapter, I investigate the system of Cantonese final particles. Along the same line of the analysis of Mandarin final particles presented in chapter 2, I propose that the system of Cantonese final particles maps into a system of functional projections in the CP domain.

Cantonese has a much larger inventory of final particles than Mandarin. Estimates vary. Some studies identify over 30 monosyllabic forms (e.g., Kwok 1984, Ouyang 1990), and some report as many as 90 (e.g., Leung 1992). Like Mandarin final particles, Cantonese final particles have long been considered to convey a wide range of different meanings. The apparent complexity notwithstanding, some scholars observe that there exists a high degree of systematicity, which appears to underlie the connection between form and meaning. That is, phonologically similar particles also show semantic affinity. For instance, Fung (2000) suggests that particles with the onset *z* all have as their basic meaning "restriction". Matthews and Yip (1994) point out that particles with the rime *o* all convey a sense of "noteworthiness". Law (1990) states that particles with a low tone convey a stronger force than those with a high tone (see also Matthews and Yip (1994)).

The present study can be seen as a radical extension of the groundbreaking work done by Law (1990), who is the first one trying to examine the syntax and phonology of Cantonese final particles, and Fung (2000), who makes an important contribution to the discussion on the semantics of final particles that have phonological components in common. I will begin the discussion by showing that Cantonese final particles are semantically complex. That is, unlike Mandarin final particles, Cantonese final particles can be dissected into smaller meaningful units, i.e., onsets, rimes, tones and coda.

The main purpose of this chapter is to investigate how Cantonese final particles relate to sentence structure. After examining the internal formation of Cantonese final particles, i.e., decomposing them into more fundamental units in as far as that will turn out to be possible, I will assign each meaningful unit a position in the functional structure of sentence. Hopefully, this investigation will lead to a better understanding of the syntactic configuration of CP.

This chapter is organized as follows. Section 3.2 presents preliminary assumptions, lays out the task, and introduces the methodology. Section 3.3 investigates the internal formation of Cantonese final particles, dissecting them into more fundamental elements, and determining their core semantic functions. Section 3.4 focuses on mapping these meaningful units into sentence structure, exploring the functional makeup of the articulated complementizer system. Section 3.5 presents the conclusion.

3.2 PRELIMINARIES

The phonological formation of Cantonese final particles consists of four parts: the onset, the rime, the coda and the tone. My basic assumption is that there is a correlation between sound structure and interpretation. Namely, there exists a list of mean-

ingful initials, rimes, coda and tones. Cantonese final particles, which are composed of these meaningful units, are semantically complex.

On the basis of the particles reported in the literature (Cheung 1972, Yau 1980, Law 1990, Matthews and Yip 1994, Fung 2000, Fang 2003, Law 2004), I single out the following fourteen minimal units:

(1) Five initials: *g, l, m, n, z*
Three rimes: *e, aa, o*
One coda: *k*
Five tones: *1* [(55; 53)], *2* [(35)], *3* [(33)], *4* [(21; 11)], *5* [(13)]

These units in different combinations make up different final particles. Possible combinations are given in (2).

(2)[1]

	e	aa	o	-k
	Note 2	1, ø, 3, 4, 5 Note 3	(wo) ø, ø, 3, 4, 5 Note 4	aak3 Note 5
g	ø, 2, 3, ø, ø Note 6	ø, 2, 3, 4, 5 Note 7		aak3 Note 8
l	1, ø, ø, 4, 5 Note 9	1, ø, 3, 4, 5 Note 10	1, ø, 3, 4, ø Note 11	aak3 ok3 Note 12
m	1, ø, ø, ø, ø Note 13	ø, ø, 3, ø, ø Note 14		
n	1, ø, ø, ø, ø Note 15			
z	1, ø, ø, ø, ø Note 16	ø, ø, 3, 4, 5 Note 17		ek1 Note 18

* The chart is three-dimensional: initials (vertical), rimes (horizontal), and tones (marked by the numbers).

A question follows immediately: if the minimal units listed in (1) are indeed meaningful, what do they mean? As mentioned earlier, important work has been done by Law (1990) and Fung (2000). In the next section I will briefly introduce their analyses.

3.2.1 PREVIOUS STUDIES

Fung (2000) argues that final particles with the same initials share the same core meanings. She characterizes the core meanings of (the particles with) the initial *g*, *l*, and *z* as follows:

(3) *g*: +situationally given; +focus; + deictic
　　 l: +realization (of state)
　　 z: +restrictive

Examples are given in (4a), (4b), and (4c), respectively (from Fung (2000: 158, 78, 59)).[19]

(4) a. Aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4 **ge3**.
　　　　second-uncle will continue　send-back-come PRT
　　　　'(It is the case that) Second Uncle will continue to send them to us.'

　　 b. Ngo5 jiu3 heoi3 mei6-gwok3 **laa3**.
　　　　1S　　need go　　America　　 PRT
　　　　'(It's now the case that) I have to go to America.'

　　 c. Ji4-gaa1 zau6 waa6 hou2 **zaa3**.
　　　　now　　 then say　good PRT
　　　　'It's quite good at this moment only.'

Also according to Fung (2000), the coda *k* generally functions as an "emotion intensifier". For example, in (5) (from Fung (2000: 176)) only *gaak3*, which is a stronger variant of *gaa3*, is felicitous.

(5) A: Nei5 gau3-daam2　　 m4-wun2　　　aa1!
　　　　2S　　enough-bravery NEG-exchange PRT
　　　　'You dare not to do the exchange!'

　　 B: Gang2-hai6 gau3　**gaak3/*gaa3**, nei5 gu2　ngo5 paa3　nei5 aa4?
　　　　certainly　 enough PRT/PRT　　 2S　guess 1S　dread 2S　PRT
　　　　'(I) certainly dare, you think I am scared of you?'

As to the tones, a lot of work has been done by Law (1990). She makes the generalization that "a low tone is usually associated with a stronger force of an utterance; a high or rising tone generally conveys a weaker force; whereas a mid-level tone is relatively neutral" (Law 1990: 94). Accordingly, she proposes that the low tone corresponds to a tonal particle which functions as a "strengthener", and the high tone as a "weakener", whereas the mid-level tone is default.

Consider the examples given in (6) (from Law (1990: 109)). Law (1990) suggests that the particle *aa* is inherently toneless; when it is associated with different tonal particles, the utterances accordingly convey different forces. In particular, she states that (6a) sounds animated in tone, (6b) is a neutral statement, and (6c) expresses boredom or impatience on the part of the speaker.

(6) a. Keoi5 mou5   lei4 dou3 **aa1**.
     3S   NEG-have come arrive PRT
     '(As far as I know) he did not come.'

   b. Keoi5 mou5   lei4 dou3 **aa3**.
     3S   NEG-have come arrive PRT
     'He did not come.'

   c. Ngo5 dou1 waa6 keoi5 mou5   lei4 dou3 **aa4**.
     1S   all say 3S   NEG-have come arrive PRT
     'I've told you he did not come.'

It should be mentioned that Law (1990) suggests that there exists another high tone, which serves to mark what she calls "echo questions". Consider (7) (Law 1990: 91).

(7) a. Zoeng1 go2 tiu4 kwan4 ling1 heoi3 tong**3** [33]!
     take   that CL dress bring go   iron
     'Go get that dress ironed!'

   b. Zoeng1 go2 tiu4 kwan4 ling1 heoi3 tong**2**[35]?
     take   that CL dress bring go   iron
     'Did you say "go get that dress ironed?"'

In (7), the high tone affects the tone of the lexical item in sentence final position, and turns the sentence into an echo question.

Finally, when it comes to the rimes, little systematic work has been done, although Law (1990) has made some insightful comments. For instance, she claims that *aa* (see (6)) and *e* may operate as independent particles. Nevertheless, the central semantics of *aa* remains unclear in her discussion, and the independent status of *e* is not confirmed by others.[20]

3.2.2 TASKS AND METHODS
Inspired by previous works and endeavoring on a more systematic and comprehensive analysis of Cantonese final particles, I set the following tasks for the discussion that follows:

(i)   Determine what the core meaning of each minimal unit is.
(ii)   Examine whether the actual particles are indeed derived by combining the minimal units in the way as suggested in chart (2).
(iii)   Check how the dissection of Cantonese final particles maps to the functional structure of sentence.

Task (ii) and (iii) can be done only after task (i) has been implemented successfully. I propose to accomplish task (i) by using two methods.

(I)   Look at all particles that have one minimal unit in common, e.g., the same initial, the same tone, etc. See whether their common unit correlates with a common ground in meaning.
(II)   Look at sets of minimal pairs and see whether they reveal regular semantic differences.

For example, with respect to method (I), I look at groups of particles with one element in common, such as all the particles starting with the initial *g* (see (8)), or all the particles ending with the tone *5* (see (9)), and see if they share semantic affinities.

(8) *ge2, ge3, gaa2, gaa3, gaa4, gaa5, gaak3*

(9) *aa5, wo5, gaa5, le5, laa5, zaa5*

In regard to method (II), I look at minimal pairs of particles, for example, with the rime *e* versus those with *aa* (see (10)), or minimal pairs involving the tone *1* in contrast to tone *4* (see (11)), and determine whether there are any regular semantic differences.

(10) *ge2* vs. *gaa2*
     ge3 vs. *gaa3*
     le4 vs. *laa4*
     le5 vs. *laa5*

(11) *aa1* vs. *aa4*
     le1 vs. *le4*
     laa1 vs. *laa4*
     lo1 vs. *lo4*

In the next section, I aim to implement task (i) and (ii). Task (iii) will be taken up in section 3.4.

3.3 DISSECTING CANTONESE FINAL PARTICLES
In this section, I focus on the internal formation of Cantonese final particles. I will first examine the core semantics of the minimal units. In particular, I will use method (I) and/or (II) to examine particles in constantly changing sets. Each particle

will be presented with a brief characterization of its meaning on the basis of the published sources and the judgments by my informants.[21] As the discussion proceeds, I will revise the inventory of minimal units listed in (1) and re-check the combinations illustrated in (2).

3.3.1 THE INITIALS

In the following subsections I examine the semantics which can be ascribed to the initials. I start with the three well-studied initials, i.e., *g*, *l* and *z*. Then I turn to the initial *m*, which occurs only in the particles that are used in questions. Finally, I discuss the initial *n*, which is found only in the final particle *ne1*.

3.3.1.1 THE INITIAL *G*

In our inventory seven final particles start with the initial *g*: *ge3*, *gaa3*, *gaak3*, *gaa4*, *gaa5*, *ge2*, and *gaa2*. The observation is that all the *g*-particles are involved in asserting (or questioning the assertion of) the factuality of the content conveyed by the sentence that they are attached to. Let us look at them one by one.

GE3

Ge3 is generally considered an assertion marker: it shows that "the sentence is a factual statement expressing what the speaker regards as true. It is used to strengthen the force of assertion, and is like prefacing the sentence with 'It is a fact'" (Kwok 1984: 42, quoted in Lee and Yiu (1998: 10)); it "indicates the speaker's commitment to the truth of an assertion" (Law 1990: 96); it is "used for assertions of facts, often marking focus or emphasis" (Matthews and Yip 1994: 349); it "marks a high level of commitment on the part of the speaker to the proposition conveyed by the utterance, asserting the certainty of the proposition without any doubts" (Fung 2000: 157) or "emphasizes that the situation is given as a fact" (Fung 2000: 149, see also Leung (1992: 120)). Sybesma (2004) suggests that *ge3* is probably best characterized as an "actuality marker", asserting that the statement to which it is added is highly relevant to the current conversation. Compare the following two sentences (based on Fung (2000: 158)).[22, 23]

(12) a. Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4.
      that-CL-book second-uncle will continue send-back-come
      'As to those books, Second Uncle will continue to send them to us.'

    b. Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4 **ge3**.
      that-CL-book second-uncle will continue send-back-come PRT
      'As to those books, it is for sure that Second Uncle will continue to
       send them to us.'

(12a) and (12b) differ only in whether *ge3* is absent or present. While (12a) is a neutral statement without indicating the speaker's commitment to it, (12b) indicates that the speaker is highly committed to what is being asserted.

GAA3

Gaa3 is essentially the same as *ge3*, i.e., it also asserts factuality, but with *gaa3* the utterance sounds somewhat softer. Besides, Fang (2003: 133) mentions that *gaa3* may add to the utterance a sense of 'reminding'.

Consider (13). Our informants report that compared with (12b), (13) is still asserting but the tone is softer.

(13) Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4 **gaa3**.
  that-CL-book   second-uncle will continue   send-back-come PRT
  'You know, as to those books, it is for sure that Second Uncle will continue to send them to us.'

GAAK3

Fung (2000) calls *gaak3* the "emotion intensifier of *gaa3*" (Fung 2000: 176). She observes that *gaak3* often occurs with utterances containing "intensified adverbs" such as *gang2-hai6* 'definitely' (see (5)), but she does not make it very clear in what sense *gaak3* emotionally intensifies *gaa3*. Fang (2003: 60, 136) notes that *gaak3* is especially used to assert with surprise or indignation that a certain situation prevailed in the past despite current appearances to the contrary, as if the speaker wants to remind himself of how things used to be. (14) is adapted from Fang (2003: 136).

(14) Nei5 wong5-jat6 san1-tai2 hou2-hou2 **gaak3**.
  2S   in-the-past body   good-good PRT
  'You used to be in such good shape!'

My informants agree. They report that *gaak3* is often used when the speaker argues against an assumption or belief held by the hearer. For example, the *gaak3*-suffixed sentence given in (15) suggests that the speaker disagrees with the hearer's assumption that Second Uncle is not going to send us those books (the assumption may be implicitly indicated or explicitly expressed in the previous context).

(15) Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4 **gaak3**.
  that-CL-book   second-uncle will continue   send-back-come PRT
  '(Contrary to what you think,) as to those books, surely Second Uncle will continue to send them to us.'

Comparing (15) with (13), while both are used to remind the hearer of certain situation that the speaker also believes to be true, (15) further implies that the current assertion is made to correct the wrong assumption held by the hearer. In this sense, I think Fung (2000) is right in claiming that *gaak3* is emotionally more intense than its unchecked counterpart.

Let us compare the three *g*-particles all together. The example sentences are adapted from Fang (2003: 60, 145). *Ge3*, *gaa3* and *gaak3* are added to each sentence.

(16) a. Ngo5 dim2 dou1 wui5 bong1 nei5 **ge3**.
1S   how all   will help 2S   PRT
'I will surely help you under all circumstances!'

b. Ngo5 dim2 dou1 wui5 bong1 nei5 **gaa3**.
1S   how all   will help 2S   PRT
'(You know,) I will surely help you under all circumstances!'

c. Ngo5 dim2 dou1 wui5 bong1 nei5 **gaak3**.
1S   how all   will help 2S   PRT
'I will surely help you under all circumstances! --- (contrary to what you
 seem to think)'

(17) a. Gwong2-dung1-jan4 sik6 lou5-syu2 **ge3**.
Cantonese-people   eat mouse   PRT
'It is indeed the case that Cantonese people eat mice.'

b. Gwong2-dung1-jan4 sik6 lou5-syu2 **gaa3**.
Cantonese-people   eat mouse   PRT
'(You know,) it is indeed the case that Cantonese people eat mice.'

c. Gwong2-dung1-jan4 sik6 lou5-syu2 **gaak3**.
Cantonese-people   eat mouse   PRT
'It is indeed the case that Cantonese people eat mice. --- (as is the com-
 mon knowledge but what you seem to be surprised about)'

It shows that while the *ge3*-suffixed sentences simply assert the factuality of the propositional content, the *gaa3*-suffixed sentences add to a sense of 'reminding' and alleviate the tones. The *gaak3*-suffixed sentences are emotionally more intense in the sense that they usually convey the speaker's refutation with respect to the hearer's assumption or belief.

GAA4
Fung (2000) states that *gaa4* "turns a factual declarative into a question"; "it double-checks the existence of a given situation, or the assumption of the situation conveyed by the declarative" (Fung 2000: 177). Fang (2003: 72, 145) has a similar opinion. The following examples are excerpted from Fang (2003: 145).

(18) a. Gwong2-dung1-jan4 sik6 lou5-syu2 **gaa4**? (cf. (17))
Cantonese-people   eat mouse   PRT
'So Cantonese people eat mice?'

b. Nei5 gin3-saam1 gam3 gwai3   **gaa4**?
2S   CL-shirt   so   expensive PRT
'So your shirt is so expensive?'

Let us compare (19) with (12b), (13) and (15).

(19) Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6 gei3-faan1-lei4 **gaa4**?
     that-CL-book   second-uncle will continue   send-back-come PRT
     'So, as to those books, Second Uncle will really continue to send them to us
     then?'

While (12b), (13) and (15) all convey the speaker's assertion of the factuality of the
given situation (though with different overtones), (19) indicates that the speaker has
just realized that this is the situation, asking something like 'Is it really a fact that
…?'.

GAA5

Gaa5 is not mentioned in every published source, nor is it recognized by all my in-
formants. For the informants who have this particle, they point out that the use of
gaa5 is very similar to that of *gaa4*, i.e., it is also used for seeking confirmation,
except that with *gaa5* the speaker shows more certainty about what the answer
would be. Besides, they note that *gaa5* can be pronounced as *ge3 aa5* as well.

GE2

The published sources generally agree on that *ge2* can occur in two types of sen-
tences, i.e., declaratives and interrogatives (e.g., Law 1990, Fung 2000, Fang 2003).
As for the *ge2* used in declaratives, Law (1990: 96) states that compared with *ge3*,
ge2 "suggests that the speaker's commitment is of a lesser degree". Similarly, Fung
(2000: 161) claims that *ge2* in declaratives mainly conveys "the speaker's reserva-
tion or uncertainty about a situation". This is shown in (20) and (21) (excerpted from
Fung (2000: 168) and Fung (2000: 162), respectively). Fung (2000) points out that
ge2 is infelicitous in (21) due to its incompatibility with the modal verb of certainty,
i.e., *gang2-hai6* 'must be'.

(20) a. Nei5 hai6 dak1   **ge3.**
        2S   be   competent PRT
        'You are competent.'

     b. Nei5 hai6 dak1   **ge2**.
        2S   be   competent PRT
        'You are competent --- (but …)'

(21) a. Go2 go3 gang2-hai6 sing4-lung4 lei4 **ge3**.
        that CL must-be   Jacky-Chan PRT PRT
        'That one must be Jacky Chan.'

     b. ?Go2 go3 gang2-hai6 sing4-lung4 lei4 **ge2**.
        that CL must-be   Jacky-Chan PRT PRT

Fung (2000) suggests that *ge2* also has an explanatory function, marking "the situation given as an explanation to another known situation" (Fung 2000: 164). This is shown in (22) (Fung 2000: 165).

(22) a. Hai6 keoi5 dak1-zeoi6 ngo5 sin1 **ge3**.
      be   3S   pick-on   1S   first PRT
      'He is the one who picked on me first.'

   b. Hai6 keoi5 dak1zeoi6 ngo5 sin1 **ge2**.
      be   3S   pick-on   1S   first PRT
      'He is the one who picked on me first --- (that's why.)'

My informants basically agree with Law (1990) and Fung (2000), but they find that sentences ending with *ge2* most frequently convey the sense of 'reservation' or 'concession' rather than 'uncertainty'. They report that the *ge2*-suffixed sentences imply that although the speaker admits the factuality of the situation that is being claimed, he has something else to say. Consider (23).

(23) a. Gwong2-dung1-jan4 sik6 lou5-syu2 **ge2** … (cf. (17), (18a))
      Cantonese-people   eat   mouse   PRT
      'It is the case that Cantonese people eat mice --- (but it's not our favorite
       food.)'

   b. Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6
      that-CL-book   second-uncle will   continue

      gei3-faan1-lei4 **ge2** … (cf. (12b), (13), (15), (19))
      send-back-come PRT
      'As to those books, surely Second Uncle will continue to send them to
      us --- (though not in the way you seem to think.)'

   c. Ngo5 dim2 dou1 wui5 bong1 nei5 **ge2** … (cf. (16))
      1S   how   all   will help   2S   PRT
      'I will surely help you under all circumstances --- (but you should not
      only count on me.)'

Ge2 can occur in interrogatives as well. Most often it occurs with *why*-questions and reinforces the 'why' or 'how come' reading. Consider the following examples (based on Fang (2003: 43)).

(24) a. Dim2-gai2 keoi5 sau3 dak1 gam3 sai1-lei6 **ge3**?
      why   3S   thin DAK so   severe   PRT
      'Why has he lost so much weight?'

   b. Dim2-gai2 keoi5 sau3 dak1 gam3 sai1-lei6 **ge2**?
      why   3S   thin DAK so   severe   PRT
      'Why/how come he's lost so much weight?'

My informants report that compared with (24a), (24b) conveys a stronger sense of surprise on the part of the speaker.

   Ge2 may also occur with other wh-questions and A-not-A questions.[24] This is shown in (25).

   (25) a. Hau6-min6 gei2-si4 hoi1-ci2 jau5 tiu4 ho4   **ge3/ge2**?
            back-side when   start   have CL river PRT PRT
            'When does it begin to have a river in the back?'

        b. Bin1-go3 tai2 gwo3 nei3 bun2 syu1   **ge3/ge2**?
           who   see EXP that CL   book PRT PRT
           'Who read that book?'

        c. Hau6-min6 hai6-m4-hai6 jau5 tiu4 ho4   **ge3/ge2**?
            back-side   be-NEG-be   have CL   river PRT PRT
            'Is it true that there is a river in the back?'

        d. Aa3-ji6-suk1 wui5-m4-wui5 luk6-zuk6 gei3-faan1-lei4 **ge3/ge2**?
           second-uncle will-NEG-will continue mail-return   PRT PRT
           'Will Second Uncle continue to send them back?'

My informants report that the questions ending with *ge3* sound plain and sometimes abrupt. As for the questions ending with *ge2*, they occur in special contexts, e.g., the speaker is talking to a child and launches the question as a hint to elicit information from the hearer.

   Now consider (26) (Fung 2000: 159). It seems that *ge2* in (26b) has the function of turning a statement into a question.

   (26) a. Hau6-min6 jau5 tiu4 ho4   **ge3**.
            back-side   have CL   river PRT
            '(That place) has a river running at the back.'

         b. Hau6-min6 jau5 tiu4 ho4   **ge2**?
            back-side   have CL   river PRT
            'There is a river running at the rear, how come?'

I argue that *ge2* does not function to mark questions. *Ge2* is not a yes/no question particle. (26b) is not a yes/no question asking whether it is true that there is a river running at the rear. Nor is it a wh-question particle. (26b) is not a wh-question, as it does not comprise any wh-word. As for the *ge2* attached to wh-questions (see (24) and (25)), it is not a wh-question particle, either. Whether it is there does not affect the grammaticality of the sentences, but when it occurs, it contributes extra meaning to the questions.

   I suggest that in (26b) *ge2* is basically the same as *ge3*, i.e., asserting the existence of a given situation, but it conveys in addition a strong sense of surprise or unexpectedness. That is how the 'why' or 'how come' reading arises. Namely, when

the speaker externalizes his doubt or disbelief, it follows naturally the implication that he is expecting an explanation.

GAA2

According to Fung (2000: 171 ff.), *gaa2* usually conveys the speaker's doubt or disbelief. With this particle, the speaker assumes the existence of certain situation, and is puzzled by the fact that this assumption turns out to be incorrect. It is observed that *gaa2*-suffixed sentences often occur with a subsequent clause, which describes the situation of reality, which is contrary to the speaker's assumption. Consider the following sentences.

(27) a. Gwong2-dung1-jan4 sik6 lou5-syu2 **gaa2**. (cf. (17), (18a), (23a))
          Cantonese-people   eat mouse   PRT
          '(I thought that it was a fact that) Cantonese people eat mice --- (so why
           is it not on the menu? / So why aren't there any mouse farms?)'

      b. Go2-di1-syu1, aa3-ji6-suk1 wui5 luk6-zuk6
          that-CL-book   second-uncle will continue

          gei3-faan1-lei4 **gaa2**. (cf. (12b), (13), (15), (19), (23b))
          send-back-come PRT
          'As to those books, (I thought it was a fact that) Second Uncle will con-
           tinue to send them to us --- (so why are you throwing away our book-
           shelves?)'

Also according to Fung (2000), *gaa2* can be added to interrogative sentences such as wh-questions, "conveying an exhortative sense" (Fung 2000: 175). (28) is adapted from Fung (2000: 174).

(28) Dim2-gai2 m4 gin3 keoi5 **gaa2**?
      why   NEG see 3S   PRT
      'Why isn't he here? --- (Answer me; this is the question!)'

INTERIM CONCLUSION

Considering the semantic contributions of the *g*-particles, we can formulate the following generalizations. First, all the *g*-particles are involved in asserting factuality or involved in questioning thereof. Therefore, I assign the core semantic function of 'asserting factuality' to the initial *g*.

The second conclusion is that *ge3* seems to literally express the core meaning, and the meanings of other *g*-particles can be characterized as that of *ge3* plus something else. What this something else is and whether it can be linked to the minimal units that constitute the *g*-particles will be investigated in the subsequent sections.

3.3.1.2 THE INITIAL *L*

In our inventory *l*-particles are almost twice as many as *g*-particles. They are *le1*, *le4*, *le5*, *laa1*, *laa3*, *laak3*, *laa4*, *laa5*, *lo1*, *lo3*, *lo4* and *lok3*. Fung (2000: 74) claims that the core semantic feature shared by *l*-particles is "realization of state-of-affairs".

Laa3 seems to be the particle that expresses this core meaning most literally, so let us start our discussion with this particle.

LAA3

According to Fung (2000: 93 ff.), *laa3* functions to mark "realization of state". The information conveyed by *laa3* is best paraphrased as 'It is now the case that …', implying that it was not the case earlier --- at least, not that the interlocutors were aware of. The following examples are adapted from Fung (2000: 78, 79) and Fang (2003: 103), respectively.

> (29) a. Ngo5 jiu3 heoi3 mei5-gwok3 **laa3**.
>   1S   need go   America   PRT
>   '(It is now the case that) I have to go to America.'
>
> b. Ai1jaa3, gam1-jat6 jaa6-ng5   hou6 **laa3**.
>   oh   today   twenty-five day   PRT
>   'Oh, today it's already the 25th!'
>
> c. Lok6 jyu5 **laa3**.
>   fall   rain PRT
>   'It's raining now.'

Take (29c) for example. It implies that just a moment ago, or at least the last time the speaker looked out of the window, it was not raining, but now a change of state has taken place. Fung (2000) notes that the "realization of state" indicated by *laa3* can be either objective, i.e., the speaker is reporting a change that is realized in the physical world, or subjective, i.e., the speaker is expressing his sudden awareness of a situation, which may have already lasted for a while in the real world.

Fung (2000) mentions that in addition to marking the beginning of a new state, *laa3* can be used to mark the beginning of a new action (see (30a), excerpted from Fang (2003: 105)), or to mark the completion of a previous state, hence signaling the commence of a new state (see (30b)).

> (30) a. Coet1 gaai1 **laa3**.
>   out   street PRT
>   'We are going out now.'
>
> b. Ngo5 sik6-jyun4 **laa3**.
>   1S   eat-finish   PRT
>   'I'm done eating.'

Moreover, Fung (2000) points out that *laa3* can also be used to indicate that the speaker is adding new information to the hearer's background knowledge, hence bringing the hearer into realization of what is being claimed. This is shown in (31) (Fung 2000: 94).

(31) Ni1 go3 zau6 giu3-zou6 zok3-on3   dung6-gei1 **laa3**.
    this CL   then call   commit-crime motivation PRT
    'This is what is called the motivation for committing the crime.'

Some researchers consider that *laa3* can turn a statement into a directive (e.g., Leung 1992, Matthews and Yip 1994, Fang 2003). However, a closer look at all the examples that supposedly illustrate this usage shows that the directive force comes from other components or from the sentence structure rather than from the particle. What *laa3* contributes to these sentences is still marking "realization of state" (see also Fung (2000: 95)). The following examples are given by Fang (2003: 159).

(32) a. Ngo5-dei6 hou2 zau2 **laa3**.
      1PL   good leave PRT
      'We'd better go. / It's time for us to go.'

    b. M4-hou2 gong2 gam3 do1   **laa3**!
      NEG-good speak so   much PRT
      'Don't talk so much any longer!'

(32a) is understood as an announcement --- 'now it is time for us to go', rather than a suggestion --- 'let's go'. In (32b), the use of *laa3* explicitly indicates a change of state; that is, from the situation of people talking a lot to the new state that no one talks so much. The directive force is expressed separately, presumably by morpho-syntactic means.

LAAK3
Qua meaning, *laak3* is essentially the same as its unchecked counterpart, but it is less neutral in the sense that it expresses more emotional involvement of the speaker.[25] Sentences ending with *laak3* usually imply that the new situation has some consequences on the speaker, and that is why he is so concerned about it. Consider the following examples.

(33) a. Lok6 jyu5 **laak3**. (cf. (29c))
      fall   rain PRT
      'It's started raining. --- (so what are we going to do now?)'

    b. Ngo5 sik6-jyun4 **laak3**. (cf. (30b))
      1S   eat-finish PRT
      'I'm done eating. --- (so I'm off to work)'

Compared with (29c) and (30b), our informants think that the situations conveyed in (33a) and (33b) seem to matter more to the speaker.

LAA4
Fung (2000) and Fang (2003) report that sentences ending with *laa4* are interroga-tives checking whether a certain event did take place, or whether a new state did come about. Consider (34) (Fung 2000: 103, Fang 2003: 70).

(34) a. Lok6 jyu5 **laa4**? (cf. (29c))
　　　　fall rain PRT
　　　　'So it is raining now?'

　　b. Lei5 sik6-jyun4 **laa4**? (cf. (30b))
　　　　2S   eat-finish PRT
　　　　'So you're done eating?'

LAA5

Like *gaa5*, *laa5* is not mentioned in every published source, nor is it recognized by all my informants. My informants who have *gaa5* also have *laa5*. According to them, the connection between *laa4* and *laa5* is similar to that between *gaa4* and *gaa5*. Namely, while both are used for seeking confirmation, with *laa5* the speaker shows more certainty about what the answer would be. *Laa5* can be pronounced as *le aa5* as well.

LAA1

Kwok (1984) suggests that in comparison to *laa3*, *laa1* indicates tentativeness, a lack of finality or a lack of forcefulness. Luke (1990) suggests that *laa1* establishes common grounds and marks obviousness. Fung (2000) accounts for the difference between *laa1* and *laa3* in terms of the speaker's assumption regarding the hearer's knowledge of states of affairs. In particular, she suggests that with *laa3* the speaker has no particular assumption about the hearer's knowledge, whereas with *laa1* the speaker assumes the hearer has the knowledge.

(35) a. Ngo5 jiu3 heoi3 mei5-gwok3 **laa1**. (cf. (29a))
　　　　1S   need go   America   PRT
　　　　'(It is now the case that) I have to go to America --- (as you should have known.)'

　　b. Keoi5 sik6-jyun4 **laa1**. (cf. (30b))
　　　　3S   eat-finish PRT
　　　　'(Obviously/as you should have observed) he's done eating now.'

　　　In addition to declarative sentences, *laa1* is frequently used in imperative sentences as well. Fung (2000) suggests that in imperatives *laa1* still conveys the core meaning of "realization of state-of-affairs", except that "the speakers do not declare the realization of state-of-affairs in the real world; instead, they envisage the realization of the state-of-affairs in the potential world" (Fung 2000: 82).

　　　It should be noted that *laa1* in imperatives has been claimed to express various emotive meanings. For instance, Cheung (1972) and Kwok (1984) treat *laa1* as a marker of polite request, since it indicates a lack of forcefulness. However, Fung (2000) finds that imperatives ending with *laa1* may sound direct and forceful as well. My informants agree. Consider the following example.

(36) Faai3-di1   sik6 **laa1**!
    quick-a-bit eat   PRT
    'Eat a bit faster!'

According to my informants, if (36) is addressed by a hostess to her guests, it may sound friendly and hospitable, but if it is delivered by a mother to her naughty child, it may be conveyed in an impatient tone. I suggest that neither friendliness nor impatience is directly conveyed by the particle, but they are pragmatically implicated.

LE4

Le4 occurs only in imperatives. Kwok (1984) mentions that the particle is used when the speaker expects some degree of opposition from the hearer toward what is being suggested in the utterance (also mentioned in Law (1990: 136)). My informants agree. They report that with *le4* the speaker usually assumes a low level of willingness on the part of the hearer, and implies a strong intention to have the action carried out.[26] Consider (37) (adapted from Fung (2000: 129)).

(37) Tung4 ngo5 lok6-gaai1 maai5 baau1 jin1   **le4**!
    for   1S   down-street buy   CL   cigarette PRT
    'Go and get me a pack of cigarettes!'

Like the imperative sentences ending with *laa1*, my informants report that the imperative sentences ending with *le4* can be uttered either in a friendly mood or in exasperation. For instance, if (37) is addressed by a husband to his wife, who just complained how exhausted she was, the request may be made in a playful tone, as if the husband is begging coquettishly. If (37) is addressed by an angry father to his naughty child, it becomes a command issued with indignation. Note, however, what is in common is that in either case the speaker assumes that the hearer is not willing to carry out the action. Again, I suggest that the emotive meanings are not directly conveyed by the particle, but are rather pragmatic implicatures that should be calculated in each specific context.

LE5

Le5 can be seen as a particle of re-assertion, i.e., "it re-asserts a state-of-affairs that has been brought up before, but has not been properly acknowledged by the hearer" (Fung 2000: 128). The information conveyed by *le5* can be paraphrased as "I have told you that …" (Law 1990: 137), possibly accompanied with a slight tint of reproach (Fang 2003: 41, 72). The following examples are from Fung (2000: 129) and Fang (2003: 137), respectively.

(38) a. Ngo5 zan1-hai6 gin3-dou2 keoi5 **le5**.
       1S   really   see-obtain 3S   PRT
       'Believe me, I really saw him.'

    b. Ngo5 m4 zung1-ji3 sik6 min6 **le5**.
       1S   NEG like   eat   noodle PRT
       'I really don't like noodles (as I've told you).'

Le5 is also found in interrogative sentences, where the speaker who is highly confident in the answer tries to solicit agreement from the hearer (cf. Kwok 1984, Law 1990, Fung 2000, Fang 2003). The information conveyed by *le5* in questions can be paraphrased as something like 'Didn't I tell you so?' The following example is given by Fang (2003: 146).

(39) Keoi5 m4 zung1-ji3 nei5 **le5**?
     3S   NEG like   2S   PRT
     'He doesn't like you, right? (I already told you so --- I guess now you believe me.)'

It is interesting to note the difference between *le5* and *laa4*. Compare (39) with (40).

(40) Keoi5 m4 zung1-ji3 nei5 **laa4**?
     3S   NEG like   2S   PRT
     'So he doesn't like you any more?'

Both asking for confirmation, in (39) what the speaker wants to confirm is whether the hearer has acquired the exact knowledge, whereas in (40) what the speaker wants to confirm is whether the change of state has indeed taken place. Recall Fung (2000) suggests that an *l*-particle is typically used to mark realization of a new situation, and that is what we see with *laa4*; in addition, she mentions that an *l*-particle may also be used to indicate that the speaker is adding new information to the hearer's background knowledge, hence bringing the hearer into realization of what is being claimed. I suggest that this is what *le5* conveys. In other words, while *laa4* and *le5* are both involved in marking "realization", the specific contents differ.

LE1 (NE1)

Le1 has a phonological variant, i.e., *ne1*. Cheung (1986) points out that in nowadays Cantonese the onset *l* and *n* are not contrastive, e.g., *lei5/nei5* 'you', *loi6/noi6* 'long time'. Note, however, except *le1* none of the other *l*-particles has an *n*-variant. This suggests that it is the phoneme *n* that has a variant *l*, but not the other way round. I assume that *ne1* is the base form, and *le1* exists only as a variant of *ne1*. Therefore, *le1* is not really an *l*-particle. I will discuss *ne1/le1* separately. For the sake of clarity, from now on this particle will be mentioned as *ne1*.

LO3

It is observed that *lo3* can be used in the same contexts as *laa3*, but it seems to convey a stronger emotion (cf. Leung 1992). Kwok (1984) suggests that *lo3* has an intensifying function. This is endorsed by Law (1990) as well as Matthews and Yip (1994), who say that *lo3* emphasizes the situation described in the utterances that it occurs in. Fung (2000: 106) finds *lo3* "more intense" than *laa3*. Fang (2003: 109) suggests that in addition to indicating the change of situation or realization of state-of-affairs (like *laa3*), *lo3* conveys a sense of 'reminding'. Our informants point out that whatever is reported in the sentence, it sounds much more serious when it is attached by *lo3* than by *laa3*. Consider the following sentences.

(41) a. Ai1jaa3, gam1-jat6 jaa6-ng5   hou6 **lo3**. (cf. (29b))
      oh   today   twenty-five day PRT
     'Oh, today is already the 25th! (It's already too late!)'

  b. Lok6 jyu5 **lo3**. (cf. (29c))
    fall   rain PRT
    'It's raining now! (This is not good!)'

Like *laa3*, *lo3* can also be used in imperative sentences. See (42).

(42) M4-hou2 gong2 gam3 do1   **lo3**! (cf. (32b))
    NEG-good speak so   much PRT
    'Don't talk so much (any longer)!'

My informants report that while (32b) is a suggestion, (42) is a warning; namely, the speaker implies that if the hearer does not stop talking so much, there will be some serious consequence.

LOK3

Lok3 is basically the same as *lo3*, except that it expresses a stronger emotion, as suggested by Fung (2000: 124). My informants agree.[27]

LO1, *LO4*

In the literature *lo1* and *lo4* are often discussed in pairs. They share similarities and differ from each other in a systematic way. Kwok (1984) notes that both indicating obviousness, *lo4* sounds blunt, but *lo1* seems less severe. Leung (1992) describes that while *lo1* conveys something that is self-evident and unquestionable, *lo4* conveys a subjective opinion that may not be supported by any evidence. Li et al. (1995) states that *lo1* indicates that the proposition is manifest and simple, but *lo4* indicates that the speaker has strong confidence on the truthfulness of the proposition. Fung (2000: 119-120) summarizes their difference as that of "objective (for *lo1*) versus subjective (for *lo4*)"; namely, "*lo1* assumes the hearer to have a high level of knowledge towards the proposition whereas *lo4* does not". Our informants agree. Consider (43) (based on Fung (2000: 112, 119)).

(43) a. Keoi5 fung1-sap1-beng6 jau6   faat3-zok3 **lo3**.
    3S   rheumatism   again attack   PRT
    'His rheumatism is acting up again.'

  b. Keoi5 fung1-sap1-beng6 jau6   faat3-zok3 **lo1**.
    3S   rheumatism   again attack   PRT
    'His rheumatism is acting up again. (Don't you know that?)'

  c. Keoi5 fung1-sap1-beng6 jau6   faat3-zok3 **lo4**.
    3S   rheumatism   again attack   PRT
    'His rheumatism is acting up again. (That's why he looks miserable!)'

According to my informants, the speaker of (43a) is reporting to the hearer a new situation as stated in the sentence. It neither indicates the speaker's assumption of the hearer's knowledge of the given situation, nor indicates the speaker's own commitment to it. (43b) and (43c) can be used, for example, as replies to the prior speaker's question: 'why does he look so miserable?' With *lo1* the speaker seems surprised by the questioner's ignorance of the reason, i.e., the speaker thinks that the questioner should have known the answer, while with *lo4* the speaker makes a firm judgment, as if asserting 'this is the case; I say it; no doubt'.

INTERIM CONCLUSION

What has been shown is that, as Fung (2000) argued, the *l*-particles are semantically related, sharing the core meaning of marking "realization". I ascribe this core meaning to the presence of the initial *l*. Besides, following Fung (2000), I assume that the core "realization" meaning is a general notion, which has different semantic extensions. Take *laa1* for example. It can occur in both declaratives and imperatives. According to Fung (2000), when it is used in declaratives, the core "realization" meaning refers to "the realization of state-of-affairs in the real world", whereas when it is used in imperatives, the core "realization" meaning is specified as indicating that the speakers "envisage the realization of the state-of-affairs in the potential world".[28]

Anticipating the discussion we will get into below, let us make some observations on other minimal units than the initials.

First, we observed that for both the *g*-particles and *l*-particles, the most neutral particle is a particle with a mid-level tone, i.e., the tone *3*. Particles with a high tone or a rising tone as well as those with a low tone seem more emotionally marked. Besides, from the examples we have seen so far we can conclude that Fung (2000) is right about the coda *k*. Our observation is that the checked particles show more involvement in what is going on on the part of the speaker than their unchecked counterparts. In this sense, I agree with Fung (2000) that *k* generally functions as an "emotion intensifier".

3.3.1.3 THE INITIAL *Z*

In our inventory there are five *z*-particles: *zaa3*, *zaa4*, *zaa5*, *ze1*, and *zek1*. Arguably, all five have as their core meaning "restriction", from which the semantic feature of "delimitive/deminutive" and "exclusive" may be derived (Fung 2000: 30). We start with *zaa3*, which seems to convey literally the core "restrictive" meaning.

ZAA3

It is agreed that *zaa3* conveys the 'restrictive' meaning in the most neutral sense, i.e., it expresses the meaning 'not more than that' or 'and not something else as well'. In the following examples (adapted from Fung (2000: 59), and Fang (2003: 133, 118, 134, 145)), *zaa3* places restriction on different parts of the sentences.

> (44) a. Ji4-gaa1 zau6 waa6 hou2 **zaa3**.
>   now   then   say   good PRT
>   'It's quite good at this moment only.'

   b. Ngo5 sik1 da2 gei1   **zaa3**.
      1S   eat   play machine PRT
      'I can only play game machines.'

   c. Ngo5 heoi3 jau4-seoi2 **zaa3**.
      1S   go   swim   PRT
      'I only go for a swim.'

   d. Ngo5-dei6 hok6-hau6 jau5 leung5-cin1   jan4   **zaa3**.
      1PL   school   have two-thousand people PRT
      'Our school only has 2000 people.'

   e. Keoi5 ng5-sap6 seoi3 **zaa3**.
      3S   fifty   year PRT
      'He is only 50 years old.'

ZAA4

Zaa4 occurs in confirmation-seeking questions, questioning and verifying the de-limitation aspect of the semantics (cf. Fung 2000: 66, Fang 2003: 145). The information conveyed by *zaa4* can be paraphrased as 'really only that?' This is illustrated in (45) (adapted from Fang (2003: 145, 119, 134)).

   (45) a. Gam1-maan5 coeng3 ka1-lai1-ok **zaa4**?
          tonight   sing   karaoke   PRT
          'Tonight we only sing karaoke?'

      b. Lei5 heoi3 jau4-seoi2 **zaa4**? (cf. (44c))
         2S   go   swim   PRT
         'You only go for a swim?'

      c. Lei5-dei6 hok6-hau6 jau5 leung5-cin1   jan4   **zaa4**? (cf. (44d))
         2PL   school   have two-thousand people PRT
         'You school only has 2000 people?'

      e. Keoi5 ng5-sap6 seoi3 **zaa4**? (cf. (44e))
         3S   fifty   year PRT
         'He is only 50 years old?'

ZAA5

Like *gaa5* and *laa5*, *zaa5* is not mentioned in every published source, nor is it rec-ognized by all my informants. My informants who have *gaa5* and *laa5* also have *zaa5*. They mention that the connection between *zaa4* and *zaa5* is consistent with that between *gaa4* and *gaa5* as well as that between *laa4* and *laa5*. Besides, *zaa5* can be pronounced as *ze aa5*.

ZE1

Ze1 usually conveys a sense of 'down-playing' (in some contexts even to the degree of disapproval or contempt). It often implies information such as 'it's no big deal', 'don't make such a fuss', etc. Compare *ze1* with *zaa3*.

(46) a. Lei5 heoi3 jau4-seoi2 **ze1**. (cf. (44c))
       2S   go   swim   PRT
       'You are only going for a swim --- (not a trip around the world).'

   b. Ngo5-dei6 hok6-hau6 jau5 leung5-cin1   jan4   **ze1**. (cf. (44d))
       1PL   school   have two-thousand people PRT
       'Our school only has 2000 people --- (don't think too much of it).'

   c. Keoi5 ng5-sap6 seoi3 **ze1**. (cf. (44e))
       3S   fifty   year   PRT
       'He is only 50 years old --- (not 150).'

While (44c) is a neutral statement claiming that the person in question is only going for a swim and is not going to do anything else, (46a) is uttered in a context where the prior speaker is making a huge fuss about what he is going to do, while it turns out that all he is going to do is swimming. Similarly, (44d) is a neutral statement simply stating the fact that our school is not big, containing only 2000 people and no more than that, whereas (46b) is felicitous in a context where the previous speaker considers 2000 people to be a large number and hence expects the government to spend a lot of money on their school. The *ze1*-suffixed sentence implies something like: 'be realistic --- 2000 doesn't mean anything!' As for the distinction between (44e) and (46c), (44e) is a neutral statement stating the fact that the person in question is only at the age of 50, which is deemed relatively young; (46c) basically conveys the same opinion, but the speaker spells it out to respond to something that is mentioned previously, e.g., the person is going to retire, or there is a big preparation for the person's 50th birthday. The overtone carried by the *ze1*-suffixed sentence is something like: 'come on, he is only 50; no need to make such a fuss!'

ZEK1

Zek1 is in most respects the same as *ze1*, except that it "distinguishes itself from *ze1* by its high affective value" (Fung 2000: 57) or by its "stronger emotional force" (Fung 2000: 50). Obviously, this property can be ascribed to the presence of the coda *k*. Besides, it is mentioned that *zek1* has a distinctive use which *ze1* does not have, i.e., it reports on things which the speaker thinks are only known to a very small number of people, not including the hearer, but including the speaker himself much to his own content and pride (Fung 2000: 56, Fang 2003: 31, 137). I consider the sense of confidentiality to arise from the "delimitive" and "exclusive" feature, which are derivatives of the core "restrictive" meaning. Consider (47) (adapted from Fang (2003: 61, 31)). In both sentences, the speaker announces proudly a piece of news that is considered confidential.

(47) a. Ngo5 dai6-lou2　jau5 hou2 do1　leng3　　jau4-piu3 **zek1**.
　　　　1S　　big-brother have good many beautiful stamp　　PRT
　　　　'My elder-brother has a lot of beautiful stamps!'

　　b. Ngo5 kam4-jat6 gin3-dou2 nei5 aa3-maa1 **zek1**.
　　　　1S　　yesterday see-obtain 2S　mother　PRT
　　　　'I saw your mom yesterday.'

Fung (2000) mentions that *zek1* may also be used in imperative sentences, which usually convey a strong exhortative sense (see (48), from Fung (2000: 55)). The high emotive value conveyed by *zek1* can be ascribed to the presence of the coda *k*. However, the link with the central "restrictive" meaning seems to have been lost. I leave the question open.

(48) a. Sik6-saai3 keoi5 **zek1**, m4-hou1　jik1　　keoi5-dei6!
　　　　eat-all　　3S　　PRT　NEG-good benefit 3PL
　　　　'Eat it up, don't let (it) benefit them.'

　　b. Heoi3 **zek1**, ngo5-dei6 jat1-ding6 wui5 zi1-ci4　nei5 **ge3**.
　　　　go　　PRT　1PL　　　definitely will　support 2S　PRT
　　　　'Go, go! We will definitely support you!'

INTERIM CONCLUSION
What we have seen is that, as Fung (2000) argued, the *z*-particles are semantically related by the core feature of "restriction". I ascribe the core semantic feature to the presence of the initial *z*. Besides, our earlier observations are confirmed. Namely, among the particles with the same initials, the most neutral particle is a tone-*3* particle, and the coda *k* functions as an "emotion intensifier".

3.3.1.4 THE INITIAL *M*
In our inventory two final particles have the initial *m*: *me1* and *maa3*. Both of them occur in yes/no questions. Consider (49) (based on Law (1990: 22)).

(49) a. Nei5 sik1　gong2　jing1-man2 **me1**?
　　　　2S　　know speak　English　　PRT
　　　　'You speak English? (I thought you didn't.)'

　　b. Nei5 sik1　　gong2　jing1-man2 **maa3**?
　　　　2S　　know　speak　English　　PRT
　　　　'Do you speak English?'

As shown by the paraphrases, the *me1*-suffixed question conveys a sense of surprise, implying that there is a gap between what the speaker believes to be true and what seems to be the reality. The *maa3*-suffixed question does not have such an indication. With *maa3*, the speaker has no prediction to what the answer would be.

Another distinction between *me1* and *maa3* is that the latter cannot occur in a
question that has a negation marker, whereas the former can. See (50) (based on
Law (1990: 18)).

(50) a. Nei5 m4 gei3-dak1 **me1**?
        2S   NEG remember PRT
        'Do you not remember? (I am very surprised that you forgot it.)'

b. *Nei5 m4 gei3-dak1 **maa3**?
        2S   NEG remember PRT
        INTENDED READING: 'Do you not remember?'

Leaving aside the rimes and the tones, I suggest that the initial *m* in *me1* and the
initial *m* in *maa3* are not the same element. I propose that the *m* in *me1* functions to
mark yes/no questions, whereas the *m* in *maa3* is a negation marker. I will discuss
the *maa3*-suffixed questions in chapter 5. In the remainder of this chapter I will only
consider *me1*.

3.3.1.5 THE INITIAL *N*
There is only one final particle with the initial *n*, i.e., *ne1* (with a phonological vari-
ant, i.e., *le1*). The observation is that the Cantonese final particle *ne1* is very similar
in meaning and use to the Mandarin final particle *ne*. Like Mandarin *ne*, Cantonese
ne1 can occur in declaratives, wh-questions, alternative questions as well as in the-
matic questions. Consider the following examples (excerpted from Law (1990: 122,
123)).

(51) A: Keoi5 hou2-noi6 mou3   da2 din6-waa2 bei2 ngo5 **laa3**.
          3S   very-long NEG-have do telephone to   1S   PRT
          'S/he hasn't called me for a long time.'

B: Wak6-ze2 keoi5 m4 dak1-haan4 **ne1**.
          perhaps   3S   NEG get-free   PRT
          'It may be because s/he is not free.'

(52) Keoi5 gei2-si4 lei4   **ne1**?
          3S   when   come PRT
          '(I wonder) when is s/he coming, (do you know)?'

(53) Keoi5 zung1-ji3 ni1 go3 ding6 go2 go3 **ne1**?
          3S   like   this CL or   that CL PRT
          '(I wonder) whether s/he likes this one or that one, (do you know)?'

(54) Gam1-jat6 keoi5 m4 lei4-dak1,   ting1-jat6 **ne1**?
          today   3S   NEG come-obtain tomorrow PRT
          'S/he can't come today, how about tomorrow?'

(55) (Jyu4-gwo2) keoi5 m4 soeng2-seon3 nei5 ge3 syut3-waa6 **ne1**?
     if   3S   NEG believe   2S   GE word   PRT
     '(I wonder what happens) if s/he doesn't believe what you say?'

Law (1990: 121) suggests that *ne1* "has the core function of drawing someone's attention to something, or of pointing to something". Recall that, in chapter 2, I mentioned that the Mandarin final particle *ne* also serves to draw the hearer's attention. I argued that this discourse function could be derived from its core function of marking evaluative mood.

I consider Cantonese *ne1* to be the counterpart of Mandarin *ne*. Namely, I suggest that Cantonese *ne1* is an evaluative marker, which occurs in declaratives and questions to mark evaluative mood. It indicates that the speaker considers the matter that is being addressed to be unusual or of particular importance, and thus invites the hearer to pay special attention to it. As for the *ne1* occurring in thematic questions, following Wu's (2005b) analysis of its Mandarin counterpart, I consider it a topic marker, which functions to mark new topics.

It should be noted that in chapter 2 I mentioned that Mandarin *ne* can be associated with either a high pitch or a low pitch, and I suggested that the pitch variation has a semantic function independent of the particle. In a similar vein, I suggest that the high tone associated with Cantonese *ne1* should be analyzed separately. I will talk about tone variation in section 3.3.4.

3.3.1.6 CONCLUSION

What we have seen in the preceding discussion is that particles with the same initials express the same semantic core. On the basis of Fung (2000), I conclude the semantic meanings contributed by the initials as follows:

(56) *g*: asserting factuality
     l: marking realization
     z: marking restriction
     m: marking yes/no questions
     n: marking evaluative mood[29]

In addition, we observed that among the particles with the same initials, the most neutral particle is always a tone-*3* particle. We also confirmed Fung's (2000) proposal that the coda *k* functions as an "emotion intensifier".

3.3.2 THE RIMES

It was mentioned earlier that little systematic work had been done on the semantics of rimes. The purpose of this subsection is to investigate the semantics of the rime *e*, *aa*, and *o*. To achieve the goal, I will look at sets of particles that share the same rime to check if they have any semantic feature in common. In addition, I will compare minimal pairs of particles that differ only in rimes to test if our analyses can account for their differences. We start with the rime *e*.

3.3.2.1 THE RIME *E*
Below I assemble all the particles containing the rime *e*, each accompanied with a brief note of its basic meaning (see section 3.3.1 for a more detailed description).

(57) *ge3*: asserting factuality
   ge2: asserting factuality plus

   le4: strong suggestions
   le5: (asking for) re-assertion

   ze1: placing restriction, down-playing
   zek1: same as *ze1*, emotionally more intense

   me1: marking yes/no questions, conveying surprise

   ne1: marking evaluation, drawing attention

Examining these particles, we hardly find any semantic feature that they have in common. I suggest that the rime *e* is a default vowel, an element that has no semantic content but is added purely out of phonological necessity. That *e* has no semantic content may explain why Cantonese does not have a final particle *e* used independently (see note 2), which would be formed by combining the rime *e* with a null initial.

3.3.2.2 THE RIME *AA*
Different from *e*, *aa* can combine with an empty initial and other formal features, giving rise to a group of *aa*-particles. There are five in total: *aa1*, *aa3*, *aak3*, *aa4*, and *aa5*. In the following I will first briefly review the semantic properties of the *aa*-particles, based on the published sources and the judgments of my informants. Then I will put forward an analysis of the core function of *aa*. Finally, I will provide some supporting evidence.

We start our discussion with *aa3*, which is considered to have the most neutral meaning among the *aa*-particles.

AA3
Aa3 can be used in a wide range of environments. It can occur in declaratives, imperatives, interrogatives and exclamatives. It is usually considered that *aa3* makes an utterance sound softer and more natural (e.g., Law 1990: 108, Matthews and Yip 1994: 340, Fang 2003: 58). The following examples are from Fung (2000: 169), Law (1990: 108), and Fang (2003: 163, 152, 154).

(58) a. Cin4-min6 jau5 hou2 do1   jan4   **aa3**.
      front-side have very many people PRT
      'There are lots of people in front.'

   b. Faai3 di1   sik6 **aa3**!
      quick little eat   PRT
      'Eat faster!'

   c. Ni1 di1 ca4 zan1-hai6 zeng3 **aa3**!
      this CL tea really-be tasty PRT
      'This tea tastes really nice!'

   d. Nei5 heoi3 bin1-dou6 **aa3**?
      2S   go   where   PRT
      'Where are you going?'

   e. Nei5 zi1-m4-zi1   **aa3**?
      2S   know-NEG-know PRT
      'Do you know it?'

The speaker of (58a) is making a live report of the current situation. If *aa3* is left out, the sentence would be a factual statement, which sounds abrupt and unnatural. (58b) is a suggestion, whereas its counterpart without *aa3* is a command. In (58c), the addition of *aa3* makes the exclamation sound more emotional and more expressive. As for the questions, with *aa3* both of them sound softer and friendlier, whereas without the particle they sound severe, like interrogations issued by a policeman to a criminal suspect.

AAK3

Aak3 sounds more definitive compared with *aa3*. Law (1990: 196) notes that it "indicates that the information carried by the utterance is intended to contradict an assumption or an expectation held by the addressee". Matthews and Yip (1994) point out that in different contexts *aak3* may convey abrupt disagreement or agreement. Fang (2003) suggests that *aak3* re-asserts the speaker's attitude, implying that 'it is indeed like this'. The following examples are excerpted from Matthews and Yip (1994: 348, 349) and Fang (2003: 59).

   (59) A: Lei5 m4 zou6 je5   aa4?
            2S   NEG do   thing PRT
            'Aren't you working?'

        B: M4-hai3 **aak3**, ngo5 duk6-gan2-syu1.
           NEG-be PRT   1S   study-ASP-book
           'Yes, I am. I'm studying.'

   (60) A: Ting1-jat3 gau2-dim2   gin3 wo3.
            tomorrow nine-o'clock see PRT
            'See you at nine tomorrow!'

    B: Hou2 **aak3**.
       good PRT
       'Okay, right.'

(61) Ngo5 jiu3 ceng2-dou2 keoi5 lei4 **aak3**.
     1S   will invite-obtain 3S   come PRT
     'I'll invite him to come here --- (I've made up my mind.)'

Matthews and Yip (1994: 349) mention that the response given in (59) "represents a forceful denial (contrast the response '*m4-hai3 aa3*', which softens the force of the denial)"; in (60) where the speaker accepts a suggestion, the response with *aak3* has "the implication that the matter is settled". This is also what we see in (61). Obviously, the distinction between *aak3* and *aa3* is consistent with the distinction we observed previously between the particles with the coda *k* and their unchecked counterparts.

AA1

Like *aa3*, *aa1* displays a wide range of uses. It can occur in declaratives, imperatives, interrogatives, etc. In the literature it is claimed that in comparison with *aa3*, *aa1* makes an utterance sound more lively in tone (Law 1990: 109, Matthews and Yip 1994: 340). Compare the following sentences with those given in (58).

(62) a. Cin4-min6 jau5 hou2 do1   jan4 **aa1**.
        front-side have very many people PRT
        'There are lots of people in front. --- (Why did you say there was just
        a few?)'

     b. Faai3 di1   sik6 **aa1**!
        quick little eat PRT
        'Eat a bit faster.' [nudging]

     c. Ni1 di1 ca4 zan1-hai6 zeng3 **aa1**
        this CL tea really-be tasty PRT
        'This tea tastes really nice. --- (How come you don't like it?)'

     d. Nei5 heoi3 bin1-dou6 **aa1**
        2S   go   where   PRT
        'Where are you going?' [challenging]

     e. Nei5 zi1-m4-zi1   **aa1**
        2S   know-NEG-know PRT
        'Do you know it?' [challenging]

As indicated in the translations, while the *aa3*-suffixed sentences are relatively plain and neutral, the *aa1*-suffixed sentences always imply extra information. The implications vary depending on specific contexts. We will talk more about this in section 3.3.4.2.

AA4

Although Law (1990) mentions the use of *aa4* in declaratives, imperatives and A-not-A questions, others only have *aa4* in confirmation-seeking questions.

   (63) Keoi5 jiu3 heoi5 mei5-gwok3 **aa4**
       3S   need go   America   PRT
       'So he will go to America?'

According to my informants, (63) may be used in the following context: the speaker finds a flight ticket, which leads to the assumption that the person in question will go to America. The speaker utters the sentence to express his sudden awareness, and meanwhile wants to confirm whether it is indeed the case.

AA5

Aa5 is not reported in every published source, nor is it recognized by all my informants. My informants who have *gaa5*, *laa5*, and *zaa5* also have *aa5*. The difference between *aa4* and *aa5* lies in that the latter conveys a higher degree of confidence on the part of the speaker with respect to the answer.

   (64) Keoi5 jiu3 heoi3 mei5-gwok3 **aa5** (cf. (63))
       3S   need go   America   PRT
       'He will go to America, won't he?'

An informant reports that a felicitous context for using (64) is the following: the speaker already knows the answer, but since the hearer tries to hide the fact, the speaker deliberately asks the question to play tricks.

THE PROPOSAL

We observe that Cantonese *aa*-particles are very similar in meaning and use to the Mandarin final particle *a*. Most of the examples given above can be translated into a corresponding *a*-suffixed sentence in Mandarin. In chapter 2, I proposed that the Mandarin final particle *a* is a discourse marker, which functions to mark relevance of the utterance in which it occurs to the discourse context. I suggest that the same analysis is applicable to the Cantonese *aa*-particles. More specifically, I assign the minimal unit *aa* the core function of marking discourse relevance. Among the *aa*-particles, *aa3* is the particle that performs this core function most literally. It makes the utterance that it is attached to more contextually related and situationally linked. This explains why native speakers feel that *aa3* usually makes an utterance sound less abrupt and more natural.

    As for the particular meanings we find here and there conveyed by some of the *aa*-particles, I suggest that they are brought in by the formal features other than the rime, i.e., the coda and the tones. For example, I mentioned earlier that the distinction between *aak3* and *aa3* lies in the presence vs. absence of the coda *k*, which functions as an "emotion intensifier". We will discuss tonal variation shortly.

    Next I will provide supporting evidence by examining four pairs of particles, i.e., *ge3* vs. *gaa3*, *ge2* vs. *gaa2*, *le4* vs. *laa4*, and *le5* vs. *laa5*.[30] The distinction between

the particles in each pair supposedly rests on the absence vs. presence of the discourse marker *aa*.

GE3 VS. GAA3

As mentioned before, *ge3* and *gaa3* are basically the same, both being used to assert factuality. Nevertheless, they are not totally interchangeable. Consider (65). (65a) is repeated from (58a). (65b) and (65c) are adapted from Fung (2000: 169).

> (65) a. Cin4-min6 jau5 hou2 do1 jan4 **aa3**
>   front-side have very many people PRT
>   'There are lots of people in front.'
>
> b. Cin4-min6 jau5 hou2 do1 jan4 **ge3**.
>   front-side have very many people PRT
>   '(The fact is that) there were/will be lots of people in front.'
>
> c. Cin4-min6 jau5 hou2 do1 jan4 **gaa3**.
>   front-side have very many people PRT
>   '(The fact is that) there are lots of people in front. --- (you'd better be careful.)'

According to my informants, the speaker of (65a) is making a live report of the current situation. As mentioned by Fung (2000), the sentence is compatible with the phrase *nei5 tai2* 'you see'.

> (66) Nei5 tai2, cin4-min6 jau5 hou2 do1 jan4 **aa3**.
>   2S   look front-side have very many people PRT
>   'Look, there are lots of people in front.'

The reporting interpretation can be accounted for by our analysis that the core function of *aa* is to mark relevance of the statement to the current conversational situation. When *aa3* is left out, the sentence is not interpreted as a report any more. It is a simple statement without indicating any particular connection to the current situation.

(65b) is interpreted as an assertion of a situation either referring to the past time, i.e., 'at that time there were lots of people in front', or to the future time, in which case a modal verb, i.e., *wui5* 'will', can be added to the sentence.[31] See (67).

> (67) Cin4-min6 wui5 jau5 hou2 do1 jan4 **ge3**.
>   front-side will   have very many people PRT
>   '(The fact is that) there will be lots of people in front.'

(65c) is similar to (65a) in that it also refers to the present time, but with *gaa3* the speaker is not only reporting to the hearer, but also emphasizing that this is indeed the situation. Obviously, the similarity is due to the presence of *aa* in both sentences, and the distinction due to the presence of the initial *g* in (65c) and its absence in (65a).

Now compare (65b) with (65c). Unlike the assertion marked by *ge3*, which can refer either to the past time or to the future time, the one marked by *gaa3* is confined to the present time. I suggest that this is because *gaa3* consists of the discourse marker *aa*, which indicates a connection of the statement to the current conversational situation.

Note that relevance to the current conversational environment is not necessarily indicated by tense difference. Consider the following examples (based on Fung (2000: 170)), where *ge3* and *gaa3* both occur in a sentence associated with the past tense.

(68) Go2 zan6 si2, ceot1-min6 lok6-gan2-jyu3 **ge3/*gaa3**,
    that CL time out-side   fall-ASP-rain   PRT PRT

    keoi5 zung6 dang2-zo2 hou2 noi6 zi3   coet1-heoi3.
    3S   even   wait-PERF very long then out-go
    'At that time, it was raining outside and he waited quite a while before
     going out.'

(69) Answering the question why it took him such a long time to finally go out:

    Go2 zan6 si2, ceot1-min6 lok6-gan2-jyu3 ***ge3/gaa3***.
    that CL time out-side   fall-ASP-rain   PRT PRT
    '(It is because) at that time it was raining outside.'

(68) simply makes an assertion of a given situation and does not indicate any obvious connection to the context. In this case, only *ge3* is felicitous. (69) indicates a connection to the discourse context, i.e., it is delivered as an explanation to the question raised by the prior speaker. In this case, only *gaa3* is felicitous.

Finally, let us compare the use of *ge3* and *gaa3* in questions. Consider the following examples (adapted from Fung (2000: 174)).

(70) a. Dim2-gai2 m4 gin3 keoi5 **ge3**?
     why   NEG see 3S   PRT
     'Why isn't he here?'

    b. Dim2-gai2 m4 gin3 keoi5 **gaa3**?
      why   NEG see 3S   PRT
      'Why isn't he here?'

It is generally agreed that in comparison with the questions ending with *ge3*, those with *gaa3* sound less blunt and more natural. As mentioned earlier, the pragmatic effect is induced by the discourse marker *aa*, which makes an utterance more contextually related and situationally linked.

GE2 VS. *GAA2*

Ge2 and *gaa2* both express the speaker's surprise or disbelief with respect to the asserted content. However, as Fung (2000: 172-3) points out, the two particles are

used with speakers' different assumptions.[32] Compare (71a) with (71b) (from Fung (2000: 172)).

(71) a. Cin4-min6 jau5 tiu4 ho4 **ge2**
          front-side have CL river PRT
          'There is a river in front, how come?'

      b. Cin4-min6 jau5 tiu4 ho4 **gaa2**
          front-side have CL   river PRT
          'There should be a river in front, how come I don't see one?'

Fung (2000) describes that the speaker of (71a) does not expect a river in front, whereas the situation is that there is a river in front, and that is how the surprise arises. On the other hand, the speaker of (71b) expects a river in front, but the situation is that there is no river in front, and thus the speaker feels puzzled.

The contrast can be accounted for by the internal formation of the two particles. We have reached the conclusion that the semantic unit *g* marks assertions. As for its uses in (71a) and (71b), I suggest that the *g* in *ge2* asserts the situation in the real world, i.e., 'there is a river in front'; whereas the *g* in *gaa2* asserts the situation in the epistemic world, i.e., the speaker's belief that 'there is a river in front'. For the time being let us assume that the sense of surprise conveyed by both particles comes from their common tonal feature (see section 3.3.4.2 and 3.3.4.3). In (71a) the speaker expresses his surprise towards the asserted situation, i.e., the situation in reality --- 'there is a river in front', conveying the meaning 'how come there is a river in front?' In (71b) the speaker does not cast doubt on the asserted situation, i.e., the situation that he assumes to be true; rather, he is surprised at the reality, i.e., 'there is no river in front'. I suggest that the link between the speaker's assumption, which is the situation that is being asserted, and the reality, which is the situation that the speaker casts doubt on, is indicated by the discourse marker *aa*.

LE4 VS. *LAA4*
It is unfeasible to compare *le4* and *laa4*, because they occur in different types of sentences. *Le4* occurs only in imperatives, and *laa4* in confirmation-seeking questions.

(72) a. Tung4 ngo5 lok6-gaai1 maai5 baau1 jin1   **le4**!   (= (37))
          for   1S   down-street buy   CL   cigarette PRT
          'Go and get me a pack of cigarettes!'

      b. Lok6 jyu5 **laa4**?   (=(34a))
          fall   rain PRT
          'So it is raining now?'

As mentioned in section 3.3.1.2, following Fung (2000), I suggest that although the initial *l* generally functions to mark "realization", in different circumstances it may have different indications. In particular, I consider that the *l* in *le4* indicates that the

speakers "envisage the realization of the state-of-affairs in the potential world", whereas the *l* in *laa4* marks "the realization of state-of-affairs in the real world".

LE5 VS. *LAA5*

Similarly, I suggest that the *l* in *le5* and the one in *laa5* have different indications. The former indicates that the speaker is adding new information to the hearer's background knowledge, hence bringing the hearer into realization of what is being claimed, whereas the latter marks the realization of a new state. Consider the following examples.

(73) a. Keoi5 m4 zung1-ji3 nei5 **le5**? (= (39))
      3S   NEG like   2S   PRT
      'He doesn't like you, right? (I already told you so --- I guess now you
       believe me.)'

   b. Keoi5 m4 zung1-ji3 nei5 **laa5**?
      3S   NEG like   2S   PRT
      'He doesn't like you any more, right?'

As for their distinction that supposedly rests on the absence vs. presence of *aa*, it is however not very obvious. This is probably because, unlike the semantic unit *g*, *l* and *z*, the discourse marker *aa* is devoid of specific meaning, and thus the effect induced by *aa* may not always be distinct and notable.

INTERIM CONCLUSION

In this subsection I proposed that the Cantonese *aa*-particles basically function to mark relevance of the utterance in which they occur to the discourse unit. I ascribed the core function of marking relevance to the presence of the rime *aa*. This analysis is favored by comparing the particles in minimal pairs that differ only in the presence vs. absence of *aa*.

3.3.2.3 THE RIME *O*

Like the rime *aa*, the rime *o* can occur with an empty initial to form a group of *o*-particles: *wo3*, *wo4*, and *wo5*. It can also occur with the initial *l*, forming a group of *lo*-particles: *lo1*, *lo3*, *lok3* and *lo4*. In the following discussion I will first introduce the basic meanings of the *o*-particles. Then I will briefly review the *lo*-particles that we discussed in section 3.3.1.2. It will show that all these particles share the core meaning of marking noteworthiness.

WO3

Matthews and Yip (1994: 340) claim that *wo3* is an "informative" particle, indicating "noteworthiness". Similarly, Fang (2003: 67) suggests that *wo3* is a particle of 'reminding'. My informants agree. Consider (74) (Matthews and Yip 1994: 353-4).

(74) a. Mei5-gam1sing1-zo2 **wo3**.
      US-dollar   rise-PERF PRT
      'Look, the US dollar has gone up!'

    b. Lei5 siu2-sam1 zaa1-ce1 **wo3**.
       2S   careful   drive-car PRT
      'Drive carefully!'

WO4

Wo4 conveys the speaker's sudden awareness or discovery of some unknown or unexpected information (cf. Law 1990: 100, Mathews and Yip 1994: 354, Fang 2003: 79). This is illustrated in (75) (Matthews and Yip 1994: 354).

(75) Jyun4-loi4 keoi5 hai6 ngo5 ji3-cin4 ge3
     after-all   3S   be   1S   before   GE

     tung4-hok6 lei4 ge3 **wo4**.
     classmate   PRT PRT PRT
     'It turned out she was my former classmate.'

WO5

Wo5 is a particle reporting "hearsay" information (cf. Law 1990: 100, Mathews and Yip 1994: 354, Fang 2003: 66). (76) is excerpted from Mathews and Yip (1994: 354). The phrase *teng1-maan4-waa3* can be left out without affecting the "hearsay" reading.

(76) Teng1-maan4-waa3 lei5 lou5-baan2 jiu3 ci4-zik1 **wo5**
     hear-say   2S boss   want resign PRT
     'I hear your boss is going to resign.'

LO3

Like *laa3*, *lo3* marks "realization of state", but it is more emphatic than *laa3*. Fang (2003) points out that compared with *laa3*, *lo3* adds to the sentence a sense of 're-minding'.

LOK3

Lok3 does not differ from *lo3* in the essential meaning, but the former is emotionally more intense.

LO1, LO4

Likewise, *lo1* and *lo4* do not differ from *lo3* in the essential meaning, but they both convey something extra. In particular, *lo1* implies that the speaker assumes the hearer to have the knowledge that is being claimed in the utterance. *Lo4* does not have such an indication; instead, it implies that the speaker himself has a firm judgment about what he is saying.

THE PROPOSAL

Looking at the particles with the rime *o*, it seems that every member conveys to some degree a sense of "noteworthiness". *Wo3* is the particle that expresses this meaning most literally. *Wo4*, which expresses the speaker's sudden awareness and reports his new discovery, implies that the content that is being claimed is worth

special attention. *Wo5* reports hearsay news. Obviously, marking "noteworthiness" is an inalienable part of its semantic content.

As for the *lo*-particles, it was mentioned earlier that an important distinction between *laa3* and *lo3* is that the latter seems more emphatic, usually conveying a sense of reminding. It follows naturally given that *lo3* indicates "noteworthiness". Other *lo*-particles have the indication as well, since they are semantically *lo3* plus something else.

Therefore, I conclude that the particles with the rime *o* share the semantic affinity of marking "noteworthiness". I ascribe this core meaning to the presence of the rime *o*.

3.3.2.4 CONCLUSION

In the above subsection I examined the semantic functions of the rimes. I suggested that the rime *e* is a default element, which has no semantic content. I considered the rime *aa* to be a discourse marker, marking relevance of the utterance in which it occurs to the discourse unit. I proposed that the rime *o* also performs a discourse function, i.e., marking noteworthiness. This is summarized in (77).

(77) *e:* default vowel
　　　aa: marking relevance
　　　o: marking noteworthiness

3.3.3 THE CODA

In the preceding discussion, we have compared pairs of particles that are with and without the coda *k*, i.e., *gaak3* vs. *gaa3*, *laak3* vs. *laa3*, *lok3* vs. *lo3*, *zek1* vs. *ze1*, *aak3* vs. *aa3*. The distinction can be generalized as follows: the particles with the coda *k* are emotionally more intense than their unchecked counterparts. Following Fung (2000), I consider the coda *k* an "emotion intensifier".

3.3.4 THE TONES

In the following discussion I examine the semantics of the tones. Cantonese has six tones, but only five are found in final particles. They are: *1* [(55, 53)], *2* [(35)], *3* [(33)], *4* [(21, 11)], and *5* [(13)]. Below I will look at the particles with the same tones to check if they have any semantic property in common. Let us start with the tone *3*, which seems to be semantically most neutral.

3.3.4.1 THE TONE *3*

Previously we observed that among the particles with the same segmental form the most neutral particle is always the one with the mid-level tone. This is shown in (78), which lays out sets of particles that share the same segmental form but differ only in tone. Each particle is accompanied with a short characterization (see the preceding sections for a longer description).

(78) *aa3*: marking relevance
　　　aa1: marking relevance; more lively in tone
　　　aa4: seeking confirmation

aa5: same as *aa4*, but indicating more confidence in what the answer
    would be

wo3: marking noteworthiness
wo4: marking noteworthiness, expressing the speaker's sudden awareness
wo5: marking noteworthiness, reporting hearsay news

ge3: asserting factuality
ge2: asserting factuality, conveying reservation, surprise, etc.

gaa3: asserting factuality
gaa2: asserting factuality, conveying disbelief, surprise, etc.
gaa4: seeking confirmation of the asserted content
gaa5: same as *gaa4*, but indicating more confidence in what the answer
    would be

laa3: marking realization
laa1: marking realization, meanwhile implying the speaker's assumption of
    the hearer's knowledge
laa4: seeking confirmation of the realization of state-of-affairs
laa5: same as *laa4*, but indicating more confidence in what the answer
    would be

lo3: marking realization, indicating noteworthiness
lo1: marking realization, indicating noteworthiness, implying the speaker's
    assumption of the hearer's knowledge
lo4: marking realization, indicating noteworthiness, making dogmatic
    claims

zaa3: marking restriction
zaa4: seeking confirmation of the restricted content
zaa5: same as *zaa4*, but indicating more confidence in what the answer
    would be

The list shows that particles with the tone *1*, *2*, *4* and *5* always add extra
information to the meaning expressed by the particles with the tone *3*. Following
Law (1990), I suggest that the tone *3* is a default element. Like the rime *e*, it is
devoid of semantic content and added out of phonological necessity.

3.3.4.2 THE TONE *1*
(79) assembles particles with the high tone, i.e., the tone *1*. For the sake of conven-
ience, the short description following each particle only represents the information
that is supposedly conveyed by the tone; the meanings conveyed by the initial, the
rime and the coda are not taken into account here.

(79) *aa1*: tempting, contrast, rebuttal, soliciting agreement, etc.

    laa1: obvious, enumerating, suggestive, etc.
    lo1: obvious, evasive, etc.

    ze1: down-playing, disapproval, contempt, etc.
    zek1: similar to *ze1*

    me1: surprise, disbelief

    ne1: contrast, drawing attention, reminding, etc.

The meanings given in the list are not exhaustive. In different contexts different implications may be derived. Take *aa1* for example. Consider the following sentences.

(80) Reply to the comment 'it's very dry here':

    Kam4-jat6 lok6 gwo2 jyu5 **aa1**.
    yesterday fall EXP rain PRT
    '(But) it just rained yesterday.'

(81) Go2 saam1 zek3 gau2-zai2 hou2 dak1-ji3 **aa1**.
    that three CL puppy very cute   PRT
    'These three puppies are very cute. --- (why do you want to give them away?)'

(82) Ngo5 lei4 bong1 nei5 **aa1**?
    1S   come help 2S PRT
    'How about let me help you?'

In (80) the speaker refutes what the hearer has just said. *Aa1* expresses something like 'why do you think so? It's not true'. In (81) *aa1* expresses the speaker's puzzlement, implying that the speaker demands an explanation. In (82) it is used to solicit agreement from the hearer.

The diverse meanings indicated by the tone-*1* particles notwithstanding, I suggest that the semantics of the high tone can be systematically analyzed.

Recall that, in chapter 2, we observed that Mandarin final particles can be associated with a high boundary tone or a low boundary tone. Boundary tones exist cross-linguistically, and they are argued to play independent roles in conveying semantic and discourse meanings (Pierrehumbert and Hirschberg 1990, Steedman 2000, and among others). Adopting Chu's (2002) terms, I suggested that the high boundary tone basically conveys the information that is hearer oriented, and the low boundary tone conveys the information that is speaker oriented.

Turning back to the high tone associated with Cantonese final particles, I suggest that it is the perception of a high boundary tone existing in Cantonese, which generally functions to convey hearer-oriented information. Under this category falls the

collection of meanings such as soliciting agreement, indicating contrast, conveying surprise, demanding explanation, and expressing contempt, etc.

It was mentioned in section 3.2 that Law (1990) distinguishes two high tones. She suggests that one is a "weakener", which "has a softening effect" and "tends to make an utterance sound more tentative" (Law 1990: 94). The other she suggests to be an "echo question particle". Under the current analysis, both can be seen as denoting hearer- orientated information.

Consider the following example (given by Law (1990: 116)).

(83) Keoi5 zau2-zo2　hou2 noi6 **laa1**
　　　3S　　leave-PERF very　long PRT
　　i. 'S/he has left for a long time --- I thought you knew.'
　　ii. 'S/he has left for a long time --- is that what you just said?'

(83) is ambiguous. Depending on the context, it can be interpreted either as a statement with the overtone that the speaker assumes the hearer should possess the knowledge and requires an explanation for his ignorance, or as an echo question that double-checks what the previous speaker has just said. Law's (1990) proposal of the "weakener" cannot explain the first reading, but both readings can be accounted for under our analysis.

3.3.4.3 THE TONE *2*

In our inventory, the mid-rising tone is found only in *g*-particles. They are *ge2* and *gaa2*. (84) lists a couple of meanings that are supposedly indicated by the tone.

(84) *ge2*: concessive, explanatory, surprise, eliciting answer, etc.
　　gaa2: disbelief, contrast, eliciting answer, etc.

It shows that the tone-*2* particles share semantic affinities with the tone-*1* particles, conveying hearer-oriented information.

I suggest that like the tone-*1* particles, the tone-*2* particles also involve a high boundary tone. However, while the former are derived by combining a toneless particle with the high boundary tone, the latter are derived by combining *ge3* with it. In other words, I assume a general distinction between the *g*-particles on the one hand, and the *l*- and *z*-particles on the other. That is, I assume *ge3* forms an independent particle, which participates in the derivation of other *g*-particles. For example, *gaa2* is derived by combining *ge3* with the discourse marker *aa* and the high boundary tone. As for the *l*- and *z*-particles, I assume that it is the rime *l* and *z* that participate in the derivation of the member particles. For example, *laa1* is derived by combining the initial *l*, the discourse marker *aa* and the high boundary tone.

This assumption is supported by the fact that Cantonese has *ge3*, which can be used independently, but it does not have an independent *le3* or *ze3*.[33]

3.3.4.4 THE TONE *4*

In our inventory, there are seven particles associated with the low tone. They are listed in (85).

(85) *aa4*: seeking confirmation

wo4: marking noteworthiness, conveying sudden awareness

gaa4: seeking confirmation of the asserted content

le4: marking realization, making strong suggestion
laa4: seeking confirmation of the realization of state-of-affairs
lo4: marking realization, indicating noteworthiness, making dogmatic claims

zaa4: seeking confirmation of the restricted content

The link between *aa4*, *gaa4*, *laa4* and *zaa4* is obvious. Sharing the same rime and the same tone, they are all used to ask for confirmation. Consider the following examples (from Fang (2003: 44) and Fung (2000: 178, 128, 66)).

(86) a. Nei5-dei6 hai2 dou6 **aa4**?
　　　2PL　　　be　place　PRT
　　　'So you are here?'

　　b. Nei5 gu2　di1 zan3-tung3-gou1 m4-sai2　cin2　　mai5 **gaa4**?
　　　2S　　guess CL　painkiller　　　NEG-need money buy　PRT
　　　'So you think the painkiller is free of charge?'

　　c. Nei5 sik6-zo2 joek6　　　**laa4**?
　　　2S　　eat-PERF medication PRT
　　　'So you've taken the medication?'

　　d. Dak1 gam3 do1　**zaa4**?
　　　get　so　much PRT
　　　'So you just got this much?'

Remarkably, the sentences given above all indicate that the speaker has just come to realize the situation in question. Some of my informants point out that in some contexts the sentences may not necessarily express the confirmation-seeking reading, and they are simply an expression of the speaker's sudden awareness.[34] This reminds us of the sentences ending in *wo4*, which also express the speaker's sudden realization.

(87) a. Nei5-dei6 hai2 dou6 **wo4**.
　　　2PL　　　be　place　PRT
　　　'So you are here.'

b. Dak1 gam3 do1 **wo4**.
get   so   much PRT
'So you got this much.'

I suggest that expressing the speakers' awareness of certain situation can be seen as conveying speaker-oriented information, i.e., it indicates the speaker's own grasp of information or knowledge (cf. Chu 2002). In this sense, *aa4*, *gaa4*, *laa4*, *zaa4* and *wo4* can all be seen as conveying speaker-oriented information. I ascribe this property to the presence of the tone *4*.

A question that remains is why the utterances ending in *aa4*, *gaa4*, *laa4*, and *zaa4* often convey the meaning of seeking confirmation. I suggest that the interrogative reading does not come from the final particles, namely, none of the tone-*4* particles functions to mark questions. Presumably, the sentence proper is associated with an interrogative mood. Like in Mandarin, the interrogative mood in Cantonese does not have to be marked overtly.

There are two other particles associated with the tone *4*. It was mentioned in section 3.3.1.2 that *le4* occurs in imperative sentences, implying that the speaker has a strong intention to have the hearer take an action, even if the hearer is not willing to do so. *Lo4* occurs in declarative sentences. It implies that the speaker has made a firm judgment of what is being claimed, and shows little concern with respect to whether or not it makes any sense to the hearer. Obviously, both particles can be seen as conveying speaker-oriented information. Again, I ascribe this property to the presence of the tone *4*.

I propose that the low tone in *aa4*, *gaa4*, *laa4*, *zaa4* and *wo4* is the manifestation of a low boundary tone, which has the core function of signaling "speaker orientation". This is further confirmed by comparing the tone-*4* particles with their tone-*1* counterparts.[35]

(88) a. Keoi5-dei6 hai2 dou6 **aa1**
3PL   be   place PRT
'They are here. --- (How come you didn't know; it's so obvious.)'

b. Keoi5-dei6 hai2 dou6 **aa4**
3PL   be   place PRT
'So they are here?'

(89) a. Keoi5 fung1-sap1-beng6 jau5 faat3-zok3 **lo1** (= (43b))
3S   rheumatism   again attack   PRT
'His rheumatism is acting up again. --- (Don't you know that?)'

b. Keoi5 fung1-sap1-beng6 jau5 faat3-zok3 **lo4** (= (43c))
3S   rheumatism   again attack   PRT
'His rheumatism is acting up again. (That's why; no doubt.)'

Steedman (2003) proposes that the distinction between the high boundary tone and the low boundary tone lies in that the former indicates information that the speaker claims the hearer to be committed to, whereas the latter indicates informa-

tion that the speaker claims himself to be committed to. This is exactly what we see in the above examples. (88a) and (89a) both imply that the speaker considers the hearer should have the knowledge, whereas (88b) and (89b) both express the speaker's own commitment to the knowledge.

3.3.4.5 THE TONE *5*
Finally, let us examine the semantic function of the tone *5*. (90) assembles all the particles associated with the low-rising tone.

(90) *aa5*: seeking confirmation;
    implying the speaker has a high confidence in what answer would be

wo5: marking noteworthiness;
    reporting hearsay news

gaa5: seeking confirmation of the asserted content;
    implying the speaker has a high confidence in what answer would be

le5: making or questioning re-assertion
laa5: seeking confirmation of the realization of state;
    implying the speaker has a high confidence in what answer would be

zaa5: seeking confirmation of the restricted content;
    implying the speaker has a high confidence in what answer would be

It was mentioned before that *aa5*, *gaa5*, *laa5* and *zaa5* are not reported in every published source, nor are they recognized by all my informants. For those who have them, it is pointed out that *gaa5* is equivalent to *ge aa5*, *laa5* to *le aa5* and *zaa5* to *ze aa5*. In other words, *gaa5*, *laa5* and *zaa5* are basically *aa5* plus something else. Below I will use *aa5* as a representative.

Let us find out if *aa5*, *wo5* and *le5* have any semantic feature in common. If they do, the common semantic feature is supposedly attributed to the tone *5*.

Rooryck (2001) states that evidentials have two essential properties: indicating "source" and denoting "reliability". "'Source of information' defines who stands for the information status of the sentence", and the information status is often measured on a scale with respect to its "reliability" (Rooryck 2001: 125). It seems that all the tone-*5* particles are involved in conveying evidentiality. They either indicate the "source" of information, such as the 'hearsay' particle *wo5*, or indicate a high degree of "reliability", such as *aa5*, or indicate both, such as *le5*, which on the one hand indicates that it is the speaker himself who stands for the information status, and on the other hand implies that the content is highly reliable. Based on these observations, I propose that the tone *5* associated with Cantonese final particles is an evidential marker.

Note that in addition to conveying evidentiality, utterances ending with *aa5* always indicate that the speaker is seeking confirmation or soliciting agreement. There are two possibilities. Previously I mentioned that utterances ending with *aa4* may have a confirmation-seeking reading. I suggested that the interrogative reading does

not come from the particle, but due to the interrogative mood the sentence is associated with. It is possible that *aa5* is also attached to utterances which are associated with the interrogative mood. However, unlike the utterances attached by *aa4*, which may also be declaratives, the utterances attached by *aa5* are always questions, so we still have to explain why *aa5* occurs only in interrogative sentences.

The other possibility is that the interrogative reading comes from the particle itself. Namely, *aa5* does not only comprise the tone *5*, but it also comprises the tone *1*. The combination of the two tones gives rise to the same tonal feature as the tone *5*, i.e., low-rising. It is the tone *1* that contributes to the utterance the confirmation-seeking reading, which is hearer oriented.

The confirmation-seeking reading is also possible with the utterances ending in *le5*. As mentioned before, utterances ending in *le5* can have either a declarative or an interrogative reading. We can either assume that the interrogative reading comes from the interrogative mood associated with the sentence in which *le5* occurs, or assume that it comes from the particle itself, i.e., when a high boundary tone is present, *le5* conveys the meaning of seeking confirmation, otherwise it merely indicates re-assertion.

In this study, I assume that, as for *aa5* and *le5*, it is the high boundary tone that brings in the confirmation-seeking reading. Whether this is indeed the case, I expect to find out in future research.

3.3.5 CONCLUSION
In this section, I examined the core semantics of the initials, the rimes, the coda and the tones, which is summarized as follows.

(91) ***ge3***: asserting factuality
    l: marking realization
    z: marking restriction
    m: marking yes/no questions
    n: marking evaluative mood

    e: default
    aa: marking relevance
    o: marking noteworthiness

    k: emotion intensifier

    3: default
    1: marking 'hearer-orientation'
    4: marking 'speaker-orientation'
    5: marking evidentiality

In section 3.2, I made a preliminary proposal of how the minimal units constitute single final particles (see chart (2)). On the basis of (91), I revise my previous proposal as follows.

(92) *aa1*: *aa + 1*
    aa3: *aa + 3*
    aak3: *aa + k + 3*
    aa4: *aa + 4*
    aa5: *aa + 5 + 1*

    wo3: *o + 3*
    wo4: *o + 4*
    wo5: *o + 5*

    ge3
    ge2: *ge3 + 1*
    gaa3: *ge3 + aa*
    gaak3: *ge3 + aa + k*
    gaa2: *ge3 + aa + 1*
    gaa4: *ge3 + aa + 4*
    gaa5: *ge3 + aa + 5 + 1*

    le4: *l + e + 4*
    le5: *l + e + 5 (+ 1)*
    laa3: *l + aa + 3*
    laak3: *l + aa + k + 3*
    laa1: *l + aa + 1*
    laa4: *l + aa + 4*
    laa5: *l + aa + 5 + 1*
    lo3: *l + o + 3*
    lok3: *l + o + k + 3*
    lo1: *l + o + 1*
    lo4: *l + o + 4*

    ze1: *z + e + 1*
    zek1: *z + e + k + 1*
    zaa3: *z + aa + 3*
    zaa4: *z + aa + 4*
    zaa5: *z + aa + 5 + 1*

    me1: *m + e + 1*

    ne1: *n + e + 1*

(92) shows that Cantonese final particles are semantically complex, i.e., the semantics of each particle given on the left side is the integration of the semantics of the minimal units given on the right side. In the next section, I will go one step further. I suggest that Cantonese final particles are not only semantically complex, but are also structurally complex. I will show how the dissection of Cantonese final particles maps into sentence structure.

3.4 STRUCTURAL MAPPING OF CANTONESE FINAL PARTICLES
In this section, I propose a syntactic analysis of Cantonese final particles. Along the same line of my previous discussion of Mandarin final particles, I propose that the system of Cantonese final particles maps into a system of functional projections in the CP domain.

I start the investigation by assigning independent status to the minimal units, proposing that the semantics previously attributed to the initials, rimes, coda and tones is actually conveyed by simplex particles. Then I will look at the relative order of these particles, which will be mapped into a hierarchical structure. Finally, I draw the conclusion.

3.4.1 MINIMAL UNITS AS SIMPLEX PARTICLES
Previously I suggested that in the final particle system of Cantonese, initials, rimes, coda and tones were the minimal units which were the semantic and formal base of the particles that we discussed in the preceding sections. In this section, I further suggest that the initials, rimes, coda and tones can be seen as independent particles themselves. I propose that Cantonese has the following simplex particles:

(93) *ge3*: asserting factuality
le: marking realization
ze: marking restriction
me: marking yes/no questions
ne: marking evaluative mood

aa: marking relevance
o: marking noteworthiness

k: emotion intensifier

1: marking 'hearer orientation'
4: marking 'speaker orientation'
5: marking evidentiality

In (93), I exclude the default elements, i.e., the rime *e* and the tone *3*, from our list, which I assume have no syntactic status. I replace the initials with simplex particles that end with a default vowel, and the rimes with simplex particles that start with an empty initial. For instance, previously I suggested that it was the initial *l* that functioned to mark realization. Here I consider this function to be performed by a minimal particle, i.e., *le*, which is the combination of the initial *l* and the default vowel *e*. Previously I suggested that it was the rime *aa* that functioned to mark discourse relevance. Here I suggest that it is the minimal particle *aa* (the combination of an empty initial and the rime *aa*) that performs this function.

In (93), I also propose three tonal particles, one corresponding to the high boundary tone, one to the low boundary tone, and one marking evidentiality. I consider the coda *k* to form a particle as well, although like the tonal particles it is not autonomous in phonology. I assume that except *ge3*, the particle *le, ze, me, ne, aa,*

and *o* are all inherently toneless. They are either combined with the tonal particles, or associated with the default tone.

Under the current proposal, what are traditionally conceived of as single particles are actually particle clusters. It should be noted that, first, phonological fusion often takes place when the immediately following particle has an empty initial. For instance, some of my informants consider the particle cluster *ge3 aa1* to be acceptable, but they report that the fused form *gaa2* sounds better and more natural.

Besides, the minimal particles *le* and *ze* are not used in isolation. They occur only in non-final position in particle clusters, e.g., *le aa5*, *ze aa5* (semantically equivalent to *laa5* and *zaa5*, respectively). When *le* and *ze* appear in the middle of particle clusters, they are pronounced with a schwa instead of [ɛ] (different from *le1*, *le4*, *le5*, *ze1*, and *zek1*, which are pronounced with [ɛ]). This is also the case of *ge3*. *Ge3* in (94a) is pronounced with [ɛ], while *ge3* in (94b) is pronounced with a schwa (cf. Law 1990).

> (94) a. Gwong2-dung1-jan4 sik6 lou5-syu2 **ge3**. (=(17a))
>   Cantonese-people   eat mouse   PRT
>   'It is indeed the case that Cantonese people eat mice.'

>   b. Gwong2-dung1-jan4 sik6 lou5-syu2 **ge3 me1**?
>   Cantonese-people   eat mouse   PRT PRT
>   'It is the case that Cantonese people eat mice? (I don't believe this.)'

I consider the non-citation forms, i.e., the particles pronounced with a schwa, to be the 'reduced' versions of the particles-in-isolation.

3.4.2 TOWARD A HIERARCHY OF THE FUNCTIONAL HEADS

Finally let us consider how to relate our findings so far to the sentence structure. The combinations given in (92) provide straightforward empirical evidence, according to which we can determine the order of some of the final particles. However, the combinatory possibilities are quite limited. Some final particles never co-occur. For these particles we will take more general considerations into account.

Purely empirically, we know from the co-occurrence facts given in (92) that the complementizer system in Cantonese comprises at least four layers. Going inside out, the first layer consists of the functional projections headed by *ge3*, *le*, and *ze*, the second layer comprises those headed by *aa* and *o*, the third layer hosts the coda *k*, and the outermost layer hosts the tonal particles. It is unclear which layer the particles *me* and *ne* occupy, but for sure they are in positions lower than the tonal particles.

Below I will examine the relative order of the particles that occupy the same layer. We start with *ge3*, *le*, and *ze*. According to my informants, the following particle clusters are possible in Cantonese (cf. Law 1990: 207-210):

> (95) *ge3 laa1*
>   *ge3 laa3*
>   *ge3 laa4*
>   *ge3 laa5*

ge3 lo1
ge3 lo3
ge3 lo4

ge3 zaa3
ge3 zaa4
ge3 ze1
ge3 zek1

The particle clusters given in (95) show that *ge3* can occur with *le* and *ze*, the former preceding either of the latter two particles.

Only one informant reports that *le* and *ze* can co-occur, in which case *ze* precedes *le*. See (96).

(96) Giu3-zo2   loeng3 pun4 coi3 **ze   laa3**.
      order-PERF two   CL   dish PRT PRT
      '(He) only asked two dishes.'

I do not have an explanation for why the co-occurrence of *ze* and *le* is not commonly accepted. Nevertheless, I take *ze* to precede *le* in our ordering.

What we observed above is that *ge3*, *le* and *ze* can co-occur. The order among the three particles can be described as follows: *ge3* precedes *ze*, and *ze* precedes *le*.

Now let us consider the relative order of *aa* and *o*. Neither the published sources nor our informants report any co-occurrence of *aa* and *o*. It is confirmed that the following combinations do not exist in Cantonese.[36]

(97) **aa wo3*
      **aa wo4*
      **aa wo5*

      **wo aa1*
      **wo aa3*
      **wo aak3*
      **wo aa4*
      **wo aa5*

I suggest that *aa* and *o* compete for the same position in sentence structure. This seems plausible also when we consider their semantic properties, i.e., marking relevance and marking noteworthiness both induce pragmatic effects. In this sense *aa* and *o* both can be seen as functioning on the discourse level.

As for the relative order of the tonal particles, I propose that, both being boundary tones, the tone *1* and *4* occupy the same position. The existence of the fused form *aa5*, *gaa5*, *laa5*, and *zaa5* suggests that the evidential marker, i.e., the tone *5*, occurs preceding the high boundary tone. See (98).

(98) *aa5*: *aa + 5 + 1*
      gaa5: *ge3 + aa + 5 + 1*

laa5: *le + aa + 5 + 1*
zaa5: *ze + aa + 5 + 1*

So far I have examined the order of the particles that stay on the same layers. Such relative orders give rise, by transitivity, to a single overall order; that is, *ge3* precedes *ze*, which precedes *le*, which precedes *aa* and *o*, which precede the tone *5*, which precedes the tone *1* and *4*. As mentioned earlier, the coda *k* follows the segmental particles and precedes the tonal particles. Thus it should occur in between the discourse particles *aa* and *o* and the tone *5*.

Finally, let us consider the position of *me* and *ne*. Here are some co-occurrence facts of *me*, *ne* and other final particles. According to my informants, *me* and *ne* both follow *ge*, *ze*, and *le* (cf. Law 1990: 207-210).

(99) *ge3 me1*
    ze me1
    le me1

(100) *ge3 ne1*
     ze ne1
     le ne1

Me and *ne* do not occur with each other. See (101).

(101) **me ne1*
     **ne me1*

Neither of them occurs with the discourse particles *aa* and *o*. The following combinations do not exist.

(102) **me aa*
     **me wo*

     **ne aa*
     **ne wo*

     **aa me1*
     **wo me1*

     **aa ne1*
     **wo ne1*

Despite the lack of direct evidence, it is not reasonable to put *me* and *ne* in the same position, nor to put them in the same position as *aa* and *o*, as these particles perform different semantic functions after all. In section 3.3, we saw that *me* is a typing particle for yes/no questions; *ne* is on a par with the Mandarin final particle *ne*, which is an evaluative marker; *aa* and *o* perform discourse functions, i.e., marking relevance and noteworthiness, respectively.

In chapter 2, I argued that in Mandarin clause-typing elements (though covert) should precede the evaluative particle, which precedes the discourse particle. It is reasonable to assume that the Cantonese particles follow the same ordering as their Mandarin counterparts; namely, *me* precedes *ne*, and *ne* precedes *aa* and *o*.

At this stage, the relative order of the particles collected in (93) can be updated as follows: *ge3* precedes *ze*, *ze* precedes *le*, *le* precedes *me*, *me* precedes *ne*, *ne* precedes *aa* and *o*, *aa* and *o* precede *k*, *k* precedes the tone *5*, and the tone *5* precedes the tone *1* and *4*. This linear order maps into a hierarchy of functional projections headed by the minimal particles. Below I will look at the particles one by one, trying to give each projection a label according to the semantic function of the corresponding particle, and meanwhile putting them in the right order. We go inside out, or from bottom to top.

Ge3: this is the lowest element in the structure. Sybesma (2004) proposes that it occupies a head in the C-domain the specifier position of which contains a tense related operator. Let's say it is in FinP.

Ze: it serves to mark restriction, meaning 'only'. Let's put it in FocP.

Le: for the Mandarin final particle *le*, which is the counterpart of the Cantonese *le*, Sybesma (1997) proposes that it performs a function similar to that of T in languages such as Dutch and English: it helps to anchor the sentence to the time axis of the real world. Let's assume that both the Mandarin final particle *le* and the Cantonese final particle *le* are in DeikP.

Me: it is the typing particle for yes/no questions. Let's put it in MoodP.

Ne: it is an evaluative marker. Let's put it in EvaluativeP.

Aa, *o*: *aa* marks discourse relevance, and *o* marks noteworthiness. Both can be seen as performing discourse functions. Let's put them in DiscourseP.

K: it is an "emotion intensifier". Let's put it in EpistemicP.

5: it is an evidential marker. Let's put in EvidentialP

1, *4*: they signal for hearer and speaker orientation, respectively. Let's put them in EpistemicP.

The hierarchy of the functional projections headed by Cantonese final particles is schematically represented as follows:

(103) $Epist_1$ > Evid > $Epist_2$ > Disc > Eval > Mood > Deik > Foc > Fin
     1, 4   *5*   *k*   *aa, o*   *ne*   *me*   *le*   *ze*   *ge3*

3.4.3 CONCLUSION

In this section, I proposed a syntactic analysis of Cantonese final particles. I started the discussion by suggesting that the minimal units which were treated as components of single final particles are simplex particles, and the final particles reported in the literature are in fact particle clusters. Then I examined the relative order of the simplex particles, and mapped the linear order to a hierarchy of the corresponding functional heads. I consider this hierarchy to manifest the makeup of the CP domain.

3.5 CONCLUSION

In this chapter, I investigated the final particle system in Cantonese. First I examined the internal formation of Cantonese final particles and argued that they can be dissected into smaller meaningful units, i.e., initials, rimes, coda and tones. I suggested that every meaningful unit conveys a core semantic meaning. I then assigned the meaningful units independent status by proposing that they constitute individual particles, which are semantically and structurally simplex. By looking at their relative order, I established a hierarchy of the functional projections headed by the simplex particles. I concluded that the functional structure where the Cantonese final particles reside is as follows:

$$\text{Epist}_1 > \text{Evid} > \text{Epist}_2 > \text{Disc} > \text{Eval} > \text{Mood} > \text{Deik} > \text{Foc} > \text{Fin}$$

| 1, 4 | 5 | k | aa, o | ne | me | le | ze | ge3 |

NOTES

[*] This chapter is based on research done together with Rint Sybesma. See Sybesma and Li (2005).

1. The notes given in the chart offer information about which particle is mentioned in which sources. Note that none of the sources claims to be exhaustive, e.g., Fung (2000) only deals with the particles with the initial *z*, *l*, and *g*. Some particles mentioned in the notes can be found in the literature but are not treated in this chapter, and thus are not found in the chart. The notes also provide information relevant to our discussion of the final particles.

2. Of the references, only Law (1990), who mentions *e1*, *e3*, *e4*, and Yau (1980), who mentions *e1* and *e4,* include *e* as a separate particle in their inventories. My informants do not have *e* as a separate particle.

3. Law (1990) and Matthews and Yip (1994) fully agree on the possible forms of *aa*: *aa1*, *aa3*, *aa4*, *aa5*. Cheung (1972) seems to only have *aa1*, *aa3* and *aa4*, but this is not entirely clear. Law (2004) only has *aa3* and *aa4*. Yau (1980) has *aa1*, *aa2*, *aa3*, *aa4*, *aa5,* and Fang (2003) has *aa1*, *aa3*, *aa4*. My informants agree on *aa1*, *aa3*, *aa4*. Some of them also have *aa5*.

4. Yau (1980), Law (1990), Matthews and Yip (1994), Fang (2003) and Law (2004) have *wo3*, *wo4* and *wo5*; Cheung (1972) has *wo4* and *wo5*, and a third one, which he says is associated with a tone that is higher than [33] and lower than [55]. My informants have *wo3*, *wo4* and *wo5*. I assume that *wo* is *o* with an empty onset.

5. Yau (1980), Law (1990) and Matthews and Yip (1994) have *aak3*. So do my informants.

6. Everybody agrees on the *ge*-particles (except that Law (2004) does not list any *ge*). Cheung (1972) notes that *ge2* is under the influence of intonation.

7. Yau (1980), Matthews and Yip (1994), Fung (2000) and Fang (2003) have *gaa2*, *gaa3*, and *gaa4*. Law (1990) only has *gaa3*, and so does Cheung (1972), but the latter probably would have *gaa4*, just not as a separate particle (see note 10). My informants have *gaa2*, *gaa3* and *gaa4*. Some of them also have *gaa5*.

8. Yau (1980), Law (1990), Matthews and Yip (1994) and Fang (2003) have *gaak3*. So do my informants.

9. Fung (2000) has *le3*, *le4*, and *le5*. She does not mention *le1* in any form. Yau (1980) and Law (1990) have *le1*, *le4* and *le5*. The latter mentions that *le1* has a variant form with the nasal initial *n*. Law (2004) only has *le1/ne1*. Matthews and Yip (1994) do not list *le1/ne1* on page 340, but they mention it and the particle *le5* on page 341. Cheung (1972) has *ne1*, but under *lo-la* he also mentions *le4* and *le5* (Cheung 1972: 174, 173 resp.). Fang (2003) has *le1*, *le3*, *le4*, and *le5*, though *le1* does not occur as often as *ne1*. My informants have *le1*, *le4*, and *le5*. They agree on that *le1* and *ne1* are interchangeable. None of them has *le3* as an independent particle.

10. Yau (1980), Matthews and Yip (1984), Fung (2000) and Fang (2003) have *laa1*, *laa3*, and *laa4*. Law (2004) and Cheung (1972) only have *laa1* and *laa3*, but the latter treats all *Caa4*-particles (C standing for consonant) as combinations with *aa4*, and does not list them separately (he gives an example of *laa4* on p. 176). Law (1990) is the only one with *laa5*. My informants agree on *laa1*, *laa3*, and *laa4*. Some of them also have *laa5*.

11. Yau (1980), Matthews and Yip (1994), Fung (2000), Fang (2003) and Law (2004) all have *lo1*, *lo3* and *lo4*. Cheung (1972) only has *lo3* and *lo4*. Law (1990) has an additional *lo5*. My informants have *lo1*, *lo3* and *lo4*.

12. All except Law (2004) have *laak3*. All have *lok3*.

13. All except Fung (2000) have *me1* (see note 1).

14. All except Fung (2000) have *maa3* (see note 1).

15. See note 9.

16. Fung (2000) also has *4*, but she mentions that *ze4* is infrequently used (Fung 2000: 69). This is confirmed by the fact that no one else has this particle. Matthews and Yip (1994) also have *ze3*, but no one else in the literature mentions it. My informants say that *ze3* is present only in non-final position in particle clusters.

17. Yau (1980) and Fang (2003) have *zaa3* and *zaa4*. Law (1990) has *zaa1*, *zaa3*, and *zaa5*. Matthews and Yip (1994) have *zaa2*, *zaa3*, and *zaa4*. Fung (2000) has *zaa3*, *zaa4*, and *zaa5*, which she says is "unproductive". Law (2004) only has *zaa3*. Cheung (1972) only has *zaa4*. My informants agree on *zaa3* and *zaa4*. Some of them also have *zaa5*.

18. All have *zek1*. Fung (2000) is the only one who also has *zaak1*, which she says is "unproductive".

19. The contents in brackets are added by me.

20. See note 2.

21. The characterizations have to be short for practical reasons; as a result, not all subtleties involved in the expressive power of the particles can be done justice to.

22. Ideally, one base sentence is used to illustrate the semantic effects of all particles. Yet it is impossible to find such a sentence with which every particle is compatible. In the coming discussion I will try to use the same sentence whenever possible.

23. In addition to the translations of the literal meanings of the example sentences, extra information is provided to help illustrate the subtle meanings conveyed by the final particles.

24. Law (1990) and Fung (2000) both mention that *ge2* cannot occur with wh-questions or A-not-A questions except the *why*-questions. Law (1990) mentions that this is also the case for *ge3*. However, according to my informants, although there seem to be some restrictions, which make the co-occurrence of *ge2* and *ge3* with wh- and A-not-A questions less flexible (I do not have an explanation for this), the co-occurrence is still possible.

25. See Fung (2000: 104 ff.) for a similar opinion. Fang (2003: 108-9), however, notes that in comparison to *laa3*, *laak3* is basically the same except that the tone is "lighter". My informants agree with Fung, not with Fang.

26. Fung (2000: 131) notes that compared with *le3*, *le4* encodes a higher level of potentiality for the hearer to carry out the action. My informants do not have *le3* used as an independent particle. See note 9.

27. Fang (2003) thinks that the tone is "lighter" with *lok3* than with *lo3* (Fang 2003: 109). My informants do not agree. See also note 26.

28. This may account for the distinction between the Cantonese *laa3* and the Mandarin final particle *le*. They are similar, as the latter has also been claimed to indicate realization of a new situation or change of state. How-

ever, the Cantonese *laa3* has a much wider range of uses than the Mandarin *le*.

29. The topic marker *ne1* which appears in thematic questions is ignored here.

30. In our inventory, these are the only minimal pairs available for the purpose of the current comparison. In the lists given below, '*' denotes that the particle does not exist, or at least is not accepted by most of the references and my informants (see the notes 1 to 18).

> *e1, *e3, *e4, *e5 vs. aa1, aa3, aa4, aa5
> *gek3, *ge4, *ge5 vs. gaak3, gaa4, gaa5
> *le1, *le3 vs. laa1, laa3
> ze1, zek1, *ze3, *ze4 vs. *zaa1, *zaak1, zaa3, zaa4
> ne1 vs. *naa1
> me1, *me3 vs. *maa1, maa3

31. Fung's (2000: 169) gloss of (65b), i.e., "(that place) has lots of people in front (of it)", suggests that the sentence can have a present-time reading. Although *ge3* can be used in a sentence with present tense (e.g., (6a)), my informants cannot get this reading with this particular sentence.

32. Fung (2000) does not offer an explanation for this.

33. See note 9 and 16.

34. Similarly, in Mandarin a sentence ending with a low-pitch *a* can be a statement merely expressing the speaker's sudden awareness of certain situation. In some cases, the speaker may further require a confirmation.

35. The distinction between *gaa2* and *gaa4*, *laa1* and *laa4* are similar to that between *aa1* and *aa4*. *Wo4* and *zaa4* do not have a high-tone counterpart, for *wo1* and *zaa1* do not exist. Although there is *le1*, as mentioned before, it is not an *l*-particle but a variant of *ne1*.

36. Since *wo* does not occur preceding *aa*, the prediction is that *lo* does not occur preceding *aa*, either. This is borne out. The following combinations are confirmed to not exist.

> *lo aa1
> *lo aa3
> *lo aak3
> *lo aa4
> *lo aa5

Likewise, since *aa* does not occur preceding *wo*, the prediction is that *gaa*, *laa*, and *zaa* do not occur preceding *wo*. Again, this is confirmed by

my informants, expect one who thinks that *gaa wo*, *laa wo* and *zaa wo* may exist. See the following example.

(i) Keoi5 fung1-sap1-beng6 jau6 faat3-zok3 **le/laa/lo wo3**.
 3S rheumatism again attack PRT/PRT/PRT PRT
 '(Mind you) his rheumatism is acting up again.'

This informant thinks that the vowel following the initial *l* can be pronounced in three forms: [ə], [a] and [o], and which one is used does not affect the meaning of the sentence. Nevertheless, he points out that *le* and *lo* sound more natural than *laa*.

 I do not take this as effective evidence for *aa* preceding *o*, as all my other informants do not accept *gaa wo*, *laa wo*, or *zaa wo*. Besides, the fact that there is no such a cluster *aa wo* will always be a problem for assuming that *aa* precedes *o*.

 As for the existence of *lo wo*, I suggest that it manifests rime harmony. Namely, as a result of assimilation, the default vowel of the preceding particle changes to the same vowel as that of the following particle.

4. WENZHOU FINAL PARTICLES

4.1 INTRODUCTION

In this chapter, I investigate the final particle system of Wenzhou. Along the lines of the preceding chapters, I propose that the system of final particles in Wenzhou corresponds to a system of functional projections in the CP domain.

Studies on Wenzhou grammar have been scarce, and those on such 'peripheral categories' as final particles are even fewer. The discussion that I will present in this chapter is mainly based on You (2003), which describes the semantic and syntactic properties of a group of Wenzhou final particles, and consultation with Wenzhou informants. Due to the limited access to data, the analysis presented here is preliminary and some problems still remain open. Nevertheless, I hope that the current study will contribute insight to the understanding of the issue, and provide a good starting point for further research.

This chapter is organized as follows. Section 4.2 briefly reviews the Mandarin and Cantonese final particles that we discussed in the preceding chapters. Section 4.3 examines the semantic properties of Wenzhou final particles. Section 4.4 attempts on a syntactic analysis of these final particles. Section 4.5 presents the conclusion.

4.2 A COMPARATIVE SURVEY ON MANDARIN AND CANTONESE FINAL PARTICLES

Before we look at the final particles in Wenzhou, it is helpful for us to briefly review the final particles that we have seen so far in Mandarin and Cantonese.

(1) Mandarin final particles

    ne: marking evaluative mood
    ba: marking low degree on sentence force
    ma: marking high degree on sentence force
    a: marking discourse relevance

(2) Cantonese final particles

    ge3: asserting factuality
    le: marking realization
    ze: marking restriction
    me: marking yes/no questions
    ne: marking evaluative mood
    aa: marking discourse relevance
    o: marking noteworthiness
    k: emotion intensifier
    1: marking 'hearer orientation'
    4: marking 'speaker orientation'
    5: marking evidentiality

Comparing (1) and (2), we see that Mandarin and Cantonese have some final particles performing the same functions. For instance, they both have a final particle marking evaluative mood and a final particle marking discourse relevance.

Mandarin and Cantonese may have more final particles in common.

I did not discuss in chapter 2 the Mandarin final particle *de*, which has a similar use to the Cantonese final particle *ge3*, and the final particle *le*, which performs a similar function to the Cantonese final particle *le*. Consider (3) (from CCRL).

(3) a. Wǒ shì nǐ de fūxù,　zánme bài　　　　guò tiān-dì　　**de**.
　　　1S　be　2S DE husband 1PL　pay-homage-to　EXP heaven-and-earth PRT
　　　'I am your husband, (it is the fact that) we've had a wedding ceremony.'

　　b. Wǒ xīn-lǐ　　　biàn　　de gāoxìng hé　qīngsōng de duō　**le**.
　　　1S　heart-inside become DE happy　and relieved　DE much PRT
　　　'My heart has become much happier and more relieved.'

In (3a) the presence of *de* indicates the speaker's commitment to the assertion, and in (3b) the presence of *le* marks the realization of a new state. I consider the Mandarin final particle *de* to be the counterpart of the Cantonese final particle *ge3*, which functions to assert factuality, and Mandarin *le* the counterpart of Cantonese *le*, which functions to mark realization.

We saw in chapter 2 that Mandarin has two final particles functioning to mark degrees, i.e., *ba* and *ma*. Although the final particles that we discussed in chapter 3 do not perform this function, Cantonese has two final particles, i.e., *gwaa3* and *maa3*[1] (not formally connected to any final particles mentioned in chapter 3; neither of them can be dissected into smaller semantic units), which seem to have similar functions as Mandarin *ba* and *ma*, respectively.

Gwaa3 is similar to the Mandarin final particle *ba*. Matthews and Yip (1994: 353) claim that *gwaa3* "indicates the speaker's uncertainty about the information in the sentence, like 'I suppose' in British or 'I guess' in American English", or, as they also mention, like Mandarin *ba* (cf. Cheung 1972). They say that *gwaa3* is typically used in answers to questions and propositions. Fang (2003) and Cheung (1972) give examples of *gwaa3* used in questions, indicating that the speaker expects an affirmative answer. In fact, just like Mandarin *ba*, *gwaa3* can be attached to many different types of sentences. Here are some examples. (4a) and (4b) are excerpted from Cheung (1972: 180) and Fang (2003: 53), respectively.

(4) a. lei5 m4-wui3 cheut3-heoi3 **gwaa3**?
　　　2S　NEG-will out-go　　　PRT
　　　'you're not going out, are you?'

　　b. keoi5 seung5-lau2 zou6 mat1-je5 **gwaa3**.
　　　3S　　go-upstairs　do　what　PRT
　　　'he went upstairs to do something I suppose'

In chapter 3, section 3.3.1.4, I mentioned that Cantonese has a final particle *maa3*, which occurs at the end of yes/no questions. Fang (2003) reports a non-

interrogative use of *maa3*. It is used for "stating the obvious" (Fang 2003, 63). See (5) (Fang 2003: 133).

(5) ngo5 go3 zai2 zau6-hai6 zung1-ji3 go2-go3 leoi5-zai2 **maa3**.
1S   CL   son   just   like   that-CL   girl   PRT
'My son simply likes that girl!'

The *maa3* in (5) seems very close to the Mandarin *ma* used in declarative sentences. It indicates that the speaker is totally committed to the assertion, and that he accepts it as a matter of fact.

Although they have the same phonological form, it is not possible that the *maa3* used in declaratives and the one occurring in yes/no questions are the same particle. The *maa3* in declaratives cannot be further divided into smaller units, but the *maa3* in yes/no questions is the combination of the negation marker *m4* and the discourse particle *aa* (see chapter 5, section 5.4). Besides, in many cases the *maa3* in declaratives is interchangeable with the disyllabic particle *aa1-maa3*, the *maa3* in yes/no questions is not.

I suggest that *gwaa3* and *maa3* are both degree markers. Cantonese *gwaa3* is on a par with Mandarin *ba*, functioning to mark a low degree with respect to the strength of sentence force. I consider the *maa3* in (5) to perform the same function as Mandarin *ma*; namely, when attached to declaratives, it marks a high degree with respect to the strength of the assertive force.[2]

In chapter 2, I mentioned that there exist a high boundary tone and a low boundary in Mandarin. In chapter 3, I showed that the boundary tones are found in Cantonese as well, and I treated them as tonal particles. Here I suggest that the boundary tones in Mandarin can be treated in the same way. Namely, Mandarin has two tonal particles, one functioning to mark speaker orientation, and the other to mark hearer orientation.

In sum, we find that many Mandarin and Cantonese final particles perform the same functions. This is summarized in the following table.

(6) Counterpart particles in Mandarin and Cantonese

MFP	CFP	Semantic Function
de	*ge3*	asserting factuality
le	*le*	marking realization
ne	*ne*	marking evaluative mood
ba	*gwaa3*	marking low degree
ma	*maa3*	marking high degree
a	*aa*	marking relevance
high pitch	*1*	marking hearer orientation
low pitch	*4*	marking speaker orientation

In the coming discussion, we will look at the final particles in Wenzhou, to see what semantic functions they perform, and how they relate to the structure of the

sentence. I will focus on eight final particles that are used frequently in the urban district of Wenzhou: *ba, gi, miɛ, na, n̠i, a, e,* and *o.*[3]

4.3 SEMANTIC CONTRIBUTION OF WENZHOU FINAL PARTICLES
4.3.1 *gi*

Like Mandarin and Cantonese, Wenzhou has a final particle, i.e., *gi*, which is used for assertions of facts. You (2003: 226) mentions that *gi* is on a par with the Mandarin particle *de*; when it appears in sentence final position, it serves an assertive function. Consider the following examples. The presence of *gi* indicates that 'this is indeed the situation' or 'this is the fact'.

(7) a. møy8-zɿ6 hə3 jieu6 jyɔ6, dʑia8 tɕy5   fu3 tɕy5
       thing   good then okay price expensive NEG expensive

   nau4   ka1-ji6 **gi**
   NEG-have matter   PRT
   'It is okay if the thing is of good quality. It doesn't matter whether it is
    expensive or not.'

   b. ki7 tshɿ3 zɿ6-ky5 n̩4 ɕia3-te7 **gi**
      this CL   matter 1S know   PRT
      'I know this thing.'

4.3.2 *ba*

Like Mandarin and Cantonese, Wenzhou has a final particle, i.e., *ba*, which functions to mark realization. You (2003: 192-3) points out that *ba* is the counterpart of the Mandarin final particle *le*. It serves to mark the beginning of a new action or change of situation. This is shown in (8).

(8) a. n̩4 tshɿ7 sei1-ko1   **ba**.
      1S eat   watermelon PRT
      'I'm going to eat the watermelon.'

   b. vu4 lo8 tshɿ3 **ba**.
      rain fall up   PRT
      'It's started raining.'

4.3.3 *n̠i*

The Wenzhou final particle *n̠i* performs a similar function to the Mandarin final particle *ne* and the Cantonese final particle *ne*. It is frequently used in wh-questions, A-not-A questions, as well as in thematic questions. Consider the following examples.

(9) a. a-n̠i2 naŋ2   s̩1-çy1 ki7 baŋ4 s̩1   n̠i?
       what person like   this CL   book PRT
       'Who likes this book?'

   b. gei2 s̩1-çy1 a7   fu3 s̩1-çy1 ki7 baŋ4 s̩1   n̠i?
       3S like   PRT NEG like   this CL   book PRT
      'Does he like this book or not?'

   c. n̠i4 tçiɛ1 lə4-jyɔ2   tsau3 pai7-tçiaŋ1, çi3-mi   lə4-lei4 n̠i?
      2S ask   old-Wang go   Beijing   if-so-then old-Li PRT
      'You asked Old-Wang to go to Beijing; then what about Old-Li?'

The addition of *n̠i* in (9a) and (9b) indicates that the speaker has a special interest in finding out the answer. In (9c), the component attached by *n̠i* is a new topic in contrast to the old topic mentioned in the preceding clause. I consider the use of *n̠i* in wh- and A-not-A questions to be related to the marking of evaluative mood; namely, it indicates that the speaker considers the matter that is being asked of particular significance. As for the *n̠i* used in thematic questions, following Wu's (2005b) analysis of the Mandarin particle *ne*, I assume that it is a topic marker.

Nonetheless, note that unlike Mandarin *ne* and Cantonese *ne*, *n̠i* is not used in declarative sentences. According to my informants, in Wenzhou in declarative sentences no particular particle is needed to express unexpectedness or surprise.

4.3.4 *e*

Recall that Cantonese has a final particle, i.e., *wo3*, which functions to mark noteworthiness. In Wenzhou this function is performed by the final particle *e*. Like *wo3*, *e* can occur in declarative and imperative sentences. The declarative use of *e* is shown in (10).

(10) a. gei2 i7   dzɿ2 ŋ̍4   li4 va6 o7 tshɿ8 tei4.
        3S   one meal five 50g rice all eat   can
       'He can eat 250 gram of rice for one meal.'

    b. gei7 i7   dzɿ2 ŋ̍4   li4 va6 o7 tshɿ8 tei4 **e**.
        3S   one meal five 50g rice all eat   can PRT
       'Note he can eat 250 gram of rice for one meal.'

According to my informants, (10a) and (10b) both convey a sense of surprise as the speaker considers 250 grams per meal to be a large amount. They differ in that the latter conveys an additional sense of reminding. Note that if a piece of information is surprising, usually it is also noteworthy, but noteworthy information is not necessarily surprising. Consider (11).

(11) maŋ2 khe1 khe1ba4 **e**.
      door open open PERF PRT
      'Note the door has been opened.'

(11) can be used in the following context: people are waiting outside the office building; the janitor unlocks the door and tells people that the door has been opened and they can go in now. In this case, no 'surprise' meaning arises, and *e* is used to notify the change of situation.

Like Cantonese *wo3*, *e* can be used in imperative sentences, where the particle serves to remind the hearer to do something. This is shown in (12).

(12) a. ȵi4-liɛ tshɻ7 kha4 lei.
      2PL   eat fast bit
      'Eat a bit faster.'

    b. ȵi4-liɛ tshɻ7 kha4 lei **e**.
      2PL   eat fast bit PRT
      'Eat a bit faster --- (mind you!)'

4.3.5 *a*

Mandarin and Cantonese both have a discourse particle functioning to mark relevance. The particle is found in Wenzhou as well. Like Mandarin *a* and Cantonese *aa*, the Wenzhou final particle *a* can occur in various types of sentences. You (2003) mentions its use in yes/no questions, imperative sentences and exclamative sentences.[4] See (13) (excerpted from You (2003: 229-231)).

(13) a. vɑ6 tshɻ7 ba4 **a**?
      rice eat   PERF PRT
      'You already ate, right?'

    b. ki7 liɛ4 ne8 fai1 tsau3 tɕhy7 **a**!
      this two day don't go   out   PRT
      'Don't go out these two days!'

    c. peŋ1-dzɻ2-leŋ2 tshɻ7-tei3 tsaŋ1 hə3-ku5 **a**!
      ice-cream   eat-up   really feel-good PRT
      'It feels so good eating the ice cream!'

You (2003) suggests that the *a* in (13a) marks yes/no questions, the one in (13b) expresses imperative mood, and the one in (13c) expresses exclamative mood. However, according to my informants, *a* in the above sentences can be left out, and the yes/no question reading, imperative reading and exclamative reading are still available.

The particle *a* can occur in other types of sentences as well, e.g., declaratives, wh-questions, A-not-A questions. See (14), (15) and (16).

(14) A: ɕi3 kai goŋ1-sֻ1 tɕyo7-n̠i2 tɕheŋ3 gei2 zu6 gu6-vaŋ6?
          that CL company why   engage 3S do counselor
          'Why did that company engage him as their counselor?'

     B: (iaŋ1-vu6) gei2 vai6 kuɔ3 te8-n̠y4 (**a**).
          because   3S   can speak German PRT
          '(Because) he can speak German.'

(15) kai7 zֻ6-ŋa4   tsֻ3-na4 sei3 (**a**)?
        this character how   write PRT
        'How to write this character?'

(16) n̠i4 sֻ1-ɕy1 a7   fu3 sֻ1-ɕy1 ki7 baŋ4 sֻ1   (**a**)?
        2S like   PRT NEG like   this CL   book PRT
        'Do you like this book or not?'

Likewise, in the above examples *a* can be left out without affecting the grammaticality or the basic meaning of the sentences. However, as pointed out by my informants, when *a* is present, the sentences sound more emotive and more expressive.

I suggest that *a* does not convey clausal typing information; like its Mandarin and Cantonese counterparts, *a* in Wenzhou is a discourse particle, functioning to mark relevance of the utterance in which it occurs to the discourse unit.

4.3.6 *o*

The Wenzhou final particle *o* induces the same semantic effect as the Mandarin final particle *ba*. It can occur in declaratives, yes/no questions, imperatives, wh- and A-not-A questions. The declarative use of *o* is shown in (17). While (17a) is a neutral statement, (17b) expresses the speaker's uncertainty.

(17) a. gei2 sֻ1-ɕy1 ki7 baŋ4 sֻ1.
          3S   like   this CL book
          'He likes this book.'

     b. gei2 sֻ1-ɕy1 ki7 baŋ4 sֻ1   **o**.
          3S   like   this CL book PRT
          'Probably he likes this book.'

It should be mentioned that when used in declarative sentences, in addition to conveying uncertainty, *o* is occasionally used to mark noteworthiness. In this case, it induces the same semantic effect as the Wenzhou final particle *e*. Consider (18). Suppose the children are making big noises. The mother tries to stop them by warning them that their father is coming back.

(18) a7-pa7 jieu6 vai6 tsau3 lei2 ba **o**, fai1 tshɔ3 ba!
     father then will go   come PRT PRT don't noise PRT
     'Note you father is coming back. Stop making noises!'

Nonetheless, this use of *o* is very rare. The default meaning of (18) is still 'probably your father is coming back soon; stop making noises'.
    Like Mandarin *ba*, *o* can be used in yes/no questions. See (19).

(19) a. gei2 sɿ1-çy1 ki7 baŋ4 sɿ1?
        3S   like   this CL book
        'He likes this book?'

     b. gei2 sɿ1-çy1 ki7 baŋ4 sɿ1 **o**?
        3S   like   this CL book PRT
        'He likes this book, right?'

(19a) shows that like in Mandarin, in Wenzhou a yes/no question can be formed without any final particle. (19b) is equivalent to the *ba*-attached yes/no question in Mandarin. (19a) and (19b) both indicate that the speaker has a presupposition about the answer, but with *o* the speaker shows more certainty. Wenzhou does not have any particle question that is equivalent to the *ma*-attached yes/no question in Mandarin. When the answer is completely unknown to the speaker, A-not-A questions are used. See (20).

(20) gei2 sɿ1-çy1 a7 fu3 sɿ1-çy1 ki7 baŋ4 sɿ1?
     3S   like   PRT NEG like   this CL book
     'Does he like this book?'

In (20), the positive and the negative answer are equally unknown to the speaker. We will have more discussion on A-not-A questions in Chapter 5.
    The particle *o* can be attached to imperative sentences as well. This is shown in (21). While (21a) is a command, (21b) is a suggestion or a request.

(21) a. n̠i4 tso3 tçi1 bə5-tsei3 ha5 ŋ̍4!
        2S bring CL newspaper give 1S
        'Bring me a piece of newspaper!'

     b. n̠i4 tso3 tçi1 bə5-tsei3 ha5 ŋ̍4 **o**!
        2S bring CL newspaper give 1S PRT
        'Would you bring me a piece of newspaper?'

    Finally, *o* can be attached to wh- and A-not-A questions. Examples are given in (22) and (23), respectively.

(22) kai7 zɿ6-ŋa4   tsɿ3-na4 sei3   **o**?
     this character how   write PRT
     'How to write this character?'

(23) ɳi4 sɿ1-ɕy1 a7   fu3   sɿ1-ɕy1 ki4 baŋ7 sɿ1   **o**?
     2S like   PRT NEG like   this CL   book PRT
     'Do you like this book or not?'

My informants report that compared with the questions without *o*, those with it express more explicitly the speaker's intention to elicit the answer, as if saying something like 'answer me, tell me right now'. It shows that like the Mandarin final particle *ba*, when *o* is added to a wh- or A-not-A question, it helps bring out an imperative reading. However, it is not very clear to my informants if *o* conveys a strong or weak imperative reading. They mention that depending on the contexts, (22) and (23) can be delivered either with an impatient tone or with a more friendly tone.

Leaving aside its use in wh- and A-not-A questions, we saw that the Wenzhou final particle *o* makes the same semantic contribution to the utterances that it occurs as the Mandarin final particle *ba*. That is, when it occurs in a declarative, it expresses the speaker's uncertainty and makes a weak assertion; when it occurs in a yes/no question, it makes a weak inquiry in the sense that the speaker already sort of knows the answer; when it occurs in an imperative, it issues a suggestion instead of a command. I suggest that like the Mandarin final particle *ba*, *o* is a degree particle, marking low degree on sentence force. A question arises immediately: does Wenzhou also have a final particle that functions to mark high degree on sentence force, like the Mandarin final particle *ma*?

Next I will discuss two final particles, i.e., *na* and *miɛ*, both inducing a strengthening effect when attached to sentences. However, neither particle is totally equivalent to the Mandarin final particle *ma*. Compared with *ma*, the syntactic distribution of *na* and *miɛ* is more restricted.

4.3.7 *na*

The final particle *na* occurs in declaratives, imperatives, wh-questions and A-not-A questions. It cannot occur in yes/no questions.

The declarative use of *na* is shown in (24).

(24) a. gei2 pai7-tɕiaŋ1 tsau3 ku5 ba4.
        3S Beijing   go   EXP PERF
        'He's been to Beijing.'

   b. gei2 pai7-tɕiaŋ1 tsau3 ku5 ba4   **na**.
        3S Beijing   go   EXP PERF PRT
        'He's indeed been to Beijing.'

My informants report that while (24a) is a neutral statement, (24b) sounds more certain and definitive. They point out that a *na*-attached declarative is often used in the context where the speaker is arguing against the hearer, asserting that what the hearer thinks is wrong and what is being claimed is actually the case.

When *na* is used in imperative sentences, it indicates that the speaker has a strong intention to have the action carried out. Compare (25a) with (25b).

(25) a. zuɔ5 lo8!
       sit   down
       'Sit down!'

   b. zuɔ5 lo8   **na**!
       sit   down PRT
       '(I insist that you) sit down!'

While (25a) sounds plain and neutral, (25b) indicates that the speaker is urging the hearer to sit down, conveying something like 'do it now, I insist!'

The final particle *na* can occur in wh- and A-not-A questions as well. See (26) and (27).

(26) kai7 zɻ6-ŋa4 tsɻ3-na4 sei3 **na**?
     this character how   write PRT
     'How to write this character?'

(27) ȵi4 sɻ1-ɕy1 a7 fu3 sɻ1-ɕy1 ki7 baŋ4 sɻ1 **na**?
     2S like   PRT NEG like   this CL book PRT
     'Do you like this book or not?'

My informants report that like *o*, when *na* is added to a wh- or A-not-A question, it helps bring out an imperative reading, expressing something like 'answer me, tell me right now'. However, when asked to compare the two particles, they feel it difficult to tell whether one expresses a stronger meaning than the other. They point out that both particles can be used to indicate that the speaker is running out of patience and wants to get the answer immediately, but both of them can be used in a friendly mood as well.

If we look at the use of *na* and *o* in declarative and imperative sentences, it seems that the former serves to mark a high degree and the latter a low degree on sentence force. However, it remains unclear if this is also the case when they occur in wh- and A-not-A questions. Besides, *na* cannot be used in yes/no questions. I leave these questions open.

4.3.8 *miɛ*

The final particle *miɛ* occurs in imperatives, wh-questions and A-not-A questions. Let us first consider the use of *miɛ* in imperatives.[5] According to my informants, *miɛ* is used in the context where the speaker assumes or knows that the hearer does not want to perform what is expected of him. See (28).

(28) a. n̠i4 zuɔ4!
   2S sit
   'Sit down!'

  b. n̠i4 zuɔ4 **miɛ**!
   2S sit PRT
   '(I insist that you) sit down!'

While (28a) is a simple command, (28b) indicates that although the speaker knows that the hearer does not want to sit down, he still forces the hearer to do so. My informants point out that while *na* also conveys a strong intention on the part of the speaker, it is not as strong as that expressed by *miɛ* (cf. You 2003: 230).

Mie can occur in wh- and A-not-A questions as well. Examples are given in (29) and (30), respectively.

(29) kai7 zɻ6-ŋa4 tsɻ3-na4 sei3 **miɛ**?
   this character how   write PRT
   'How to write this character?'

(30) gei2 n̠i4 sɻ1-çy1 a7 fu3 sɻ1-çy1 **miɛ**?
   3S 2S like   PRT NEG like   PRT
   'Do you like him or not?'

According to my informants, the addition of *miɛ* in wh- and A-not-A questions indicates that the speaker knows that the hearer is not willing to give the answer but still forces him to do so. Questions ending with *miɛ* are always concomitant with a tone of impatience or enforcement. My informants agree on that when appearing in wh- and A-not-A questions, *miɛ* expresses a stronger force than both *na* and *o*.

I suggest that *miɛ* is a degree particle, marking high degree on the directive force associated with imperative sentences and wh- and A-not-A questions. However, I do not have an explanation for why *miɛ* is missing in declaratives and yes/no questions.

If this analysis is on the right track, then Wenzhou has three degree particles, i.e., *o, na* and *miɛ*. I suggest that the analysis of Mandarin degree markers *ba* and *ma* is applicable to the degree markers in Wenzhou. This is demonstrated in the following table.

(31)

Degree markers			Sentence force	Sentence Mood
o : low degree	*na*: high degree	Ø	Ass	DEC
o : low degree	Ø	Ø	Dir	Y/N
o : low degree (?)	*na*: high degree (?)	*miɛ*: higher degree	Dir	WH
o : low degree (?)	*na*: high degree (?)	*miɛ*: higher degree	Dir	A-NOT-A
o : low degree	*na*: high degree	*miɛ*: higher degree	Dir	IMP

4.3.9 CONCLUSION

In the preceding discussion I examined the semantic functions of the final particles in Wenzhou, which are summarized below.

(32) *gi*: asserting factuality
 ba: marking realization
 n̠i: marking evaluative mood
 e: marking noteworthiness
 a: marking relevance
 o: marking low degree on sentence force
 na: marking high degree on sentence force
 miɛ: marking high degree on sentence force

We see that the functional categories represented by the Mandarin and Cantonese final particles also exist in Wenzhou. The three Chinese languages all have a final particle which functions to mark assertion, i.e., *de* in Mandarin, *ge3* in Cantonese, and *gi* in Wenzhou. They all have a final particle that functions to mark realization, i.e., *le* in Mandarin, *le* in Cantonese, and *ba* in Wenzhou. They all have a final particle that functions to mark evaluative mood, i.e., *ne* in Mandarin, *ne* in Cantonese, and *n̠i* in Wenzhou. They all have final particles that function to mark degrees on sentence force, i.e., *ba* and *ma* in Mandarin, *gwaa3* and *maa3* in Cantonese, and *o*, *na*, and *miɛ* in Wenzhou. They all have a final particle that functions to mark discourse relevance, i.e., *a* in Mandarin, *aa* in Cantonese, and *a* in Wenzhou. Besides, we see that Cantonese and Wenzhou both have a final particle marking noteworthiness, i.e., *wo3* and *e*.

I notice that Wenzhou final particles also display pitch variation, to my ears, a distinguishable difference between a high pitch and a low pitch. However, more systematic research on spontaneous speech is absolutely necessary before we draw any conclusion on this issue. I leave the question open whether like Mandarin and Cantonese, Wenzhou has boundary tones that mark speaker/hearer orientation.

4.4 STRUCTURAL MAPPING OF WENZHOU FINAL PARTICLES
In this section I propose a syntactic analysis of Wenzhou final particles. I assume that Wenzhou final particles are heads of functional projections. Below I will try to establish a hierarchy of the functional projections by examining the relative order of the final particles.

4.4.1 CO-OCCURRENCE OF WENZHOU FINAL PARTICLES
Like Mandarin and Cantonese final particles, Wenzhou final particles can co-occur, and when they do, they display a rigid order.

The final particle *gi* can occur preceding the final particle *e*, *a*, *o*, and *na*. Note that phonological fusion may take place when the following particle starts with a vowel. Consider (33).

(33) a. n̩4 zʅ4 ji2 kai5 lei4-pa5 lei2   **gi e/ge**.
     1S be last CL week   come
     'Note that the situation is that I just came here last week.'

    b. ki7   ki3   tɕyɔ3 phai5 n̠i4 o7 tshʅ7 ku6 ba4 **gi a**,
     these several kind dish 2S all eat   EXP PERF

        n̠i4 tsʅ3-na4 vai6 kuɔ3   n̠i4 ɕiau3-te   ki7 liɛ8 phai6 gə
     2S how   can speak 2S NEG-know this some dish DE

        mei6-də4 n̠i?
     taste   PRT
     'The situation is that you've tried all these dishes. How come you said
      you didn't know how they tasted.'

   c. gei2 saŋ1 lei2   **gi o/go**
     3S new come
     'Probably the situation is that he just came.'

   d. gei2 pai7-tɕiaŋ1 tsau3 ku5 ba4   **gi na**.
     3S Beijing   go   EXP PERF
     'It is indeed the case that he has been to Beijing.'

Like *gi*, *ba* also occurs preceding *e*, *a*, *o*, and *na*, and phonological fusion may take place when the following particle starts with a vowel. See (34).

(34) a. va6-mai6 vu4 lo8-tshʅ3 **ba e/be**.
     outside   rain fall-up
     'Note it starts raining outside.'

   b. va6-mai6 vu4 lo8-tshʅ3 **ba a**.
     outside   rain fall-up
     'It starts raining outside. (You'd better take your umbrella.)'

c. gei2 jieu6 vai6 tsau3 lei **ba o/bo**.
   3S   then will walk come
   'Probably he is coming soon.'

d. jieu6 vai6 lo8 vu4 **ba na**.
   then will fall rain
   'It's indeed going to rain.'

Gi and *ba* do not occur with each other. This is shown in (35).

(35) *jieu6 vai6 lo8 vu4 **ba gi/gi ba**.
    then will fall rain
    INTENDED MEANING: 'The situation is that it's going to rain.'

The final particle *ɲi* cannot be followed by any other final particles, but it can occur following *gi* and *ba*. See (36).

(36) a. ki7 kai5 tsʅ3-i5 ɲi4 tsʅ3-na4 çi3-tçhy7 **gi ɲi**?
      this CL   idea   2S how   think-of
      'How did you think of this idea?'

b. gei2 gi mi6 tçyo5-ɲi2 pi5   hoŋ2 **ba ɲi**?
    3S   GI face why   become red
    'Why is his face turning red?'

The final particle *na* can be followed by the final particle *a*. This is shown in (37).

(37) gei2 pai7-tçiaŋ1 tsau3 ku5 ba4 **na a**.
    3S Beijing   go   EXP PERF
    'He has indeed been to Beijing. --- (Why did you say that he hadn't?)'

It cannot occur with the final particle *e*. See (38).

(38) gei2 pai7-tçiaŋ1 tsau3 ku5 ba4 **na e/e na**
    3S Beijing   go   EXP PERF
    INTENDED READING: 'Note he's indeed been to Beijing.'

As shown in (33d) and (34d), *na* can be preceded by *gi* and *ba*.

The final particle *o* cannot be followed by any other final particle, but it can be preceded by *gi* and *ba* (see (33c) and (34c)).

Since *miɛ* is usually used in imperative sentences, it rarely occurs with other final particles.

The final particle *e* and *a* cannot be followed by any other final particles, but they both can occur following *gi* and *ba* (see (33a), (33b), (34a) and (34b)). Besides, as mentioned above, *a* can occur following *na* (see (37)).

What we have seen so far is that *gi* and *ba* both precede *na*, and *na* precedes *a*. We also observed that *ɲi, miɛ, e* and *o* all follow *gi* and *ba*. What remains unclear is the relative order of *ba* and *gi*, and the exact position of *ɲi, miɛ, e* and *o*. In the next section I will take more general considerations into account to give all particles a place in the structure.

4.4.2 TOWARD A HIERARCHY OF THE FUNCTIONAL HEADS
Purely empirically, we cannot decide the relative order of *gi* and *ba*, for the two particles never co-occur. However, in chapter 3 we saw that their Cantonese counterparts, i.e., *ge3* and *le*, can co-occur, and *ge3* precedes *le*. I assume that *gi* and *ba* follow the same order, i.e., *gi* precedes *ba*.

There is no direct evidence for the relative order between *ɲi* and particles such as *na* and *a*, either. In Chapter 2, we saw that in Mandarin the evaluative marker *ne* precedes the degree markers *ba* and *ma*, and the degree markers precede the discourse marker *a*. Here I assume the same ordering for *ɲi, na* and *a*. That is, *ɲi* occurs preceding *na* which precedes *a*.

As for *miɛ* and *o,* since they perform the same function as *na*, i.e., marking degrees on sentence force, I suggest that the three particles are in the same position, i.e., following *ɲi* and preceding *a*.

Finally, let us consider the location of the 'noteworthiness' particle *e*. There is evidence suggesting that *e* is in a position higher than the degree marker *na*. Although *na* and *e* do not co-occur, *na* can occur with another 'noteworthiness' particle *o*. See (39).

(39) ɡei2 pai7-tɕiaŋ1 tsau3 ku5 ba4 **na o**.
     3S   Beijing   go   EXP PERF
     'Note he has indeed been to Beijing.'

Recall that I mentioned in section 4.3.6 that when used in declarative sentences, the final particle *o* has two meanings. As a degree marker, it conveys speakers' uncertainty, marking a low degree of the strength of the assertive force, but occasionally it can be used to mark noteworthiness, performing the same function as the final particle *e*. Importantly, when *na* and *o* co-occur, *o* only has the function of marking noteworthiness. In other words, when *o* expresses speakers' uncertainty, it cannot occur with *na*. This observation supports our analysis that both being degree markers, *o* and *na* compete for the same position in sentence structure. If Wenzhou has two *o*-particles, one conveying speakers' uncertainty, and the other marking noteworthiness, the fact that the latter can occur following *na* suggests that *e*, which also marks noteworthiness, should occur following the degree marker.

The other particle that is in a higher position than *na* is the discourse particle *a*. The two particles *e* and *a* never co-occur. I suggest that they occupy the same posi-

tion. This seems reasonable if we consider their semantic functions. They both can be seen as performing discourse functions.

At this stage, we take our final step: to assign each final particle a position in sentence structure. I consider *gi,* the counterpart of Mandarin *de* and Cantonese *ge3,* to be in FinP. I consider *ba,* the counterpart of Mandarin *le* and Cantonese *le,* to be in DeikP. I consider the evaluative marker *n̠i* to be in EvaluativeP. I take the degree markers *na, miɛ* and *o* to be in DegreeP. Finally, I take the discourse particles *a* and *e* to be in DiscourseP. I propose that the functional structure that consists of Wenzhou final particles is as follows:

(40) Discourse > Degree > Evaluative > Deik > Fin
     a, e   *na, miɛ, o*   *n̠i*   *ba*   *gi*

4.4.3 CONCLUSION

In the preceding discussion, I examined the relative order of Wenzhou final particles. On the basis of their linear order and considering their semantic functions, I established a hierarchy of the functional heads represented by the final particles. I consider that this hierarchy manifests the functional structure of the CP domain in Wenzhou.

4.5 CONCLUSION

In this chapter, I investigated the final particle system in Wenzhou. I first examined the semantic functions of Wenzhou final particles. We observed that most of the Mandarin and Cantonese final particles discussed before can find their counterparts in Wenzhou, which perform similar or the same functions. I then looked at the combinatory possibilities of different Wenzhou particles. On the basis of their relative order, I proposed the following functional structure which consists of the Wenzhou final particles:

Discourse > Degree > Evaluative > Deik > Fin
  a, e   *na, miɛ, o*   *n̠i*   *ba*   *gi*

NOTES

1. This *maa3* is different from the *maa3* mentioned in chapter 3, section 3.3.1.4. It occurs only in declaratives. See the discussion below.

2. The distribution of Cantonese *maa3* is much more restricted than Mandarin *ma*. Cantonese *maa3* seems to occur only in declarative sentences.

3. In addition to the eight particles, Wenzhou has another particle, i.e., *ba4,* which also occurs in sentence final position. According to You (2003), *ba4* is functionally equivalent to the Mandarin verb-suffix *le*. It marks the ac-

complishment of an action. The following examples are given by You (2003: 195).

(i) ŋ̩4 tshŋ7 sei1-ko1 **ba4**.
   1S eat   watermelon PERF
   'I ate the watermelon.'

(ii) gei2 tshaŋ3 jy2 **ba4**.
   3S   get-on boat PERF
   'He got on the boat.'

Although *ba4* occurs in sentence final position, its semantic function suggests that it does not belong in the CP domain. Note that unlike other final particles, which are all inherently toneless, *ba4* is associated with a tone. I assume that *ba4* is the perfective aspect marker of Wenzhou, and that it is generated in the IP domain. For this reason, I keep *ba4* out of the discussion.

4. In You (2003: 229-30), the *a* used in yes/no questions is marked as [a42] and sometimes [ɦa0], the *a* used in imperatives marked as [ɦa31], and the *a* used in exclamatives marked as [ɦa0]. In my personal contact with the author, it is confirmed that these are different phonetic representations of the same particle. In some cases, *a* may start with a glottal stop. As for the different tones, it is pointed out to me that like the Mandarin final particle *a*, *a* in Wenzhou is basically toneless, and it may display pitch variation when appearing in different sentences.

5. You (2003) only mentions the occurrence of *miɛ* in imperatives, and he equates the particle to the Mandarin final particle *ba* (You 2003: 230). In my personal contact with the author, it is confirmed that *miɛ* actually conveys a stronger force than the Mandarin *ba*. See the discussion that follows.

5. NEGATIVE PARTICLE QUESTIONS

5.1 INTRODUCTION

In the preceding chapters, I examined various types of particles that occur in sentence final position. In this chapter, I will discuss a group of negation forms, which appear to occur in the final position of a special type of questions. Examples are given in (1).

(1) a. Mandarin

   Tā qù xuéxiào **bù**?
   3S go school   NEG
   'Is he going to school?'

   b. Cantonese

   Keoi5 lei4-zo2   **mei6**?
   3S   come-PERF NEG-yet
   'Has he come yet?'

   c. Wenzhou

   n̻i4 dʑiau6-n̻i2 jiau3 dɤu8 iaŋ1-vaŋ2 a7   **nau3**?
   2S last-year   have read English   PRT NEG-have?
    'Did you read English last year?'

Cheng, Huang and Tang (1996) call this type of questions "negative particle questions" (henceforth NPQs). In the coming discussion, I will look at NPQs in Mandarin, Cantonese and Wenzhou. I propose that the formation of NPQs in the three Chinese languages can be accounted for by a unified analysis.

This chapter is organized as follows. Section 5.2 reviews Cheng, Huang and Tang's (1996) analysis. Section 5.3, 5.4, and 5.5 discuss respectively the NPQ construction in Mandarin, Cantonese and Wenzhou. Section 5.6 presents the conclusion.

5.2 CHENG, HUANG AND TANG (1996)

Cheng, Huang and Tang (1996) observe a distinction between Mandarin and Cantonese; that is, Mandarin NPQs display a selectional relation between the negation marker and the aspect/verb, whereas Cantonese NPQs do not.[1]

Both languages have more than one negation marker. Cheng, Huang and Tang (1996) state that Mandarin has two negation markers, i.e., *bù* and *méiyǒu*. *Bù* is used with bare verbs and modals, and *méiyǒu* is used with various aspects and with accomplishment verbs. Consider (2) (adapted from Cheng, Huang and Tang (1996: 46)).

(2) a. Húfēi bú/*méiyǒu   huì qù.
     Hufei NEG/NEG-have will go
     'Hufei will not go.'

   b. Húfēi *bú/ méiyǒu   qù-guò.
     Hufei   NEG/NEG-have go-EXP
     'Hufei has not been (there).'

It shows that *méiyǒu* cannot appear with the modal verb *huì*, and *bù* cannot appear with the experiential aspect marker *guò*.

The selectional relation holds in NPQs as well. See (3) (adapted from Cheng, Huang, and Tang (1996: 53)).

(3) a. Tā huì qù bù/*méiyǒu?
     3S will go NEG/NEG-have
     'Will he go?'

   b. Tā qù-guò *bù/méiyǒu?
     3S go-EXP NEG/NEG-have
     'Has he been (there)?'

Cantonese has three negation markers, i.e., *m4*, *mou5* and *mei6*. Cheng, Huang and Tang (1996) mention that *m4* is on a par with *bù* in Mandarin. It appears with bare verbs and modals. *Mou5* is like Mandarin *méiyǒu*. It is used with various aspects and accomplishment verbs. *Mei6* is similar to *mou5* except that the former has an added meaning of "not yet". See (4) ((4a) is adapted from Cheng, Huang, and Tang (1996: 48)).

(4) a. Keoi5 m4/*mou5/*mei6   ho2yi3 lei4.
     3S   NEG/NEG-have/NEG-yet can   come
     'He cannot come.'

   b. Keoi5 *m4/mou5/mei6   heoi3-gwo3 mei5gwok3.
     3S   NEG/NEG-have/NEG-yet go-EXP   America
     'He didn't go to America. /He hasn't been to America yet.'

The examples show that *mou5* and *mei6* cannot occur with the modal verb *ho2yi3*, and *m4* cannot occur with the experiential aspect marker *gwo3*.

Unlike Mandarin NPQs, Cantonese NPQs do not seem to display the selectional relation between negation and the aspect/verb, as *mei6* is the only negation marker that can appear in NPQs. See (5) (adapted from Cheng, Huang, and Tang (1996: 54)).

(5) a. Ngo5 ho2yi3 ceot1-heoi3 *m4/*mou5/mei6?
     1S   can   go-out   NEG/NEG-have/NEG-yet
     'Can I go out?'

    b. Keoi5 heoi3-gwo3 mei5gwok3 *m4/*mou5/mei6?
       3S   go-EXP   America   NEG/NEG-have/NEG-yet
       'Has he been to America?'

To account for the distinction, Cheng, Huang and Tang (1996) propose that Mandarin NPQs are derived via NEG-to-C movement, i.e., the negation markers are base-generated inside IP, where the selectional relation is determined, and later they move up to C to form questions. They suggest that the NEG-to-C movement does not take place in Cantonese NPQs; the negation marker *mei6* is base-generated in C. Therefore Cantonese NPQs do not display the selectional relation.

Cheng, Huang and Tang (1996) provide further evidence for the NEG-to-C movement. Consider (6) (Cheng, Huang and Tang 1996: 59). In (6), the agreement requirement of the matrix verb differs from that of the embedded verb.

(6) Tā huì yǐwèi nǐ qù-guò méiyǒu?
    3S will think 2S go-EXP NEG-have
    i. *'Will he think or not think that you have been there?'
    ii. 'Will he think that you have been there or you haven't been there?'

(6) cannot have a matrix reading, but it can have an embedded reading. Note that with the embedded reading it is still a matrix question.

Cheng, Huang and Tang (1996) point out that if the negation marker *méiyǒu* were base-generated in C, and the selectional relation were determined by some non-local constraint, both readings would be ruled out. The matrix reading is not available because the negation marker cannot be generated in the matrix C, as the modal verb *huì* is present in the matrix. However, it would wrongly rule out the embedded reading as well. Although the negation marker can be generated in the embedded C, it eventually has to move up to the matrix C, in which case the non-local constraint in the matrix will be violated.

If the negation marker *méiyǒu* is base-generated inside IP, and the selectional relation is determined by a local constraint, the matrix reading will still be ruled out, as the negation marker cannot be generated inside the matrix IP. As for the embedded reading, the negation marker can be generated inside the embedded IP, and move to the matrix C via the embedded C. Since there is no constraint on the non-local relation between C and the aspect/verb, the embedded reading is allowed.

Cheng, Huang and Tang (1996) mention that both readings are available for the counterpart sentence in Cantonese, which they take as evidence for their analysis that Cantonese NPQs do not have the agreement requirement. See (7) (Cheng, Huang and Tang 1996: 62).

(7) Keoi5 wui5 yi3wai4 nei5 heoi3-gwo3 mei6?
    3S   will think   2S go-EXP   NEG-yet
    i. 'Will he think or not think that you have been there?'
    ii. 'Will he think that you have been there or you haven't been there?'

In the next two sections, I will show that Cheng, Huang and Tang's (1996) analysis raises several problems. I will propose a unified account for the formation of NPQs in Mandarin and Cantonese.

5.3 ON THE DERIVATION OF MANDARIN NPQS

In this section, I examine the formation of Mandarin NPQs. I will first show that Cheng, Huang and Tang's (1996) movement approach encounters problems. Then I will provide evidence suggesting that NPQs share affinities with another type of question, i.e., A-not-A questions. I propose that the two types of questions are actually derived from the same origin.

5.3.1 PROBLEMS OF THE MOVEMENT APPROACH

Cheng, Huang and Tang's (1996) movement approach cannot explain the contrast between (8a) and (8b).

(8) a. *Tā bú/méiyǒu   qù-le   xuéxiào.
       3S NEG/NEG-have go-PERF school
       INTENDED MEANING: 'He didn't go to school.'

   b. Tā qù-le   xuéxiào *bù/méiyǒu?
      3S go-PERF school   NEG/NEG-have
      'Did he go to school?'

(8) show that in declaratives neither *bù* nor *méiyǒu* can occur with the perfective aspect marker *le*, but in NPQs *méiyǒu* can occur with *le*. If, as Cheng, Huang and Tang (1996) suggest, the negation marker *méiyǒu* in (8b) is extracted from inside IP, we expect the co-occurrence of *méiyǒu* with *le* to be ungrammatical, which is however not the case.

The movement approach not only rules out grammatical sentences, but it also generates ungrammatical sentences. Consider (9).

(9) a. Tā bù   zhǐ   xǐhuān zhè běn shū.
       3S NEG only like   this CL   book
       'He does not only like this book.'

   b. *Tā zhǐ   xǐhuān zhè běn shū   bù?
       3S only like   this CL   book NEG
       INTENDED READING: 'Does he only like this book?'

In (9), the declarative sentence is well formed with the negation marker *bù* generated inside IP, but the corresponding NPQ is out. If, as Cheng, Huang and Tang (1996) suggest, NPQs are formed by moving the negation marker from inside IP to C, we would expect (9b) to be well formed, which is again not the case.

Additionally, it should be noted that Cheng, Huang and Tang (1996) consider *méiyǒu* as a whole to be a negation marker. However, it has been argued in the literature that *méiyǒu* is not simplex but a combination of the negation marker *méi*

with the independent verb *yǒu* 'to have'. For instance, Wang (1965) suggests that *méi* is a morphological variant of *bù* in the environment '… *yǒu*' (see also Ernst (1995)).[2] It is not a trivial issue, because what is supposed to move is the NEG head; if *méiyǒu* is not a pure negation marker, it cannot undergo NEG-to-C movement.

5.3.2 AFFINITY BETWEEN NPQS AND A-NOT-A QUESTIONS
In Mandarin, besides NPQs, there is another type of question that involves overt negation, i.e., A-not-A questions. The question '*does he like this book?*' can be expressed in either of the forms given in (10).

(10) a. Tā xǐhuān zhè běn shū   bù   xǐhuān zhè běn shū?
      3S like   this CL book NEG like   this CL   book
      'Does he like this book?'

   b. Tā xǐhuān zhè běn shū   bù?
      3S like   this CL book NEG
      'Does he like this book?'

One may assume that there is a derivational relationship between the two types of questions. However, Cheng, Huang and Tang (1996) provide evidence to argue that NPQs are different from A-not-A questions.

First, they observe that non-temporal and locative preverbal adjuncts can appear in NPQs but not in A-not-A questions. See (11) (Cheng, Huang and Tang 1996: 43).

(11) a. Tā cháng qù bù?
      3S often go NEG
      'Does he go often?'

   b. *Tā cháng qù bù   qù?
      3S often   go NEG go
      INTENDED READING: 'Does he go often?'

However, the evidence is not convincing because these adjuncts can actually appear in A-not-A questions. See (12).

(12) Tā cháng qù bù   cháng qù?
      3S often go NEG often go
      'Does he go often?'

The fact that (12) is grammatical shows that the ungrammaticality of (11b) is not because non-temporal and locative preverbal adjuncts cannot occur in A-not-A questions, but because of other reasons (see Li and Thompson (1979), Lü (1985), Tang (1986), Ernst (1994), and Zhang (1997) for relevant discussion).

The other piece of evidence is that they observe that NPQs cannot occur with final particle *ne*, whereas A-not-A questions can.[3] See (13) and (14) (adapted from Cheng, Huang and Tang (1996: 44, 45)).

(13) a. Tā qù bù (*ne)?
          3S go NEG PRT
          'Is he going?'

    b. Tā yǒu qián   méiyǒu   (*ne)?
          3S have money NEG-have   PRT
          'Did he have money?'

(14) a. Tā lái   bù   lái   ne?
          3S come NEG come PRT
          'Is he coming?'

    b. Tā yǒu-méiyǒu   lái   ne?
          3S have-NEG-have come PRT
          'Did he come?'

However, according to my informants, like A-not-A questions, NPQs can be attached by the final particle *ne*. They think that (15a) and (15b) are well formed.

(15) a. Tā qù bù ne?
          3S go NEG PRT
          'Is he going?'

    b. Tā yǒu qián   méiyǒu ne?
          3S have money NEG-have PRT
          'Did he have money?'

Furthermore, Cheng, Huang and Tang (1996) mention that, according to Zhang (1990), in Classical Chinese the appearance of NPQs predates the appearance of other types of yes/no questions. This would support their analysis that NPQs are not derived from other types of yes/no questions. Nevertheless, it is questionable if NPQs in Classical Chinese are homogeneous with NPQs in Modern Chinese. We know that negation markers play a crucial role in the formation of NPQs. However, the system of negation markers in Classical Chinese is different from that in Modern Chinese. As is pointed out by Zhang (1990), Classical Chinese has more than a dozen negation markers, whereas in nowadays Mandarin there are only two, i.e., *bù* and *méiyǒu*. It is possible that NPQs in Classical Chinese and NPQs in Modern Chinese are different types of questions, and they are derived from different sources.

In their appendix Cheng, Huang and Tang (1996) compare NPQs with various types of questions, including *ma*-attached questions, tag-questions, *háishì* ('or')-questions, A-not-A questions, etc. They intend to show that NPQs are different from them. However, it turns out that although NPQs are different from *ma*-attached questions, tag-questions, etc., they are similar to A-not-A questions.

First, NPQs and A-not-A questions both require the main verb to be affirmative. The constraint does not hold in *ma*-attached questions. See (16), (17) and (18).

(16) a. *Tā bù/méiyǒu   xǐhuān nǐ bù?
    3S NEG/NEG-have like   2S NEG
    INTENDED READING: 'Does he not like you?'

   b. *Tā bù/méiyǒu   kàn-guò méiyǒu?
    3S NEG/NEG-have see-EXP NEG-have
    INTENDED READING: 'Has he not seen it?'

(17) a. *Tā bù/méiyǒu   xǐhuān nǐ bù   xǐhuān nǐ?
    3S NEG/NEG-have like   2S NEG like   2S
    INTENDED READING: 'Does he not like you?'

   b. *Tā bù/méiyǒu   kàn-guò méiyǒu   kàn-guò?
    3S NEG/NEG-have see-EXP NEG-have see-EXP
    INTENDED READING: 'Has he not seen it?'

(18) a. Tā bù   xǐhuān nǐ ma?
    3S NEG like   2S PRT
    'Does he not like you?'

   b. Tā méiyǒu   kàn-guò ma?
    3S NEG-have see-EXP PRT
    'Has he not seen it?'

Secondly, NPQs and A-not-A questions are used in neutral contexts where the speaker has no presupposition about the answer, whereas *ma*-attached questions indicate that the speaker has a presupposition about the answer. The following example is adapted from Cheng, Huang and Tang (1996: 71), which is originally from Li and Thompson (1981: 549).

(19) A: Nǐ hǎoxiàng shòu-le   yìdiǎn?
    2S seem   thin-PERF a-little
    'You seem to have lost some weight.'

   B: a. Shì ma? Nǐ kàn wǒ shòu-le   ma?
      be PRT 2S see 1S thin-PERF PRT
      'Is that so? Do you think I've lost weight?'

    b. #Shì bù? #Nǐ kàn wǒ shòu-le   méiyǒu?
      be NEG   2S see 1S thin-PERF NEG-have

    c. #Shì bù   shì? #Nǐ kàn wǒ shòu-le   méiyǒu   shòu?
      be NEG be   2S see 1S thin-PERF NEG-have thin

      Wǒ zìjǐ dào   bù   juédé.
      1S self on-the-contrary NEG feel
      'I haven't noticed it myself.'

This is further confirmed by the fact that NPQs and A-not-A questions both can occur with the adverb *dàodǐ* 'on earth', and neither can occur with the adverb *nándào* 'really'; whereas *ma*-attached questions can occur with *nándào* but not with *dàodǐ*. The adverb *dàodǐ* indicates that the speaker has no idea and really wants to find out the answer, while the adverb *nándào* suggests that the speaker has a presupposition about what the answer is and wants to confirm it.

Compare (20) and (21) (adapted from Cheng, Huang and Tang (1996: 72-3)).

(20) a. *Dàodǐ   tā huì qù ma?
          on-earth 3S will go PRT

b. Dàodǐ   tā huì qù bù?
   on-earth 3S will go NEG
   'Is he really going?'

c. Dàodǐ   tā huì bú huì qù?
   on-earth 3S will NEG will go
   'Is he really going?'

(21) a. Nándào tā huì qù ma?
        really   3S will go PRT
        'Is he really going?'

b. *Nándào tā huì qù bù?
    really   3S will go NEG

c. *Nándào tā huì bú huì qù?
    really   3S will NEG will go

In sum, what I have shown is that, contrary to Cheng, Huang and Tang's (1996) suggestion, there is a high degree of similarity between NPQs and A-not-A questions. In the next section I propose that they are derived from the same origin.

5.3.3 DERIVING MANDARIN NPQS

I propose that NPQs are a special type of A-not-A question. Following Huang (1991), I assume that A-not-A questions constitute two syntactically distinct types. The [A not AB] type is derived from a simplex sentence with an interrogative INFL constituent that is phonetically realized by a rule of reduplication. The [AB not A] type is derived from a base structure of juxtaposed IPs that may be subject to anaphoric ellipsis.[4] Examples are given in (22).

(22) a. Tā xǐ-bù-xǐhuān   zhè běn shū?
        3S li(ke)-NEG-like this CL book
        'Does he like this book?'

   b. Tā xǐhuān zhè běn shū   bù-xǐhuān?
      3S like   this CL book NEG like
      'Does he like this book?'

According to Huang (1991), the interrogative INFL in (22a) is realized by copying the immediately following morpheme *xǐ*, and the negation marker *bù* is inserted in between the original and its copy. (22b) is derived from a base structure, i.e., [*tā* [*xǐhuān zhè běn shū*] [*bù xǐhuān zhè běn shū*]], in which the second occurrence of *zhè běn shū* is deleted.

    I propose that NPQs belong to the [AB not A] type; namely, they are derived from a base structure of juxtaposed IPs, which undergoes anaphoric ellipsis that deletes the constituent that follows the negation marker.

    First, let us consider how the NPQs ending with *bù* are derived. The derivation of (23a) is demonstrated in (23b).

   (23) a. Tā huì qù xuéxiào bù?
        3S will go school   NEG
        'Will he go to school?'

     b. [$_{IP1}$ [$_{VP}$ huì qù xuéxiào]] [$_{IP2}$ [$_{NegP}$ bù [$_{VP}$ huì qù xuéxiào]]] →
       [$_{IP1}$ [$_{VP}$ huì qù xuéxiào]] [$_{IP2}$ [$_{NegP}$ bù [$_{VP}$ ~~huì qù xuéxiào~~]]] →
       [$_{IP1}$ [$_{VP}$ huì qù xuéxiào]] [$_{IP2}$ [$_{NegP}$ bù]]

(23b) shows that the apparent sentence-final position of the negation marker *bù* is due to the deletion of the constituent that immediately follows it.

    In this discussion, I consider *méiyǒu* to be the combination of the negation marker *méi* and the verb *yǒu*. I suggest that the sentence-final position of *méiyǒu* results from the deletion of the complement of the verb *yǒu*, which can be either an NP or a VP. See (24) and (25).

   (24) a. Tā yǒu qián   méiyǒu?
        3S have money NEG-have
        'Does he have money?'

     b. [$_{IP1}$ [$_{VP}$ yǒu [$_{NP}$ qián]]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu [$_{NP}$ qián]]]] →
       [$_{IP1}$ [$_{VP}$ yǒu [$_{NP}$ qián]]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu [$_{NP}$ ~~qián~~]]]] →
       [$_{IP1}$ [$_{VP}$ yǒu [$_{NP}$ qián]]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu]]]

   (25) a. Tā qù-guò méiyǒu?
        3S go-EXP NEG-have
        'Has he been there?'

     b. [$_{IP1}$ [$_{VP}$ qù-guò]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu [$_{VP}$ qù-guò]]]] →
       [$_{IP1}$ [$_{VP}$ qù-guò]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu [$_{VP}$ ~~qù-guò~~]]]] →
       [$_{IP1}$ [$_{VP}$ qù-guò]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu]]]

Recall that Cheng, Huang and Tang (1996) propose the NEG-to-C movement mainly to account for the selectional relation between the negation marker and the aspect/verb. Let us see how the current analysis maintains the agreement requirement without resorting to any movement. I propose that there is an agreement requirement of the predicate nature of the two juxtaposed IPs. Namely, if the first IP contains bare verbs or modals, so does the second IP. As a result, the negation form that is generated in the second IP has to be *bù* but not *méiyǒu*. If the first IP contains aspect markers or accomplishment verbs, so does the second IP. In this case, the negation form that occurs in the second IP has to be *méiyǒu* but not *bù*. This is illustrated in (26).

(26) a. [$_{IP1}$ huì qù xuéxiào] [$_{IP2}$ bú/*méiyǒu huì qù xuéxiào]

b. [$_{IP1}$ qù-guò] [$_{IP2}$ *bú/méiyǒu qù-guò]

Under the current analysis, the problems raised by the movement approach disappear. The derivation of (8b) (repeated in (27a)) is illustrated by (27b).

(27) a. Tā qù-le   xuéxiào méiyǒu?
　　　3S go-PERF school   NEG-have
　　　'Did he go to school?'

b. [$_{IP1}$ [$_{VP}$ qù le xuéxiào]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu qù xuéxiào]]] →
　[$_{IP1}$ [$_{VP}$ qù le xuéxiào]] [$_{IP2}$ [$_{NegP}$ méi [$_{VP}$ yǒu ~~qù xuéxiào~~]]][5] →
　[$_{IP1}$ qù le xuéxiào] [$_{IP2}$ méi yǒu]

As shown by (20b), the co-occurrence of *le* and *méiyǒu* is legitimate in NPQs because they are not base generated in the same IP. As for why they cannot occur in the same IP, I suggest that while *le* marks perfective aspect, *méiyǒu* negates it. Thus when they occur in the same IP, there is a conflict of semantic feature.

On the other hand, due to the connection between *le* and *méiyǒu*, when the first IP is marked by the perfective aspect marker *le*, the negation form that appears in the second IP can only be *meiyou*. That is why (28) is out.

(28) *[$_{IP1}$ [$_{VP}$ qù le xuéxiào]] [$_{IP2}$ [$_{NegP}$ bú [$_{VP}$ qù xuéxiào]]]

Now let us consider (9b) (repeated in (29a)).

(29) a. *Tā zhǐ   xǐhuān zhè běn shū   bù?
　　　3S only like   this CL book NEG
　　　INTENDED READING: 'Does he only like this book?'

b. *[$_{IP1}$ [$_{VP}$ zhǐ xǐhuān zhè běn shū]] [$_{IP2}$ [$_{NegP}$ bù [$_{VP}$ zhǐ xǐhuān
　　　　　　　　　　　　　　　　　　　　　　　　　zhè běn shū]]]

(30) [IP tā [NegP bù[VP zhǐ xǐhuān zhè běn shū]]]

It shows that (9b) is ungrammatical because its base structure, which is (29b) but not (30) (cf. (9a)), is not legitimate (for the constraints on the formation of A-not-A questions see Zhang (1997) among others).

It was mentioned in section 5.2 that Cheng, Huang and Tang (1996) examined the mixed cases where the agreement requirement of the matrix verb differed from that of the embedded verb. They suggest that it provides supporting evidence for the claim that the negation marker in Mandarin NPQs is base generated inside IP and not in C. (6) is repeated below.

(31) Tā huì yǐwéi nǐ qù-guò méiyǒu?
   3S will think 2S go-EXP NEG-have
   i. *'Will he think or not think that you have been (there)?'
   ii. 'Will he think that you have been (there) or you haven't been (there)?'

The mixed cases can also be accounted for by the current analysis. See (32).

(32) a. *[IP1 huì yǐwéi [CP nǐ qù-guò]] [IP2 méiyǒu huì yǐwéi [CP nǐ qù-guò]]

   b. [IP huì yǐwéi [CP nǐ [IP1 [qù-guò]] [IP2 méiyǒu [qù-guò]]]]

In (32a), it is the matrix IPs that are conjoined. The matrix reading is not allowed because in the second IP the negation form *méiyǒu* occurs with the modal verb *huì*, which violates the agreement requirement. In (32b), it is the embedded IPs that are conjoined. In this case, the agreement requirement is met, and thus the embedded reading is available.

5.3.4 CONCLUSION
In the preceding discussion, I argued that Mandarin NPQs are not derived via NEG-to-C movement. I proposed that they are derived from a base structure of juxtaposed IPs, which undergoes anaphoric ellipsis that deletes the constituent that follows the negation form. The current analysis not only explains the selectional relation between negation and the aspect/verb, but it also avoids the problems raised by the movement approach. Besides, it accounts for the affinity between NPQs and A-not-A questions.

5.4 ON THE DERIVATION OF CANTONESE NPQS
In this section, I examine the formation of Cantonese NPQs. I will first discuss the problem raised by Cheng, Huang and Tang's (1996) analysis. Then I will show that Cantonese NPQs share an affinity with A-not-A questions. I propose that Cantonese NPQs are in fact a special type of A-not-A questions. This analysis is supported by historical evidence.

5.4.1 PROBLEM OF CHENG, HUANG AND TANG'S (1996) ANALYSIS

Cheng, Huang and Tang (1996) claim that Cantonese NPQs do not display a selectional relation between negation and the aspect/verb, because *mei6* is the only negation form that can occur in NPQs. They propose that Cantonese NPQs are derived by inserting *mei6* into the C position.

Let us take a closer look at the NPQ that seems to violate the agreement requirement. Consider (33) (Cheng, Huang and Tang 1996: 48, 54).

(33) a. *Keoi5 mei6   ho2yi3 lei4.
         3S   NEG-yet can   come
         'He cannot come.'

     b. Ngo5 ho2yi3 ceot1-heoi3 mei6?
        1S   can   go-out   NEG-yet
        'Can I go out?'

It shows that while in declaratives *mei6* cannot occur with the modal verb *ho2yi3*, in NPQs it can.

There are two things that should be mentioned. First, although usually *mei6* cannot be used with modals (as shown in (33a)), in some contexts it can. See (34).

(34) Keoi5 zung6 mei6   ho2yi3 ceot1-heoi3.
     3S   still NEG-yet can   go-out
     'He hasn't been allowed to go out yet.'

Suppose the person in question has been kept in custody for a long time. When being asked about his current situation, the speaker uses (34) to tell that the person is still not allowed to go out.

Secondly, the accurate reading of (33b) is not '*Can I go out?*'. In Cantonese this meaning is expressed by an A-not-A question. Compare (35a) with (35b).

(35) a. Keoi5 ho2-m4-ho2yi3 ceot1-heoi3?
         3S   can-NEG-can   go-out
         'Can he go out?'

     b. Keoi5 ho2yi3 ceot1-heoi3 mei6?
        3S   can   go-out   NEG-yet
        'Can he go out now?'

(35b) indicates that the person in question has been forbidden to go out, and the speaker wonders if he is allowed to go out now.

This shows that there is a semantic connection between (35b) and (34). Likewise, (36b) is semantically connected to (36a).

(36) a. Keoi5 mei6   heoi3-gwo3 mei5gwok3.
         3S   NEG-yet go-EXP   America
         'He hasn't been to America yet.'

b. Keoi5 heoi3-gwo3 mei5gwok3 mei6?
    3S   go-EXP   America   NEG-yet
    'Has he been to America yet?'

The accurate reading of (36b) is not '*Has he been to America?*'. Rather, the speaker asks if the person in question has been to America yet. In Cantonese, the former reading is expressed by an A-not-A question. Compare (36b) with (37).

(37) Keoi5 jau5 mou5   heoi3-gwo3 mei5gwok3?
     3S   have NEG-have go-EXP   America
     'Has he been to America?'

I argue that for Cantonese NPQs, the selectional relation between negation and the aspect/verb does hold. If, as Cheng, Huang and Tang (1996) have suggested, the negation form *mei6* is on a par with a question particle that is base generated in C, we would not expect the semantic connection between NPQs and the declaratives that contain the negation form *mei6*.

Two questions arise immediately. First, does the selectional relation suggest that the negation form *mei6* is based generated inside IP, and its sentence-final position results from NEG-to-C movement? I argue that NEG-to-C movement does not take place in Cantonese NPQs, either. Consider (38).

(38) a. *Keoi5 mei6   lei4-zo2.
       3S   NEG-yet come-PERF
       INTENDED READING: 'He hasn't come yet.'

b. Keoi5 lei4-zo2   mei6?
    3S   come-PERF NEG-yet
    'Has he come yet?'

It shows that *mei6* cannot occur with the perfective aspect marker *zo2* in declaratives, but it can in NPQs. If NPQs were derived by extracting the negation form *mei6* from inside IP to C, (38b) should be ungrammatical. I will return to this in section 5.4.3.

The other question is why the negation marker *m4* and *mou5* cannot appear in NPQs. In section 5.4.3 I will discuss the complementary distribution of negation markers in Cantonese. Besides, in section 5.4.4 I will show that in Early Cantonese *m4* and *mou5* did occur in NPQs, and in fact nowadays *m4* is still used in NPQs, appearing as part of the final particle *maa3*.

5.4.2 AFFINITY BETWEEN NPQS AND A-NOT-A QUESTIONS
In Cantonese, a yes/no question can be formed by attaching the particle *me1* to the sentence final position. See (39) (Law 1990: 18).

(39) Nei5 sik6 gong2 gwong2-dong1-waa2 me1?
    2S   know speak Cantonese   PRT
    'Do you (really) know how to speak Cantonese? (I am very surprised.)'

It shows that in addition to marking yes/no questions, *me1* conveys a sense of surprise (see also Chapter 3, section 3.3.1.4).

Cheng, Huang and Tang (1996) mention that the formation of Cantonese A-not-A questions involves the negation marker *m4* and *mou5*. Examples are given in (40) (excerpted from Cheng, Huang and Tang (1996: 49)).

(40) a. Keoi5 lei4-m4-lei4?
       3S   come-NEG-come
       'Is he coming?'

    b. Keoi5 jau5-mou5   lei4?
       3S   have-NEG-have come
       'Did he come?'

Below I compare NPQs with *me1*-attached questions and A-not-A questions. I will show that NPQs differ largely from the particle questions, but they are similar to A-not-A questions.

First of all, NPQs and A-not-A questions both require the predicate to be affirmative, whereas *me1*-attached questions do not. See (41) and (42).

(41) a. *Keoi5 m4/mou5/mei6   heoi3 mei6?
       3S   NEG/NEG-have/NEG-yet go   NEG-yet
       INTENDED READING: 'Has he not gone yet?'

    b. *Keoi5 m4/mou5/mei6   heoi3-m4-heoi3?
       3S   NEG/NEG-have/NEG-yet go-NEG-go
       INTENDED READING: 'Is he not going?'

    c. *Keoi5 m4/mou5/mei6   jau5-mou5   heoi3?
       3S   NEG/NEG-have/NEG-yet have-NEG-have go
       INTENDED READING: 'Did he not go?'

(42) a. Keoi5 m4-heoi5 me1?
       3S   NEG-go   PRT
       'Is he not going?'

    b. Keoi5 mou5   heoi3 me1?
       3S   NEG-have go   PRT
       'Did he not go?'

    c. Keoi5 zung6 mei6   heoi3 me1?
       3S   still   NEG-yet go   PRT
       'Has he not gone yet?'

Secondly, NPQs and A-not-A questions are both used in neutral contexts where the speaker has no presupposition about the answer, whereas *me1*-attached questions imply that the speaker has a presupposition about the answer. Suppose the speaker

hears some rumor that Cantonese people eat mice. He wants to confirm it from the hearer who is Cantonese. The speaker asks:

(43) a. Nei5 sik6-gwo3 lou5-syu2 me1?
      2S   eat-EXP   mouse   PRT
      'Have you eaten mice?'

   b. #Nei5 sik6-gwo3 lou5-syu2 mei?
      2S   eat-EXP   mouse   PRT
      'Have you eaten mice yet?'

   c. #Nei5 jau5-mou5 sik6-gwo3 lou5-syu2?
      2S   eat-EXP   mouse   PRT
      'Have you eaten mice?'

In the given context, only (43a) is felicitous. (43b) and (43c) are not felicitous because both of them indicate that the positive and the negative answer are equally unknown to the speaker.

Finally, NPQs and A-not-A questions both can occur with the adverb *dou3dai2* 'on-earth', whereas *me1*-attached questions cannot.[6] This is shown in (44).

(44) a. Dou3dai2 keoi5 heoi3-gwo3 mei5gwok3 mei6?
      on-earth 3S   go-EXP   America   NEG-yet
      'Has he on earth been to America yet?'

   b. Dou3dai2 keoi5 jau5-mou5   heoi3-gwo3 mei5gwok3?
      on-earth 3S   have-NEG-have go-EXP   America
      'Has he on earth been to America?'

   c. *Dou3dai2 keoi5 heoi3-gwo3 mei5gwok3 me1?
      on-earth 3S   go-EXP   America   PRT

In sum, what has been shown is that Cantonese NPQs differ from the particle questions in various respects. This provides further evidence against Cheng, Huang and Tang's (1996) analysis that the negation form *mei6* in NPQs is equal to a question particle. On the other hand, we see that Cantonese NPQs share an affinity with A-not-A questions. In the next section I propose that Cantonese NPQs and A-not-A questions are derived from the same origin.

5.4.3 DERIVING CANTONESE NPQS
Cheng, Huang and Tang (1996) observe that the negation forms in Cantonese display complementary distribution, i.e., *mei6* occurs only in NPQs, and *m4* and *mou5* occur only in A-not-A questions. Consider (45) and (46) (Cheng, Huang and Tang 1996: 49).

(45) a. Keoi5 lei4-zo2   mei6?
       3S   come-PERF NEG-yet
       'Has he come yet?'

   b. *Keoi5 lei4   m4?
       3S   come NEG
       INTENDED READING: 'Is he coming?'

   c. *Keoi5 lei4   mou5?
       3S   come NEG-have
       INTENDED READING: 'Did he come?'

(46) a. Keoi5 lei4-m4-lei4?
       3S   come-NEG-come
       'Is he coming?'

   b. Keoi5 jau5-mou5   lei4?
       3S   have-NEG-have come
       'Did he come?'

   c. *Keoi5 lei4-mei6-lei4?
       3S   come-NEG-yet-come
       INTENDED READING: 'Has he come yet?'

In section 5.3, I mentioned that Huang (1991) distinguishes two types of A-not-A questions in Mandarin. One is the [A not AB] type, which is derived from a simplex sentence with an interrogative INFL constituent that is phonetically realized by a rule of reduplication. The other is the [AB not A] type, which is derived from a base structure of juxtaposed IPs that may be subject to anaphoric ellipsis.

I suggest that Huang's (1991) analysis is applicable to Cantonese A-not-A questions as well. In particular, I suggest that the A-not-A questions formed with the negation form *m* and *mou* belong to the [A not AB] type, and the NPQs ending in *mei6* belong to the [AB not A] type. We will turn back to the occurrence of *m4* and *mou5* in A-not-A questions in the next section. At this moment let us concentrate on the formation of NPQs.

I propose that Cantonese NPQs are derived from a base structure of juxtaposed IPs, which undergoes anaphoric ellipsis that deletes the constituent immediately following the negation form *mei6*. This is shown in (47) and (48).

(47) a. Keoi5 ho2yi3 ceot1-heoi3 mei6?   (= (35b))
       3S   can   go-out   NEG-yet
       'Can he go out now?'

   b. [$_{IP1}$ [$_{VP}$ ho2yi3 ceot1-heoi3]] [$_{IP2}$ [$_{NegP}$ mei6 [$_{VP}$ ho2yi3 ceot1-heoi3]]] →
      [$_{IP1}$ [$_{VP}$ ho2yi3 ceot1-heoi3]] [$_{IP2}$ [$_{NegP}$ mei6 [$_{VP}$ ~~ho2yi3 ceot1-heoi3~~]]] →
      [$_{IP1}$ [$_{VP}$ ho2yi3 ceot1-heoi3]] [$_{IP2}$ [$_{NegP}$ mei6]]

(48) a. Keoi5 heoi3-gwo3 mei5gwok3 mei6?   (= (36b))
       3S   go-EXP   America   NEG-yet
       'Has he been to America yet?'

    b. $[_{IP1}$ $[_{VP}$ heoi3-gwo3 mei5gwok3]]
            $[_{IP2}$ $[_{NegP}$ mei6 $[_{VP}$ heoi3-gwo3 mei5gwok3]]] $\rightarrow$
      $[_{IP1}$ $[_{VP}$ heoi3-gwo3 mei5gwok3]]
            $[_{IP2}$ $[_{NegP}$ mei6 $[_{VP}$ ~~heoi3-gwo3 mei5gwok3~~]]] $\rightarrow$
      $[_{IP1}$ $[_{VP}$ heoi3-gwo3 mei5gwok3]] $[_{IP2}$ $[_{NegP}$ mei6]]

As shown in (47b) and (48b), I suggest that *mei6* in NPQs is base generated inside IP as a full-fledged negation marker.[7] In other words, it is the same element as the one occurring in declaratives. This explains the semantic connection between NPQs and the corresponding declaratives that contain the negation form *mei6*.

It was mentioned earlier that *mei6* cannot occur with the perfective aspect marker *zo2* in declaratives, but it can in NPQs (see (38)). I propose that (38b) (repeated in (49a)) is derived in the way as shown in (49b).

(49) a. Keoi5 lei4-zo2   mei6?
       3S   come-PERF NEG-yet
       'Has he come yet?'

    b. $[_{IP1}$ $[_{VP}$ lei4-zo2]] $[_{IP2}$ $[_{NegP}$ mei6 $[_{VP}$ lei4]]] $\rightarrow$
      $[_{IP1}$ $[_{VP}$ lei4-zo2]] $[_{IP2}$ $[_{NegP}$ mei6 $[_{VP}$ ~~lei4~~]]][8] $\rightarrow$
      $[_{IP1}$ $[_{VP}$ lei4-zo2]] $[_{IP2}$ $[_{NegP}$ mei6]]

The co-occurrence of *zo2* and *mei6* is legitimate in NPQs because they are not base generated in the same IP. As for why they cannot occur in the same IP, I suggest that it is due to the same reason that excludes the co-occurrence of *méiyǒu* and *le* in Mandarin. Namely, while *zo2* marks perfective aspect, *mei6* as well as the negation form *mou5* negate it. Thus when they occur with *zo2* in the same IP, there is a conflict of semantic feature.

5.4.4 HISTORICAL EVIDENCE FROM CHEUNG (2001)
By examining twelve sets of language teaching material compiled between 1828 and 1963, Cheung (2001) identifies six types of A-not-A questions in Early Cantonese. See (50) (excerpted from Cheung (2001: 226)).[9]

(50) a. VP + *mh*-VP or V + *mh*-V
     b. VP + *mh*-VP $\rightarrow$ VP + *mh*
     c. VP + *mh*-VP + *a* $\rightarrow$ VP + *mh* + *a* $\rightarrow$ VP-*ma*
     d. VP + *mh*-VP $\rightarrow$ VP + *mh*-V
     e. VP + *mh-chahng* VP $\rightarrow$ VP + *mh-chahng*
     f. VP + *mh*-VP $\rightarrow$ V *mh* VP

Cheung suggests that the type (a) is the prototype of A-not-A questions, and the other five types are derived from it through different processes of deletion.[10]

(50) shows that in Early Cantonese there exist not only the [A not AB] type of questions, i.e., V-*m4*-VP, but also the [AB not A] type of questions, i.e., VP-*m4*-V. The latter includes NPQs, i.e., VP-*m4*. Cheung (2001) points out that in the nineteenth and early twentieth century Cantonese displayed an exclusive use of the 'VP-*m4*-V' and 'VP-*m4*' questions, and later on the 'V-*m4*-VP' questions gradually took over the dominant status.

Consider (51) (Cheung 2001: 206, 213).

(51) a. Neih sik   mh sik   se   jih   ni?   (Wisner 1927: 20)
      2S   know NEG know write character PRT
      'Do you know how to write?'

   b. Neih sik   se   jih   mh sik   ni?   (Ibid)
      2S   know write character NEG know PRT
      'Do you know how to write?'

   c. Keuih seung chuhng leuhng mh ni?   (Wisner 1927: 278)
      3S   want follow   good   NEG PRT
      'Does she want to get out (of prostitution) by getting married?'

Although at present time the negation marker *m4* occurs only in the 'V-*m4*-VP' questions, (51) shows that it used to occur in the 'VP-*m4*-V' and 'VP-*m4*' questions as well. The latter are the so-called NPQs.

Note that these questions can be followed by final particles such as *ni* (so can the A-not-A questions in Modern Cantonese, see Chapter 3). Cheung (2001) points out that it is "a general practice for a VP-*mh* question to conclude with a particle, either *ni/ne* or *a*"; "when the particle *a* is positioned immediately after the negative *mh*, the fusion between a syllabic nasal and a following vowel is not only imaginable but also highly desirable in terms of ease of pronunciation" (Cheung 2001: 225). In fact, the fused form *maa3* still exists in nowadays Cantonese. (52) (from Cheung (2001: 224)) is an example of the *maa3*-attached question in Early Cantonese, and (53) (from Law (1990: 22)) is an example of the *maa3*-attached question in Modern Cantonese.

(52) Yi   dak hou ma?   (Leih 1932: 23b)
     cure DAK good PRT
     'Is this curable?'

(53) Nei5 sik1   gong2 jing1-man2 maa3?
     2S   know speak English   PRT
     'Do you know how to speak English?'

In Chapter 3, I argued that *maa3* is different from the yes/no question particle *me1*, and *maa3*-attached questions are not particle questions. Now it is clear that *maa3*-attached questions are NPQs; more precisely, they are a special type of A-not-A questions.

Cheung (2001) points out that when the negation marker *m4* occurs with the verb *jau5* 'to have', it gives rise to the combination *mou5*. He mentions that in Early Cantonese *mou5* occurred in both the [A not AB] and the [AB not A] type of questions, but the latter has diminished in recent decades. Consider the following examples (given by Cheung (2001: 207, 211)).

(54) a. Neih yauh mouh   yuhnbat a?   (Chao 1947: 53)
        2S   have NEG-have pencil   PRT
        'Do you have a pencil?'

   b. Neih yauh yuhnbat mouh   a?   (Ibid.)
        2S   have pencil NEG-have PRT
        'Do you have a pencil?'

While (54a) and (54b) are equally felicitous in Early Cantonese, nowadays questions like (54b) are rarely used and considered old-fashioned.

Cheung (2001) points out that the negation form *mei6* is derived by combining the negation marker *m4* with the adverb *caang4* 'already, yet'. He mentions that from early on in the nineteenth century the negation form *mei6*, *m4-caang4*, and *mei6-caang4* are identical in use. *M4-caang4* is the dominant form throughout all periods until the early 1940s. Since then, *mei6* has taken over as the standard word in phrasing questions of this type.

Consider (55) (from Cheung (2001: 221)). The sentences are all taken from the same text by Wisner (1927).

(55) a. Neih gin-gwo gwaaimaht   meih   ni?   (Wisner 1927: 279)
        2S   see-EXP strange-being NEG-yet PRT
        'Have you ever seen a strange animal?'

   b. Neih gin-gwo go   di sangmaht mh-chahng ni?   (Wisner 1927: 31)
        2S   see-EXP that CL being   NEG-yet   PRT
        'Have you ever seen those beings?'

   c. Neih gin-gwo seuingauh meih-chahng ni?   (Wisner 1927: 36)
        2S   see EXP buffalo   NEG-yet   PRT
        'Have you ever seen a buffalo?'

That *mei6* is not simplex but can be reanalyzed as a compound which comprises a negation marker and an adverb further excludes the possibility that it is base generated in C as a question particle.

To summarize, Cheung's (2001) study provides historical evidence for the affinity between A-not-A questions and NPQs in Cantonese. It shows that the fact that nowadays *mei6* is the only negation form appearing in NPQs is not due to the lack of agreement. The negation form *m4* and *mou5* did, and in fact *m4* still does, occur in NPQs. Besides, that *mei6* is developed from the complex *m4-caang4* further suggests that it is not a question particle.

5.4.5 CONCLUSION

In the preceding discussion, I argued that Cantonese NPQs are not formed by inserting a negation form into the C position. I proposed that NPQs are a special type of A-not-A questions, which are derived from a base structure of juxtaposed IPs that undergoes anaphoric ellipsis. The current analysis not only explains the affinity shared by NPQs and A-not-A questions, but it is also supported by historical evidence.

5.5 ON THE DERIVATION OF WENZHOU NPQS

Like Mandarin and Cantonese, Wenzhou has a particular type of question that is characterized by a negation form in sentence final position. In this section I argue that Wenzhou NPQs are derived in the same way as the NPQs in Mandarin and Cantonese.

5.5.1 NEGATION FORMS IN WENZHOU

Wenzhou has three negation forms, i.e., *fu3*, *nau3* and *mei6*.[11] *Fu3* is on a par with Mandarin *bù* and Cantonese *m4*. It is used with bare verbs and modals. *Nau3* is equivalent to Mandarin *méiyǒu* and Cantonese *mou5*. It is the combination of the negation marker *ɲ* and the verb *jiau4* (You 2003: 210, 219). It can occur with various aspects and accomplishment verbs. *Mei6* is equal to Cantonese *mei6*. It is the same as *nau3* except that it has an additional meaning of 'not yet'. See (56).

  (56) a. gei2 fu3/*nau3/*mei6   vai6 ma4 ki7 paŋ3 sɿ1.
            3S   NEG/NEG-have/NEG-yet will buy this CL   book
            'He won't buy this book.'

     b. ŋ̍4 pai7-tɕiaŋ1 *fu3/nau3/mei6   tsau3-ku5.
        1S Beijing   NEG/NEG-have/NEG-yet go-EXP
        'I haven't been to Beijing (yet).'

     c. i1-ji2 *fu3/*nau3/*mei6   sei3 hə3 ba4.
        clothes NEG/NEG-have/NEG-yet wash good PERF
        INTENDED READING: 'Clothes haven't been washed (yet).'

It shows that *fu3* cannot occur with the experiential aspect marker *ku5* or the perfective aspect marker *ba4*. *Nau3* and *mei6* cannot occur with the modal verb *vai6*; they both can occur with the experiential aspect marker *ku5*, but neither of them can occur with the perfective aspect marker *ba4*.

   The three negation forms all can appear in NPQs (cf. You 2003: 231-33). Examples are given in (57).

  (57) a. gei2 tsau3 a7 **fu3**?
            3S   go   PRT NEG
            'Is he going?'

   b. n̪i4 dʑiau6-n̪i2 jiau3 dɤu8 iaŋ1-vaŋ2 a7 **nau3**?
      2S last-year have read English PRT NEG-have
      'Did you read English last year?'

   c. ɕei2 tsau3 ɦuɔ2 ba4 a7 **mei6**?
      3S go PRT PERF PRT NEG-yet
      'Has he left yet?'

Note that in Wenzhou NPQs the negation form is usually preceded by the particle *a7* (written as '也', pronounced *yě* in modern Mandarin). It is the residue of the final particle '也' in Classical Chinese, which functions to mark assertion.[12] Native speakers feel that when *a7* is left out, the sentences sound unnatural or not good.

5.5.2 AGREEMENT IN NPQS
In Wenzhou, some NPQs display the selectional relation between negation and the aspect/verb, whereas some seem not. See (58).

  (58) a. ɕei2 vai6 ma4 ki7 paŋ3 sʅ1 a7 fu3/*nau3/*mei6?
       3S will buy this CL book PRT NEG/NEG-have/NEG-yet
       'Will he buy this book?'

     b. ɕei2 tsau3-ku5 pai7-tɕiaŋ1 a7 fu3/nau3/mei6?
       3S go-EXP Beijing PRT NEG/NEG-have/NEG-yet
       'Has he been to Beijing (yet)?'

     c. i1-ji2 sei3 hə3 ba4 a7 fu3/nau3/mei6?
      clothes wash good PERF PRT NEG/NEG-have/NEG-yet
      'Have you washed the clothes (yet)?'

In (56a) we see that in declaratives *fu3* is the only negation marker that can occur with the modal verb *vai6*. The agreement requirement is maintained in (58a). However, the agreement requirement is not met in (58b) and (58c). In (56b) we see that in declaratives *fu3* cannot occur with the experiential aspect marker *ku5*, but in (58b) it can. (56c) shows that in declaratives none of the negation markers can occur with the perfective aspect marker *ba4*, whereas (58c) shows that they all can occur with *ba4* in NPQs.[13]

We mentioned that Cheng, Huang and Tang (1996) propose that some NPQs are derived by NEG-to-C movement, and some by inserting a negation marker, which is on a par with a question particle, to the C position. Both hypotheses encounter problems to derive NPQs in Wenzhou. If we assume that the negation forms in NPQs are extracted from inside IP to C, we will not be able to explain the contrast between (56b) and (58b), and the contrast between (56c) and (58c). If we assume that the negation forms are equal to question particles and they are base generated in C, we will not be able to explain the selectional relation displayed in (58a).

I will come back to this issue in section 5.5.4. Below let us first take a look at A-not-A questions in Wenzhou.

5.5.3 AFFINITY BETWEEN NPQS AND A-NOT-A QUESTIONS

The negation form *fu3*, *nau3* and *mei6* all can occur in A-not-A questions. See (59).

(59) a. ȵi4 sʅ1-ɕy1 a7   fu3 sʅ1-ɕy1 ki7 baŋ3 sʅ1?
       2S   like   PRT NEG like   this CL   book
       'Do you like this book?'

  b. ȵi4 dʑiau6-ȵi2 jiau3 dɤu8 a7 nau3   dɤu8 iaŋ1-vaŋ2?
       2S   last-year   have read PRT NEG-have read   English
       'Did you read English last year?'

  c. ȵi4 ki7 baŋ4 sʅ1   dɤu8 hə3   ba4   a7 mei6   dɤu8 hə3?
       2S   this CL   book read finish PERF PRT NEG-yet read finish
       'Have you finished reading this book?'

NPQs are similar to A-not-A questions in various aspects. For instance, NPQs and A-not-A questions both require the main verb to be affirmative. This constraint does not hold in particle questions, e.g., *o*-attached questions (see chapter 4 for the discussion on *o*).

(60) a. *ȵi4 fu3 sʅ1-ɕy1 a7   fu3 sʅ1-ɕy1 ki7 baŋ4 sʅ1?
       2S   NEG like   PRT NEG like   this CL   book
       INTENDED READING: 'Do you not like this book?'

  b. *ȵi4 fu3   sʅ1-ɕy1 ki7 baŋ4 sʅ1   a7 fu3?
       2S   NEG like   this CL   book PRT NEG
       INTENDED READING: 'Do you not like this book?'

  c. ȵi4 fu3   sʅ1-ɕy1 ki7 baŋ4 sʅ1   o?
       2S   NEG like   this CL   book PRT
       'You don't like this book, right?'

Besides, NPQs and A-not-A questions both are used in neutral contexts where the speaker has no presupposition of the answer, whereas *o*-attached questions indicate that the speaker has a presupposition of the answer.

(61) a. ɡei2 pai7-tɕiaŋ1 tsau3-ku5 a7 nau3   tsau3-ku5?
       3S   Beijing   go-EXP PRT NEG-have go-EXP
       'Has he been to Beijing?'

   b. ɡei2 pai7-tɕiaŋ1 tsau3-ku5 a7 nau3?
      3S   Beijing   go-EXP   PRT NEG-have
      'Has he been to Beijing?'

   c. ɡei2 pai7-tɕiaŋ1 tsau3-ku5 o?
      3S   Beijing   go-EXP   PRT
      'He's been to Beijing, right?'

(61a) and (61b) both indicate the positive and negative answer are equally unknown to the speaker. (61c) indicates that the speaker already sort of knows the answer, and the question is launched for confirmation.

    Therefore, like what we have observed in Mandarin and Cantonese, in Wenzhou NPQs and A-not-A questions are closely related. In the next section I suggest that Wenzhou NPQs are a special type of A-not-A questions.

5.5.4 DERIVING WENZHOU NPQS
Like the A-not-A questions in Mandarin and Cantonese, A-not-A questions in Wenzhou can be divided into two subtypes, i.e., the [A not AB] type and the [AB not A] type. See (62).

   (62) a. n̠i4 sʅ1-ɕy1 a7 fu3 sʅ1-ɕy1 ki7 baŋ4 sʅ1?
        2S like   PRT NEG like   this CL   book
        'Do you like this book?'

     b. n̠i4 sʅ1-ɕy1 ki7 baŋ4 sʅ1   a7 fu3 sʅ1-ɕy1?
        2S like   this CL   book PRT NEG like
        'Do you like this book?'

    I propose that Wenzhou NPQs belong to the [AB not A] type. More precisely, I propose that they are derived from a base structure of juxtaposed IPs that undergoes anaphoric ellipsis which deletes the constituent following the negation form.

    First, let us consider the NPQs that maintain the agreement requirement. The derivation of (58a) (repeated in (63a)) is illustrated in (63b).

   (63) a. ɡei2 vai6 ma4 ki7 paŋ4 sʅ1 a7 fu3?
        3S   will buy this CL   book PRT NEG
        'Will he buy this book?'

     b. [$_{IP1}$ [$_{VP}$ vai6 ma4 ki7 paŋ4 sʅ1] a7] [$_{IP2}$ [$_{NegP}$ fu3
                      [$_{VP}$ vai6 ma4 ki7 paŋ4 sʅ1]]] →
       [$_{IP1}$ [$_{VP}$ vai6 ma4 ki7 paŋ4 sʅ1] a7] [$_{IP2}$ [$_{NegP}$ fu3
                      [$_{VP}$ ~~vai6 ma4 ki7 paŋ4 sʅ1~~]]]→
       [$_{IP1}$ [$_{VP}$ vai6 ma4 ki7 paŋ4 sʅ1] a7] [$_{IP2}$ [$_{NegP}$ fu3]]

It was mentioned earlier that the particle *a7* present in NPQs is developed from the final particle '也' in Ancient Chinese, which functions to mark assertions. Here I assume that *a7* is attached to the first conjunct to conclude the clause.

As for the NPQs that seem to violate the agreement requirement, let us first consider the contrast between (56b) and (58b). (56b) is repeated in (64). It shows that in declaratives the negation marker *fu3* cannot occur with the experiential aspect marker *ku5*, but *nau3* and *mei6* can.

(64) ŋ̍4 pai7-tɕiaŋ1 *fu3/nau3/mei6   tsau3-ku5.
    1S Beijing   NEG/NEG-have/NEG-yet go-EXP
    'I haven't been to Beijing (yet).'

What should be noted is that there is a distinction between the negation marker *fu3* and the negation form *nau3* and *mei6*. The former is a pure negation marker, whereas the latter are combinations of a negation marker with something else. As mentioned before, *nau3* is the combination of the negation marker *ŋ* with the modal verb *jiau4* 'to have'. In section 5.4.4 we saw that the negation form *mei6* in Cantonese is developed from the combination of the negation marker *m4* with the adverb *caang4* 'already, yet'. Presumably, *mei6* in Wenzhou, which is on a par with *mei6* in Cantonese, is also a compound that comprises a negation marker and a morpheme that expresses the aspectual meaning 'already, yet'.

This is not a trivial issue, as it leads to a structural difference between the sentences negated by *fu3* and those negated by *nau3* and *mei6*. Consider (65).

(65)[14] a. *[$_{IP}$ [$_{NegP}$ fu3 [$_{AspP}$ ku5 [$_{VP}$ tsau3 pai7-tɕiaŋ1]]]]

      b. [$_{IP}$ [$_{NegP}$ ŋ [$_{AspP}$ jiau3 [$_{AspP}$ ku5 [$_{VP}$ tsau3 pai7-tɕiaŋ1]]]]]
               └─nau3─┘

      c. [$_{IP}$ [$_{NegP}$ NEG [$_{AspP}$ ASP$_{'yet'}$ [$_{AspP}$ ku5 [$_{VP}$ tsau3 pai7-tɕiaŋ1]]]]]
                   └─ mei6─┘

It shows that while *fu3* occupies the head position of NegP, *nau3* and *mei6* are both compounds that comprise the NEG head and the head of its complement, i.e., AspP. It seems that (65a) is out because the negation marker cannot directly negate the experiential aspect marker *ku5*. I leave this issue open.

Turning to the seemingly problematic NPQs, (58b) (repeated in (66)) shows that *fu3* can occur with the experiential aspect marker *ku5* in NPQs.

(66) gei2 tsau3-ku5 pai7-tɕiaŋ1 a7   fu3?
    3S   go-EXP   Beijing   PRT NEG
    'Has he been to Beijing (yet)?'

I propose that (66) is derived in the following way. See (67).

(67) [IP1 [AspP ku5 [VP tsau3 pai7-tɕiaŋ1] a7]] [IP2 [NegP NEG [AspP ASP
 [AspP ku5 [VP tsau3 pai7-tɕiaŋ1]]]]]→
 [IP1 [AspP ku5 [VP tsau3 pai7-tɕiaŋ1] a7]] [IP2 [NegP NEG [AspP ~~ASP~~
 [AspP ~~ku5 [VP tsau3 pai7 tɕiaŋ1~~]]]]]→
 [IP1 tsau3-ku5 pai7-tɕiaŋ1 a7] [IP2 fu3]

As shown in (67), I suggest that the negation marker is base generated in the second IP, and it takes some AspP as its complement. This AspP dominates the projection headed by the experiential aspect marker *ku5*. In the process of anaphoric ellipsis, the aspectual head and its complement are deleted, and the negation marker is left in sentence final position, which is phonologically realized as *fu3*.

Now consider the contrast between (56c) and (58c). (56c) is repeated in (68). It shows that none of the negation forms can occur with the perfective aspect marker *ba4*.

(68) i1-ji2 *fu3/*nau3/*mei6 sei3 hə3 ba4.
 clothes NEG/NEG-have/NEG-yet wash good PERF
 INTENDED READING: 'Clothes haven't been washed (yet).'

Previously we saw that the same constraint held in Mandarin and Cantonese. Namely, in these three Chinese languages, to negate the perfective aspect, one cannot simply insert a negation marker to the sentence, but has to replace the perfective aspect marker with the compound *méiyǒu/mou5/nau3* or *mei6/mei6*. I do not have an explanation for this.

As for why the three negation forms all can occur with *ba4* in NPQs, I propose that in NPQs the negation forms and the perfective aspect marker are not generated in the same IP. Consider (69), (70) and (71).

(69) a. i1-ji2 sei3 hə3 ba4 a7 fu3?
 clothes wash good PERF PRT NEG
 'Have you finished washing the clothes?'

 b. [IP1 [AspP [VP sei3 hə3] ba4] a7]
 [IP2 [NegP NEG [AspP ASP [VP sei3 hə3]]]] →
 [IP1 [AspP [VP sei3 hə3] ba4] a7]
 [IP2 [NegP NEG [AspP ~~ASP [VP sei3 hə3~~]]]] →
 [IP1 sei3 hə3 ba4 a3] [IP2 fu3]

(70) a. i1-ji2 sei3 hə3 ba4 a7 nau3?
 clothes wash good PERF PRT NEG-have
 'Have you finished washing the clothes?'

b. [$_{IP1}$ [$_{AspP}$ [$_{VP}$ sei3 hə3] ba4] a7] [$_{IP2}$ [$_{NegP}$ ŋ̩ [$_{AspP}$ jiau4 [$_{VP}$ sei3 hə3]]]] →
   [$_{IP1}$ [$_{AspP}$ [$_{VP}$ sei3 hə3] ba4] a7] [$_{IP2}$ [$_{NegP}$ ŋ̩ [$_{AspP}$ jiau4 [$_{VP}$ sei3 hə3]]]] →
   [$_{IP1}$ sei3 hə3 ba4 a3] [$_{IP2}$ nau3]

(71) a. i1-ji2   sei3   hə3   ba4   a7 mei6?
        clothes wash good PERF PRT NEG-yet
        'Have you finished washing the clothes yet?'

b. [$_{IP1}$ [$_{AspP}$ [$_{VP}$ sei3 hə3] ba4] a7]
        [$_{IP2}$ [$_{NegP}$ NEG [$_{AspP}$ ASP$_{‘yet’}$ [$_{VP}$ sei3 hə3]]]] →
   [$_{IP1}$ [$_{AspP}$ [$_{VP}$ sei3 hə3] ba4] a7]
        [$_{IP2}$ [$_{NegP}$ NEG [$_{AspP}$ ASP$_{‘yet’}$ [$_{VP}$ sei3 hə3]]]] →
   [$_{IP1}$ sei3 hə3 ba4 a7] [$_{IP2}$ mei6]

In (69), I suggest that the complement of the NEG head is deleted via anaphoric el-
lipsis, resulting in the sentence final position of the negation marker, which is pho-
nologically realized as *fu3*. In (70) and (71), I suggest that it is the complement of
the aspectual head that undergoes deletion. Later phonological incorporation takes
place, which combines the NEG head with the aspectual head and gives rise to the
compound *nau3* and *mei6*, respectively.

5.5.5 CONCLUSION
In this section I argued that Wenzhou NPQs are derived in the same way as Manda-
rin and Cantonese NPQs, i.e., they are derived from a base structure of juxtaposed
IPs which undergoes anaphoric ellipsis. Under the current analysis, not only can we
explain the agreement requirement held in Wenzhou NPQs, but also we can account
for the similarities between Wenzhou NPQs and A-not-A questions.

5.6 CONCLUSION
In this chapter, I discussed the formation of NPQs in Mandarin, Cantonese and
Wenzhou. I proposed that NPQs in the three Chinese languages are derived from a
base structure of juxtaposed IPs which undergoes anaphoric ellipsis. I argued that
the sentence final position of the negation forms in NPQs results from the deletion
of the constituent that immediately follows them.

    Under the current analysis, the negation forms occurring in NPQs are not gener-
ated in the CP domain, but belong in the IP domain. I mentioned before that NPQs
can be attached by final particles. That is, the negation forms can occur with final
particles, and when they do, the former precede the latter. This provides supporting
evidence that the negation forms are located in a lower position than final particles.

NOTES

1. Cheng, Huang and Tang (1996) also discuss Taiwanese NPQs. They propose that Taiwanese NPQs are derived in the same way as Cantonese NPQs. In this thesis I concentrate on the sentence final elements in Mandarin, Cantonese and Wenzhou, and leave Taiwanese out of the discussion.

2. There seems to be a co-dependent relation between *méi* and *yǒu*, i.e., *méi* is the negation marker that is used only to negate the verb *yǒu*, and *yǒu* is the verb that can only be negated by *méi*. Note that the verb *yǒu* can be absent, and the sentences are still grammatical. See (i).

   (i) a. Tā méi(yǒu) qù-guò.
        3S NEG-have go-EXP
        'He hasn't been there.'

     b. Tā qù-guò méi(yǒu)?
        3S go-EXP NEG-have
        'Has he been there?'

3. Cheng, Huang and Tang (1996) consider *ne* to be a wh-question particle. They also mention that NPQs and A-not-A questions cannot occur with the final particle *ma*, which they consider a yes/no question particle. According to my informants, NPQs and A-not-A questions both can occur with the final particle *ma*, when *ma* is associated with a low pitch. In this case, the sentences express a strong directive reading. See Chapter 2 for the discussion on the final particle *ne* and *ma*.

4. Huang (1991) suggests that the base structure consists of juxtaposed VPs. In this study, I assume that they are IPs, because the conjuncts may comprise aspect markers and modals.

5. A problem seems to rise here for anaphoric ellipsis, i.e., the VP in the second IP is not identical to its antecedent in the first IP. Following Cheng (1989), I assume that the perfective aspect marker *le* is the head of some AspP, which dominates VP. In the derivation it is lowered down and adjoins to the main verb.

6. In section 5.3.2, in addition to the adverb *dàodǐ* 'on earth' (on a par with *dou3dai2* in Cantonese), I used the adverb *nándào* 'really' to distinguish Mandarin NPQs and A-not-A questions from *ma*-attached questions. It shows that the former cannot occur with *nándào* but the latter can. In Cantonese, although the adverb *m4tung1* 'really' (on a par with *nándào* in Mandarin) cannot occur in NPQs or A-not-A questions, either, it also sounds weird in *me1*-attached questions. Presumably, it is because the final particle *me1* already comprises a 'surprise' or 'disbelief' reading, and when *m4tung1* is added, there is a meaning redundancy.

7. At this moment, I treat *mei6* as occupying the head position of NegP. In the following discussion we will see that *mei6* is actually a compound. It is the fusion of a pure negation marker with some aspectual element.

8. I assume that the perfective aspect marker *zo2* is the head of some AspP. In the derivation it is lowered down and adjoins to the main verb. See note 5.

9. The transcription system adopted by Cheung (2001) is the Yale romanization system. I reserve his transcriptions in the following form and the examples excerpted from his work. Cheung (2001) did not give tones, and we do not know what the tones are like in Early Cantonese, so I leave the examples without tone marks.

10. Cheung (2001) suggests that the type (b) through the type (e) involve forward deletion which removes certain identical constituents from the second VP, and the type (f) involves backward deletion which affects the first VP.

11. Wenzhou has two negative elements which are bound morphemes, i.e., *m̩* and *ŋ* (You 2003: 218). The former occurs in *məɜ1* 'not good', which is the fusion of *m̩* with the adjective *hə35* 'good'. The latter occurs in fixed phrases, such as *ŋ-phai33* 'indecent', *ŋ-ta35* 'timid', and *nau35* 'not have' (see the following discussion).

12. I thank You Rujie for pointing this out to me.

13. Note that there is a difference between Wenzhou on the one hand and Mandarin and Cantonese on the other. In Mandarin and Cantonese the negation marker *bù/m4* cannot occur with the experiential aspect marker *guò/gwo3* or the perfective aspect marker *le/zo2* in either declaratives or NPQs.

14. I assume that the experiential aspect marker *ku5* occupies the head position of some AspP. In the derivation it is lowered down and adjoined to the verb. See note 5.

6. CONCLUSION

The main question that I was concerned with in this thesis is how Chinese final particles relate to the structure of sentence. Since Tang (1988/1989), Chinese final particles have often been treated as complementizers situated in the C position. However, it is not plausible that all final particles are generated uniformly in one slot, due to the fact that different final particles make different contributions to the interpretation of the sentence that they are attached to, and the fact that more than one final particle can co-occur, and when they do, they obey a certain order.

In the light of recent hypotheses on the split CP system, I considered the array of Chinese final particles to exhibit a rich functional makeup of the C-domain. More specifically, I proposed that Chinese final particles are heads of functional projections in CP.

The investigation was implemented by two steps. The first step was examining the semantic function of final particles, according to which I decided which functional projection a final particle corresponded to. From the meaning minimalists' point of view, I attempted to extract a general semantic core from the various uses of a final particle in different contexts. The second step involved the structural mapping of the final particles to the sentence structure. Crucial evidence came from the observation that different final particles can enter a rigidly ordered sequence.

Chapter 2 discussed the Mandarin final particles *ne*, *ba*, *ma* and *a*. I proposed that the semantic function of *ne* is to mark evaluative mood, indicating that the speaker considers the content that is being claimed to be extraordinary or of particular importance. I proposed that *ba* and *ma* are degree markers, which scale on sentence force; in particular, *ba* marks a low degree and *ma* marks a high degree of the strength of the (non-)directive force. I considered *a* to be a discourse marker, which functions to highlight relevance of the utterance in which it occurs to the discourse context.

Taking into account their semantic functions, I suggested that *ne* is generated in the head position of the functional projection EvaluativeP, *ba* and *ma* in DegreeP, and *a* in DiscourseP. I established a hierarchy of these functional projections on the basis of the linear order in which the final particles occur. This is schematically represented in (1).

(1) **Discourse > Degree > Force > Evaluative > Mood > Fin**
     a   *ba, ma*   *ne*

In chapter 3, along the same line of Law (1990) and Fung (2000), I took an extreme approach of dissecting Cantonese final particles into minimal semantic units. I concluded that Cantonese has eleven simplex particles. They are *ge3*, *le*, *ze*, *me*, *ne*, *aa*, *o*, *k*, and three tonal particles, i.e., tone *1*, tone *4* and tone *5*. Based on previous researches as well as incorporating my own findings from the consultation with native speaker informants, I suggested that the semantic function of *ge3* is to assert factuality, *le* to mark realization, *ze* to mark restriction, *me* to mark yes/no questions, *ne* to mark evaluative mood, *aa* to mark discourse relevance, *o* to mark noteworthiness, and the coda *k* is an emotion intensifier. As for the tonal particles, I suggested

that tone *1* and tone *4* are perceptions of a high boundary tone and a low boundary tone, respectively. In chapter 2, I mentioned that the boundary tones were also observed in Mandarin, recognized as pitch variation associated with the final particles. I suggested that the high boundary tone functions to mark "hearer orientation" and the low boundary tone to mark "speaker orientation" (Chu 2002). Finally, I suggested that in Cantonese evidentiality could be marked by a tonal particle, i.e., tone *5*.

In the second part of the discussion, I assigned each final particle a position in the sentence structure by looking at their combinatory possibilities. I proposed that the hierarchy of the functional projections headed by Cantonese final particles is as follows:

(2) **Epist$_1$ > Evid > Epist$_2$ > Discourse > Evaluative > Mood > Deik > Foc > Fin**
    1, 4   5   k   aa, o   ne   me   le   ze   ge3

Counterparts of the Mandarin and Cantonese final particles are found in Wenzhou. In chapter 4, I showed that the Wenzhou final particle *gi* performs a similar function to Cantonese *ge3* and Mandarin *de* (briefly discussed in section 4.2). They all serve to assert factuality. The Wenzhou final particle *ba* is similar to Cantonese *le* and Mandarin *le* (briefly discussed in section 4.2), which all function to mark realization. The Wenzhou final particle *n̩i* is similar to Cantonese *ne* and Mandarin *ne*. They all function to mark evaluative mood. The Wenzhou final particle *a* is on a par with Cantonese *aa* and Mandarin *a*. They all function to mark discourse relevance. Besides, we saw that the three Chinese languages all have final particles functioning to mark degrees with respect to the strength of sentence force, i.e., *ba* and *ma* in Mandarin, *gwaa3* and *maa3* in Cantonese (briefly discussed in section 4.2), and *o, na,* and *miɛ* in Wenzhou. Cantonese and Wenzhou both have a final particle marking noteworthiness, i.e., *o* in Cantonese and *e* in Wenzhou.

I then examined the order in which the Wenzhou final particles occur. For the particles that do not co-occur, I assumed that they follow the same order as their Mandarin and Cantonese counterparts. As a result, I established a hierarchy of the functional projections headed by the Wenzhou final particles. This is schematically presented in (3).

(3) **Discourse > Degree > Evaluative > Deik > Fin**
      a, e   na, miɛ, o   n̩i   ba   gi

In addition to final particles, in Mandarin, Cantonese and Wenzhou, a group of negation forms are found in sentence final position, which appear to help form questions. In chapter 5, I argued that questions ending with these negation forms are derived from a base structure of juxtaposed IPs which undergoes anaphoric ellipsis, and the negation forms are base generated inside one of the IP conjuncts. Namely, I claimed that the negation forms in the final position of questions do not belong in the C-domain.

At this stage, let us consider the functional structures containing Mandarin, Cantonese and Wenzhou final particles together. Integrating the sequences given in (1),

(2) and (3), which were established independently on the basis of data from the three different languages, we obtain an overall picture of the structure of the C-domain in Chinese.[1]

	Epist₁ >	Evid >	Epist₂ >	Disc >	Degree >	Force >	Eval >	Mood >	Deik >	Foc >	Fin
Mandarin:	*H, L*			*a*	*ba, ma*		*ne*		*le*		*de*
Cantonese:	*1, 4*	*5*	*k*	*aa, o*	*gwaa3, maa3*		*ne*	*me*	*le*	*ze*	*ge3*
Wenzhou:				*a, e*	*o, na, miɛ*		*ɲi*		*ba*		*gi*

Ideally, the configuration given above holds universally across Chinese languages. Needless to say, whether this is indeed the case needs to be verified by further research which takes into account more Chinese languages. In addition, it would be interesting to compare the functional structure containing Chinese final particles with the functional structure containing peripheral elements in other languages. As is pointed out by Cinque (1999), a functional projection may appear in some languages marked by head morphemes such as particles, but in others may manifest itself via adverbials in the corresponding specifier position. The morphological variation notwithstanding, presumably the underlying configuration of the functional field is invariant across languages. If we can prove this, it will contribute a new insight to our understanding of the structure of UG.

NOTE

1. I add the Mandarin final particle *de* and *le*, which were not mentioned in chapter 2 and introduced to the system in chapter 4, to the structure. I put them in FinP and DeikP, respectively. In chapter 2 I did not assign the high pitch (denoted by 'H') and low pitch (denoted by 'L') a position in the sentence structure. Here I put them in Epist₁P. I did not discuss Cantonese *gwaa3* and *maa3* in chapter 3. They were introduced to the system in chapter 4. Here I put them in DegreeP.

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SUMMARY

Chinese has a rich inventory of final particles, which typically occur in clause or sentence final position. This thesis endeavors to motivate a syntactic analysis of Chinese final particles, investigating how they relate to the structure of sentence, especially in the light of the recent hypotheses on the articulated structure of the C-domain.

As a first step, assuming that every final particle possesses a general, unspecified meaning, I extract a semantic core from the various uses of a single particle in different contexts, according to which, I decide which final particle corresponds to which functional category. Then I proceed to establish a hierarchy of the functional projections headed by the final particles on the basis of their relative order.

This thesis looks at the final particles in three Chinese languages, i.e., Mandarin, Cantonese, and Wenzhou.

Chapter 2 discusses the Mandarin final particles *ne*, *ba*, *ma*, and *a*. I suggest that the final particle *ne* functions as an evaluative marker, indicating that the speaker considers what is being claimed to be extraordinary or of particular importance. I propose that *ba* and *ma* are degree markers, which scale on sentence force; in particular, *ba* marks a low degree and *ma* marks a high degree with respect to the strength of the (non-)directive force. I suggest that *a* is a discourse marker, which functions to highlight relevance of the utterance in which it occurs to the discourse context. Mapping to the sentence structure, I propose that *ne* is generated in the head position of EvaluativeP, *ba* and *ma* in DegreeP, and *a* in DiscourseP. On the basis of the relative order of *ne*, *ba*, *ma*, and *a*, I locate these functional projections in a hierarchical structure.

Chapter 3 examines the final particle system in Cantonese. Compared with Mandarin, Cantonese seems to have a much larger inventory of final particles. However, by taking an extreme approach of dissecting them into smaller semantic units, I diminish the number dramatically, ending up with eleven final particles, which I consider semantically and structurally simplex. I proceed to map the simplex particles into sentence structure, proposing that they are heads of functional projections in the periphery, and establish a hierarchy of the functional projections by examining the relative order of the final particles in clusters.

Chapter 4 looks at the final particles in Wenzhou. The observation is that Wenzhou final particles are similar in their meaning and use to Mandarin and Cantonese final particles, suggesting that the functional categories displayed by Mandarin and Cantonese also exist in Wenzhou. Like their Mandarin and Cantonese counterparts, Wenzhou final particles can co-occur. I establish a hierarchy of the functional projections headed by Wenzhou final particles on the basis of their relative order.

In addition to final particles, a group of negation forms are found in sentence final position, which appear to help form questions. In chapter 5, I discuss the formation of this special type of question which is characterized by a negation form in sentence final position. I suggest that this type of question is derived from a base structure of juxtaposed IPs which undergoes anaphoric ellipsis. I argue that the negation forms do not belong in the C-domain, but are base generated inside one of

gation forms do not belong in the C-domain, but are base generated inside one of the IP conjuncts.

Integrating the research results of the final particle system in Mandarin, Cantonese, and Wenzhou, I obtain an overall picture of the functional structure of the C-domain in Chinese:

Epist$_1$ > Evid > Epist$_2$ > Disc > Degree > Force > Eval > Mood > Deik > Foc > Fin

	Epist$_1$	Evid	Epist$_2$	Disc	Degree	Force	Eval	Mood	Deik	Foc	Fin
Mandarin:	*H, L*			*a*	*ba, ma*		*ne*		*le*		*de*
Cantonese:	*1, 4*	*5*	*k*	*aa, o*	*gwaa3, maa3*		*ne*	*me*	*le*	*ze*	*ge3*
Wenzhou:				*a, e*	*o, na, miɛ*		*ɲi*		*ba*		*gi*

Ideally, the structure given above holds universally across Chinese languages. Needless to say, whether this is indeed the case needs to be verified by further research which takes into account more Chinese languages. Furthermore, the present study can be taken as a point of departure for comparative studies not only on the final particles in Chinese, but also on peripheral elements in other languages. As is pointed out by Cinque (1999), a functional projection may appear in some languages marked by head morphemes such as particles, but in others may manifest itself via adverbials in the corresponding specifier position. The morphological variation notwithstanding, presumably the underlying configuration of the functional field is invariant across languages. If we can prove this, it will contribute a new insight to our understanding of the structure of UG.

SAMENVATTING (SUMMARY IN DUTCH)

Het Chinees kent een grote rijkdom aan eindpartikels, dat wil zeggen, partikels die aan het eind van een zin of zinsdeel staan. Dit proefschrift probeert deze partikels syntactisch te analyseren door te onderzoeken hoe ze zich verhouden tot de structuur van de zin, mede in het licht van recente hypotheses met betrekking tot de structuur van de CP.

Aannemend dat ieder partikel een algemene, weinig specifieke kernbetekenis heeft, probeer ik, als een eerste stap, voor ieder partikel deze kernbetekenis vast te stellen door de verschillende contexten waarin het voorkomt en wat het daar uitdrukt te onderzoeken. Vervolgens probeer ik uit te maken met welke functionele categorieën de partikels corresponderen. Tenslotte probeer ik erachter te komen, voornamelijk op empirische gronden (met name door te kijken naar de onderlinge volgorde), wat de hiërarchische verhoudingen tussen de partikels zijn.

In deze dissertatie onderzoeken we de eindpartikels in drie Chinese talen, het Mandarijn, het Kantonees en het Wenzhounees.

Hoofdstuk 2 gaat over de Mandarijnse partikels *ne*, *ba*, *ma* en *a*. Ik stel voor dat *ne* een evaluerend partikel is, waarmee de spreker aangeeft te vinden dat wat hij of zij zegt bijzonder is of in elk geval erg belangrijk. De partikels *ba* en *ma* zijn, beargumenteer ik, graadmarkeerders, gerelateerd aan de *force* van de zin. *Ba* geeft een lage en *ma* een hoge graad aan van de (non-)directiviteit van de zin. *A* is een conversatiepartikel. Hun relatie met de zinstructuur is als volgt: *ne* wordt gegenereerd als het hoofd van EvaluativeP, *ba*/*ma* als dat van DegreeP en *a* als dat van DiscourseP. De onderlinge volgorde suggereert wat de onderlinge hiërarchische verhoudingen zijn.

In hoofdstuk 3 gaan we in op de eindpartikels van het Kantonees. Het Kantonees heeft veel meer eindpartikels dan het Mandarijn. Door de Kantonese eindpartikels radicaal in kleinere semantische eenheden te uiteen te trekken, wordt het aantal echter aanzienlijk gereduceerd. We houden zo elf semantisch en structureel simplexe eindpartikels over. Ook deze partikels worden gerelateerd aan de structuur van de zin door ze te associëren met functionele projecties in de periferie van de zin. Ook hier bepalen we de onderlinge hiërarchie door de volgorde te onderzoeken, waarin de partikels, geclusterd of alleen, voorkomen.

In hoofdstuk 4 kijken we naar het Wenzhounees. We stellen vast dat de Wenzhounese partikels veel overeenkomsten vertonen met die van het Mandarijn en het Kantonees. We concluderen dat het Wenzhounees soortgelijke functionele projecties kent.

Naast de eindpartikels treffen we soms in zinsfinale positie een negatie-element aan, schijnbaar om een ja/nee-vraagzin te vormen. In hoofdstuk 5 gaan we in op de aard van aldus gevormde vraagzinnen. Ik stel voor dat dit soort zinnen gevormd worden door twee nevengeschikte IPs waarvan de tweede elliptisch gereduceerd is. Ik laat zien dat de negatie-elementen niet onderdeel uitmaken van het C-domein, maar van het I-domein van een van de twee conjuncten.

Als we de onderzoeksresultaten van de drie hoofdstukken over de eindpartikels van het Mandarijn, Kantonees en Wenzhounees bij elkaar leggen, krijgen we het volgende algehele beeld van het C-domein van het Chinees:

Epist₁ > Evid > Epist₂ > Disc > Degree > Force > Eval > Mood > Deik > Foc > Fin

Mandarin: *H, L*			*a*	*ba, ma*		*ne*		*le*		*de*
Cantonese: *1, 4*	*5*	*k*	*aa, o*	*gwaa3, maa3*		*ne*	*me*	*le*	*ze*	*ge3*
Wenzhou:			*a e*	*o, na, miɛ*		*ɲi*		*ba*		*gi*

Deze structuur geldt in principe voor alle Chinese talen. Om te zien of dat ook echt zo is, is meer onderzoek noodzakelijk. Verder kan deze studie, behalve als uitgangspunt voor onderzoek naar andere Chinese talen, ook als uitgangspunt dienen voor onderzoek naar perifere elementen in andere, niet-Chinese talen. Cinque (1999) laat zien dat een functionele projectie in sommige talen gemarkeerd wordt door hoofden zoals partikels en in andere talen door bijwoorden in de specificeerderspositie. De morfologische variatie op dit punt laat onverlet dat de onderliggende configuratie universeel eenvormig is. Dat is althans de hypothese. Verder onderzoek moet uitwijzen of die klopt of niet, en of de specifieke uitwerking zoals hier gegeven de juiste is.

CURRICULUM VITAE

Boya Li was born on 27 April 1978, in Yichang, China. She finished her high school in Yichang First High School in 1996 and in the same year she entered Beijing Language and Culture University, majoring in Teaching Chinese as a Foreign Language. In 2000, she started her Master program in Peking University, specializing in Chinese linguistics. It is there that she first encountered the theory of Generative Grammar. After one year, she joined the research project "The Syntax of the Languages in Southern China". Since then, she has worked as a PhD student in LUCL. Currently she is living with her husband and their dog in Warsaw, Poland.