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A generalized syntactic schema for utterance particles in Chinese

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Abstract

A novel analysis of the syntax of utterance particles in Chinese is proposed in this paper. In terms of their diachronic origin, there are two types of utterance particles in Chinese, namely predicative utterance particles and non-predicative utterance particles, both of which are derived by a generalized syntactic schema. It is proposed that utterance particles are the complement of a functional category, forming a conjunction structure. The schema can be applied to other sentence-final expressions in Chinese and English, leading to a conjecture that sentence-final expressions are not heads.

Keywords: Utterance particles; Conjunction; Tags; Mandarin; Cantonese

1 Word order of utterance particles

Utterance particles in Chinese, which are also known as “sentence-final particles”, are functional words that occur in the sentence-final position, expressing some grammatical meanings and pragmatic information, such as the speaker’s attitude. For example, in Mandarin, the interrogative 嗎 *ma* in 1 and the assertive 吧 *ba* in 2 are typical utterance particles that convey some pragmatic information. In Cantonese 㗎 *wo* in 3 with the low rising tone ([wɔ¹³] in IPA) is a hearsay evidential utterance particle.

- (1) 他看書嗎?
ta_kan_shu_ma?
he_read_book_MA
Did he read?
- (2) 他看書吧
ta_kan_shu_ba.
he_read_book_BA
He read, I believe.
- (3) 佢睇書㗎
keoi_tai_syu_wo.
he_read_book_WO
It is said that he read.

In the literature of generative grammar, it has been widely assumed that utterance particles in Chinese are heads of functional projections in syntax, such as CP

(Lee 1986, Cheng 1991, among many others), split CP in a cartographic periphery domain (Li 2006), or some functional phrases beyond CP (Tang 邓思颖 2010, Tang 2015).

There are two ways to derive the sentence-final word order of the utterance particles in Chinese. One way is to claim that the phrase containing the utterance particle is head final, abbreviated as “XP” in 4, in which the utterance particle is the head and the clause is its complement. A theory-internal problem is the inconsistency in setting the value of the head parameter in Chinese, given that Chinese is head initial in the clausal domain (Huang 1982).

- (4) [_{XP} clause [_X particle]]

Another possibility is to claim that the utterance particle is head initial underlyingly while the clause in the complement undergoes movement to the specifier of the phrase (Tang 1998), as in 5, in the spirit of Kayne (1994), deriving the apparently sentence-final order in Chinese. Although the right word order can be derived, the motivation of moving the clause seems puzzling.

- (5) [_{XP} clause_i [_{X'} [_X particle] *t_i*]]

In this paper, it is argued that the apparent head final word order of the utterance particles in Chinese is derived by a generalized syntactic schema that may cover both predicative utterance particles and non-predicative utterance particles. It will be further conjectured that utterance particles and other sentence-final expressions are not heads, contra the analyses in 4 and 5.

2 Predicative utterance particles

There are at least six utterance particles that are used frequently in spoken Mandarin, such as 了 *le*, 呢 *ne*, 來著 *laizhe*, 嗎 *ma*, 吧 *ba*, and 啊 *a* (and their variants) (Zhu 朱德熙 1982). Among these utterance particles, some of them have a verbal origin. For instance, the temporal particles 了 *le* in 6 (conveying some aspectual meaning) and 來著 *laizhe* in 7 (conveying recent past) were undoubtedly derived from the verbs 了 *liao* ‘finish’ and 來 *lai* ‘come’, respectively (Ota 太田辰夫 1987, Cao 曹广顺 1995, among others). The evaluative mood of the utterance particle 吧 *ba* in 8 is inherited from the verb 罷 *ba* ‘stop, finish’ (Ota 太田辰夫 1987).

- (6) 下雨了
 xia_yu_le.
 fall_rain_LE
It has rained.
- (7) 下雨來著
 xia_yu_laizhe.
 fall_rain_LAIZHE
It rained.
- (8) 你去吧
 ni_qu_ba!
 you_go_BA
It is suggested that you go.

It seems that the predicative function of these particles is still preserved in modern Mandarin. For example, the realization of the event of raining in 6 is signaled by the predicative utterance particle 了 *le* (cf. “There is an event of raining and this event of raining has been realized”), which inherits the aspectual meaning from the verb 了 *liao* ‘finish’. The temporal meaning of the event of raining in 7 is associated with 來著 *laizhe* (cf. “There was an event of raining and this event of raining had come to its existence”), which inherits the existential and directional meaning from the deictic verb 來 *lai* ‘come’ and the affirmative meaning from 著 *zhuo* ‘order’. The evaluative mood of 吧 *ba* in 8 can be interpreted as a solicitation of approval or agreement from the hearer that may settle certain debates or uncertainties (cf. “certain uncertainty of your going can be ceased”), which inherits the meaning of settling down from the verb 罷 *ba* ‘stop’. It is highly likely that these three particles in Mandarin, namely, 了 *le*, 來著 *laizhe*, and 吧 *ba*, all have a verbal origin, which can be traced back to verbs like 了 *liao* ‘finish’, 來 *lai* ‘come’, 著 *zhuo* ‘order’, and 罷 *ba* ‘stop’.

The counterparts of the Mandarin utterance particles that have a verbal origin can also be found in Cantonese, such as 喇 *laa* ([la³³]) (likely cognate with Mandarin *le*) and 嚟 *lei* ([lei²¹]) (cognate with Mandarin 來著 *laizhe*). For the Cantonese utterance particles that cannot be seen in Mandarin, some of them also have a verbal origin and may play a role in predication in Cantonese, such as 添 *tim* ([tim⁵³]), 𨳊 *gwaa* [k^wa³³]), and 喎 *wo*.

The utterance particle 添 *tim* ‘too’ has an emphatic function and was historically derived from the verb 添 *tim* meaning ‘to add’. In fact, 添 *tim* ‘add’ can still be used as a verb in modern Cantonese that means “to add”, as in 10. Example 9 with 添 *tim* could be paraphrased as “There is an event of raining and this event happens additionally/unexpectedly” (out of the expectation of the speaker).

- (9) 落雨添
 lok__jyu__tim!
 fall__rain__TIM
It is raining unexpectedly.
- (10) 佢添咗一碗飯
 keoi__tim-zo__jat__wun__faan.
 he__add-PERF__one-CL__rice
He ate one more bowl of rice.

The utterance particle 𨳊 *gwaa* expresses the speaker’s uncertainty and was historically derived from the verb 估 *gu* (or romanized as *gwu*) ‘guess’ (Chao 1947). In modern Cantonese, 估 *gu* ‘guess’ is still used as a verb, as in 12. Example 11 with 𨳊 *gwaa* could be paraphrased as “That it will rain tomorrow is what I guess”. This predicative utterance particle conveys some modality meaning.

- (11) 落雨𨳊
 lok__jyu__gwaa.
 fall__rain__GWAA
It is raining. I suppose.

(12) 我估聽日會落雨

ngo__gu__tingjat__wui__lok__jyu.

I__guess__tomorrow__will__fall__rain

I guess it will rain tomorrow.

喎 *wo* in 3 with the low rising tone is a hearsay evidential utterance particle (Tang 2015) and was historically derived from the verb 話 *waa* [wa²²] ‘say’ (Chao 1947, Leung 2006). In modern Cantonese, 話 *waa* ‘say’ can be used as a verb, as in 14. Example 13 with 喎 *wo* could be paraphrased as “It will rain tomorrow and this piece of information is told you”. This particular utterance particle that was derived from the verb of saying conveys the speech act being performed by the speaker.

(13) 落雨喎

lok__jyu__wo.

fall__rain__WO

It is heard that it is raining.

(14) 佢話聽日會落雨

keoi__waa__tingjat__wui__lok__jyu.

he__say__tomorrow__will__fall__rain

He said it will rain tomorrow.

3 Predicative core of polysyllabic utterance particles

In the literature, the focus of the study of utterance particles in Chinese is solely on the monosyllabic ones, such as those in 1 to 3 (Hu 胡明揚 1981, Li and Thompson 1981, Zhu 朱德熙 1982, Li 2006, among others in Mandarin, and Kwok 1984, Luke 1990, Law 1990, Fung 2000, among others in Cantonese). On the contrary, polysyllabic ones are almost neglected.

As a matter of fact, utterance particles in Chinese are not all monosyllabic. Some of them are apparently polysyllabic, for example, Mandarin 來著 *laizhe* in 7, which can be decomposed into 來 *lai* ‘come’ and 著 *zhe*. The verbal origin of 來 *lai* ‘come’ is not debatable as it is still being used as a verb in modern Chinese. For 著 *zhe*, it was used as a verb 著 *zhuo* meaning ‘to order’ and has been grammaticalized as an affirmative utterance particle that was added to 來 *lai* in the Qing Dynasty to reinforce the affirmative meaning of the clause (Sun 孫錫信 1999)^a.

Besides 來著 *laizhe* that has been discussed in the literature, other polysyllabic utterance particles seem to receive less attention. In terms of syllables, polysyllabic utterance particles in Mandarin can be classified into disyllabic ones, such as 也好 *yehao*, 也罷 *yeba*, 好了 *haole*, and 罷了 *bale*, and trisyllabic ones, such as 就是了 *jiushile*, as documented in Zhang et al. 張斌主編 (2010: 250)^b. In 15, 也好 *yehao* is formed by two morphemes, namely 也 *ye* ‘also’ and 好 *hao* ‘be good’, which is used to indicate that the speaker agrees with the suggestion denoted by the clause. In 16, 也罷 *yeba* is formed by two morphemes, namely 也 *ye* ‘also’ and 罷 *ba* ‘stop, finish’, which is used to express forbearance of the speaker. In 17, 好了 *haole* is formed by two morphemes, namely 好 *hao* ‘be good’ and a temporal particle 了 *le*, which is used to express agreement and judgment of the speaker. In 18, 罷了 *bale* is formed by two morphemes, namely 罷 *ba* ‘stop, finish’ and the temporal particle 了 *le*, which means “that’s all, nothing else”. In 19, 就是了 *jiushile* is the only trisyllabic utterance particle documented in

Zhang et al. 张斌主编 (2010), which is formed by three morphemes, namely the adverb 就 *jiu* ‘exactly, precisely’, 是 *shi* ‘be’, and the temporal particle 了 *le*. This trisyllabic utterance particle 就是了 *jiushile* is used to give force to the statement denoted by the clause and may mean “that’s all, that’s right, just”. In addition to Zhang et al. 张斌主编 (2010), these five words are also explicitly classified as “particles” (i.e. *zhuci* in Chinese) in the sixth edition of 现代汉语词典 *Dictionary of Modern Chinese*, an “authoritative” Chinese dictionary.

(15) 說說也好

shuo-shuo__yehao.

say-say__YEHAO

It is not a bad idea to talk.

(16) 你不想去也罷

ni__bu__xiang__qu__yeba.

you__not__want__go__YEBA

It is fine if you do not want to go.

(17) 你去好了

ni__qu__haole.

you__go__HAOLE

You had better go.

(18) 我只是說說罷了

wo__zhishi__shuo-shuo__bale.

I__only__say.say__BALE

I say it casually only.

(19) 你放心就是了

ni__fangxin__jiushile.

you__take.it.easy__JIUSHILE

Don't worry. Take it easy.

Among the polysyllabic utterance particles we have examined, 好 *hao* ‘be good’, 罷 *ba* ‘stop, finish’, and 是 *shi* ‘be’ are all verbal and can be used as “real” predicates. In 20, 好 *hao* ‘be good’ is used as a stative predicate, predicated of the subject 他 *ta* ‘he’. In modern Mandarin, 罷 *ba* ‘stop, finish’ is a bound morpheme and may form a compound by taking a noun, such as 罷工 *ba-gong* ‘strike’ (lit. stop-work) in 21, in which the noun 工 *gong* ‘work’ is regarded as the object of the verb 罷 *ba* ‘stop, finish’, forming a VO compound. The verb 是 *shi* ‘be’ is a copula in Mandarin, as in 22.

(20) 他很好

ta__hen__hao.

he__very__good

He is very good.

(21) 工人罷工

gongren__ba-gong.

worker__stop-work

Workers are striking.

- (22) 他是學生
 ta__shi__xuesheng.
 he__be__student
He is a student.

It is proposed that so-called polysyllabic utterance particles in Mandarin can be decomposed into more than one morpheme, one of which is regarded as the predicative core. For example, 好了 *haole* is formed by a predicative core 好 *hao* ‘good’ followed by another particle 了 *le* that also has a predicative origin while 就是了 *jiushile* can be decomposed into three morphemes “就 *jiu* + 是 *shi* + 了 *le*” with a predicative core 是 *shi* ‘be’ modified by 就 *jiu* ‘then’ and followed by another particle 了 *le*.

Although it is well-known in the literature that Cantonese is a language that has rich particles, much attention was paid to those monosyllabic utterance particles only. In Cheung 張洪年 (1972), two disyllabic utterance particles in Cantonese are identified, namely 罷啦 *baalaa* ([pa³⁵ la⁵⁵]) in 23 and 係啦 *hailaa* ([hɛi³⁵ la⁵⁵]) in 24, and are analyzed as “compound particles”. According to Cheung 張洪年 (1972), “compound particles” are formed by more than one morpheme as an inseparable unit (see also Wong 黃卓琳 2014). In 23, 罷啦 *baalaa* is formed by two morphemes 罷 *baa* ‘stop, finish’ and a temporal particle 啦 *laa*. Its morphology is somewhat similar to 罷了 *bale* in Mandarin. Unlike Mandarin 罷了 *bale*, Cantonese 罷啦 *baalaa* is mainly used to form an imperative (Tang 鄧思穎 2009), having a function of advocating or advising. Cantonese 係啦 *hailaa* in 24 seems to be the counterpart of Mandarin 就是了 *jiushile*, which is also used to give force to the statement denoted by the clause.

- (23) 你去罷啦
 nei__heoi__baalaa.
 you__go__BAALAA
You had better go.

- (24) 我去係啦
 ngo__heoi__hailaa.
 I__go__HAILAA
All right, I will go.

There are two more examples, namely 定啦 *dinglaa* and 得㗎 *dakgaa*, that can be analyzed as polysyllabic utterance particles in Cantonese (Wong 黃卓琳 2014)^c. In 25 定啦 *dinglaa* ([tɪŋ³⁵ la⁵⁵]) denotes an epistemic meaning, which can be decomposed into a predicative core *ding* ‘stable’ and the temporal particle 啦 *laa*. In 26 得㗎 *dakgaa* ([tɛk⁵⁵ ka³⁵]) contributes some conditional meaning and can be decomposed into a predicative core 得 *dak* ‘possible, able’ and an another utterance particle 㗎 *gaa* that is likely to be formed by merging 嘅 *ge* ([kɛ³³]) and 啊 *aa* ([a³⁵]). A characteristic that these two polysyllabic utterance particles share is the existence of a predicative core.

- (25) 佢會去定啦
 keoi__wui__heoi__dinglaa.
 he__will__go__DINGLAA
It is likely that he will go.

(26) 佢肯去得㗎

keoi__hang__heoi__dakgaa.

he__willing__go__DAKGAA

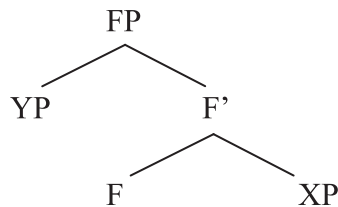
Something would be possible only if he is willing to go.

Interestingly, a predicative element can be found in all these polysyllabic utterance particles in Mandarin and Cantonese. Considering the facts in Mandarin and Cantonese, we may conclude that the polysyllabic utterance particles in Chinese are all formed by a predicative core, which may be either preceded by an adverbial element or followed by another utterance particle that may also have a predicative origin. The predicative core in the examples of polysyllabic utterance particles include 好 *hao* ‘be good’ in Mandarin, 罷 *ba* ‘stop, finish’ in Mandarin and its counterpart 罷 *baa* ‘stop, finish’ in Cantonese, 是 *shi* ‘be’ and its counterpart 係 *hai* ‘be’ in Cantonese, 定 *ding* ‘stable’ in Cantonese, and 得 *dak* ‘possible, able’ in Cantonese.

4 Syntax of predicative utterance particles

The utterance particles that were historically derived from verbs or predicative elements are still predicative in modern Chinese in some sense, serving as “grammaticalized predicates”. This “grammaticalized predicate” and its preceding clause may form a “serial verb” construction in a broad sense (cf. Li and Thompson 1981), having a syntactic structure like 27.

(27)



In 27, F is regarded as a conjunction that takes two conjuncts, XP and YP. XP, the internal conjunct, is a position reserved for the utterance particles while YP, the external conjunct, is a position for the main clause that precedes the utterance particles. If the utterance particle is predicative, XP could be regarded as a secondary predicate and F functions as a coordinating conjunction that links the main clause and the secondary predicate, somewhat like *and* in English^d. In terms of their function, some secondary predicates are predicated of the main clause in YP^e, which may express judgments and evaluative meanings, and some secondary predicates indicate the temporal sequence of events, the resultant state of the event of the main clause, or the speech act being performed by the speaker, from which the aspectual, temporal, and modality meanings and other pragmatic functions are derived.

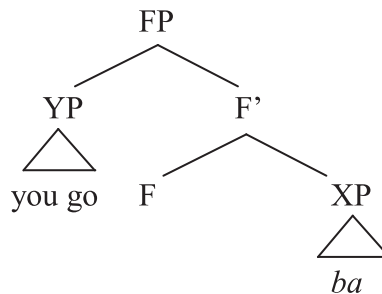
Predicative utterance particles should be different from the canonical lexical predicates although both of them seem to be predicates. The predicative element, i.e. the root of the predicative utterance particles, is more “bleached”, losing some lexical meanings. For example, the evaluative meaning of 吧 *ba* could have inherited the meaning of settle down from the verb 罷 *ba* ‘stop’. The lexical meaning of 罷 *ba* ‘stop’ has been “bleached” and it only expresses the judgment of the speaker. Some of the

predicative utterance particles seem to be still quite lexical, for instance, 好 *hao* (originally derived from 好 *hao* ‘good’) in 好了 *haole*, which could be analyzed as a “defective” predicate, still straddling the line between lexical and functional.

In 8, repeated in 28, the utterance particle 吧 *ba* is regarded as a secondary predicate in the complement of F, i.e. in the XP position, and the main clause is the specifier of FP, i.e. in the YP position, as indicated in 29, which could mean something like “You should go and this is what I suggest to settle certain uncertainty”. The function of 吧 *ba* in XP is associated with the evaluative meaning expressed by the second conjunct “this is what I suggest to settle certain uncertainty”. Other irrelevant details are omitted.

- (28) 你去吧
 ni__qu__ba!
 you__go__BA
It is suggested that you go.

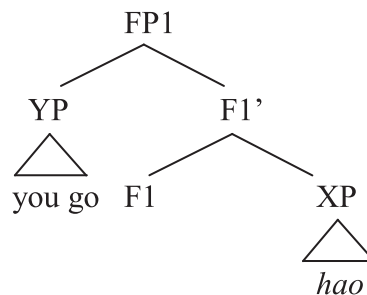
(29)



Polysyllabic utterance particles, however, can be decomposed. For instance, the Mandarin disyllabic utterance particle 好了 *haole* in 17, repeated in 30, is decomposed into two morphemes, namely 好 *hao* ‘good’ and 了 *le*. For the derivation, F1 is first merged with 好 *hao* ‘good’ and second merged with the main clause 你去 *ni qu* ‘you go’, forming the structure in 31. This is the first step.

- (30) 你去好了
 ni__qu__haole.
 you__go__HAOLE
You had better go.

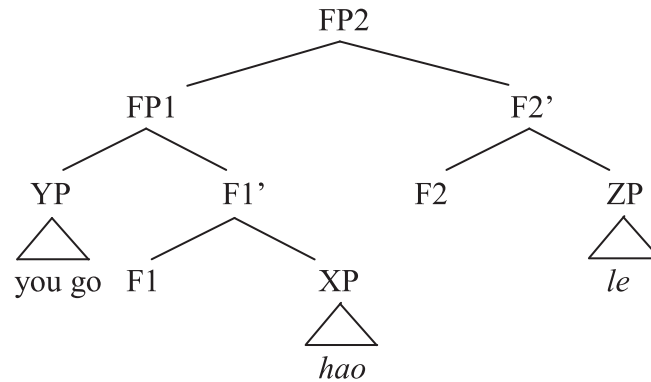
(31)



For the second step, a different functional category F2 is chosen and first merged with 了 *le* and second merged with FP1, as in 32, deriving the word order “clause + 好

hao + 了 *le*". FP1 "clause + 好 *hao*" is embedded in FP2. The same analysis can apply to the disyllabic utterance particle 罷啦 *baalaa* in Cantonese.

(32)



The Mandarin disyllabic utterance particle 好了 *haole* can be followed by another utterance particle, such as 吧 *ba* in 33^f. To derive the word order "clause + 好 *hao* + 了 *le* + 吧 *ba*" in 33, I assume that an additional functional category F3 is introduced and merged with 吧 *ba* and FP2 accordingly, as in 34. In this configuration, FP2 is further embedded. According to the analysis presented here, 33 could roughly mean something like "you should go and this option is the best and this message has been conveyed and this is what I suggest to the hearer to settle certain uncertainty".

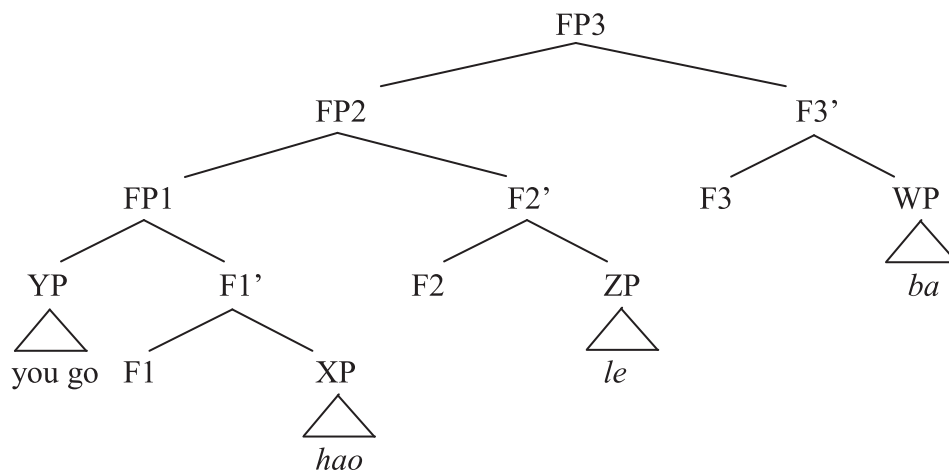
(33) 你去好了吧

ni__qu__haole__ba.

you__go__HAOLE__BA

Perhaps you should go.

(34)

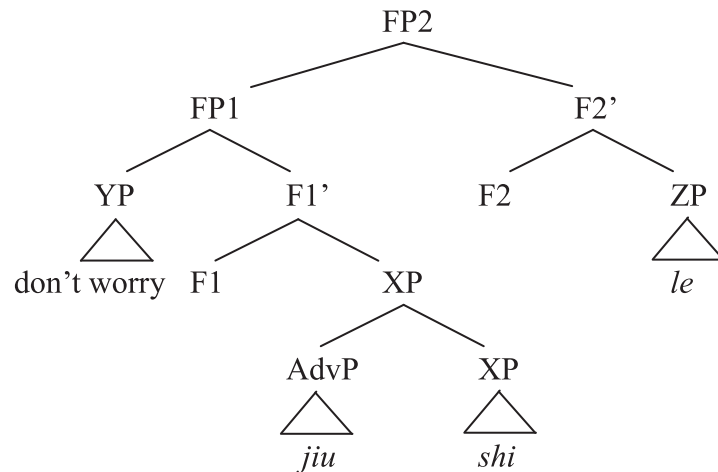


For the syntax of the Mandarin trisyllabic utterance particle 就是了 *jiushile* in 19, as repeated in 35, I assume that it should be decomposed into a predicative core 是 *shi* 'be' followed by another predicative utterance particle 了 *le* and preceded by an adverbial 就 *jiu* 'then'. The adverbial 就 *jiu* 'then' is adjoined to the verb 是 *shi* 'be'. F1 is then merged with

XP headed by 是 *shi* ‘be’. After the derivation of FP1 is completed, F2 is introduced and merged with 了 *le*, deriving the word order “clause + 就 *jiu* + 是 *shi* + 了 *le*” on the surface⁶.

- (35) 你放心就是了
 ni__fangxin__jiushile.
 you__take.it.easy__JIUSHILE
Don't worry. Take it easy.

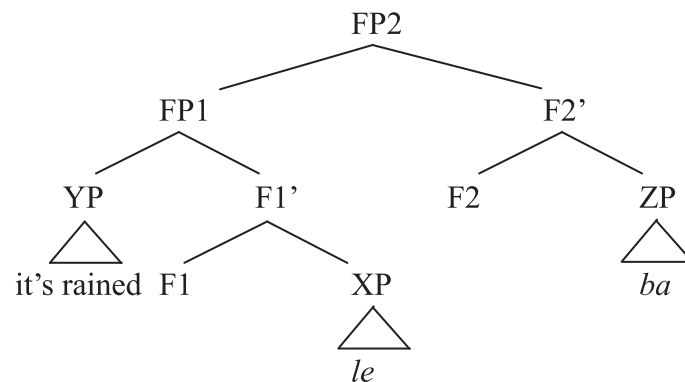
(36)



Along the lines of the discussion in this paper, the syntax of polysyllabic utterance particles is treated on a par with that of the “particle cluster”, i.e. stacking of utterance particles in a specific order, such as “了 *le* + 吧 *ba*” in 37. As shown in the configuration in 38, the clause with 了 *le* is embedded in FP2, deriving the word order “了 *le* + 吧 *ba*” on the surface. The utterance particles 了 *le* and 吧 *ba* are complements of F1 and F2, respectively, reminiscent of the status of 好 *hao* and 了 *le* in the disyllabic utterance particle 好了 *hao le* in 32.

- (37) 下雨了吧
 xia__yu__le__ba.
 fall__rain__LE__BA
Perhaps it has rained.

(38)



The above considerations lead to the conclusion that the polysyllabic utterance particles are in fact a subgroup of the particle cluster and should be treated as “compounds

in disguise”^h. In other words, describing these utterance particles as “polysyllabic” would be quite misleading.

5 Syntax of non-predicative utterance particles

Examples 39, 40, and 41 are yes-no questions, also known as “VP-Neg questions”ⁱ. 39 is from Mandarin. The negation 沒有 *meiyou* ‘not’ negates the completion of an event (Li and Thompson 1981). 不 *bu* ‘not’ provides a neutral negation (Li and Thompson 1981) and may form a VP-Neg question, such as 40, in some northern dialects. 41 is a Cantonese example. The negation 未 *mei* ([*mei*²²]) ‘not yet’ may also form a VP-Neg question^j.

(39) 他看了書沒有?

ta__kan-le__shu__meiyou?
he__read-PERF__book__not
Did he read?

(40) 他現在身體好不?

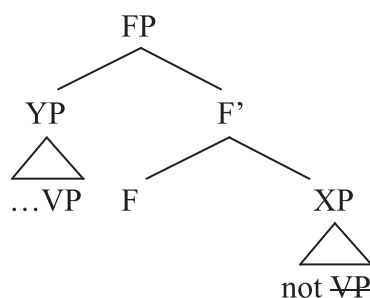
ta__xianzai__shenti__hao__bu?
he__now__body__good__not
Is his health fine?

(41) 佢睇咗書未?

keoi__tai-zo__syu__mei?
he__read-PERF__book__not
Has he read yet?

The syntactic schema in 27 also applies to yes-no questions, for example, 42. The functional category F connects two conjuncts, i.e. the main clause in the external conjunct YP and the negation with the identical VP in the internal conjunct XP. Deletion takes place and the identical VP in the internal conjunct is elided, leaving the negation on the surface.

(42)



In Mandarin, the utterance particle 嗎 *ma* in 1, as repeated in 43, functions as an interrogative marker that forms a yes-no question.

(43) 他看書嗎?

ta__kan__shu__ma?
he__read__book__MA
Did he read?

Note that although both 嗎 *ma* in 43 and 沒有 *meiyou* ‘not’ in 39 can form yes-no questions and look quite similar on the surface, they behave differently. Firstly, the adverb 到底 *daodi* ‘really’ expresses the speaker’s impatience or irritation in not getting the answer to a question (Law 2008), which can go with 沒有 *meiyou* in 44, but not 嗎 *ma* ‘not’ in 45^k.

(44) 到底他來了沒有?

daodi__ta__lai-le__meiyou?
really__he__come-PERF__not
Did he really come?

(45) *到底他來了嗎?

daodi__ta__lai-le__ma?
really__he__come-PERF__MA

Secondly, the discrepancy between 46 and 47 shows that *ma* is compatible with a negative clause while *meiyou* ‘not’ is not (Shi 石定栩 2007)^l.

(46) 他沒去北京嗎?

ta__mei__qu__Beijing__ma?
he__not__go__Beijing__MA
Isn't it that he did not go to Beijing?

(47) *他沒去北京沒有?

ta__mei__qu__Beijing__meiyou?
he__not__go__Beijing__not

Although 嗎 *ma* was from a negation historically (Ota 太田辰夫 1987) and may have a similar syntactic structure as what the interrogatives with 沒有 *meiyou* ‘not’ have, it is assumed that VP-ellipsis was a historical process that took place diachronically in interrogatives with 嗎 *ma*. In modern Chinese, 嗎 *ma* has been fully grammaticalized to be an utterance particle that purely and simply conveys the speech act being performed by the speaker. The complement of F in interrogatives with 嗎 *ma* contains nothing but the grammaticalized particle 嗎 *ma* underlyingly, as in 48. In other words, the so-called elided VP does not exist in the numeration in the first place. Historically 嗎 *ma* was derived from a verbal negation 無 *wu* ‘not’ (Ota 太田辰夫 1987) and its verbal properties may still be preserved in modern Chinese, functioning as a secondary predicate in the internal conjunct in 48.

(48) [[Subject VP] F [*ma*]]

On the contrary, VP-ellipsis in VP-Neg questions is a synchronic process, which perhaps takes place in the phonological component, i.e. PF, and the elided VP is in the derivation from the numeration all the way to the semantic component, i.e. LF, in synchronic syntax. What F conjoins is the positive clause in the external conjunct and the negative clause in the internal conjunct. 49 is the underlying structure for VP-Neg questions. According to 49, the underlying structure for 39 would be 50. F connects the positive clause and the negative clause, which would mean something like “Did he read or not read?”.

- (49) [[Subject VP] F [not ~~VP~~]]
 (50) [他看了書] F [沒有看書]
 [ta__kan-le__shu] F [meiyou__kan__shu]
 he__read-PERF__book__F__not__read__book
 Did he read?

Such VP-Neg questions are regarded as disjunctive questions and F is interpreted as a disjunctive conjunction, just like *or* in English^m. After deletion applies, the identical VP in the internal conjunct is elided and the negation remains, deriving the word order of yes-no questions “clause + negation”. VP-Neg questions have two logically possible answers, one positive and one negative, which can be denoted unambiguously by syntax. With the adverb 到底 *daodi* ‘really’, the speaker of 44 impatiently is asking for a yes or no answer to the question by choosing either the positive answer or the negative answer offered by the configuration in 49. On the other hand, 45 is incompatible with the adverb 到底 *daodi* ‘really’ because no such choices, i.e. positive or negative answers, can be offered by the configuration in 48.

In VP-Neg questions, if the external conjunct is a negative clause, the negative clause would be repeated and negated in the second conjunct, as in 51. As the negative clause cannot be negated again, the ungrammaticality of 47 is expected, exhibiting the phenomenon of reversed polarity from the preceding clause.

- (51) *[他沒去北京] F [沒有沒去北京]
 [ta__mei__qu__Beijing] F [meiyou__mei__qu__Beijing]
 he__not__go__Beijing__F__not__not__go__Beijing

The acceptability of 46, however, suggests that yes-no questions with the utterance particle 嗎 *ma* should have a different syntactic structure, as in 52. The negative clause is not copied and will be not negated. The utterance particle 嗎 *ma* is then reinterpreted as a secondary predicate to express the speech act in modern Chinese.

- (52) [ta__mei__qu__Beijing] F [ma]
 he__not__go__Beijing__F__MA
 Isn't it that he did not go to Beijing?

The syntactic schema may be extended to sentences with the focus utterance particle 呢 *ne* in Mandarin, as in 53. For the historical source of 呢 *ne*, it could be from 嚮 *ni* ‘that’ in pre-modern Chinese (Ota 太田辰夫 1987), preserving a demonstrative function, or from 裏/里 *li* ‘place’ (Ota 太田辰夫 1987), conveying a locative meaning. Although the origin is still debatable, a similarity that both 嚮 *ni* ‘that’ and 裏/里 *li* ‘place’ share is anaphoricity, which 呢 *ne* in modern Chinese inherits. The anaphoric function of 呢 *ne* in 53 is still preserved, which is used to call the hearer’s attention to the information denoted by the clause 他很高 *ta hen gao* ‘he is very tall’.

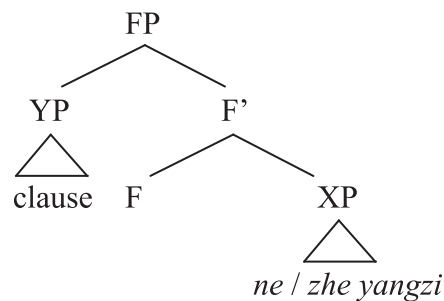
- (53) 他很高呢
 ta__hen__gao__ne!
 he__very__tall__NE
 Listen, he is very tall.

The anaphoric function of 呢 *ne* is quite similar to 這樣子 *zheyangzi* ‘this appearance’ in the sentence-final position in 54, a popular colloquial expression frequently used by the young generation, particularly in colloquial Mandarin spoken in Taiwan. This expression could be paraphrased as “or something like that” in English. In some occasion 這樣子 *zheyangzi* ‘this appearance’ could be shortened as 醬子 *jiangzi* (literally meaning ‘sauce, paste’) in the spoken language and on the internet.

- (54) 我大概六分鐘就睡著了這樣子/醬子
 wo __dagai__liu__fenzhong__jiu__shuizhao__le__zheyangzi/jiangzi.
 I__probably__six__minute__then__sleep__LE__this.appearance
Probably I will fall asleep in six minutes (or something like that).

The anaphoric expressions, such as 呢 *ne* and 這樣子 *zheyangzi*, are kind of repetition of the main clause that precedes them and they are used to reinforce the meaning denoted by the main clause. I assume that the main clause and such anaphoric expressions are conjoined by *F*, as in 55, and are in *YP* and in *XP*, respectively.

(55)



The syntax of both predicative and non-predicative utterance particles in Chinese can be captured by the same syntactic schema in 27 with the functional category *F* as the head. *F* could be interpreted either as a coordinating conjunction or as a disjunctive conjunction. The utterance particles are in the internal conjunct, i.e. the complement of *F*. Under this hypothesis, utterance particles are not heads that select the main clause. Instead, the highest project is *FP*, a conjunction structure, and it is the head *F* that conjoins the main clause and the utterance particle. Neither the main clause nor the phrase headed by the utterance particle would be the root. It is the conjunction structure *FP* that should be regarded as the root. Along these lines, all sentences would be dominated by a conjunction structure headed by a conjunction *F* and ended with an internal conjunct, a position reserved for expressing aspectuality, modality, and speech act.

6 A generalized schema: consequences

The proposed conjunction configuration in 27 for both predicative utterance particles and non-predicative utterance particles in Chinese may have some interesting consequences.

The generalized schema *FP* in 27 can be stacked (or embedded) recursively in syntax. The configuration proposed in 34 is a good example, in which *FP* is projected three times with different purposes and functions. The (relative) hierarchical order of different *FP*s is likely to be constrained by semantics, particularly in the syntax-semantics interface, in the sense of the cartographic approach (Cinque 1999, among others). The

FPs associated with speech act should be the highest while those associated with aspectual properties would be the lowest.

Let us examine the following examples in Cantonese. The utterance particles 喇 *laa* ([la³³]) denotes aspectuality and 咩 *me* ([mɛ⁵⁵]) denotes interrogative. 56 shows that the word order should be “喇 *laa* + 咩 *me*”, not “*咩 *me* + 喇 *laa*”, which implies that the aspectual FP that contains 喇 *laa* should be lower than the interrogative FP that contains *me*.

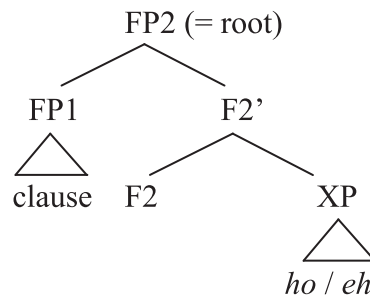
- (56) 佢走咗喇咩/*咩喇
 keoi__zau-zo__laa__me/_*me__laa?
 he__leave-PERF__LAA__ME__ME__LAA
He has left, hasn't he?

Among the utterance particles in the speech act domain, for instance, Cantonese 咩 *me* and 喎 *ho* ([hɔ³⁵]) in 57, 咩 *me* encodes the epistemic state of the speaker while *ho* (also known as an interjection) discusses that of the addressee (Lam 2014). 57 shows that the word order should be “咩 *me* + 喎 *ho*”, which suggests that the FP with the addressee orientation should be syntactically higher than the FP with the speaker orientation.

- (57) 大聲就得㗎喇咩喎/*喎咩?
 daai__seng__zau__dak__gaa__laa__me__ho/_*ho__me?
 big__voice__then__okay__GAA__LAA__ME__HO__HO__ME
What, can one get by just by being loud? I assume you'd agree it's a valid question, right? (Lam 2014: 64)

The status of 喎 *ho* in Cantonese is somewhat like the interjection *eh* in English (mainly spoken in North America), as in 58. The addressee-oriented particles or interjections are the internal conjunct of the highest FP, i.e. FP2 in 59, while other utterance particles or speech act oriented expressions are embedded in the external conjunct, i.e. FP1. Hence, the main clause and the utterance particles (or interjections) are in a conjunction relation forming FP, which is projected in the highest syntactic position, i.e. the root, of the sentence.

- (58) What's he talking about, eh?
 (59)



In addition to utterance particles, the complement of F can also be reserved for other kinds of elements to express some pragmatic meanings, which can be

labeled as “sentence-final expressions” or more specifically, “utterance tags” (Yap et al. 2014).

Recall that the focus utterance particle 呢 *ne* in Mandarin is analyzed as an anaphoric expression that is used to reinforce the meaning denoted by the main clause. Interestingly, tags in English tag statements, such as 60 and 61 (Crystal 2008), are reminiscent of the reinforcing function of 呢 *ne* in Mandarin. For example, *that was* and *is John* are tags that partially duplicate the main clause to reinforce the meaning denoted by the main clause. Although *these phoneticians* in 62 is not analyzed as a tag, Crystal (2008) points out that there should be some connection between 62 and tag statements. Utterance particles and other sentence-final expressions like tags in 60 and 61 and the expression in 62 should be treated on a par syntactically although tags and tag-like sentence-final expressions, but not utterance particles, are prosodically separated from the rest of the clause. The presence of an intonational break distinguishes tags and tag-like sentence-final expressions from utterance particles (cf. Sailor 2012).

(60) That was a lovely drink, that was.

(61) He’s a nice man, is John.

(62) They’re all the same, these phoneticians!

The proposed configuration in 55 should be able to apply to the expressions like tags in English, in which the tags are in the complement position of the conjunction F. For example, 63 would be the underlying structure for 60, in which the clause is repeated in the second conjunct and F is interpreted as a coordinating conjunction, somewhat like *and*. To avoid repetition, *a lovely drink* is elided, leaving the subject *that* and the copula *was*.

(63) [that was a lovely drink] F [that was ~~a lovely drink~~]

In spoken Cantonese, some part of the clause could be repeated and put in the final position following the utterance particles, forming apparent tag statementsⁿ. In 64, the subject 我 *ngo* ‘I’ and the nominal adverbial 聽日 *tingjat* ‘tomorrow’ are repeated and put after the utterance particle 啊 *aa*. In 65, the subject 佢 *keoi* ‘he’ and the adverb 都 *dou* ‘also’ are repeated and put after the utterance particle 喎 *wo*. The repetition of these expressions seems to reinforce the information denoted by the main clause, somewhat similar to the function of tags in English. If the proposed configuration in 55 applies to 64 and 65, the repeated expressions would be analyzed as the internal conjunct of F while the main clause with the utterance particles 啊 *aa* and 喎 *wo* would be embedded in the external conjunct. The repeated predicate is elided, leaving the subject, for instance, 我 *ngo* ‘I’ in 64 and 佢 *keoi* ‘he’ in 65, and the adverbials, for instance, 聽日 *tingjat* ‘tomorrow’ in 64 and 都 *dou* ‘also’ in 65 on the surface, as represented in 66.

(64) 我聽日交文啊, 我聽日

ngo_tingjat_gaau_man_aa, __ngo_tingjat.

I_tomorrow_submit_paper_AA_I_tomorrow

I will submit a paper tomorrow indeed.

- (65) 佢都幾好喎, 佢都
 keoi__dou__gei__hou__wo, __keoi__dou.
 he__also__quite__good__WO__he__also
He is quite nice indeed.

(66) [Subject Adverb VP] F [Subject Adverb ~~VP~~]

The proposed generalized syntactic schema can also be extended to tags in tag questions. *Isn't he* in 67 is a tag in English, which should be derived from a similar structure of VP-Neg questions in Chinese by negating the repeated positive clause followed by VP-ellipsis in the second conjunct, as in 68^o. F is interpreted as a disjunctive conjunction.

- (67) He is coming, isn't he?
 (68) [he is coming] F [isn't he ~~coming~~]

The internal conjunct is not necessarily a negative clause, for instance, 69. The internal conjunct is a positive clause when the external conjunct is a negative one. What the configuration in 70 offers is the positive and negative answers to be chosen by the hearer.

- (69) He is not coming, is he?
 (70) [he is not coming] F [is he ~~coming~~]

There is another type of yes-no questions in English, for example, 71, in which *or not* is following the interrogative clause^p. The same syntactic schema can cover 71, in which the functional category F is overtly realized as the distinctive conjunction *or*. What *or* conjoins is a positive interrogative in the external conjunct and the repeated predicate negated by *not*, as in 72. The repeated predicate is deleted by VP-ellipsis on the surface, somewhat like the VP-Neg questions in Chinese in 49. The analysis of 71 shows that the functional category F can be overt (as realized as *or*), not necessarily empty^q.

- (71) Is he going or not?
 (72) [is he going] or [not ~~going~~]

Among various constructions in Chinese and English we have examined so far, the internal conjunct contains some empty elements. Some of them may be derived by deletion, for instance, VP-ellipsis, and some may be base-generated silent elements, in the sense of Kayne (2015). Although the functional category F plays a crucial role in conjunction, the relation between the two conjuncts can also be brought together by co-reference between the empty elements in the internal conjunct and their antecedent in the external conjunct in some cases.

73 is spoken in colloquial English and has an interpretation close to that of a tag question. Kayne (2015) assumes that 73 is related to 74. A difference between these two sentences is that 73 contains silent ISN'T THAT, as represented in 75, while ISN'T THAT are audible in 74^f. 75 could be rephrased in 76 under the generalized schema

proposed in this paper, in which F is a coordinating conjunction that conjoins the external conjunct *we're on the list* and the internal conjunct *ISN'T THAT right*. The antecedent of the silent pronominal THAT in the internal conjunct is the clause in the external conjunct. Considering subject-auxiliary inversion in the tags in 68 and 70, the internal conjunct should have a full-fledge clausal structure like CP (or a structure larger than CP, such as FP. See footnote 18). Apparently truncated expressions such as those in 72 and 73 should also have a full-fledge clausal structure that contains a syntactic position for the negation in 72 and the silent subject in 76, for example, a function project like TP, and a position for the raised silent auxiliary in 76, for example, CP.

- (73) We're on the list, right?
 (74) We're on the list, isn't that right?
 (75) we're on the list ISN'T THAT right
 (76) [we're on the list] F [ISN'T THAT right]

A similar analysis can be extended to sentence-final 對 *dui* 'right' in Mandarin, as in 77, somewhat like tag questions in English. Mandarin 對 *dui* 'right' is a verb. It can form a yes-no question in the form of 'A-not-A' or followed by the interrogative particle 嗎 *ma* in 77^s. 78 is the simplified syntactic representation of 77, in which F is a coordinating conjunction that conjoins the main clause in the external conjunct and the 'tag' in the internal conjunct. The verb 對 *dui* 'right' in the internal conjunct is predicated of a silent subject, which could be either an empty pronominal *pro* (Zhang and Tang 张和友, 邓思颖 2011), given that Chinese is a *pro*-drop language, or silent THAT, in the sense of Kayne (2015).

- (77) 我們都被邀請, 對不對/對嗎?
 women__dou__bei__yaoqing, __dui-bu-dui/__dui ma?
 we__all__BEI__invite__right-not-right__right__MA
We are all invited, right?
 (78) [we are all invited] F [THAT right]

Given that 79 could be paraphrased as 80, Kayne (2015) assumes that 79 is in fact derived by 81 with silent TELL, silent ME, and the adverb *again* associated with silent TELL. The syntax of 81 can also be captured by the generalized syntactic schema, as represented in 82. The functional category F is a coordinating conjunction that conjoins two conjuncts. TELL ME are silent elements that are base-generated in the internal conjunct and TELL takes a clausal object CP which is the repeated question referring to the external conjunct. After the repeated object CP is elided, the adverb *again* remains.

- (79) Where do they live, again?
 (80) ?Where do they live, tell me again?
 (81) where do they live TELL ME again
 (82) [where do they live] F [TELL ME ~~CP~~ again]

It seems that the interpretation of 79 is rather similar to the echo questions marked with 話 *waa* in Cantonese (Tang 1998), as in 83. The interrogative particle 話 *waa* has

the high rising tone ([wa³⁵]), which was originally derived from the verb of saying 話 *waa* with the low level tone ([wa²²])(cf. 14). Following Kayne (2015) analysis of *again*, I assume that 83 can be analyzed as 84. In the internal conjunct, AGAIN and ME are silent and the clausal object CP of the verb of saying is elided, leaving the verb of saying alone to denote the speech act of the speaker^t. The verb of saying in the internal conjunct is then realized as 話 *waa* with the high rising tone.

- (83) 佢哋住喺邊度話?
 keoidei__zyu__hai__bindou__waa?
 they__live__in__where__WAA
Where do they live, again?
- (84) [where do they live] F [AGAIN tell ME ~~CP~~]

In Cantonese silent TELL ME could be modified by the adverb 先 *sin* ‘first’. In 85 the adverb 先 *sin* ‘first’ is used to reinforce the interrogative meaning of the question, which may express some reservation (Tang 邓思颖 2006). I assume that 85 may have a syntactic representation in 86, in which F is a coordinating conjunction that conjoins the interrogative in the external conjunct and the expression associated with the speech act in the internal conjunct. In the internal conjunct, the adverb *sin* ‘first’ is an overt element that modifies the predicate headed by silent TELL with two empty objects, namely silent ME and the elided clausal object CP, giving rise to the meaning of “Tell me who is the prettiest first”. After VP-ellipsis takes place, *sin* ‘first’ will be left alone on the surface, on a par with *again* in 79^u.

- (85) 邊個最靚先?
 bingo__zeoi__leng__sin?
 who__most__pretty__SIN
(Frankly tell me) who is the prettiest?
- (86) [who is the prettiest] F [first TELL ME ~~CP~~]

Recent studies have shown that utterance particles and some specific intonation are in complementary distribution (Wakefield 2011, Zhang 2014). If there is indeed such a correlation between the existence of utterance particles and intonation, it is speculated that intonation could have the same syntactic status as utterance particles, which could also be in the complement of F underlyingly, i.e. in the internal conjunct XP in 87. In terms of semantics and function, utterance particles and intonation are the same, while in terms of phonetics, they are different. The former is segmental and the latter supra-segmental. The speculation in 87 awaits supporting evidence particularly from large scale typological studies along these lines, cf. Cheng (1991) clausal typing hypothesis and Feng’s 冯胜利 (2015) diachronic study of Chinese particles, which I leave open in this paper.

- (87) [_{YP} main clause] F [_{XP} intonation]

Our discussion of the generalized syntactic schema of utterance particles in Chinese and its consequences in sentence-final expressions in English, such as tags, may

support Kayne (2015) conjecture that sentence-final particles are not heads, which can be rephrased as in 88^v.

(88) Sentence-final expressions are not heads.

If the conjecture in 88 is proved to be correct, sentence-final expressions, including utterance particles, tags, and intonation, are all phrases in the complement of the conjunction F, i.e. in the internal conjunct. The root clause in all languages is then interpreted as a conjunction structure. In other words, all sentences should be dominated by a conjunction structure cross-linguistically, which would be regarded as the ultimate highest phase in syntax. The conjunction analysis of the root clause may bring us to a new horizon of viewing and understanding the deep nature of human language. Needless to say, more research along these lines will be fruitful in further exploring the syntactic structure of utterance particles in other Chinese dialects as well as in other languages that have utterance particles and other sentence-final expressions. It is hoped that the generalized schema hypothesized in this paper could shed light on the study of the syntax of the periphery and comparative grammar.

7 Concluding remarks

A novel analysis has been proposed for the utterance particles in Chinese. It has been argued that there are two types of utterance particles in terms of their diachronic origin, namely predicative and non-predicative, both of which can be derived by a generalized syntactic schema. The main clause and the utterance particles are conjoined by the functional category F, forming a conjunction structure. It has also been argued that polysyllabic utterance particles in disguise are in fact a subgroup of “particle cluster”. Both polysyllabic utterance particles in disguise and the particle cluster are derived by the same schema that is stacked (or embedded) recursively. It has also been shown that the generalized syntactic schema can be applied to other sentence-final expressions in Chinese and English, leading to a conjecture that sentence-final expressions are not heads.

Endnotes

^aThere is a possibility that cannot be denied that 來 *lai* and 著 *zhe* in 來著 *laizhe* may be reanalyzed as a compound in modern Mandarin due to some morphological reason although they should be decomposed into two independent predicative utterance particles historically.

^bZhang et al. 张斌主编 (2010: 250) also document these polysyllabic utterance particles: 似的 *side*, 的话 *dehua*, 着呢 *zhene*, 而已 *eryi*, and 罢了 *bianle*. 似的 *side* ‘like’ is usually preceded by the verb 像 *xiang* ‘resemble’ forming the “像...似的 *xiang ... side*” sequence, which is not a real utterance particle. 的话 *dehua* ‘if’ is a marker of conditional subordinate clauses and should be different from utterance particles. 着呢 *zhene* is always attached to adjectival predicates and could be analyzed as an adjectival suffix, not an utterance particle. 而已 *eryi* could also be from a predicative element historically, which calls for future research on its diachronic syntax. Among all these elements, 罢了 *bianle* may be qualified to be polysyllabic utterance particles, falling within the scope of my analysis although it is rarely used in contemporary spoken Mandarin.

^cThese two examples are not discussed in Cheung 張洪年 (1972).

^dIf the internal conjunct XP in 27 is a predicative, F could also be regarded as a “relator” that mediates the relationship between XP and its subject YP, in the sense of den Dikken (2006).

^eThe secondary predicate may be predicated of an empty subject in the second conjunct, along the lines in Huang (1992), and the empty subject refers to the main clause in the first conjunct. The empty subject could be an empty pronominal in the sense of Huang (1992) or a silent expression in the sense of Kayne (2015). See the discussion in section 6 of this paper.

^fExample 33 is due to a reviewer of this paper.

^gCantonese 就係啦 *zau hailaa* seems to be the counterpart of the trisyllabic utterance particle 就是了 *jiushile* in Mandarin. However, there are two differences between Cantonese and Mandarin. First, Mandarin allows 就是 *jiushi* without 了 *le* while Cantonese does not (*就係 *zauhai*). Second, Cantonese allows 係啦 *hailaa* without the adverbial 就 *zau* ‘exactly’ while Mandarin does not (*是了 *shile*).

^hSee Wong 黃卓琳 (2014) for more evidence and further elaboration along these lines.

ⁱSee also Cheng et al. (1996) for an alternative syntactic analysis of VP-Neg questions in Chinese.

^jThe Cantonese counterpart of Mandarin 沒有 *meiyou* ‘not’ is 冇 *mou* ‘not’. In modern Cantonese, 冇 *mou* ‘not’ cannot form a VP-Neg question though it was acceptable in old Cantonese (Yue 2004). The Mandarin counterpart of Cantonese 未 *mei* ‘not yet’ is 還沒有 *hai meiyou* ‘not yet’. See Law (2014) for the derivation of Cantonese 冇 *mou* ‘not’.

^kLaw (2008) observes that 到底 *daodi* ‘really’ is incompatible with 嗎 *ma*, but he does not discuss 沒有 *meiyou* ‘not’.

^lIn Shanghainese the interrogative utterance particle (口伐) *va* is incompatible with negative clauses, on a par with VP-Neg questions with 沒有 *meiyou* in Mandarin (Shi 石定栩 2007).

^mI am grateful to Jo-wang Lin (personal communication) for drawing my attention to the disjunctive nature of F in 50.

ⁿThere seem to be some similarities between apparent tag statements like 64 and 65 and the “dislocation focus construction” like (i) though Cheung’s (2008) movement analysis of dislocation deviates from the deletion analysis of tags proposed in this paper. I am grateful to Kwun-kin Chan (personal communication) for his input of Cantonese examples like 64 and 65.

- (i) 買一部手機啊, 佢會淨係
 maai__jat-bou__saugei__aa,__keoi__wui__zinghai
 buy__one-CL__cellphone__AA__he__will__only
 He will only buy a cellphone. (Cheung 2008:19)

^oSee, for example, Sailor (2012) for the discussion of distributional and behavioral similarities of tags VP-ellipsis in English.

^pAs pointed out by John Wakefield (personal communication), the fronted auxiliary in 70 may be deleted: *He going or not?*

^qThe existence of *or* in 70 suggests that the head of FP can be overtly realized, contra Kayne (2015) conjecture that the high sentential heads are all silent in all languages.

^rCapitals are used to indicate non-pronunciation in Kayne (2015).

^sThere should be an embedded FP in the internal conjunct in which the embedded F conjoins 對 *dui* ‘right’ and the utterance particle 嗎 *ma*. Irrelevant details are omitted.

^tThe word order of AGAIN in 83 differs from *again* in 81, given that adverbials (and adjuncts in general) should precede the predicate in Chinese.

^uThe analysis presented here is also reminiscent of Liu 劉丹青 (2013) who proposes that it is the speech act verb that 先 *sin* ‘first’ in 84 modifies.

^vKayne (2015) examines *right* and *again* in English, 講 *kong* ‘tell’ in Taiwanese, and *tu* in French and his original statement is “All pronounced elements that could have been taken to be sentence-final particles in one language or another actually share the non-sentence-final-particle status that *right*, *again*, *kong* and *tu* share”. Some version of 87 had been proposed independently in an early stage of my work before I came across Kayne (2015).

Competing interests

The authors declare that they have no competing interests.

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