A NEW SYNTACTIC ANALYSIS OF MANDARIN SENTENCE-FINAL PARTICLES

Kang Xu
University of Calgary

1. Introduction

In Mandarin Chinese, the term *sentence-final particles* has been used to describe a class of linguistic items whose categorial status is not clear. Three examples containing sentence-final particles (henceforth SFPs) are given in (1a-c). SFPs are bolded, and the parenthetical content in the English translation aims to capture the interpretive content of the SFPs.

(1) a. Sānshí nián qián hái méi yǒu shǔbiāo **ne**.
thirty years before still NEG have mouse PARTICLE
'Thirty years ago, there didn't even exist anything like a computer mouse (**believe me**).'

b. Mǎshàng dě kàn bǐsài le **ei**.
soon need watch game PARTICLE PARTICLE
'(**Remember**), you need to watch the game soon.'

c. Yīnggāi lí jiā hái bù suàn tèbié yuǎn **ha**?
should from home still NEG count very far PARTICLE
'Should not count as very far from home, **eh**?'

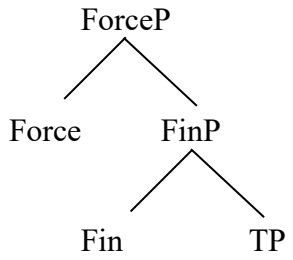
As noted by Paul and Pan (2017), some researchers suggest that Mandarin SFPs are essentially acategorial and do not count for grammar. For example, Biberauer et al. (2007, 2008, 2010, 2014) discuss two SFPs *ma* and *ne*, and suggest that Mandarin SFPs do not belong to any syntactic category. On the other hand, recent research by scholars such as Paul and Pan (2017), Pan (2019), Yang and Wiltschko (2016), and Wiltschko (2021) has argued that Mandarin SFPs do play an important role in syntax, although they disagree on how to analyze Mandarin SFPs. Specifically, Paul and Pan (2017) and Pan (2019) argue that Mandarin SFPs are complementizer heads of a split CP structure. Yang and Wiltschko (2016) and Wiltschko (2021) associate Mandarin SFPs with the interactional layer above CP.

Paul and Pan (2017) take Rizzi's (1997) analysis of the so-called left periphery as the point of departure for their analysis of Mandarin SFPs. The left periphery refers to the topmost layer of the (propositional) structure of the clause. Bresnan (1972) suggests that this topmost layer consists of a single category, C(omplementizer)P. Rizzi (1997) further suggests that C splits into two separate categories, ForceP and Fin(iteness)P. The higher

Actes du congrès annuel de l'Association canadienne de linguistique 2023.
Proceedings of the 2023 annual conference of the Canadian Linguistic Association.

Force C head specifies what type of clause (declarative, interrogative, exclamative, etc.) a sentence is. The lower Finiteness C head is sensitive to the finiteness of the TP. For example, in English, *that* occurs with finite clauses while *for* occurs with non-finite clauses.

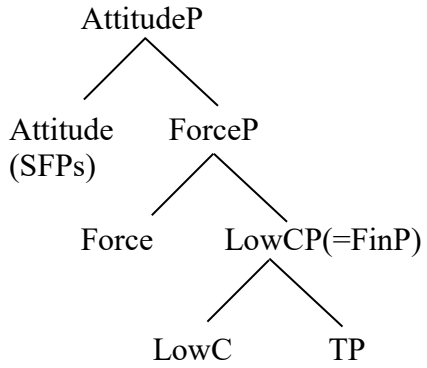
(2)



(Modified from Rizzi 1997: 297)

Building on Rizzi's (1997) analysis of Complementizers (Cs) and their projections (CPs), which suggests that cross-linguistically the C system consists of two distinct categories, Force and Finiteness, as shown in (2).[1] Paul and Pan (2017) propose that the Mandarin C system consists of three subprojections LowCP, ForceP and AttitudeP, as shown in (3).

(3)



(Paul and Pan 2017)

According to Paul and Pan (2017), Mandarin SFPs are full-fledged functional heads on a par with C elements in Indo-European languages. SFPs realizing LowCs are comparable to Rizzi's FiniteP, the neutral label 'LowC' is chosen because it is unclear whether the [+/- Finite] distinction applies to Mandarin (Paul and Pan 2017).

Paul and Pan (2017) propose that in addition to the CP categories which Rizzi (1997) proposes, Mandarin requires an additional AttitudeP. This is a category that

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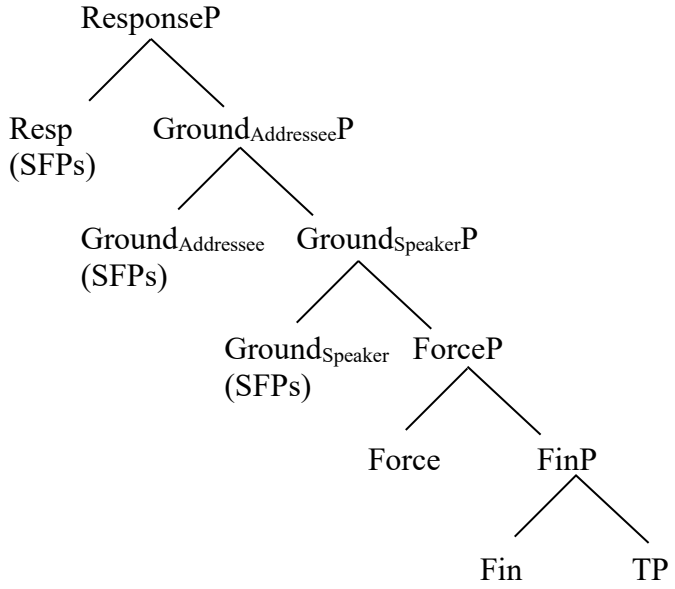
[1] Note that Rizzi (1997) proposes an articulated structure for the complementizer system which consists of optional Topic and Focus phrases in between of the ForceP and the FinP (see Rizzi 1997). Pan's (2019) Mandarin CP system also consists of optional Topic and Focus phrases (see Pan 2019). I will not be discussing Mandarin Topic and Focus phrases in this paper; therefore, I have omitted these phrases from the structures presented here.

realizes content expressing the speaker's or addressee's attitude to the propositional content. Mandarin SFPs that express a certain attitude such as *a*, *ei*, *ou*, *ma*, *ne*, *ba*, etc. are analyzed as the highest C head, Attitude (Paul and Pan 2017).

Aside from Paul and Pan (2017), Mandarin SFPs have been suggested to perform other syntactic functions. Wiltschko (2021) proposes that syntactic structure should not only represent the propositional content but should also represent interactions in discourse. Wiltschko (2021) proposes that interactions is represented in the interactional structure above CP. This interactional structure consists of a $\text{Ground}_{\text{Speaker}}$ Phrase, a $\text{Ground}_{\text{Addressee}}$ Phrase and a Response Phrase. $\text{Ground}_{\text{Speaker}}$ phrase encodes speaker's attitude towards the proposition while $\text{Ground}_{\text{Addressee}}$ phrase encodes what the speaker believes is the addressee's attitude towards the proposition. Response Phrase encodes what the speaker wants the addressee to do with the current sentence. Wiltschko suggests that Mandarin SFPs expressing an attitude associate with this interactional structure, as shown in (4).

(4)



Following Wiltschko (2021) and Xu (2022), in the present paper, I argue that the subgroup of Mandarin SFPs that express an attitude are not part of the CP layer. Instead, SFPs are part of the interactional structure (contra Paul and Pan 2017, Pan 2019, among others). Xu (2022) discusses three representative particles, *ne* 呢, *ba* 吧 and *ha* 哈. Xu (2022) demonstrates that *ne* is a typical $\text{Ground}_{\text{Speaker}}$ particle, *ba* is a $\text{Ground}_{\text{Addressee}}$ particle in some contexts and *ha* is a typical Response particle. Xu's (2022) arguments are mainly based on the co-occurrence of SFPs. Xu (2022) demonstrates in detail that when co-occurring with other particles, $\text{Ground}_{\text{Speaker}}$ particles must appear closer to the host sentence than other particles. $\text{Ground}_{\text{Addressee}}$ particles must be located in between of the $\text{Ground}_{\text{Speaker}}$ particles and Response particles. In addition, Response particles are consistently found in the sentence-final position, following other particles. In this paper, I

will present arguments that were not covered in Xu's (2022) work to further support that Mandarin SFPs are part of the interactional structure.

The organization of the paper is as follows: In section 2, I review three pieces of literature on Mandarin SFPs. In section 2.1, I discuss why Paul and Pan's (2017) analysis is inadequate for explaining strict word order among SFPs. In section 2.2, I review Wiltschko's (2021) Interactional Spine, which is an alternative structure that permits a more empirically adequate analysis of Mandarin SFPs. In section 2.3, I review Xu (2022), which discusses three representative particles, *ne* 呢, *ba* 吧 and *ha* 哈. In section 3, I discuss additional arguments in support of the analysis of Xu (2022) that Mandarin SFPs associate with the interactional structure above CP. In section 4, I conclude.

2. Previous literature on Mandarin sentence-final particles

2.1 Paul and Pan (2017)

In this section, I review Paul and Pan's (2017) analysis since it is the most relevant piece of work to the present paper. The core proposal of Paul and Pan (2017) is that Mandarin has a three-layered split CP structure (LowCP<ForceP<AttitudeP) and SFPs are complementizers that realize the heads of each layer of the split CP, as illustrated in Table 1.

Table 1. The three layers in the split CP.

C1 (LowC)	C2 (ForceC)	C3 (Attitude)
lower subprojection of LowCP; *le* currently relevant state; *láizhe* recent past	ba_{imp} (advisative *ba*); $ba_{\text{Qconfirmation}}$; *ma* yes/no question	*a* softening; *ei* gentle reminder; *ou* impatience; *ma* dogmatic assertion; *zhene* intensifier.....
higher subprojection of LowCP *éryǐ* 'only'		lower layer Attitude *ne* 'exaggeration'<higher layer Attitude *ba* 'probability'

(simplified Table from Paul and Pan 2017: 51)

As shown in Table 1, SFPs realize the three distinct layers of CP proposed by Paul and Pan (2017). SFPs *le* and *laizhe* are claimed to express notions related to Tense (Zhu 1982) and occur nearest to the host sentence; they are the Low Complementizer heads (LowCs). Paul and Pan (2017) further divide LowCP into two subprojections (hence there are two different layers under C1) and argue that SFP *éryǐ* belongs to a higher subprojection of LowCP. The second class of SFPs consist of particles such as ba_{imp}, $ba_{\text{Qconfirmation}}$, and $ma_{\text{yes/no question}}$ which all convey a type of Force and belong to a higher layer of CP, the Force CP. The highest layer of CP is headed by a group of particles which encodes the speaker's attitude or feelings.

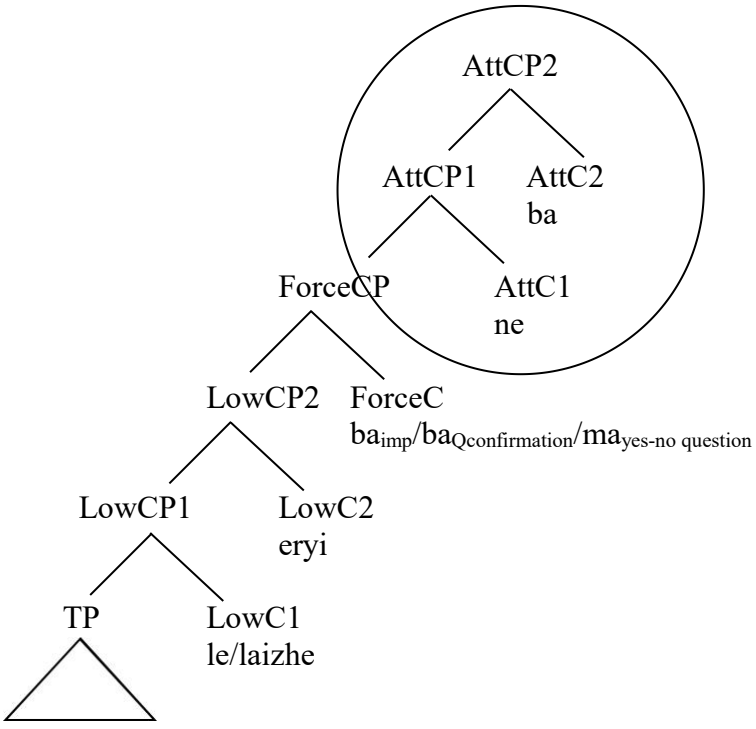
Crucially, Paul and Pan (2017) further divide Attitude CP into two subprojections and argue that the Attitude CP headed by *ba* is always higher than the Attitude CP headed by *ne* (hence there are two different layers under C3). According to Paul and Pan (2017), sentence (5a) contains two Attitude heads, *ne* and *ba*. The order for these two co-occurring SFPs is fixed: *ne*<*ba* is possible but not *ba*<*ne*, as shown in (5a-b).

(5) a. Sānshí nián qián hái méi yǒu shǔbiāo **ne** **ba**.
thirty year before still NEG have mouse ATT1 ATT2
'Thirty years ago, very probably there didn't even exist anything like a computer mouse.'

b. *Sānshí nián qián hái méi yǒu shǔbiāo **ba** **ne**.
thirty year before still NEG have mouse ATT1 ATT2
(int.)'Thirty years ago, very probably there didn't even exist anything like a computer mouse.'

Paul and Pan (2017) argue that the fixed order among co-occurring particles is a reflection of their position in the structural hierarchy and therefore Mandarin requires two subprojections AttC1<AttC2 for the particles that express an attitude. On Paul and Pan's (2017) analysis, the structure of a Mandarin sentence containing SFPs can be represented as in (6). I circle the highest Attitude CPs in diagram (6) since they are the focus of my discussion.

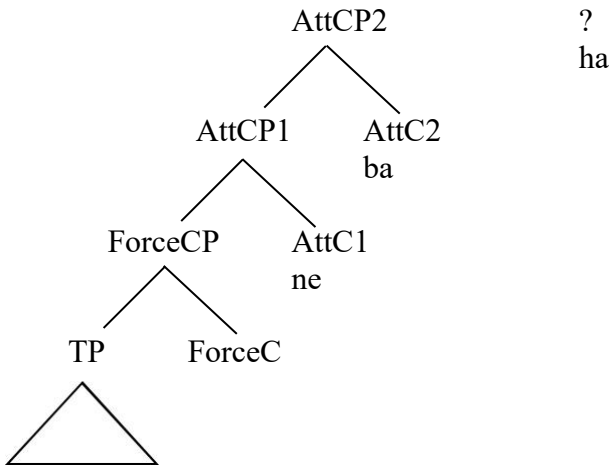
(6)



The main shortcoming of Paul and Pan's (2017) analysis has to do with the observation that the proposed 'higher attitude complementizer AttC2 *ba* (probability)' can itself be followed by other particles. For example, particle *ha* can follow *ba*. In Paul and Pan's (2017) analysis, there is no position above the AttC2. As a result, sentences such as (7) cannot be accounted for using their CP system.

(7) Sānshí nián qián hái méi yǒu shǔbiāo **ne** **ba**, **ha**?
thirty year before still NEG have mouse ATT1 ATT2 PARTICLE
'Thirty years ago, very probably there didn't even exist anything like a computer mouse, eh?'

(8)



In order to account for the correct word order in (7), we can certainly further divide AttCP into AttCP1, AttCP2, and AttCP3 with the particle *ha* in the highest Attitude complementizer head position. However, doing this only describes the surface word order of a sentence and does not attempt to explain why SFPs must appear in the order of *ne<ba<ha*. In the next subsection I briefly review an alternative which permits an empirically adequate account of the facts discussed here.

2.2 Wiltschko (2021)

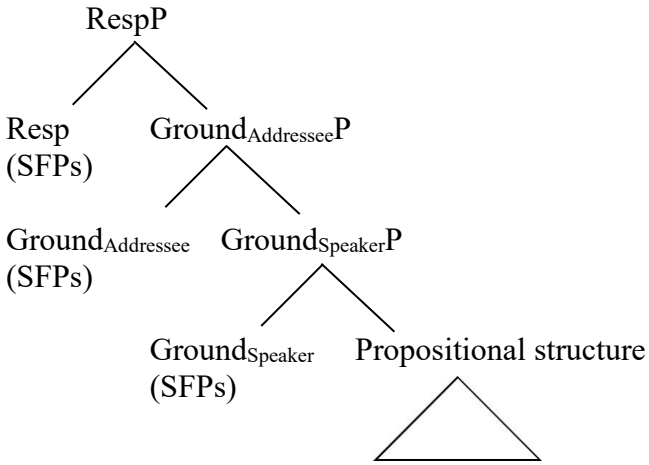
In this section, I summarize relevant aspects of Wiltschko's (2021) Interactional Spine Hypothesis. Following insights of Ross (1970) and Speas and Tenny (2003), Wiltschko (2021) proposes an Interactional Structure, which is an alternative to the Speech Act Structure of Speas and Tenny (2003) (and the AttPs of Paul and Pan 2017/Pan 2019).[2]

In order to capture the complexity of speech acts in conversations, Wiltschko (2021) proposes an Interactional Structure that regulates interactions between interlocutors. Wiltschko proposes two core functions for this Interactional Structure. First, this

[2] For the discussion of the similarities and differences between Ross (1970), Speas and Tenny (2003), and Wiltschko (2021), please refer to Xu (2022).

Interactional Structure serves to manage the common ground between the interlocutors. Second, it aids the interplay between initiating and reacting moves, such as turn-taking (Wiltschko 2021). Wiltschko proposes three specific functional projections in this interactional layer: a $\text{Ground}_{\text{Speaker}}$ Phrase, a $\text{Ground}_{\text{Addressee}}$ Phrase and a Response Phrase, as shown in (9).

(9)



(simplified diagram from Wiltschko 2021: 108)

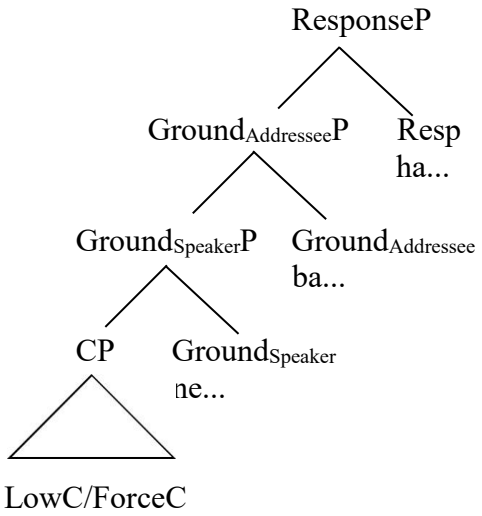
The $\text{Ground}_{\text{Speaker}}$ and $\text{Ground}_{\text{Addressee}}$ Phrases manage the common ground between the interlocutors. $\text{Ground}_{\text{Speaker}}$ phrase encodes the speaker's attitude towards the proposition. $\text{Ground}_{\text{Addressee}}$ phrase encodes what the speaker believes is the addressee's attitude towards the proposition. The Response phrase encodes what the speaker wants the addressee to do with the current utterance.

Wiltschko (2021) proposes that Mandarin SFPs associate with this Interactional Structure. Mandarin employs SFPs that indicate the speaker's certainty or uncertainty regarding the conveyed information. Likewise, there are SFPs used when the speaker believes the addressee is certain about the content being discussed and SFPs used when the speaker believes the addressee lacks knowledge about the discussed content. Specifically, Wiltschko (2021) proposes that the particle *de* 的 is a $\text{Ground}_{\text{Speaker}}$ particle that is used to convey what is being said is in the speaker's ground and the speaker has known the utterance for a while. Wiltschko (2021) further proposes that the particle *a* 啊 encodes that the content of what is being said is new to the speaker. Wiltschko (2021) also discusses two addressee-oriented particles *ma* 嘛 and *bei* 呗. She suggests that *ma* is a $\text{Ground}_{\text{Addressee}}$ particle that indicates that the speaker thinks that the addressee already knows what is being said, whereas *bei* indicates that the speaker thinks that the addressee does not know the utterance. See Wiltschko (2021) for further discussion of these four particles.

2.3 Xu (2022)

Following Wiltschko (2021), Xu (2022) proposes that Mandarin SFPs should not be treated uniformly as complementizers (contra Paul and Pan 2017). Instead, SFPs should be analyzed as $\text{Ground}_{\text{Speaker}}$, $\text{Ground}_{\text{Addressee}}$ and Response particles. Specifically, Xu (2022) presents analysis of three additional Mandarin SFPs, *ne*, *ba* and *ha*. Xu (2022) argues that particle *ne* is a $\text{Ground}_{\text{Speaker}}$ particle, particle *ba* is a $\text{Ground}_{\text{Addressee}}$ particle, and particle *ha* is a Response particle.

(10)



In Xu (2022), two types of evidence are discussed to demonstrate that the particles *ne*, *ba*, and *ha* appear in the Interactional Structure above CP. The first type of evidence pertains to the semantic interpretation of these SFPs, while the second type of evidence concerns the linear order restrictions when these SFPs co-occur with others. In section 3, three additional pieces of evidence will be discussed to further support the analysis that SFPs indeed appear in this Interactional Structure.

3. Additional arguments in support of Xu's (2022) analysis

In this section, I discuss three additional arguments in support of the hypothesis that SFPs appear in the Interactional Structure. The first argument is that $\text{Ground}_{\text{Speaker}}$ particles such as *ne* can co-occur with speaker-oriented adverbs. The second argument is that two particles of the same category cannot co-occur. The third argument is that $\text{Ground}_{\text{Speaker}}$ particle *ne* imposes selectional restrictions on the clause type of its host CP while the highest Response particle *ha* imposes no selectional restrictions on CP.

3.1 Co-occurrence of SFPs with speaker-oriented adverbs

Particles such as *ne* can (and sometimes must) co-occur with semantically related speaker-oriented adverbs. I interpret this fact as evidence that *ne* is indeed a $\text{Ground}_{\text{Speaker}}$ particle. Yang (2018) notes that SFPs that encode that the speaker strongly believes a proposition can co-occur with subjective adverbs such as *guai* 怪 'extremely', *ting* 挺

'very', *gou* 够 'enough', all of which express the speaker's subjective attitude. Paul and Pan (2017) also point out that in the presence of a speaker-oriented emphatic adverb such as *ke* 可 'really', the use of particle *ne* is obligatory, as shown in (11).

(11) Déguó yǔyánxuéjiā kě duō *(**ne**)!
German linguists really many PARTICLE
'There really are a lot of German linguists (**believe me**).'
(Paul and Pan 2017: 55)

Speaker-oriented adverbs represent the speaker's commitment to the truth of a proposition (Palmer 2001, Papafragou 2006, Ernst 2008). In example (11), the adverb *kě* 'really' indicates that the speaker strongly believes the proposition to be true. Since the co-occurrence with a speaker-oriented adverb *kě* 'really' is not only possible but obligatory, examples such as (11) clearly demonstrate that SFP *ne* is a speaker-oriented particle. Note that the above sentence would be ungrammatical if the speaker-oriented particle *ne* were replaced with an addressee-oriented particle, such as *ei* 欸 or *me* 嚜, as shown in (12a-b).

(12) a. *Déguó yǔyánxuéjiā kě duō **ei**!
German linguists really many PARTICLE
(int.)'There really are a lot of German linguists (**I am reminding you**).'

b. *Déguó yǔyánxuéjiā kě duō **me**!
German linguists really many PARTICLE
(int.)'There really are a lot of German linguists (**You do not know this**).'

3.2 Two SFPs of the same category do not co-occur

In this section, I discuss the complementary distribution of particles that belong to the same syntactic category. For example, if particle *ne* is indeed a $\text{Ground}_{\text{Speaker}}$ particle, it is predicted that it cannot co-occur with another $\text{Ground}_{\text{Speaker}}$ particle, such as *de*. Following Wiltschko (2021), I assume that the particle *de* is a $\text{Ground}_{\text{Speaker}}$ particle that indicates that what is being said is in the speaker's ground. These two particles are semantically compatible in meaning, but they cannot co-occur, as shown in (13-14), regardless of the relative order between *ne* and *de*.

(13) a. Zhè dōngxi sān bǎi yuán mǎi bù lái **de**.
this stuff three hundred CL buy NEG come PARTICLE
'You cannot buy this for three hundred Yuan (**believe me**).'

b. Zhè dōngxi sān bǎi yuán mǎi bù lái **ne**.
this stuff three hundred CL buy NEG come PARTICLE
'You cannot buy this for three hundred Yuan (**believe me**).'

c. *Zhè dōngxi sān bǎi yuán mǎi bù lái **de** **ne**.
this stuff three hundred CL buy NEG come PARTICLE PARTICLE
(int.)‘You cannot buy this for three hundred Yuan (**believe me**).’

d. *Zhè dōngxi sān bǎi yuán mǎi bù lái **ne** **de**.
this stuff three hundred CL buy NEG come PARTICLE PARTICLE
(int.)‘You cannot buy this for three hundred Yuan (**believe me**).’

(14) a. Zhè táng lǐ de yú hěn dà **de**.
this pond inside DE fish very big PARTICLE
‘The fish in this pond are very big (**believe me**).’

b. Zhè táng lǐ de yú hěn dà **ne**.
this pond inside DE fish very big PARTICLE
‘The fish in this pond are very big (**believe me**).’

c. *Zhè táng lǐ de yú hěn dà **de** **ne**.
this pond inside DE fish very big PARTICLE PARTICLE
(int.)‘The fish in this pond are very big (**believe me**).’

d. *Zhè táng lǐ de yú hěn dà **ne** **de**.
this pond inside DE fish very big PARTICLE PARTICLE
(int.)‘The fish in this pond are very big (**believe me**).’

I propose that $\text{Ground}_{\text{Speaker}}$ particle *ne* cannot co-occur with $\text{Ground}_{\text{Speaker}}$ *de* because they are both $\text{Ground}_{\text{Speaker}}$ particles. Therefore, they compete for the same syntactic position, which is the head of the $\text{Ground}_{\text{Speaker}}$ Phrase.

Similarly, two $\text{Ground}_{\text{Addressee}}$ particles cannot co-occur, as illustrated in (15-16) with the particles *ei* and *me*.

(15) a. Zhèyàng bù xíng **ei**.
this.way NEG good PARTICLE
‘**Remember**, this is not good.’

b. Zhèyàng bù xíng **me**.
this.way NEG good PARTICLE
‘This is not good (**you do not know this**).’

c. *Zhèyàng bù xíng **ei** **me**.
this.way NEG good PARTICLE PARTICLE

d. *Zhèyàng bù xíng **me** **ei**.
this.way NEG good PARTICLE PARTICLE

(16) a. Jīntiān kěshì xīngqīsān **ei**.
today is wednesday PARTICLE
'**Remember**, today is Wednesday.'

b. Jīntiān kěshì xīngqīsān **me**.
today is wednesday PARTICLE
'Today is Wednesday (**you do not know this**).'

c. *Jīntiān kěshì xīngqīsān **ei** **me**.
today is wednesday PARTICLE PARTICLE

d. *Jīntiān kěshì xīngqīsān **me** **ei**.
today is wednesday PARTICLE PARTICLE

As illustrated in examples (15-16), SFP *ei* cannot co-occur with the Ground$_{\text{Addressee}}$ particle *me*, regardless of the relative order between *ei* and *me*. This observation aligns with the analysis of *ei* and *me* as Ground$_{\text{Addressee}}$ particles, where two Ground$_{\text{Addressee}}$ particles must compete for the same syntactic position, allowing for at most one in a sentence.

Finally, Response particles also cannot co-occur with each other in a single sentence, because they too compete for the same position, that is, head of RespP. The examples in (17-18) show that Response particle *ha* cannot co-occur with Response particle *ma*.

(17) a. Nǐmen shì jiǔ diǎnzhōng kāi mén de **ha**?
you: PL be nine o'clock open door NOM PARTICLE
'You opened at nine o'clock, **eh**?'

b. Nǐmen shì jiǔ diǎnzhōng kāi mén de **ma**.
you: PL be nine o'clock open door NOM PARTICLE
'You opened at nine o'clock, **and let me add**...'

c. *Nǐmen shì jiǔ diǎnzhōng kāi mén de **ha** **ma**?
you: PL be nine o'clock open door NOM PARTICLE PARTICLE

d. *Nǐmen shì jiǔ diǎnzhōng kāi mén de **ma** **ha**?
you: PL be nine o'clock open door NOM PARTICLE PARTICLE

(18) a. Nǐ xīn yǎng le tiáo gǒu **ha**?
you new keep ASP CL dog PARTICLE
'You have got a new dog, **eh**?'

b. Nǐ xīn yǎng le tiáo gǒu **ma**.
you new keep ASP CL dog PARTICLE
'You have got a new dog, **and let me add**...'

c. *Nǐ xīn yǎng le tiáo gǒu **ha** **ma**?
you new keep ASP CL dog PARTICLE PARTICLE

d. *Nǐ xīn yǎng le tiáo gǒu **ma** **ha**?
you new keep ASP CL dog PARTICLE PARTICLE

As shown in examples (17-18), SFP *ha* cannot co-occur with Response particle *ma*. This observation is in line with analyzing SFP *ha* as a Response particle since two Response particles cannot co-occur.

Summarizing the discussion in this section, I argued that particles of the same interactional category cannot co-occur. Specifically, it is not possible for two $\text{Ground}_{\text{Speaker}}$, two $\text{Ground}_{\text{Addressee}}$ or two Response particles to co-occur within the same sentence, even if they are semantically compatible, because in each case they are competing for the same position in the clausal spine.

3.3 Sentence type selection

In this section, I disucss an argument that indicates that $\text{Ground}_{\text{Speaker}}$ particles are lower than either $\text{Ground}_{\text{Addressee}}$ or Response particles. Assuming that selectional restrictions are imposed by a head on its complement, the Interactional Spine Hypothesis adopted here, correctly predicts that only $\text{Ground}_{\text{Speaker}}$ particles can impose selectional restrictions on the clause type of their host sentences, since they are the only interactional heads in a local relation with CP (Wiltschko 2021: 109). In what follows, I will show that the $\text{Ground}_{\text{Speaker}}$ particle *ne* can select only declarative and interrogative clauses while the highest Response particle *ha* imposes no selectional restrictions on CP, and consequently can co-occur with all clause types.

Huang and Liao (2002: 45) observe that the particle *ne* is primarily used in declaratives (19) and interrogatives (20).

(19) Wǒ méi shénme, nǐ cái xīnkǔ **ne**.
I NEG what you only tired PARTICLE
'I am fine, you are tired **(believe me**).'

(20) Gāngcái nǐ nà néngnài **ne**?
just.now you that ability PARTICLE
'What ability did you just demonstrate?'

In contrast to the $\text{Ground}_{\text{Speaker}}$ particle *ne*, the Response particle *ha* can be used in all sentence types. Yuan (2008) provides the following examples to illustrate this.

(21) a. Zàicì yìnzhèng le rújiā suǒ shuō de
again.prove LE Confusianism suo say DE

guòyóubùjí zhè gè dàolǐ **ha**,
overdone is worse than undone this CL wisdom PARTICLE

zhè gè guòfèn bǎohù fǎnér qīnhài le biérén.
this CL over protect instead hurt LE others
'Once again proves the wisdom that Confucianism speaks of, overdoing is worse than undoing, over-protection hurts others instead.'

b. Yīnggāi lí jiā hái bù suàn tèbié yuǎn **ha**?
should from home still NEG count very far PARTICLE
'Should not count as very far from home, **eh**?'

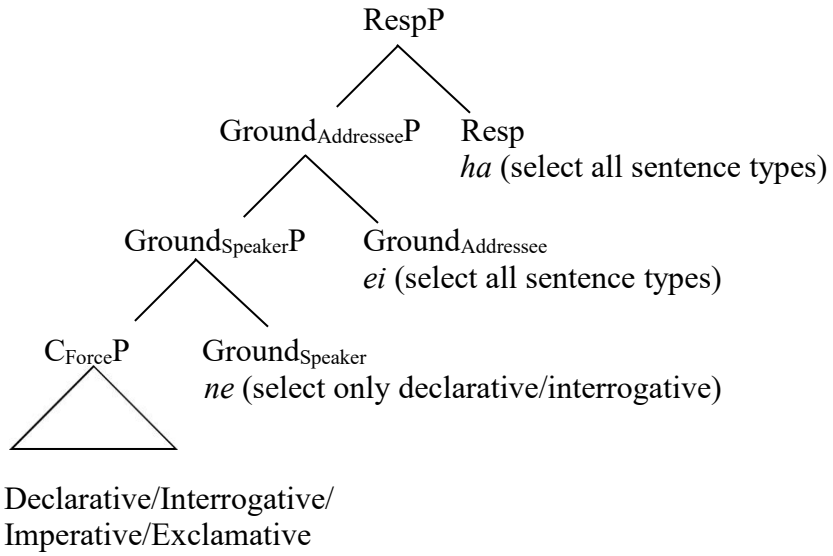
c. Zánmen yíkuài qù **ha**.
we together go PARTICLE
'Let us go together.'

d. Zhè dìfāng duō měi **ha**!
this place very beautiful PARTICLE
'This place is very beautiful!'

As shown in examples (21a-d), the particle *ha* can be used in declaratives (21a), interrogatives (21b), imperatives (21c), and exclamatives (21d). Having discussed the particles *ne* and *ha*, let us now turn to $\text{Ground}_{\text{Addressee}}$ particle *ei*. Huang and Depner (2020) note that the particle *ei* can be used with all sentence types. Their observation is also consistent with Wiltschko's (2021) prediction that $\text{Ground}_{\text{Speaker}}$ particles select the sentence types of the host sentence, while $\text{Ground}_{\text{Addressee}}$ particles, such as *ei*, do not impose any selectional restrictions on their host $C_{\text{Force}}P$, as they are not in a local relation with it.

The fact that $\text{Ground}_{\text{Speaker}}$ particles, but not $\text{Ground}_{\text{Addressee}}$ or Response particles can impose selectional restrictions on $C_{\text{Force}}P$ is consistent with the structure in (22), where only $\text{Ground}_{\text{Speaker}}$ is in a local relation with $C_{\text{Force}}P$.

(22)



4. Conclusion

Following Wiltschko (2021) and Xu (2022), in this paper, I argue that the subgroup of Mandarin SFPs that express an attitude are not part of the CP layer (contra Paul and Pan 2017, Pan 2019, among others). Instead, these SFPs are part of the Interactional Structure (Wiltschko 2021). I argue that these SFPs belong to different categories of the Interactional Structure and should be further divided into three distinct syntactic categories: Ground$_{Speaker}$ particles, Ground$_{Addressee}$ particles and Response particles.

Xu (2022) presents two types of evidence to demonstrate that SFPs appear in the Interactional Structure above CP. The first piece of evidence has to do with the semantic interpretation of SFPs. The second piece of evidence has to do with the co-occurrence options for SFPs. In this paper, I have presented three additional arguments to further support Xu's (2022) analysis that SFPs are part of the Interactional Structure. First, Ground$_{Speaker}$ particles such as *ne* can (and sometimes must) be used with compatible speaker-oriented adverbs. Second, it is not possible for two particles of the same category to co-occur within a sentence. Third, Ground$_{Speaker}$ particles such as *ne* can only select declaratives and interrogatives while Ground$_{Addressee}$ and Response particles do not impose any selectional restrictions on sentence types, as they are higher in the structure and are not in a local relation with the ForceCP. Taken together the findings of Xu (2022) and the present paper provide strong evidence for the Interactional Spine, and in particular evidence that Ground$_{Speaker}$ is the lowest interactional category.

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