

Introduction

In Mandarin Chinese, the term sentence-final particles (SFP) has been used to describe a class of linguistics items whose categorial status is not clear, as shown in (1a-c)

- (1) a. Women ershi si ge **le**
we twenty four CL **Particle**
"Now there are twenty four of us."
- b. Zhangsan mingtian qu Jianada **ma**
Zhangsan(name) tomorrow go Canada **Particle**
"Is Zhangsan going to Canada tomorrow?"
- c. Sanshi nian qian hai mei you shubiao **ne**
thirty years before still NEG have mouse **Particle**
"Thirty years ago, there didn't even exist anything like a computer mouse."

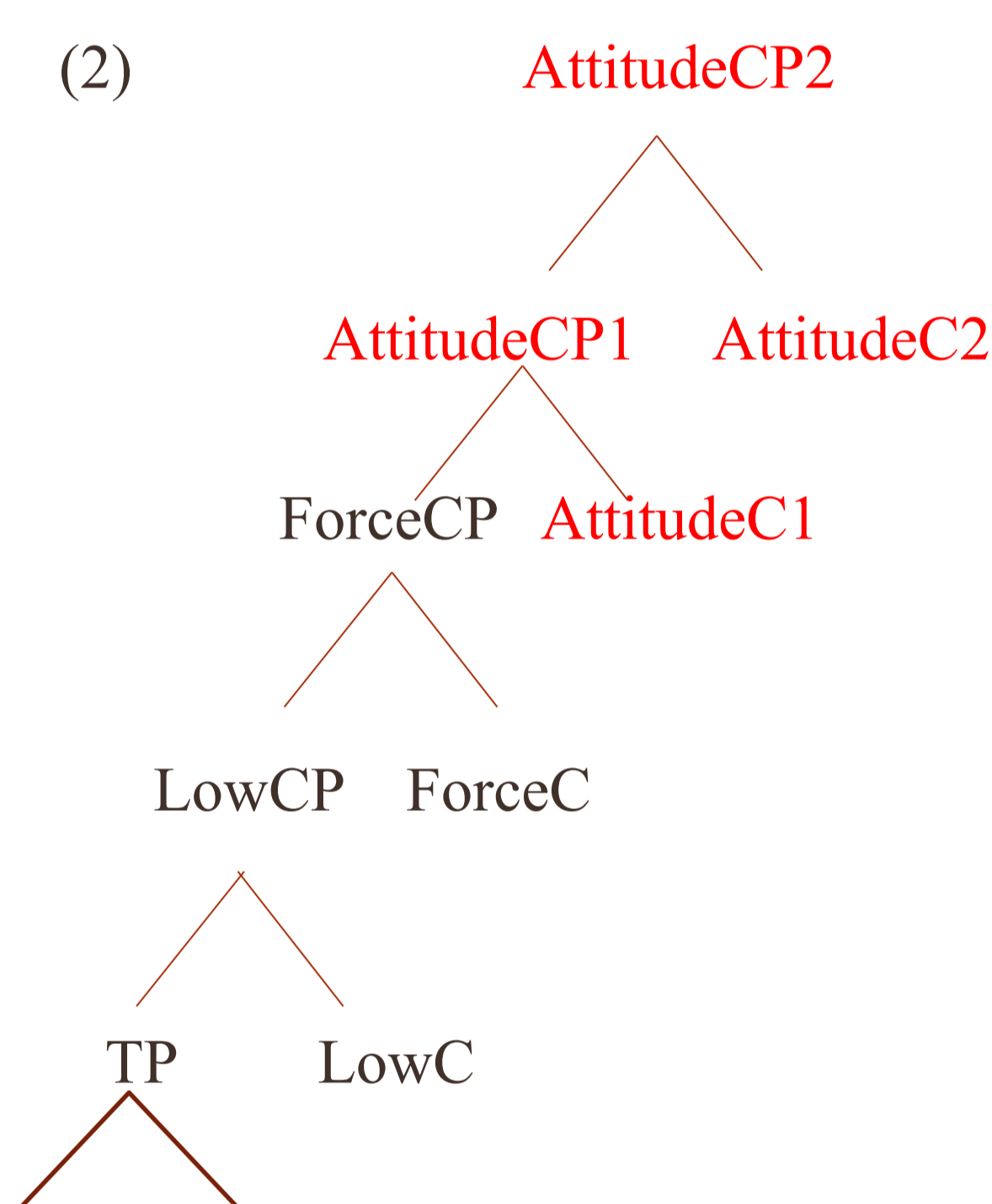
Recent generative analysis such as Paul and Pan (2017) and Pan (2019) propose that SFPs are part of the CP structure. They suggest that Mandarin CP structure can be split into three subprojections [AttitudeCP [ForceCP [LowCP [TP...]]]]. Particles such as *le* in (1a) are analyzed as a LowC (express tense). Particles such as *ma* in (1b) are analyzed as a ForceC (express force). Particles such as *ne* in (1c) are analyzed as a AttitudeC (express attitude). Crucially, they suggest that Attitude CP can be further split into two subprojections AttitudeCP1 and AttitudeCP2. In this poster, I focus my discussion on the last group of SFPs that express an attitude.

Objectives

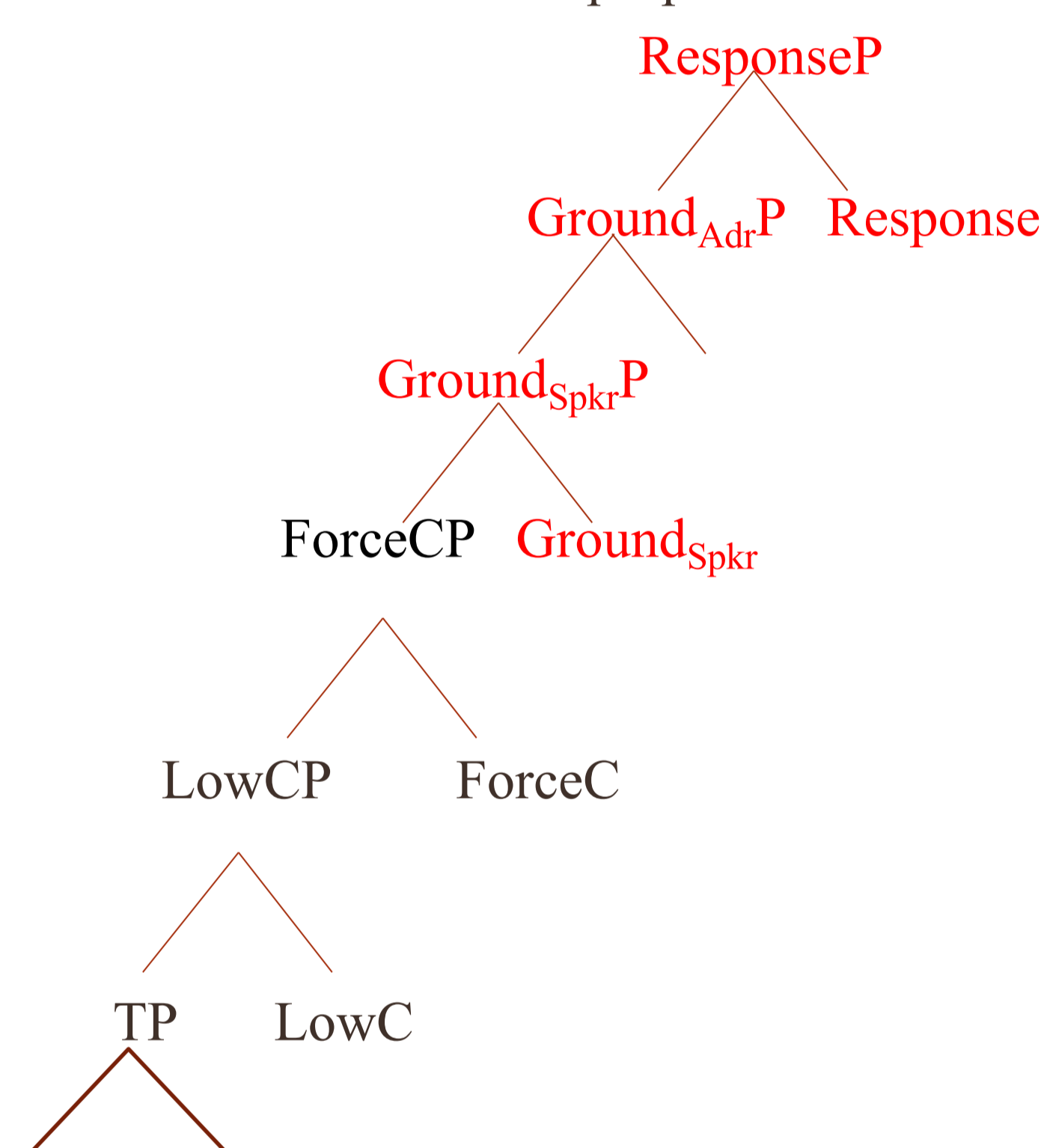
I adopt Wiltschko's (2021) interactional grammar framework and I provide evidence in support of the interactional grammar framework and against recent generative analysis such as Paul and Pan (2017) and Pan (2019).

Recent generative analysis and the current proposal

Paul and Pan (2017) and Pan's (2019) proposal:



Current proposal:



Wiltschko (2012) proposes three specific functional projections in this interactional layer: a Ground_{Spkr} Phrase, a Ground_{Adr} Phrase and a Response Phrase, as shown in the above diagram. The Grounding Phrases manage the common ground between the interlocutors. Ground_{Spkr} phrase encodes the speaker's attitude towards the proposition and Ground_{Adr} phrase encodes what the speaker believes is the addressee's attitude toward the proposition. The Response Phrase serves to aids interplay between initiating and reacting moves and regulate interactions such as turn-taking. It encodes what the speaker wants the addressee to do with the utterance.

Predictions of the current analysis

Prediction #1: There are three specific functional projections in the interactional layer: a Ground_{Spkr} Phrase, a Ground_{Adr} Phrase and a Response Phrase. This can account sentences with three co-occurring particles.

- (3) [Sanshi nian qian hai mei you shubiao TP] **ne**_{GroundSpkr} **ba**_{GroundAdr} **ha**_{Resp}?

Prediction #2: All particles that express attitude are analyzed uniformly as the highest complementizers in recent generative analysis, this analysis gives no satisfactory syntactic account for the strict word order among these SFPs

- (4) [Sanshi nian qian hai mei you shubiao TP] **ne**_{GroundSpkr} **ba**_{GroundAdr} **ha**_{Resp}?

ne<ba<ha is the only accepted order; as a set of linguistic items that express speaker's attitude (e.g. surprise) and completes the sentence, it might be expected that these particles can appear in a relatively flexible order. However, this is not the case. Alternatively, since Ground_{Spkr}<Ground_{Adr}<Resp, it is predicted that ne<ba<ha.

Prediction #3: The interpretation of SFPs can be derived from their core interactional function.

For example, I analyze particle *ei* as a Ground_{Adr} particle. According to Zhu (1982), the use of *ei* indicates "something the addressee already knows about it, speaker uses *ei* to remind the addressee not to forget about something" (p.212) [with my own translation]. Zhu gives the following example to illustrate his point.

- (5) Jintian keshi xingqisan **ei**; ni bie wang le xiawu de qu shangke **ei**.
today is Wednesday **Particle** you don't forget Le afternoon De go teaching **Particle**
"Today is Wednesday (**remind you**); you don't forget to teach this afternoon (**remind you**)."

The semantic interpretation of *ei* makes it reasonable to analyze this particle as a Ground_{Adr} particle.

Prediction #4: The current proposal explains "Why yes/no force head *ma* is incompatible with any Attitude particle?"

Paul and Pan (2017) point out that "Also note that for reasons poorly understood, the yes/no question force head *ma*, unlike the imperative force head *ba* is incompatible with any Attitude head" (p.66 footnote 11).

I suggest that particle *ma* is the highest Response particle. Therefore, no other particles can follow *ma*. Particle *ma* cannot co-occur with any Ground_{Spkr} particles such as *ne* because Ground_{Spkr} particles always encode whether a proposition is in the speaker's ground. In contrast, *ma* encodes that the speaker has made no assumption about the proposition.

Similarly, particle *ma* is incompatible with any Ground_{Adr} particles such as *ei*. This is because Ground_{Adr} particles encode that the speaker assumes the addressee knows a certain proposition. However, the use of yes/no question particle *ma* only implies that the speaker assumes the addressee knows the answer to the question being asked. The speaker is not making an explicit assumption about what the addressee thinks about this proposition (whether the addressee has the proposition in her ground or not).

Prediction #5: Pan's (2019) Subjectivity Scale Constraint supports the present analysis.

Pan proposes the Subjectivity Scale Constraint which can be stated as follows.

- (6) The higher a functional projection is, the more subjective the interpretation of such a projection becomes, and the more difficult it is for such a projection to be embedded. (Pan 2019; p.112)

As discussed in Pan (2019), it turns out that standard yes/no question particle *ma*, weak imperative particle *ba1* and confirmation yes/no question particle *ba2* cannot be syntactically embedded. In contrast, in Pan's left-periphery system, perfective yes/no question marker *meiyou* "not have" and Wh-question operator can be embedded.

According to the Subjectivity Scale Constraint, it is expected that particles and operators appearing in the iForceP layer should all survive in embedded clauses or they should all result in ungrammatical sentences in embedded contexts. This is because they locate in the same iForceP layer in the left-periphery. Alternatively, I suggest SFPs are in the highest interactional layer and therefore they cannot be embedded.

Prediction #6: Sentence type selections

An observation is in line with Wiltschko's (2021) prediction that Ground_{Spkr} particles such as *ne* select the sentence types of the host sentence (declaratives and interrogatives) while Ground_{Adr} particles such as *ei* do not impose any restrictions on sentence types since they are higher in the structure and are not in a local relation with the CP.

- (7) a. Yaozhilan changchang chixiang: "xingxing ta ye zhai de xia **ne**."
name of a person always envisage star 3SG also pick De down **Particle**
"Yaozhilan always envisages that he can pick off the stars." (Ding 1961; p.215)
- b. Ta laorenjia gan shenme **ne**?
3SG elder do what **Particle**
"What is the elder doing?" (Ding 1961; p.210)

Conclusion

	three positions	word order	interpretation	incompatibility of particle <i>ma</i>	subjectivity scale constraint	sentence type selection
Paul and Pan's Analysis	X	X	X	X	X	X
My Analysis	✓	✓	✓	✓	✓	✓

Selected References

- Pan, J. N. (2019). Architecture of the periphery in Chinese: cartography and minimalism. London: Routledge.
Paul, W. & Pan, J. N. (2017). 'What you see is what you get: Chinese sentence-final particles as head-final complementisers', in J. Bayer & V. Struckmeier (eds.) Discourse Particles—Formal Approaches to their Syntax and Semantics, [Linguistische Arbeiten], Berlin: Mouton De Gruyter, p. 49-77.
Wiltschko, M. (2021). The grammar of interactional language. Cambridge: Cambridge University Press.

Acknowledgement and contact information

I thank Elizabeth Ritter for her encouragement, especially her support during the Covid time. Also, I thank Martina Wiltschko and her book *The grammar of interactional language* which inspires me to reflect on the syntax of Mandarin sentence-final particles.