

# Lingua

International Review of General  
Linguistics

Revue Internationale de  
Linguistique Générale

*Interim editor*

H. Whitaker

Please note that the articles in this issue were handled by the previous editorial team: Johan Rooryck, Anikó Lipták, Anne-Michelle Tessier, Chung-hye Han and Ianthi Maria Tsimpli

Volume 170 (2016)



ELSEVIER

Amsterdam – Boston – London – New York – Oxford – Philadelphia – San Diego – St. Louis

# Why Chinese SFPs are neither optional nor disjunctors<sup>☆</sup>

Victor Junnan Pan<sup>a</sup>, Waltraud Paul<sup>b,\*</sup>



<sup>a</sup> Laboratoire de Linguistique Formelle (LLF)-UMR 7110, CNRS & Université Paris Diderot-Paris 7, France

<sup>b</sup> Centre national de la recherche scientifique, Centre de recherches linguistiques sur l'Asie orientale, CNRS-EHESS-INALCO, Paris, France

Received 1 June 2015; received in revised form 12 October 2015; accepted 13 October 2015  
Available online 30 November 2015

## Abstract

In a recent paper, [Biberauer et al. \(2014b\)](#) claim that the Chinese sentence-final particles (SFPs) *ne* and *ma* only “double” the information encoded elsewhere in the sentence and are to be analyzed as “acategorical” conjunctions. This contrasts with the current analysis of, e.g. *ma* as an interrogative force head. The present article provides evidence in favour of the SFPs *ma* and *ne* as C-elements and challenges some of the preconceived ideas commonly encountered in the literature. Within the head-final split CP proposed for Chinese ‘Low C < Force < Attitude’, *ma* instantiates a Force head, whereas *ne* realizes the discourse-related AttitudeP, not a *wh*-question typing particle (pace [Lisa L.-S. Cheng’s, 1991](#)). Furthermore, evidence is provided to show that the surface sentence-final position of SFPs in Chinese must be taken at face value.

© 2015 Elsevier B.V. All rights reserved.

**Keywords:** Mandarin Chinese; Sentence-final particles (SFPs); Head-final split CP; Yes/no questions; Final over Final Constraint (FOFC)

## 1. Introduction

In a recent paper, [Biberauer, Holmberg, and Roberts \(BHR\) \(2014:200–201\)](#) state: “In a survey of about 80 VO languages with final question particles, [Bailey \(2010, 2012\)](#) observed that these particles are very often optional (this is true of Mandarin *ne* and *ma*, for example). Presumably this is possible because the question force is signaled by some other means, such as intonation.” [emphasis added]. Everybody working on Chinese will be surprised by this statement, because it presents *ma* as devoid of any inherent interrogative force. The reason why this view is so readily advocated by [BHR \(2014\)](#) is the fact that an analysis of Chinese sentence-final particles (SFPs) as Cs in a head-final CP above a head-initial TP challenges their presumably universal *Final-over-final constraint* (FOFC), which – put simply – excludes a head-final projection from selecting a head-initial XP as complement.<sup>1</sup>

The aim of the present article is to put the record straight with respect to the sentence-final particles (SFPs) *ma* and *ne* by providing a careful analysis and by challenging some of the preconceived ideas commonly encountered in the literature. The article is organized as follows. Section 2.1 gives a brief overview of the three-layered head-final split CP in Chinese. Section 2.2 invalidates the assumption that *ma* itself does not contribute interrogative force. Section 2.3 provides

<sup>☆</sup> We are extremely grateful to the anonymous reviewers for their insightful comments, which helped us to present our arguments more incisively. We would also like to thank the editor of *Lingua*, Johan Rooryck, for his support. Any errors or shortcomings are ours.

\* Corresponding author at: CRLAO, EHESS, 105, Bd Raspail, 75006 Paris, France. Tel.: +33 153105366.

E-mail addresses: [victor.pan@univ-paris-diderot.fr](mailto:victor.pan@univ-paris-diderot.fr) (V.J. Pan), [waltraud.paul@ehess.fr](mailto:waltraud.paul@ehess.fr) (W. Paul).

<sup>1</sup> For a critical appraisal of the FOFC, cf. among others [Djamouri et al. \(2013\)](#); [Haider \(2013\)](#); [Paul \(2009, 2014, 2015, chapter 8 and references therein\)](#).

arguments showing that *ne* instantiates the head of the speaker/hearer-related projection AttitudeP above ForceP; accordingly, it is not a *wh*-question typing particle (*pace* Cheng's (1991) clausal typing hypothesis). Section 3 argues that Bailey's (2012/2013) account cannot be applied to Chinese.<sup>2</sup> In her analysis, question particles are negative disjunctions in a head-initial XP whose complement has been elided, thus resulting in their surface sentence-final position. Section 4 demonstrates that there is no independent empirical evidence for a derivation à la Kayne (1994), where the sentence-final position of SFPs is obtained by raising of the TP complement to the left of the head-initial C. This leads to the conclusion in section 5 that the surface sentence-final position of SFPs in Chinese must be taken at face value.

## 2. The Chinese SFPs *ma* and *ne* as heads in a split-CP

### 2.1. The split CP in Chinese

This section gives a very short and selective overview of the split CP in Chinese, concentrating on those points that are directly relevant to the issue at hand. (For an in-depth discussion, cf. Paul, 2015, ch. 7, and references therein.)

Extending Thomas Hun-tak Lee's (1986) analysis of the *yes/no* question SFP *ma* as C to all SFPs, Paul (2009, 2014) establishes a three-layered CP for Chinese: 'Low C < Force < Attitude'. This split CP replicates the traditional division of SFPs into three distributional classes, based on their rigid relative ordering (cf. Zhu Dexi 1982:207–213). It differs from Rizzi's (1997, 2004) split CP 'Finite < Force' in that there is an additional layer above ForceP, i.e. the speaker/hearer-related projection Attitude Phrase (also cf. Haegeman and Hill, 2013; Haegeman, 2014 for a similar DiscourseP above ForceP in Romanian and West Flemish). Given the still controversial status of finiteness in Chinese, the more neutral label "low C" is used instead of Rizzi's "FiniteP".

Examples (1–3) illustrate the low C *le* and *láizhe*. While *láizhe* indicates recent past, the only common denominator covering the multitude of different cases where *le* appears is that it "closes off" the sentence and relates the event to the speech time. (cf. Li and Thompson, 1981:238–300 for sixty pages of examples with *le*):

- (1) Zuótiān xià yǔ le / láizhe/ { \* le láizhe / \*láizhe le }<sup>3</sup>  
 yesterday fall rain LowC / LowC LowC LowC / LowC LowC  
 'It rained yesterday.'
- (2) Tā gāngcái hái zài bàngōngshì láizhe /\*le  
 3SG just.now still at office LowC / LowC  
 'He was in his office just now.'
- (3) Tā bì yè \*(le).  
 3SG finish study LowC  
 'She has graduated.'

Being both low Cs, *láizhe* and *le* are mutually exclusive (cf. (1)). *Le* is unacceptable in (2) because the adverb *gāngcái* 'just now' explicitly locates the event in the past, whereas *le* relates the same event to speech time. (3) Finally illustrates a case where *le* is obligatory in order to "close off" the sentence.

Concerning the SFPs realizing ForceP, besides *ma* indicating a *yes/no* question (cf. (4)), there is also the so-called "advisative" *ba* in (5) encoding a softened imperative (cf. Chao, 1968:807):

- (4) Tā bì yè le ma / \*ma le?  
 3SG finish study LowC FORCE/ FORCE LowC  
 'Has she graduated?'
- (5) Kuài diǎnr zǒu ba  
 fast a.bit walk FORCE  
 'Walk a bit faster (please).'

<sup>2</sup> While BHR (2014) refer to Bailey's doctoral dissertation as Bailey (2012) (2012 being the examination date), elsewhere her dissertation is cited as Bailey (2013) (2013 being the year of submission). In the following, we settle for Bailey (2012/2013) in order to indicate that we refer to the same work as BHR (2014).

<sup>3</sup> The following abbreviations are used in glossing examples: CL classifier; EXP experiential aspect; NEG negation; PERF perfective aspect; PL plural (e.g. 3PL = 3rd person plural); SG singular; SUB subordinator.

(4) also illustrates the rigid order reflecting the strict hierarchy between the different layers of the split CP, in this case ‘Low C < Force’.

Finally, the highest layer, AttitudeP, encodes the speaker/hearer’s belief, attitude etc. with SFPs such as *ou* issuing a ‘warning reminder’ (which fuses into a single syllable with the preceding SFP). Like the other SFPs, Attitude SFPs must obey the strict ordering restrictions within the split CP, i.e. they may never precede low C nor Force heads:

- (6) Bù zǎo l’ou [le + ou]/\*ou le. Kuài zou b’ou [ba + ou] /\*ou ba  
 NEG early LOWC+ATT/ ATT LOWC fast go FORCE+ATT/ ATT FORCE  
 ‘It’s already late! Hurry up and go!’ (Zhu Dexi 1982:208)

To summarize this short overview, SFPs form a closed set of C-elements and instantiate the different layers in a split CP. The ordering restrictions among SFPs reflecting the fixed hierarchy ‘Low C < Force < Attitude’ can be neatly captured when they are analyzed as selecting and projecting heads.

## 2.2. Yes/no questions and the interrogative force head *ma*

Before turning to the detailed discussion of *ma* questions, two other types of *yes/no* questions are briefly presented, viz. the so-called ‘A-not-A questions’ (cf. C.-T. James Huang, 1982) and questions with rising intonation alone. This allows us to obtain a more complete picture of *yes/no* question formation in Chinese and to highlight at the same time the properties that distinguish *ma* questions from other types of *yes/no* questions.

A-not-A questions are formed by the juxtaposition of the predicate in its positive and negative form:

- (7) Tāmen jīntiān lái bù lái?  
 3PL today come NEG come  
 ‘Do they come today?’<sup>4</sup>

Besides the subtle semantic difference between A-not-A questions and *ma*-questions (the latter encoding both neutral questions as well as questions containing a presupposition), A-not-A questions are also subject to syntactic constraints not observed for questions with *ma*. (For an exhaustive overview, cf. Hagstrom, 2006.)

First, the presence of negation (cf. (8)), manner adverbs (cf. (9)) and certain epistemic adverbs (cf. (10)) blocks A-not-A question formation (cf. Ernst, 1994), whereas the corresponding *ma*-questions are all well-formed:

- (8a) Nǐmen míngtiān bù zài ma?  
 2PL tomorrow NEG be FORCE  
 ‘Are you not at home tomorrow?’
- (8b) \*Nǐmen míngtiān bù zài bu zài?  
 2PL tomorrow NEG be NEG be
- (9a) Tāmen rènzhēnde niàn shū ma?  
 3PL conscientiously study book FORCE  
 ‘Do they study conscientiously?’
- (9b) \*Tāmen rènzhēnde niàn bù niàn shū ?  
 3PL conscientiously study NEG study book
- (10a) Tā yīdìng qù ma? (Ernst, 1994:243)  
 3SG definitely go FORCE  
 ‘Is he definitely going?’
- (10b) \*Tā yīdìng qù bù qù ?  
 3SG definitely go NEG go

<sup>4</sup> As extensively discussed in Huang (1982), A-not-A questions are fundamentally different from disjunctive questions. This is the reason why in general A-not-A questions are not translated as disjunctive questions: ‘Do they come today or not?’

Second, in A-not-A question, only *wh*-phrases in postverbal position can be interpreted as *wh*-indefinites (cf. (11a)), to the exclusion of preverbal *wh* adjunct phrases in (11b) (cf. C.-T. James Huang, 1982:169; ch. 4.1.2; Y.-H. Audrey Li, 1992; Pan, 2011, ch. 5 and references therein). In *ma* questions, however, a *wh* phrase in postverbal or preverbal position receives an indefinite interpretation (cf. (12a–c))<sup>5</sup>:

- (11a) Nǐ yào bù yào chī shénme?  
2<sub>SG</sub> want NEG want eat what  
'Do you want to eat anything?'
- (11b) \*Nǐ [zài nǎlǐ] niàn bù niàn shū ?  
2<sub>SG</sub> at where study not study book  
[Intended: 'Are you studying anywhere?']
- (12a) Nǐ xiǎng chī shénme ma?  
you want eat what FORCE  
'Do you want to eat anything?'
- (12b) Nǐ [zài nǎlǐ] niàn shū ma ?  
you at where study book FORCE  
'Are you studying anywhere?'

To conclude, A-not-A questions and *ma* questions are subject to different syntactic and semantic constraints. In many cases, the question with *ma* is the only option available, which leads Hagstrom (2006:211) to consider the *ma*-question as a “true” *yes/no*-question.

Let us now turn to *yes/no* questions that are formed by a rising intonation alone, illustrated in (13b) (cf. among others Chao, 1968:41, 801; Lu Jianming, 1985:236):

- (13a) Tā zài Běijīng gōngzuò  
3<sub>SG</sub> at Beijing work  
'He works in Beijing.'
- (13b) Tā zài Běijīng gōngzuò ↑ ?  
3<sub>SG</sub> at Beijing work  
'Does he work in Beijing?'

Importantly, there exist quite a few syntactic contexts in Chinese where the option of exclusively using intonation to encode a *yes/no* question is excluded.

In tag questions with *bù shì ma* 'isn't it (so)?', the SFP *ma* is obligatory and cannot be “replaced” by a rising intonation.

- (14) Nǐ zài Běijīng gōngzuò, bú shì\*(ma) ?  
2<sub>SG</sub> at Beijing work not be FORCE  
'You work in Beijing, don't you?'

Similarly, in the presence of *wh*-indefinite construals 'something, someone', a *yes/no* question requires the presence of *ma*, because otherwise the sentence – due to the rising intonation – is analyzed as a *wh* question (cf. Victor Junnan Pan, 2011:chapter 5):

- (15a) Nǐ xiǎng chī diǎn shénme ↑ ?  
2<sub>SG</sub> want eat a.bit what  
'What do you want to eat?'
- (15b) Nǐ xiǎng chī diǎn shénme ma ?  
2<sub>SG</sub> want eat a.bit what FORCE  
'Do you want to eat a little something?'

<sup>5</sup> As observed by Huang (1982, ch. 4.1.2), neither A-not-A questions nor *ma* questions allow for the *wh*-indefinite construal of the subject.

- (15c) Ta pà shéi huì dǎ ta ↑ ?  
 3<sub>SG</sub> fear who will beat 3<sub>SG</sub>  
 ‘Who does he fear will beat him?’
- (15d) Ta pà shéi huì dǎ ta ma ?  
 3<sub>SG</sub> fear who will beat 3<sub>SG</sub> FORCE  
 ‘Is he afraid that someone will beat him?’

In this respect, Chinese is on a par with English, where a *yes/no* question can be either formed by subject-auxiliary inversion (SAI) or by a rising intonation. Evidently, this does not imply that they are equivalent or that the existence of rising intonation renders SAI “optional” in the sense that it is not SAI that contributes the question interpretation. Quite on the contrary, [Gunlogson \(2001\)](#) provides extensive evidence to show that questions formed by rising intonation (her “rising declaratives”) (cf. 16a) are clearly different from SAI questions (cf. 16b) and share properties with declarative sentences (her “falling declaratives”).

- (16a) It’s raining?  
 (16b) Is it raining?

More precisely, “rising and falling declaratives share an aspect of conventional meaning attributable to their declarative form”, and “. . . [the] declarative form (in contrast to interrogative) expresses commitment to the propositional content of the declarative”. Accordingly, rising declaratives are not inherently questioning ([Gunlogson, 2001:v–vi](#)).

Negative Polarity Items, for example, are licensed in SAI only, not in *yes/no* questions formed by rising intonation:

- (17a) \* You saw anyone ↑ ?  
 (17b) Did you see anyone?

Furthermore, on a par with tag questions in Chinese, English tag questions cannot be formed by a rising intonation, but require SAI instead:

- (18) You teach in Cambridge, don’t you / \*you don’t ↑ ?

Finally, [Ruan Lüna \(2004:23–25\)](#) and [Wang and Ruan \(2005:347\)](#) demonstrate the differences in intonation for Chinese *yes/no* questions with and without *ma*. The authors examine the acoustic properties of three types of sentences: (19a) particle-less *yes/no* questions with rising intonation; (19b) confirmation-seeking questions with the particle *ba*<sup>6</sup>; (19c) *yes/no* questions with the particle *ma*.

- (19a) Zhàoqing yào qù shòupiaochù ↑  
 Zhaoqing will go ticket-booth  
 ‘Zhaoqing will go to the ticket-booth?’
- (19b) Zhàoqing yào qù shòupiaochù ba?  
 Zhaoqing will go ticket-booth BA  
 ‘Zhaoqing will go to the ticket-booth, won’t he?’<sup>7</sup>
- (19c) Zhàoqing yào qù shòupiaochù ma?  
 Zhaoqing will go ticket-booth FORCE  
 ‘Will Zhaoqing go to the ticket-booth?’

For the 23 triplets investigated, they obtain a clear contrast between the particle-less questions and the *yes/no* questions with *ma*. More precisely, the nucleus pitch range in intonation questions is significantly wider than in *ma*-questions.

<sup>6</sup> This *ba* is different from the advisative *ba* encoding a softened imperative (cf. (5)).

<sup>7</sup> Naturally, the translation of sentence (19b) as a tag question in English does not imply that *ba* has the syntactic status of a tag in Chinese.

Accordingly, from an acoustic point of view, a *ma*-question cannot be analyzed as an intonation question with the SFP *ma* simply added on. This acoustic evidence in combination with the different syntactic constraints holding for intonation questions vs *ma* questions demonstrates that BHR's (2014:201) scenario does not hold for *ma*: "Conceivably, then, the languages in question have an abstract head in the left periphery encoding question force, triggering question intonation in the languages that have it, which is optionally doubled [...] by a final overt particle."

### 2.3. The Attitude head *ne*

The second "optional" SFP in Mandarin Chinese mentioned by BHR (2014:200) is *ne*. Note from the very outset that *ne* is a head realizing the speaker/hearer related AttitudeP, not ForceP. Accordingly, *ne* is not a question particle on a par with *ma* (pace Lisa L.-S. Cheng, 1991), a fact well-documented in the literature (cf. among others Hu Mingyang 1981:418; Jin Lixin 1996; Paris, 1981:389; Li and Thompson, 1981:305).<sup>8</sup> In other words, in a *wh*-question, *ne* is not obligatory for the simple reason that this SFP does not encode the interrogative force. However, if one wants to signal the discourse function associated with *ne*, which inter alia is to solicit the co-speaker's attention, rendered here by 'listen, and ...', *ne* is evidently required (cf. among others Wu Guo 2005, V.-J. Pan, 2011):

(20a) Nǐ jīntiān xiǎng qù nǎr?  
2SG today want go where  
'Where do you want to go today?'

(20b) Nǐ jīntiān xiǎng qù nǎr ne?  
2SG today want go where ATT  
'Listen, and you, where do you want to go today?'

Furthermore, as is equally well-known, *ne* is not limited to *wh*-questions (pace Lisa L.-S. Cheng, 1991), but can also be present in A-not-A questions, unlike *ma*:

(21a) Tā míngtiān néng bù néng lái?  
3SG tomorrow can NEG can come  
'Can he come tomorrow?'

(21b) Tā míngtiān néng bù néng lái ne /\*ma?  
3SG tomorrow can NEG can come ATT/ FORCE  
'Listen, and he, can he come tomorrow?'

In fact, *ne* is also compatible with a non-interrogative complement, which confirms that it is not an interrogative force related typing particle.

(22) Bālí míngtiān yào xià xuě ne!  
Paris tomorrow will fall snow ATT  
'Imagine, it is going to snow tomorrow in Paris!'

Within the split CP proposed for Chinese by Paul (2014), (TP) < lowCP < ForceP < AttitudeP, *ne* is thus not a force head like *ma*, but realizes the speaker/hearer related projection AttP above ForceP.<sup>9</sup> These discourse particles in AttP are not "optional" either, given that their presence/absence inevitably leads to a different interpretation, as also noted by Biberauer, Haegeman and van Kemenade (2014:9). *Ne* in (22), for example, is obligatory.

Having established that the SFP *ne* is an Attitude head, not a *wh*-question "typing particle" as claimed by Lisa L.-S. Cheng (1991), it is no longer surprising that *ne* is compatible with declaratives (cf. (22) above) and different types of questions, including rhetorical questions:

<sup>8</sup> Since *ne* is not a *wh*-question typing particle à la Cheng (1991), it does not qualify as an interrogative Force head and can therefore not be analyzed as the overt realization of the null operator present in *wh* questions, either (pace Aoun and Li, 1993). For a critical appraisal of Lisa L.-S. Cheng's (1991) Clause typing hypothesis in general, cf. Bruening (2007).

<sup>9</sup> This is not what Paul (2014) says. She analyses *ne* as a force head encoding "follow-up" questions, i.e. questions not asked "out of the blue", while at the same time observing the well-formedness of *wh*-questions and A-not-A questions without *ne*.

- (23a) [<sub>ForceP</sub>[<sub>Force°</sub> ¬] [<sub>TP</sub> Tā nǎr huì shuō hànyǔ]]?!  
 3SG where can speak Chinese  
 ‘In which world can he speak Chinese?!’ = ‘He cannot speak Chinese at all!’
- (23b) [<sub>AttP</sub> [<sub>ForceP</sub> [<sub>Force°</sub> ¬] [<sub>TP</sub> Tā nǎr huì shuō hànyǔ]] [<sub>Att°</sub> ne]]?!  
 3SG where can speak Chinese ATT  
 ‘Oh, come on, he cannot speak Chinese at all!’

If *ne* were not an Attitude head, but a *wh*-question typing particle, i.e. obligatory for *wh*-in situ languages, its presence in A-not-A questions (cf. (21b) above) would force us to treat the latter as a type of *wh*-questions as well, clearly an undesired result. In addition, as is well known, the question interpretation obtains in the absence of *ne*, both in A-not-A questions (cf. (21a) above) and *wh*-questions (cf. (24)):

- (24a) [<sub>ForceP</sub> [<sub>Force°</sub> Op] [<sub>TP</sub> Nǐ xǐhuān nǎ zuò chéngshì]] ?  
 2SG like which CL city  
 ‘Which city do you like?’
- (24b) [<sub>AttP</sub> [<sub>ForceP</sub> [<sub>Force°</sub> Op] [<sub>TP</sub> Nǐ xǐhuān nǎ zuò chéngshì]] [<sub>Att°</sub> ne]]?  
 2SG like which CL city ATT  
 ‘Listen, which city do you like?’

To summarize, even though the exact semantic contribution of *ne* is difficult to capture, a problem typical of Attitude heads in general, it is evident that *ne* is obligatory if the associated meaning is to be expressed. Against this background, it does not make much sense to talk about “optionality” as a general feature of SFPs, as BHR (2014:201) do, where SFPs are said to “optionally double” the information encoded by an abstract head which in turn triggers a given intonation. SFPs as merely “doubling” information encoded elsewhere in the sentence is in any case unfeasible as soon as the entire array of SFPs realizing the three different layers is taken into account (cf. section 2.1). In addition, as laid out in detail by an anonymous reviewer, this “doubling” analysis can in any case not rescue the FOFC. If the second, “doubling” element, does not constitute some sort of orphaned element or purely phonological add-on, it still represents a problem for the FOFC. This is because *merge* is considered a binary operation, and the “second part” of a “doubled” element would still need to be merged independently of the first. It is therefore not clear how a “discontinuous” element would be able to escape FOFC’s logic, given that the FOFC is defined over syntactic mergers — and crucially not over “elements that often appear together” or “elements that are lexically linked in some way”.

### 3. An anti-disjunction analysis of *ma*

Having established that the SFPs *ma* and *ne* are not “optional doublers”, we now turn to their syntactic analysis. In the literature on Chinese, since Thomas Hun-tak Lee (1986), *ma* has been analyzed as a C taking its clausal complement to the left:

- (25) [<sub>CP</sub> [<sub>TP</sub> Tā zài Běijīng gōngzuò] ma]?  
 3SG at Beijing work FORCE  
 ‘Does he work in Beijing?’

Given that this widely accepted analysis leads to a FOFC violation (a head-final CP dominating a head-initial TP), BHR (2014:201) adopt Bailey’s (2012/2013) general account of final question particles in VO languages (implemented for Vietnamese in her thesis). “As also discussed by Bailey (2010, 2012), at least some of the apparently FOFC-violating final question particles may actually be initial negative disjunctions of an elided disjunct clause. The structure of these *yes/no* questions would be [Q [<sub>TP</sub> [OR-NOT TP]]], where ellipsis of the second TP, identical with the first TP, leaves the negative disjunction as an apparently clause-final particle (see also Aldridge, 2011; Yaisonmanang, 2012). [. . .] If these [i.e. the apparently FOFC-violating structures with SFPs; VJP & WP] are partially disguised coordinate structures, then there is no FOFC violation [. . .].” In fact, it is not entirely correct to refer to Aldridge (2011) as confirming evidence for the FOFC, as BHR (2014:201) in the passage just cited do. Aldridge (2011) only postulates the head-initial disjunction structure as input structure for the diachronic reanalysis of the negative existential verb *wu* as an interrogative C *wu* (ultimately resulting in *ma* via phonological changes). By contrast, as output structure after reanalysis she explicitly posits [<sub>CP</sub> TP C<sub>Q</sub>] (cf. p. 443, (62)) “in which the TP to the left of *wu* is analyzed as its complement, rather than positing a second TP which is later



deleted.” As noted by Bailey (2012/2013:305), this head-final CP with a head-initial TP-complement induces a FOFC violation.<sup>10</sup>

As for Bailey (2012/2013:iii, (4)), she herself proposes the structure [<sub>ConjP</sub> CP [Conj ~~CP~~]], not [Q [TP [OR-NOT TP]]], i.e. for Bailey the clausal complement of Conj° elided under identity with that in Spec, ConjP is CP, not TP. However, for both BHR's (2014) and Bailey's (2012/2013) analyses, several problems arise immediately when trying to implement them for Chinese.

First, the conjunction scenario for *ma* completely glosses over the well-known existence of the true disjunctive question with *háishi* 'or' in Chinese (cf. Huang, 1982:275–276, ch.4.3.2; Huang et al., 2009, ch. 7.2):

- (26) Nǐ lái wǒ jiā háishi wǒ qù nǐ jiā?  
 2 SG come my home or 1 SG go your home  
 'Will you come to my place or shall I go to your place?'

Importantly, in such a disjunctive question *ma* is completely ungrammatical.

- (27a) \*Nǐ lái wǒ jiā háishi wǒ qù nǐ jiā ma?  
 2SG come my home or 1SG go your home FORCE
- (27b) \*Nǐ lái wǒ jiā ma háishi wǒ qù nǐ jiā ma?  
 2SG come my home FORCE or 1SG go your home FORCE

This ungrammaticality holds irrespective of whether there is one *ma* per clause or one *ma* for the entire disjunctive structure. Both (27a) and (27b) are excluded because the *yes/no* question force is in conflict with the disjunctive question force. In turn this shows that *yes/no* questions with *ma* and disjunctive questions must be distinguished and cannot be analyzed uniformly, as already demonstrated by Huang (1982). As a result, the *yes/no* question with *ma* cannot be derived from a disjunctive structure (also cf. Huang et al., 2009:242–244).

Furthermore, in addition to the interrogative disjunctive *háishi* 'or', Chinese also has the declarative disjunctive *huòzhě* 'or'.

- (28a) Nǐ lái wǒ jiā huòzhě wǒ qù nǐ jiā.  
 2SG come my home or 1SG go your home  
 'Either you come to my place or I go to your place.'
- (28b) Nǐ lái wǒ jiā háishi wǒ qù nǐ jiā ?  
 2SG come my home or 1SG go your home  
 'Will you come to my place or shall I go to your place?'

As illustrated in (28b), with *háishi* instead of *huòzhě*, we automatically obtain a disjunctive question. This is different from English and German where the formation of a disjunctive question not only requires 'or', but also subject-auxiliary inversion. In other words, *háishi* in Chinese involves both a disjunction and an interrogative operator. This is the reason for the incompatibility between a disjunctive question and the *yes/no* question SFP *ma* in (27) above.

Importantly, true disjunctive questions with *háishi* 'or' also demonstrate that the complement clause of a conjunction is not automatically deleted, unlike what Bailey (2012/2013) postulates: [<sub>ConjP</sub> CP [Conj ~~CP~~]]<sup>11</sup>:

- (29a) [<sub>ConjP</sub> [<sub>CP</sub> [TP Nǐ qù Bólín]] háishi [<sub>CP</sub> nǐ bù qù Bólín...]]?  
 2SG go Berlin or 2SG NEG go Berlin  
 'Do you go to Berlin or not?'
- (29b) \*[[<sub>ConjP</sub> [<sub>CP</sub> [TP Nǐ qù Bólín]] háishi [<sub>CP</sub> nǐ bù qù Bólín]]?  
 2SG go Berlin or 2SG NEG go Berlin

<sup>10</sup> This seems to be the reason why in the end Bailey (2012/2013:306) does not apply her own analysis to Chinese *ma*: "If Aldridge (2011) [sic] is correct [...], *ma* is not a question particle of the type investigated here [i.e. *ma* cannot be analyzed as a conjunction whose complement is elided; VJP & WP]. I leave this discussion aside here."

<sup>11</sup> Bailey (2012/2013: 305–6) mentions disjunctive questions with *háishi* in passing only and does not give any examples. It is clear that she completely misunderstands Huang et al.'s (2009: 242–244) analysis when stating inter alia that they equate *háishi* to 'whether' (Bailey, 2012/2013:305).

In order to correctly predict the data in (29a–b), Bailey (2012/2013) would need to establish two different types of “conjunctions”: the SFP *ne* would be derived from the conjunction type that always elides its complement, whereas the conjunction *háishi* ‘or’ would illustrate the conjunction type that always spells out its complement.

However, even granted this stipulation, Bailey’s scenario still fails in the case of disjunctions where each conjunct bears a sentence final particle, such as the Attitude head *ne* (a case not considered by Bailey, 2012/2013):

- (30) Nǐ qù Bólín *ne* háishi wǒ qù Bō’ēn *ne* ?  
 2SG go Berlin ATT OR NEG go Bonn ATT  
 ‘Listen, will you go to Berlin or should I go to Bonn?’

As far as we can see, a bottom-to-top derivation of (30) is impossible, because it would crash at the point where the syntactic object (31a) *háishi wǒ qù Bō’ēn ne* ‘or should I go to Bonn *ne*’ is merged with the topmost *ne* (cf. 31b), given that within Bailey’s approach *ne* would be a conjunction that requires the deletion of its complement.

- (31a) [<sub>ConjP2</sub> (*háishi*) [<sub>ConjP1</sub> CP [<sub>Conj1'</sub> *ne* <CP>]]]  
 (31b) # [<sub>Conj3P</sub> ConjP2 [<sub>Conj3'</sub> *ne* [<sub>ConjP2</sub> (*háishi*) [<sub>ConjP1</sub> CP [<sub>Conj1'</sub> *ne* <CP>]]]]]

(31b) excludes the existence of sentences such as (30), contrary to fact.

The only remaining possibility to derive (30) would be to first construct each conjunct (including *ne*) separately and then merge them with *háishi* ‘or’;

- (32) \* [<sub>Conj2P</sub> [<sub>Conj3P</sub> CP2 [<sub>Conj3'</sub> *ne* <CP2>]] [<sub>Conj2'</sub> (*háishi*) [<sub>ConjP1</sub> CP1 [<sub>Conj1'</sub> *ne* <CP1>]]]]

However, given Bailey’s (2012/2013:284) assumption that “conjunctions may select, but not be selected”, her ConjP *wǒ qù Bō’ēn ne* in fact cannot be selected as complement by the conjunction *háishi* ‘or’, and the derivation crashes again. There is thus no way to correctly account for the structures in (29–30) within Bailey’s (2012/2013) approach, and it can therefore not be applied to Chinese.

Based on Bailey (2012/2013), BHR (2014) propose a slightly different scenario for *yes/no* questions, which encounters similar problems to those already outlined above. *Yes/no* question particles such as *ma* are again analyzed as head-initial negative disjunctions [Q [TP [OR-NOT TP]]] with the question force encoded by a higher null interrogative operator. In contrast to Bailey, this negative disjunction selects a TP complement (instead of a CP) which is elided under identity with the first TP. This leaves the negative disjunction as a surface SFP [Q [TP [OR-NOT  $\overline{TP}$ ]]]. However, like Bailey, BHR (2014) gloss over the existence of the disjunction *háishi* ‘or’ in Chinese. Accordingly, the status of their “negative disjunction” OR-NOT is not clear. If OR-NOT stands for the sequence *háishi* ‘or’ + the negation *bù* ‘not’, *háishi* ‘or’ and *bù* ‘not’ will be stranded after the deletion of second TP, leading to the ungrammatical sentence (33a). If OR-NOT stands for a conjunction with negation incorporated, the resulting sentence is ungrammatical as well (cf. 33b).

- (33a) \* [Q [<sub>TP</sub> Nǐ qù Bólín] [háishi bù  $\overline{TP}$ ]]?  
 2SG go Berlin OR NOT

- (33b) \* Nǐ qù Bólín háishi ?  
 2SG go Berlin OR-NOT

BHR’s analysis of *yes/no* question SFPs as disjunctions is crucial for their purpose, insofar as disjunctions, on a par with conjunctions, are considered to be “acategorical”, i.e. they do not c-select specific complements and hence do not “count” with respect to the FOFC. This acategorality does, however, not hold in the case of Chinese SFPs which can only c-select TP and CP.

To conclude, an analysis of question particles as negative disjunctions whose complement has been elided, [<sub>ConjP</sub> CP [Conj  $\overline{CP}$ ]], is not feasible for Chinese. Accordingly, BHR’s (2014:201–203) characterization of such conjunctions as “acategorical elements”, hence not violating the FOFC, cannot be applied to Chinese *ma*.

#### 4. Against an antisymmetry approach

Alternatively, can the sentence final position of SFPs *qua* Cs in Chinese be accommodated by an analysis à la Kayne (1994) where a head-final CP is derived from a head-initial CP by raising the complement TP to the specifier? Naturally in the past, there have been proposals deriving SFPs in Mandarin Chinese from an underlying head-initial projection, such

as Sybesma (1999) and Hsieh and Sybesma (2008).<sup>12</sup> Sybesma's (1999) analysis is based on Tsai's (1994) unselective binding approach. Tsai (1994) postulates a null *wh*-operator Op at the sentential level (CP/IP) which scopes over the remaining sentence (including the in situ *wh*-word). Importantly, he does not postulate raising of the IP to the left of Op.

(34) [CP/IP Op [IP...*wh*...]]

However, if we now turn to Sybesma's (1999) implementation of Tsai's original proposal, we see that he complements Tsai's sentence initial operator by a sentence initial overt question SFP *ma*. The IP including the operator Op then raises to the [Spec, CP] headed by *ma*, deriving the correct surface order.

(35) Sybesma's proposal:

[CP Q-*ma* [IP Op [IP...*wh*...]] → [CP [IP Op [IP...*wh*...]]<sub>i</sub> [Q-*ma* t<sub>j</sub>]]

This type of proposal encounters several problems, one of which is the general incompatibility between the *wh*-question operator, Op, and the *yes-no* question marker *ma*. It is impossible for two different illocutionary force operators to co-exist in the same sentence, given that the same sentence cannot be simultaneously interpreted as a *yes-no* question and *wh*-question. Nevertheless, Hsieh & Sybesma (2008) maintain Sybesma's (1999) analysis without providing any other motivation than the principled undesirability of mixed head-directionality; according to them, this creates a complex parameter setting and causes problems for language acquisition. This is, however, not borne out by experimental studies. Quite on the contrary, Lee et al. (2005) observe that Chinese SFPs are acquired without any problem before the age of two years, against the background of SVO order. Proposals claiming underlyingly head-initial SFPs have so far not been able to adduce any independent empirical evidence and their choice is solely determined by the effort to obtain uniform head-directionality, although the latter has been demonstrated not to be part of grammar (cf. among others Newmeyer, 2005, chapter 2 for extensive discussion). If notwithstanding the lack of independent empirical evidence for the antisymmetry approach, one nevertheless tries to derive SFPs from an underlyingly head-initial position, technical difficulties arise. For example, as pointed out by Bayer (1999, section 3) (also cf. Abels and Neeleman, 2012), it remains entirely stipulative that it is the entire TP that must move in order to check the movement triggering feature of C, for such a feature could very well be checked by moving a subconstituent of TP, e.g. the object or the subject. This requirement also runs counter the generally observed non-movability of TP to the left (including local movement). Bayer (1999:250) therefore concludes that head-final Cs should not be analyzed as attractors of TP and that head-final CPs are indeed merged as such. This is also the stand expressed by an anonymous reviewer who points to the very few empirical advantages to be gained from an antisymmetric analysis of Chinese SFPs; its sole *raison d'être* seems to be to rescue the FOFC.

<sup>12</sup> As pointed out by an anonymous reviewer, Cheung (2009) also postulates a head-initial position for SFPs in Cantonese. As acknowledged by Cheung himself, the construction discussed by him exclusively involves the so-called "afterthought construction" or "right dislocation", typical of spontaneous speech:

(i) Hou hongoi lo1, go go sailouzai  
 very lovely SP Dem Cl kid  
 'The kid is lovely.'

(Cheung, 2009:200, (4))

Note immediately that Cheung's own translation completely glosses over the syntactic and semantic particularities of the afterthought construction in (i) and presents it as though illustrating the canonical word order 'S VP'. In fact, the literal equivalent of (i) in English is 'Is lovely, that kid.' In the derivation proposed by Cheung for this sentence type, the SFP *lo1* realizes a head-initial C<sup>0</sup> taking IP as its complement; IP itself is composed of two parts [α β]:

(ii) a. [CP C<sup>0</sup>-SFP [IP α β]] → [FOCUSP β<sub>i</sub> [CP C<sup>0</sup>-SFP [IP α t<sub>j</sub>]]]  
 b. [FOCUSP [Hou hongoi lo1]<sub>i</sub> [CP C<sup>0</sup>-lo1 [IP go go sailouzai t<sub>j</sub>]]]  
     very lovely SP                      Dem Cl kid

Leaving aside that in all of his examples only β moves, but never α, notwithstanding its greater proximity to C, the fundamental problem with the scenario in (ii) is that β and C do not form a constituent. This goes against all the existing studies of the afterthought construction since Chao (1968) and Lu (1980), who all agree on the constituent status of the first part including the SFP when present, and the existence of an intonational break (indicated by the comma) before the afterthought part. For an analysis of the afterthought construction in Mandarin as involving (right) adjunction to the matrix sentence (TP or CP), cf. Gasde & Paul (1996), Paul (2014) and references therein.

## 5. Conclusion

This article has argued that the Chinese SFPs *ma* and *ne* are Cs in a head-final CP. They cannot be derived from a disjunction structure with the SFPs heading a head-initial ConjP whose complement has been elided under identity with the clausal projection in Spec,ConjP. Given the large array of semantically very diverse SFPs the majority of which are not related to interrogative Force, such a disjunction account is in any case not feasible for all SFPs. A Kaynean raising analysis of TP to [Spec, CP], though technically feasible, does not seem to be backed up by any independent empirical evidence. As a result, the surface sentence-final position of SFPs in Chinese must be taken at face value. Whether this likewise holds for other VO languages with SFPs such as Vietnamese and what consequences arise from the existence of head-final CPs in VO languages for typology are challenging issues for future research.

## References

- Abels, K., Neeleman, A., 2012. Linear asymmetries and the LCA. *Syntax* 15, 25–74.
- Aldridge, E., 2011. *Neg-to-Q: the historical origin and development of question particles in Chinese*. *Linguist. Rev.* 28, 411–447.
- Aoun, J., Li, Y.-H.A., 1993. *Essays on the Representational and Derivational Nature of Grammar. The Diversity of wh-Constructions*. MIT Press, Cambridge, Mass.
- Bailey, L., 2010. *Sentential Word Order and the Syntax of Question Particles*. Newcastle Work. Pap. Linguist. 16 (1), 23–43.
- Bailey, L., 2012/2013. *The Syntax of Question Particles (Doctoral dissertation)*. Newcastle University.
- Bayer, J., 1999. *Final complementizers in hybrid languages*. *J. Linguist.* 35, 233–271.
- Biberauer, T., Haegeman, L., van Kemenade, A., 2014. Putting our heads together: towards a syntax of particles. *Stud. Linguist.* 68 (1), 1–15.
- Biberauer, T., Holmberg, A., Roberts, I., 2014. A syntactic universal and its consequences. *Linguist. Inq.* 45 (2), 169–225.
- Bruening, B., 2007. *Wh-in-situ does not correlate with wh-indefinites or question particles*. *Linguist. Inq.* 38.1, 139–166.
- Chao, Y.R., 1968. *A Grammar of Spoken Chinese*. California University Press, Los Angeles et alibi.
- Cheng, L.L.-S., 1991. *On the Typology of wh-Questions (Ph.D. diss.)*. MIT.
- Cheung, L.Y.-L., 2009. *Dislocation focus construction in Chinese*. *J. East Asian Linguist.* 18, 197–232.
- Djamouri, R., Paul, W., Whitman, J., 2013. Postpositions vs. prepositions in Mandarin Chinese: the articulation of disharmony. In: Biberauer, T., Sheehan, M. (Eds.), *Theoretical Approaches to Disharmonic Word Orders*. Oxford University Press, Oxford, pp. 74–105.
- Ernst, Thomas, 1994. *Conditions on Chinese A-not-A questions*. *J. East Asian Linguist.* 3, 241–264.
- Gasde, H.-D., Paul, W., 1996. *Functional categories, topic prominence and complex sentences in Chinese*. *Linguistics* 34 (2), 263–294.
- Gunlogson, C., 2001. *True to Form: Rising and Falling Declaratives as Questions in English (Doctoral diss.)*. University of California, Santa Cruz.
- Haegeman, L., 2014. *West Flemish verb-based discourse markers and the articulation of the speech act layer*. *Stud. Linguist.* 68 (1), 116–139.
- Haegeman, L., Hill, V., 2013. *The syntacticization of discourse*. In: Folli, R., Sevdali, C., Truswell, R. (Eds.), *Syntax and its Limits*. Oxford University Press, Oxford, pp. 370–390.
- Hagstrom, P., 2006. *A-not-A questions*. In: Everaert, M., van Riemsdijk, H. (Eds.), *The Blackwell Companion to Syntax*, vol. 1. pp. 173–213.
- Haider, H., 2013. *Symmetry Breaking in Syntax*. Cambridge University Press, Cambridge.
- Hsieh, F.-f., Sybesma, R., 2008. *Generative syntax and sentence-final particles in Chinese*. In: Shen, Y., Feng, S. (Eds.), *Contemporary Linguistic Theories and Related Studies on Chinese*. The Commercial Press, Beijing, pp. 364–374.
- Hu, M., 1981. *Beijinhua de yuqi zhuci he tanci (Mood particles and interjections in the Beijing dialect)*. *Zhongguo Yuwen* 5, 347–350; 6, 416–423.
- Huang, C.-T.J., 1982. *Logical Relations in Chinese and the Theory of Grammar (Ph.D. diss.)*. MIT [published 1998 by Garland, New York and London.]
- Huang, C.-T., James, Y.-H., Li, A., Li, Y., 2009. *The Syntax of Chinese*. Cambridge University Press, Cambridge.
- Jin, L., 1996. *Guanyu yiwentu zhong de ne (On the particle ne in questions)*. *Yuyan jiaoxue yu yanjiu* nr 4, 43–49.
- Kayne, R.S., 1994. *The Antisymmetry of Syntax*. MIT Press, Cambridge, MA.
- Lee, H.-t.T., 1986. *Studies on Quantification in Chinese (Ph.D. diss.)*. University of California at Los Angeles.
- Lee, H.-t.T., Zhang, Q., Fang, L., Yang, X., 2005. *The Acquisition of Sentence-final Particles in Beijing Mandarin*. Paper Presented at the Thirteenth Annual Meeting of the International Association of Chinese Linguistics, University of Leiden, June 9–11.
- Li, Y.-H.A., 1992. *Indefinite wh in Mandarin Chinese*. *J. East Asian Linguist.* 1, 125–155.
- Li, C.N., Thompson, S.A., 1981. *Mandarin Chinese. A Functional Reference Grammar*. California University Press, Los Angeles et alibi.
- Lu, J., 1980. *Hanyu kouyu jufali de yiwei xianxiang (Inversion in the grammar of spoken Chinese)*. *Zhongguo Yuwen* 1, 28–41.
- Lu, J., 1985. *Guānyú xiàndài hànyǔ lǐ de yiwèn yǔqí (On question particles in contemporary Chinese)*. *Yufa yanjiu he tansuo* 3, 233–246.
- Newmeyer, F., 2005. *Possible and probable languages. A generative perspective on linguistic typology*. Oxford University Press, Oxford.
- Pan, V.J., 2011. *Interrogatives et quantification en chinois mandarin: une approche générative*. Presses Universitaires de Rennes, Rennes.
- Paris, M.-C., 1981. *Problèmes de syntaxe et de sémantique en linguistique chinoise*. Collège de France, Paris.
- Paul, W., 2009. *Consistent Disharmony: Sentence-final Particles in Chinese*. CRLAO, Paris (Unpublished MS). Available at: <http://crlao.ehess.fr/index.php?177>
- Paul, W., 2014. *Why particles are not particular: Sentence-final particles in Chinese as heads of a split CP*. *Stud. Linguist.* 68 (1), 77–115.
- Paul, W., 2015. *New Perspectives on Chinese Syntax*. De Gruyter Mouton, Berlin.
- Rizzi, L., 1997. *The fine structure of the left periphery*. In: Haegeman, L. (Ed.), *Elements of Grammar*. Kluwer, Dordrecht et alibi, pp. 281–337.
- Rizzi, L., 2004. *Locality and left periphery*. In: Belletti, A. (Ed.), *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3. Oxford University Press, Oxford, pp. 104–131.
- Ruan, L., 2004. *Hanyu Yiwentu Yudiaoyanjiu (Research on the Intonation of Interrogative Sentences in Chinese)*. (M.A. thesis). Beijing Language and Culture University, Beijing.

- Sybesma, R., 1999. Overt *wh*-movement in Chinese and the structure of CP. In: Wang, H.-S., Tsai, F.-F., Lien, C.-F. (Eds.), *Selected Papers from the Fifth International Conference of Chinese Linguistics*. The Crane Publishing Co., Taipei, pp. 279–299.
- Tsai, W.-T.D., 1994. *On Economizing the Theory of A-bar Dependencies* (Ph.D. diss.). MIT.
- Wang, W., Ruan, L., 2005. Putonghua Yiwenju Yudiao de Shiyan Yanjiu (Experimental research on the intonation of interrogative sentences in Mandarin). In: *Proceedings of the National Conference on Man-Machine Speech Communication (NCMSC-8)*, Chinese Academy of Sciences, Beijing, pp. 344–349.
- Wu, Guo, 2005. The discourse function of the Chinese particle *ne* in statements. *J. Chin. Lang. Teach. Assoc.* 40 (1), 47–81.
- Yaisonmanang, S., 2012. *The Syntax of Yes-no Questions and Answers in Thai* (Doctoral dissertation). Newcastle University.
- Zhu, D., 1982. *Yufa jiangyi* (On Grammar). Shangwu yinshuguan, Beijing.