

***Wh-ex-situ in Mandarin Chinese:  
Mapping Between Information Structure and Split CP\****

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**Abstract**

This paper examines the so-called *wh-ex-situ* phenomenon in Mandarin Chinese. It shows that there are four different types of *wh-ex-situ* in the left-periphery of Mandarin: Type I: extracted *wh*-topic, Type II: extracted *wh*-focus, Type III: base-generated *wh*-topic and Type IV: base-generated *wh*-focus. This differs from preceding accounts which analyze all *ex-situ wh*-phrases either as topics (cf. Tang 1988, Wu 1999) or as foci (cf. Cheung 2008, 2014). These four types display different syntactic and semantic properties. While *wh*-topics (extracted and base-generated) must be D-linked and obey locality constraints as well as the “episodic eventuality” constraint (cf. Zhang 2002), *ex-situ wh*-foci do not. However, the four types all satisfy general semantic constraints on interrogatives. Within the split-CP architecture in Chinese, *ex-situ wh*-topics and *ex-situ wh*-foci occupy different positions, TopP being higher than FocP.

**Key words** : *wh-ex-situ*, left periphery, topicalization, cleft focus, Mandarin Chinese

**1. Introduction**

Chinese is a typical *wh-in-situ* language where *wh*-words stay in their original positions without moving to the scope position [Spec, CP] (cf. 1).

- (1) Zhāngsān mǎi-le shénme ?<sup>1</sup>  
Zhangsan buy-Perf what  
‘What has Zhangsan bought?’

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\* Earlier versions of this article were presented on different occasions where I got useful and important feedback as well as suggestions from the audience and participants. I express my gratitude to: Jianhua Hu (16<sup>th</sup> Symposium of Modern Chinese Grammar, City University of Hong Kong, 2009), Audrey Yen-Hui Li, Lisa Lai-Shen Cheng (The 17<sup>th</sup> Annual Conference of the International Association of Chinese Linguistics, CRLAO, Paris, 2009), Josef Bayer, Andreas Haida, Sophie Repp, Clemens Mayr, Patrick Grosz, Hans-Martin Gärtner (Workshop Information Structure in Non-Assertive Speech Acts at the 34<sup>th</sup> Annual Meeting of the German Linguistic Society (DGfS), Frankfurt, 2012), Waltraud Paul (25<sup>ième</sup> Journées de Linguistique d’Asie Orientale, CRLAO, Paris, 2012), Ricardo Etxepare, Malte Zimmermann (special thanks for the semantic analysis !), Jenneke van der Wal, Robert Van Valin and Dejan Matic (Workshop Categories of Information Structure across Languages, Max Planck Institute for Psycholinguistics, Nijmegen, 2012). The present article was taken as teaching material for different classes; on these occasions I benefited from the discussion with the students and the comments from colleagues, especially, Haihua Pan (invited talk at the Department of Foreign Languages, Beijing Language and Culture University, 2014), Linda Badan, Chiara Romagnoli (course given at the 9<sup>th</sup> EACL Spring School in Chinese Linguistics, Roma Tre University, 2014) and M. M. Jocelyne Fernandez-Vest (course given at the PhD Seminar Information Structuring of Spoken Discourse : Question-Answer Pairs and Genre, Université Sorbonne Nouvelle-Paris 3, 2014). The anonymous reviewers gave me many critics and suggestions which helped me to shape the final version. Last, but not least, this article would not have been published without the help and the encouragement from David Willingham, editor of *Linguistic Analysis*. Of course, any remaining error and shortcoming are mine.

<sup>1</sup> The abbreviations used in the glosses are as follows: Cl: classifier; DE: the structural particle placed between an NP and its determiner; Exp: experiential aspect; Neg: negative element; Perf: perfective aspect marker; SFP: Sentence Final Particle; TM: Topic Marker.

In the literature, several interpretation mechanisms are proposed to account for the in-situ *wh*-questions; these include LF-movement (Huang 1982), the Clausal Typing Hypothesis (Cheng 1991), the QU-operator analysis (Aoun & Li 1993), the unselective binding mechanism (Tsai 1994). Most of the above authors agree on the variable status of *wh*-nominals<sup>2</sup>. The binder for *wh*-nominals can be a morphological null operator, QU, in the sense of Aoun & Li (1993) or a syntactic typing particle in the sense of Cheng (1991).

However, as observed in Tang (1988) and Wu (1999) in Chinese a non-subject *wh*-word can also appear in the sentence initial position (cf. (2)). Both authors assume that the *wh*-word *shénme* ‘what’ has moved from its postverbal base position to the pre-subject position and they treat this movement as topicalization.

- (2) Shénme<sub>j</sub> Zhāngsān mǎi-le t<sub>j</sub> ?  
 what Zhangsan buy- Perf  
 ‘What has Zhangsan bought?’ (Wu 1999:82)

As to be discussed in detail in section 2 below, a bare *wh*-word such as *shénme* ‘what’ is acceptable in topic position only when contextually Discourse-linked. In addition, a pause indicated by a comma is obligatory.

Contrary to Tang (1988) and Wu (1999), Cheung (2008, 2014) treats *wh*-fronting as contrastive focalization or cleft-constructions, respectively.<sup>3</sup> Under her approach the fronted *wh*-words are analyzed as cleft foci, for, as she states, the fronted *wh*-word can be optionally preceded by the copula *shì* ‘be’ used in cleft-constructions in Chinese.

- (3) (Shì) shénme dōngxi, Mǎlì mǎi-le ?  
 be what thing Mary buy-Perf  
 ‘What thing was it that Mary bought?’ (Cheung 2008:39)

Note, though, that sentence (3) is very marginal, if not downright unacceptable with the copula *shì* ‘be’ (cf. section 3 below for further discussion).

These two competing approaches differ both with respect to syntax and semantics. The debate centers on whether fronted *wh*-items should be analyzed as topics or as foci. If one wants to account for the Chinese *wh*-ex-situ case in terms of topicalization configuration, one needs to show that the movement of the *wh*-word derives a ‘topic-comment’ configuration, that the fronted *wh*-word exhibits ‘topic-like’ behavior and passes all the tests for topics. On the contrary, in order to explain fronted *wh*-items in terms of cleft focus, it is necessary to demonstrate that the fronted *wh*-word passes all the standard tests for cleft foci. One of Wu’s main arguments is that the fronted *wh*-word should be strongly presupposed. For him this is a common property of topics. Cheung’s main argument is that the fronted *wh*-words can be optionally preceded by the copula *shì* ‘be’ also used in the cleft construction. Thus, so her reasoning, they are better analyzed as foci.

In this paper, I will show that the above analyses reveal only a partial picture of a more general and more complex phenomenon of *wh*-ex-situ. The term ‘*wh*-ex-situ’ is used to refer to a *wh*-phrase in a TP-external position, i.e. in the left periphery. Such an ex-situ *wh*-phrase

<sup>2</sup> Huang (1982) treats the Chinese *wh*-words as quantifiers that undergo quantifier raising at LF, as their English counterparts do at S-S. Tsai (1994) makes a distinction between *wh*-nouns and *wh*-adverbs with regard to ECP effects: *wh*-nominals are intrinsically variables and are interpreted by unselective binding whereas the *wh*-adverbs are operators and thus are interpreted by QR.

<sup>3</sup> Since Cheung (2014) basically adopts the same treatment as the one proposed in her thesis, I will refer to both works indistinctly. Note that it is Cheung (2008, 2014) who considers contrastive focalization and cleft constructions as the same phenomenon.

can either be a topic or a focus; and each of them can be derived *via* movement or by base-generation in the left-periphery. Logically, we thus obtain four possible combinations: base-generated *wh*-topic, extracted *wh*-topic, base-generated *wh*-focus in the left-periphery and extracted *wh*-focus.

	<i>Wh</i> -topic	<i>Wh</i> -cleft focus
Extraction	Type I	Type II
Base-generation	Type III	Type IV

**Type I: extracted *wh*-topic (the gap is derived by movement)**

- (4) [<sub>DP</sub> Nǎ-yí-bù diànyǐng], [<sub>TP</sub> Zhāngsān zuì bù xǐhuān kàn \_\_\_\_ ] ?  
 which-one-Cl film Zhangsan most Neg like see  
 ‘Which movie, Zhangsan doesn’t like (it) at all?’

The sentence initial element *nǎ-yí-bù diànyǐng* ‘which movie’ is extracted from the TP and the structure is derived by movement. TP thus contains a gap. I will maintain Tang’s (1988), Wu (1999)’s claim that this is a *wh*-topicalization case.

**Type II: extracted *wh*-focus (the gap is derived by movement)**

- (5) Shì [<sub>DP</sub> nǎ-yí-bù diànyǐng], [<sub>TP</sub> Zhāngsān zuì bù xǐhuān kàn \_\_\_\_ ] ?  
 be which-one-Cl movie Zhangsan most Neg like see  
 ‘Which movie is it that Zhangsan doesn’t like at all?’

In (5), *nǎ-yí-bù diànyǐng* ‘which movie’ is also extracted from the TP and the structure is derived by movement leaving a gap. In this case, the fronted *which movie* is preceded by the copula *shì* ‘be’ whose presence is obligatory in order to obtain the cleft focus interpretation. My claim to be corroborated in the remainder of this article is that (4) and (5) must be treated separately, because the presence/absence of *shì* ‘be’ makes a crucial distinction between a cleft focus structure and a topic structure. Xu (2004) analyzes *shì* ‘be’ as a focus marker. This point of view differs from Cheung (2008, 2014) where (4) and (5) are both treated as cleft foci and where the presence of *shì* ‘be’ is claimed to be optional and hence always enclosed in parentheses (cf. (3) above).

**Type III: base-generated *wh*-topic (gapless construction)**

- (6) [<sub>DP</sub> Nǎ-gè guójiā], [<sub>TP</sub> nǐ [<sub>DP</sub> xǐhuān de dàchéngshì] bù duō ] ?  
 which-Cl country you like DE big-city not many  
 ‘Which country, its big cities that you like are not many?’

(6) illustrates a gapless topic structure since there is no position in the TP from which the topic could have originated. *Nǎ-gè guójiā* ‘which country’ is therefore base-generated in the TP-external topic position. This type differs from the extracted *wh*-topic where movement is involved. In fact, Tang (1988) and Wu (1999) do not discuss this type of *wh*-topic in their topicalisation approach and Cheung (2008) simply denies its very existence (cf. section 4 for detailed discussion).

**Type IV: base-generated *wh*-focus in the left-periphery (gapless construction)**

- (7) Shì [<sub>DP</sub> shéi de biǎoyǎn], [<sub>TP</sub> dàjiā zuótiān dōu jiào-hǎo] ?  
 be who DE performance everyone yesterday all shout-good  
 ‘(For) whose performance was it that everyone shouted “bravo!” yesterday?’

In (7), *jiào-hǎo* ‘shout “bravo”’ is a true intransitive verb that cannot take any object at all. Therefore, *shéi de biǎoyǎn* ‘whose performance’ cannot have been extracted from the TP but must be based-generated in the sentence periphery. Note that this type was not discussed in previous studies.

The crucial fact my argumentation relies on is that *shì* ‘be’ is obligatorily present in the cleft focus illustrated in (5) and (7), where it must precede the relevant NP to be focused on. This underlies the distinction between ex-situ *wh*-topic and ex-situ *wh*-cleft focus: when the *wh*-phrase in the peripheral position is not preceded by *shì* ‘be’, it is a topic; whereas it must be analyzed as focus when *shì* ‘be’ is present. I will demonstrate that the discourse nature (Topic or Focus) of a *wh*-item in the left periphery depends on the syntactic position that its non-interrogative counterpart occupies. If the non-interrogative counterpart of the relevant *wh*-item is in TopicP, then such a *wh*-item is analyzed as a *wh*-topic; by contrast, if the non-interrogative counterpart of the relevant *wh*-item is preceded by *shì* ‘be’, it must be in FocP, and such a *wh*-item marked by *shì* ‘be’ is also analyzed as a *wh*-focus. In other words, the *wh*-phrases in (4) and in (5) occupy different syntactic positions, i.e. TopP and FocP whose order is fixed. (4) and (5) thus represent two different structures and are not two variants of the same construction, as claimed by Cheung (2008, 2014).

My argumentation is based on the following line of reasoning. First, when a *wh*-word is extracted towards a topic position *via* movement (extracted *wh*-topic; cf. (4)), it obeys all the relevant syntactic and semantic constraints. A *wh*-focus, be it extracted (cf. (5)) or base-generated (cf. (7)), on the other hand, must obey general constraints on focus structures in Chinese. For example, section 3 shows that a direct object can be easily extracted and preceded by *shì* ‘be’ in sentence initial position in a context encoding non-episodic eventualities, but not in a sentence that encodes episodic eventualities. Accordingly, a *wh*-focus can appear in the former case, but not in the latter case. Secondly, both *wh*-topicalization and *wh*-cleft focus must not violate general semantic constraints on interrogatives. I will use these constraints to construe the diagnostic tests in order to support my claim (i) that there is no automatic correlation between the derivation of a TP-external *wh*-phrase in terms of movement and its discourse function (topic or focus) and (ii) that the discourse function of a TP-external *wh*-phrase is totally determined by the functional projection hosting it. Along this line I will explore the relationship between the discourse function of a *wh*-word and the mapping between Information Structure and the Split CP architecture in Chinese.

The paper is organized as follows: In Section 2 I will go over the major arguments in favor of the original topicalization approach proposed in Wu (1999) and supplement it with additional evidence. Importantly, I will show that in addition to extracted *wh*-topics (Type I), base-generated *wh*-topics (Type III) do likewise exist in Chinese (*contra* Cheung 2008, 2014). Section 2 serves as an argument to support my claim that *wh*-topics cannot be reduced to cases of *wh*-focus, contrary to Cheung (2008)’s proposition. Section 3 introduces the cases of cleft focus and demonstrates in detail that they must be distinguished from the cases of *wh*-topic, thus invalidating Cheung’s (2008, 2014) uniform analysis of all *wh*-ex-situ cases as cleft foci. Section 4 indicates the positions of the projections within the Chinese split-CP that host the *wh*-topics and *wh*-foci.

## 2. Extracted and base-generated *wh*-topics (Type I & Type III)

This section examines two types of *wh*-topics, i.e. extracted *wh*-topics and base-generated *wh*-topics. It starts out by demonstrating that the *wh*-fronting cases in Chinese cannot be likened to the optional *wh*-movement observed in French. Then Wu’s (1999) original analysis is briefly presented. Section 2.2 discusses the theoretical question whether a fronted *wh*-phrase can be analyzed as a topic. Supporting evidence is given to show that when

a *wh*-word applies to a restrictive set, either syntactically or contextually, it can be a topic. Section 2.3 shows that the fronting of *wh*-phrases satisfies the general syntactic and semantic conditions observed for normal topicalization cases derived by movement. Therefore, *wh*-topics cannot be reduced to *wh*-foci (*contra* Cheung (2008, 2014)). Section 2.4 provides additional arguments in favor of the analysis as *wh*-topics. Section 2.5 finally emphasizes the existence of base-generated *wh*-topics in Chinese in addition to extracted *wh*-topics (again *contra* Cheung (2008, 2014)).

## 2.1 Optional *wh*-movement?

At first sight, it seems possible to capture the difference between (1) and (2), repeated in (8a-b), by simply assuming that Chinese is an optional *wh*-movement language like French. It is well known that French is a true optional *wh*-movement language: *wh*-words can move to the left periphery as in (9a) or stay in-situ as in (9b).

- (8) a. Zhāngsān      mǎi-le      shénme ?  
        Zhangsan      buy-Perf      what  
        ‘What has Zhangsan bought?’  
        b. Shénme<sub>j</sub>      Zhāngsān      mǎi-le      t<sub>j</sub> ?  
        what      Zhangsan      buy- Perf  
        ‘What has Zhangsan bought?’ (Wu 1999:82)

- (9) a. **Qui**<sub>i</sub> as-tu      vu      t<sub>i</sub>      hier?  
        who have-you      seen      yesterday  
        ‘Who did you see yesterday?’  
        b. T’as      vu      **qui**      hier?  
        you-have      seen      who      yesterday  
        ‘Who did you see yesterday?’ (Spoken French)

Let us look at French first. The difference between the interpretation of the *wh*-fronting question (8a) and that of the *wh*-in-situ question (8b) is controversial. Chang (1997), Mathieu (1997) and Cheng & Rooryck (2000) suggest several possible analyses of this problem. However, the existing works agree that both (9a) and (9b) should be interpreted as true information-seeking *wh*-questions. Although each of the above authors tries to capture the core difference between the in-situ version and the movement version of French *wh*-questions, what remains is that semantically (9a) and (9b) have exactly the same interpretation. In addition, it is hard to find pragmatic contexts in which one of them is excluded, while the other is allowed. In other words, *wh*-in-situ and *wh*-ex-situ are not strictly complementary, although the authors just mentioned try to detect some discourse and prosodic differences. Most importantly, all the facts point to the conclusion that French is an optional *wh*-movement language insofar as it also allows *wh*-in-situ.

The standard point of view on Chinese is that *wh*-in-situ is the only strategy for forming a *wh*-question. Wu (1999) made several syntactic and semantic distinctions between example (8a) and example (8b), by suggesting that (9a) is interpreted as a genuine information-seeking *wh*-question and (9b) as a *wh*-topicalization construction. I will go over an important argument provided by Wu (1999). Then, I will show that empirically and theoretically (8a) and (8b) should not be reduced to an optional *wh*-movement case and therefore a distinction will be made between Chinese and French. Tang (1988) and Wu (1999) both claim that the *wh*-fronting question in Chinese (cf. (9b)) should be treated as a case of topicalization, not as a case of *wh*-movement.

There are indeed some syntactic and interpretative differences between *wh*-movement and topicalization. For example, Wu (1999) uses the ‘scope ambiguity test’ to show some distinct properties of *wh*-movement and topicalization. (10) is a *wh*-movement case, and the sentence is ambiguous between two readings: either the universal quantifier phrase *everyone* takes wide scope, yielding ‘everyone saw a potentially different student and who are they?’ or the *wh*-phrase *which student* takes wide scope, yielding ‘everyone saw exactly the same student, who is s/he?’. What (10) shows is that *wh*-movement cannot cancel the scope ambiguity of the sentence.

(10) *Wh*-movement:

[Which student]<sub>i</sub> did everyone see *t<sub>i</sub>*? (Ambiguous between  $\exists > \forall / \forall > \exists$ )

However, the topicalization of a quantifier can cancel such an ambiguity, as shown in (11b). (11a) is ambiguous, with either the existential quantifier phrase *someone* scoping over the universal quantifier phrase *everyone* or the other way around. However, when *someone* moves to the topic position as in (11b), then, *someone* c-commands and scopes over *everyone*. As a result, only one reading is allowed.

(11) a. Everyone saw someone.

(Ambiguous between  $\exists > \forall / \forall > \exists$ )

b. Topicalization: Someone<sub>i</sub>, everyone saw *t<sub>i</sub>*.

(Non-ambiguous  $\exists > \forall / * \forall > \exists$ )

Wu (1999) claims that Chinese shows patterns similar to (11).<sup>4</sup> The idea is that Chinese *wh*-in-situ version (cf. 12a) patterns with the English *wh*-movement version (cf. 10): the sentence is ambiguous between ‘every boy likes a potentially different book’ and ‘all of the boys like the same book’. The Chinese *wh*-fronting version (12b) patterns with the English topicalization case (cf. 11b) in that the sentences have only one possible reading with the universal quantifier phrase taking narrow scope.

(12) a. Měi-gè nánshēng dōu xǐhuān nǎ-běn shū ?  
every-Cl boy all like which-Cl book

‘Which book does every boy like?’

(Ambiguous between  $\exists > \forall / \forall > \exists$ )

b. [<sub>CP</sub> [<sub>TopP</sub> [Nǎ-běn shū]<sub>i</sub>] [<sub>TP</sub> měi-gè nánshēng dōu xǐhuān *t<sub>i</sub>*]] ?  
which- Cl book every- Cl boy all like

‘Which unique book does every boy likes?’

(Non-ambiguous  $\exists > \forall / * \forall > \exists$ )

The preceding discussion has provided us with a preliminary image of the Chinese *wh*-fronting case: it is different both from optional *wh*-movement in French and from standard *wh*-movement in English. However, there is a similarity between Chinese *wh*-fronting and the quantifier topicalization case observed in English.

## 2.2 Topic (given information) vs. *wh*-element (unknown information): a contradiction?

<sup>4</sup> For the sake of clarity, I modify Wu’s (1999:88) original Chinese data (cf. i).

(i) Shenme<sub>i</sub>, meigeren dou maile *t<sub>i</sub>*  
what everyone all buy  
‘What did everyone buy?’

This sentence is not accepted by my informants because the fronted *wh*-word is not D-linked as we will see in detail in the next section.

Once we admit that (11b) involves topicalization and that the relevant ex-situ *wh*-phrase is a topic, we face another problem which is of a more theoretical nature. It seems that we contradict ourselves by saying that an element bearing unknown information (*wh*-element) at the same time bears old information (topic). In this part I will discuss the possibility of treating some kinds of *wh*-phrases as topics. I begin with a brief introduction to the notion of Topic as it is used in the relevant literature.

### 2.2.1 Properties of Topic

The linguistic schools that believe that the linear order of the sentence is determined by ‘information structure’, make a distinction between the information that is contextually ‘known’ and that which is not. For example, the Prague school defines topics as sentence elements which are contextually known with least Communicative Dynamism. Topics are called ‘theme’ in their tradition. The rest of the sentence is treated as predicated of the topic, which is called ‘rheme’. Topics are contextually bound and foci are not. In this sense, foci are ‘unknown’. Topic/Theme bears ‘old’ information and Comment/Rheme bears ‘new’ information. (Firbas 1964, Newmeyer 2001)

According to Strawson (1964), the Topic is ‘what a statement is about and it must be in the possession of the hearer’, that is, it must be *old* (i.e. the referent must be mentioned in the previous discourse) or *given* (i.e. the hearer has the referent in mind). Similar observations can be found in other relevant literature. In this sense topics are identified by the context. Li & Thompson (1976) claim that topic or theme (specially, Chinese style topics) is ‘what the sentence is about’. Chafe (1976) mentions the notion of *givenness*. For him ‘given’ refers to referents that the speaker assumes to be in the consciousness of the addressee at the time of the utterance. Krifka (2007) claims that a feature X of an expression  $\alpha$  is a ‘givenness feature’ if X indicates whether the denotation of  $\alpha$  is present in the Common Ground or not, and/or indicates the degree to which it is present in the immediate Common Ground. Common Ground is the set of propositions whose truth is taken for granted as part of the background of the conversation (Stalnaker 1978). Kadmon (2001) states that ‘... for the purpose of communication we do behave as if there is a certain body of information which is “mutual knowledge”, which is shared by the participants in the conversation and this is the Common Ground.’ Common Ground is treated as a way to model the information that is mutually known to be shared and continuously modified in communication in Krifka (2007).

Topicalization results in ‘topic-comment’ or ‘theme-rheme’ configurations. The preposed constituent is separated from the rest of the sentence by an intonational pause or a ‘comma intonation’ (Rizzi 1997) or even by a hesitation pause. Since the comment/rheme part bears new information, it is also called ‘Focus domain’ in Erteschik-Shir (2007).

To summarize: the Topic should be associated with *aboutness*, bears *old information* and should be *given* and *known* to interlocutors. The topic is linked to the discourse and is treated as a discourse element (Li & Thomson 1976). Along this line, pronouns, definites, specific indefinites, and generics qualify as topics; non-specific indefinites do not (Erteschik-Shir 2007).

### 2.2.2 Topics in Chinese

In this part, I discuss the general semantic properties of topics. Let us start with example (11) from English repeated here as (13).

- (13) a. Everyone saw someone. (Ambiguous between  $\exists > \forall / \forall > \exists$ )  
 b. Topicalization: Someone<sub>i</sub>, everyone saw t<sub>i</sub>. (Non-ambiguous  $\exists > \forall / * \forall > \exists$ )

The crucial argument of Wu (1999) is the following. The distinction between (13a) and (13b)

above is that in (13b) *someone* is interpreted as a specific indefinite that takes wide scope i.e. it scopes over the universal quantifier phrase *everyone*. A particular referent (the person that everyone saw) exists in the discourse or in the context. Thus, *someone* in (13b) becomes the topic of the whole sentence, and it is linked to the discourse. Its discourse function is directly related to the syntactic position that it occupies, i.e. TopP. Syntactically, the movement of *someone* to the left periphery derives the ‘topic-comment’ or ‘theme-rheme’ configuration. However, in (13a) when *someone* takes narrow scope it does not need to refer to any particular person who is mentioned in the previous discourse or exists in the context, thus, it is interpreted as a non-specific indefinite and in this case it is not a topic. There are two important properties of Topic: one is that it takes wide scope when there is another quantificational phrase in the sentence; the other is that it shows referentiality effects.

Turning now to Chinese. Cheng & Sybesma (1999) show that in the subject position bare nouns are interpreted as definite (14b) or as generic (14c), but not as indefinite (14a).

- (14) a. Gǒu yào guò mǎlù.  
dog want cross road  
‘The dog wants to cross the road.’ *not*: ‘A dog wants to cross the road.’
- b. Gǒu jīntiān tèbié tīnghuà.  
dog today very obedient  
‘The dog/dogs was/were very obedient today.’
- c. Gǒu ài chī ròu.  
dog love eat meat  
‘Dogs love to eat meat.’ (Cheng & Sybesma 1999:510 = (2))

Cheng & Sybesma’s observation for bare nouns in subject position also carries over to bare nouns in topic position. As we can see in (15), a bare noun in Topic position can get a definite reading (15a) or a kind-referring reading (15b), but not an indefinite reading. In (15a) a specific cat or some cats exist in the previous discourse or in the context. Crucially, an indefinite noun, such as *yì-zhī māo* ‘a cat’ is excluded from the topic position, as shown in (15c).<sup>5</sup>

- (15) a. Māo, wǒ kànjiàn-le.  
cat I see- Perf  
‘The cat/ The cats/ \*A cat/ \*Some cats, I saw.’
- b. Māo a, xǐhuān chī yú.  
cat TM like eat fish  
‘As for cats, (they) like eating fish.’
- c. \* Yì-zhī māo, wǒ kànjiàn-le.  
one- Cl cat I see-Perf

## 2.3 *Wh*-topics

In this part we will see how the notion of *wh*-topic fits into the general picture of Topic. I begin by re-examining the *wh*-fronting case presented in (12), repeated here as (16).

<sup>5</sup> However the cardinal reading is not excluded, for example, ‘One cat, I saw; but two cats, I didn’t see.’



- (16) a. Měi-gè nánshēng dōu xǐhuān nǎ-běn shū ?  
 every-Cl boy all like which-Cl book  
 ‘Which book does every boy like?’ (Ambiguous between  $\exists > \forall$  /  $\forall > \exists$ )
- b. [ForceP [TopP [Nǎ-běn shū]<sub>i</sub> [TP měi-gè nánshēng dōu xǐhuān t<sub>i</sub> ]]] ?  
 which- Cl book every- Cl boy all like  
 ‘Which unique book does every boy like?’ (Non-ambiguous  $\exists > \forall$  /  $*\forall > \exists$ )

For the majority of the native speakers that I consulted, a *wh*-ex-situ question is very different from an in-situ one. Let us compare (16b) with (16a). In (16b), a specific book exists in the discourse; more concretely, the speaker has a special referent in mind: a specific book that every boy likes reading. In this case, the D(iscourse)-linked *wh*-phrase *nǎ-běn shū* ‘which book’ necessarily takes wide scope over the universal quantifier phrase *měi-gè nánshēng* ‘every boy’. However, this specificity effect is not observed in (16a) with the same *wh*-phrase in-situ. The crucial point is that the specificity effect appears in (16b), meaning that a specific book exists in the discourse or in the common knowledge of the interlocutors. As observed that in (15) nominals in the topic position generally show specificity effects. Apparently, specificity effects are associated with Topic position and thus can be considered as a property of the topic position. The assumption is thus that the fronted *wh*-phrase in (16b) can be logically analyzed as a topic since it shows similar specificity effects.

Let us now turn to Wu’s (1999) sentence (2), repeated here as (17). Without any context, the majority of my informants reject it for reasons like ‘the sentence is unnatural or ungrammatical’.<sup>6</sup>

- (17) Shénme Zhāngsān mǎi-le ?  
 what Zhangsan buy- Perf  
 ‘What has Zhangsan bought?’ (Wu 1999:82)

It is not hard to understand why (17) is unnatural without any context: *shénme* ‘what’ is a simple *wh*-word that allows a speaker to ask an ‘out-of-the-blue’ question; by contrast, a topic position is a discourse-linked position and requires some given information which is shared by the co-speakers. Therefore, there is a semantic conflict between the ‘out-of-the-blue’ *wh*-phrase *shénme* ‘what’ and the topic position. Actually, Wu (1999) is aware of this fact and describes the felicitous context for using (17) as follows. For (17) to be felicitous, “...both the speaker and the hearer have a set of things in the presupposition background. If the speaker, or the hearer, or both, recommended a particular set of items to Zhangsan before he went shopping, and in addition, they have been informed that Zhangsan did buy some items from the list recommended, then it is appropriate for the speaker to ask (1b) ((17) in the present article). From this description, it emerges that a simple *wh*-word as *shénme* ‘what’ can hardly appear in a topic position without any context.

In a second step, I checked sentences with a complex *wh*-phrase such as *shénme cài* ‘what dish’ (cf. 18a) and the D-linked form *nǎ-gè cài* ‘which dish’ (cf. 18b) in the topic position. This time, most of my informants accepted both sentences.

<sup>6</sup> The data presented in this paper, including the data cited from the other authors, were carefully checked with around sixty native speakers from the North (Beijing, Tianjin, Shenyang, Heilongjiang), the West (Xi’an), the center (Henan, Hebei, Wuhan), the Southeast (Shanghai) and the South (Shenzhen, Taiwan). Only judgments shared by the majority of the speakers consulted (at least 90%) were taken into account.

- (18) a. [Shénme cài ], Zhāngsān zuótiān chī-le ?  
           what dish Zhangsan yesterday eat-Perf  
           ‘What dish, Zhangsan ate yesterday?’
- b. [Nǎ-gè cài ], Zhāngsān zuótiān chī-le ?  
           which-Cl dish Zhangsan yesterday eat- Perf  
           ‘Which dish, Zhangsan ate yesterday?’

The condition for using these sentences is that both the speaker and the hearer have a common nominal set in mind. This set is composed of different dishes, for instance, the dishes that they saw at the party last night. Both of them also saw that Zhangsan took some dishes. The expected answer to the above questions picks out one dish from the set of dishes to satisfy the truth condition of the sentence. In both cases in (18) a nominal set *cài* ‘dish’ is present. Thus the relevant *wh*-phrases are no longer ‘out-of-the-blue’ question words but are semantically constrained by this restrictive set. I think that this is a precondition on *wh*-topics and I will give a detailed reasoning and cross-linguistic evidence in the following paragraphs. A *wh*-topic needs to apply to a restrictive N-set which exists either in the previous discourse or exists in the common knowledge of the interlocutors. This includes two possibilities: either the syntactic form of a *wh*-phrase provides a restrictive set in the case of complex *wh*-phrases, such as *shénme cài* ‘what dish’ and *nǎ-gè cài* ‘which dish’ or the context provides such a restrictive set for a simple *wh*-word, such as in (17). On the other hand, the simple (out-of-the-blue) form of *wh*-words that does not apply to any restrictive N-set is excluded from topic position.

There are two questions that we need to address. The first question is how the notion of ‘nominal set’ is linked to Topic as claimed in the previous paragraph. Prince (1997) gives a very detailed analysis of this point. According to her, one of the functions of Left Dislocation (LD) in English is to trigger a “(po)set inference” on the part of the hearer that the entity represented by the initial NP stands in a salient partially-ordered *set relation* to some entity or entities already evoked in the discourse model. Poset relations include subset and subtype relations. Erteschik-Shir (2007) calls Posets *restrictive sets*, and she concludes that the reference of a Left-Dislocated constituent must be interpreted as a member of a restrictive set. Gregory & Michaelis (2001) state that the discourse available set allows the introduction of a *new referent* (which is a *switch/shift topic* in their sense), while at the same time forcing a well-defined connection to the previous discourse. Erteschik-Shir (2007) also makes the point clear by saying that the D-linked *wh*-phrase can be assigned topic status in that the question ranges over a discourse-specified set. Furthermore, she makes the notion ‘D-linking’ more general than the one used in Pesetsky (1987). For Erteschik-Shir, a simple *wh*-word can be interpreted as being D-linked if the context provides a set over which such a *wh*-word must range. Therefore, the fact that a fronted *wh*-phrase in the topic position in Chinese applies to a restrictive set is not a surprising claim, but an additional argument which lends direct support to the observation made by all of the above authors.

The second question is why Mandarin allows *wh*-words to appear in the topic position, but other languages such as English do not. In fact, there are already examples in the existing literature of D-linked *which* + NP questions being treated as cases of topicalization (Cinque 1990, Boeckx and Grohmann 2004, Erteschik-Shir 1973, 1997, 2007). D-linked *wh*-phrases show many syntactic and semantic properties distinct from non-D-linked ones. First, D-linked *wh*-phrases are not subject to the Superiority effect, as shown in (19, 20) (Chomsky 1973, Pesetsky 1987).

- (19) a. Who read what?  
 b. \*What<sub>i</sub> did who read t<sub>i</sub>?
- (20) a. Which man read which book?  
 b. Which book<sub>i</sub> did which man read t<sub>i</sub>?

Erteschik-Shir (1973, 1997) argues that this contrast can be accounted for if we suppose that *which* + NP is a topic. She gives the following structures as canonical f-structures (focus structures) in English: either the subject is the topic or there is a stage topic at the beginning of the sentence. Since the comment/rheme part bears new information, she treats them as focus domains.

- (21) a. SUBJECT<sub>topic</sub> [ ...X... ] Focus domain  
 b. sTOP<sub>t</sub> [ ...X... ] Focus domain

She argues that only focus domains are transparent for purpose of extraction and she calls this rule *I(dentificational)-dependency*. The dependent XP must be identified in the focus domain either by its antecedent or by an operator. In (19a), the multiple *wh*-question itself can be viewed as a case of I-dependency because one *wh*-word is dependent on the other. However, (19b) results in two different I-dependencies: one is between the moved *wh*-word *what* and its trace *t*<sub>i</sub>; the other is between two *wh*-words *who* and *what* (which is established before the movement of *what*). According to Erteschik-Shir this results in an interpretative clash. Therefore, the Superiority effect is the result of two I-dependencies in the same structure. D-linked *wh*-phrases are called *restrictive wh*-phrases in Erteschik-Shir (2007). A restrictive *wh*-phrase ranges over a context-specified set. Such a set enables '*which* + NP' to function as a topic. Therefore, both D-linked *wh*-phrases in (20b) are treated as topics.<sup>7</sup> In this case, the trace can only be identified with the subject *wh*-phrase *which man* in order to render the pair-list reading. On the other hand, the trace must also be identified within the focus domain. These two requirements can be met since *which man* is a topic and its focus domain, the string [read *t*], contains the trace, thus the trace can be identified within the local focus domain by the topic *which man* (cf. 22a). The fronted *wh*-phrase *which book* must also be a topic otherwise it forms another I-dependency with the trace via operator-trace binding yielding undesired double I-dependencies. The supporting evidence is that when one of the two *wh*-phrases is not D-linked (hence cannot be treated as a topic without any specific context), the sentence is marginal (cf. 22b, c).

<sup>7</sup> One of the anonymous reviewer points out that in Japanese, a language with the topic marker *-wa*, a *wh*-phrase (D-linked or not) does not occur with *-wa* (cf. (i) a-b) unless there are two *wh*-phrases in contrast to each other (cf. (ic)) (Miyagawa 1987, Martin 2004).

- (ii) a. \*Dare wa kita no?  
 Who TM came Q  
 'Speaking of whom, did he/she/they come?' (Miyagawa 1987)
- b. \*Dore wa boku da?  
 Which TM me Q  
 'Which (one) is me?' (Martin 2004: 240)
- c. Dare wa kite, dare wa konakatta no?  
 who TM/Contrast come who TM/Contrast didn't-come Q  
 'Who came, and who didn't?' (Miyagawa 1987)

- (22) a. [Which book]<sub>Topic</sub> [ did [which<sub>man</sub>]<sub>Topic</sub> [ read *t* ]<sub>Focus</sub> ]<sub>Focus</sub>  
 b. ? What did which boy read?  
 c. ?\* Which of the books did who read?

Cinque (1990) observes that extraction of a D-linked *wh*-phrase from a matrix clause is better than the extraction of a non D-linked one from the same clause.

- (23) a. ? Which book did you wonder whether John bought?  
 b. ?? What did you wonder whether John bought?

Cinque argues that when the context provides the required referent of such a *wh*-phrase, the extraction should be perfectly acceptable. Erteschik-Shir (2007) also accounts for the contrast in (23) with I-dependency. In (23a) *which book* is a topic and the rest of the sentence is its focus domain which is transparent for extraction (see Erteschik-Shir (1997, 2007) for a detailed discussion on this proposal). Therefore, the extraction of the topic *which book* from the focus domain in (23a) is better than the extraction of a non D-linked *wh*-word *what* in (23b), since in (24b) there is neither a topic nor a focus domain.

Chinese data seem to confirm such a contrast. When both *wh*-words are in their simple form, *shenme* ‘what’ cannot cross *shei* ‘who’ as in (24a); on the contrary, when both are in their D-linked form, the fronting of *nǎ-jǐ-běn shū* ‘which books’ can cross freely *nǎ-xiē tóngxué* ‘which students’ as shown in (24b).

- (24) a. \* Shénme<sub>j</sub>, sheí yǐjīng dú-guò-le *t<sub>j</sub>* ?  
           what     who   already     read-Exp.-Perf  
           (\* ‘What did who already finish reading?’)  
 b. [Nǎ-jǐ-běn shū]<sub>j</sub>, nǎ-xiē tóngxué yǐjīng dú-guò-le *t<sub>j</sub>* ?  
       which-several-Cl book   which-Pl student   already   read-Exp.-Perf  
       ‘Which books did which students already finish reading?’

Boeckx and Grohmann (2004) also claim that D-linked *wh*-elements have a topic-like character. They observe that the D-part of a D-linked *wh*-phrase is discourse-conditioned and that a D-linked *wh*-phrase such as *which man* relies more heavily on some previously established part of the discourse than a simple *wh*-word *who*. They give the following example as an argument to show that only simple *wh*-words can be used in an out-of-the-blue question.

- (25) A: John bought something expensive yesterday.  
       B: What did he buy?  
       B: # Which car did he buy?

They also suggest that the observed discourse effects (such as presuppositionality, referentiality, specificity or topichood) in the case of D-linked *wh*-phrases are also found in Left Dislocation and scrambling cases. They posit a close relationship between scrambling, topicalization and D-linking effects. We will not go into the technical details of their analysis here. Their main idea is that a D-linked *wh*-element contains a null D° head and when it moves it moves for clause-typing or topicalization purposes (not for agreement purposes). Accordingly, a D-linked *wh*-phrase occupies the TopP position as the result of the absence of

phi-feature checking.<sup>8</sup>

(26) [TopP [which man]<sub>i</sub> [FocP (*ti*) did [IP you see [DP *ti* [D *ti* ]]]]]?]

The technique that realizes such operations, called ‘SubMove’, allows the extraction of the material out of a higher (functional) shell for non-agreement-related purposes, stranding the D-head (which may be overtly realized as a resumptive pronoun). This extraction targets a position in the left periphery of the clause which expresses discourse properties (such as topicality or presuppositionality). Under the D° hypothesis and the movement of the remaining material (D-linked *wh*-phrase) to the TopP, some syntactic properties, such as the Superiority effect, the discourse effect and the resumptivity, can be accounted for.

To summarize, substantial empirical and theoretical evidence shows that D-linked *wh*-phrases in English can be analyzed as topics; a *wh*-topic shows many syntactic and discourse properties distinct from non-topic, i.e. non D-linked *wh*-words. Of course, these analyses of English cases cannot be applied directly in Chinese. However, to analyze as topic a D-linked *wh*-phrase such as *nǎ-gè cài* ‘which dish’, or a simple *wh*-phrase as *shénme* ‘what’ that is provided with a restrictive set by the context, is clearly motivated by languages such as English where D-linked properties pattern with topic status<sup>9</sup>.

## 2.4 Further evidence of extracted *wh*-topics (Type I)

This section presents additional empirical and theoretical considerations in support of my analysis where fronted *wh*-phrases are hosted by TopP.

### 2.4.1 Topic markers

Generally, phrases in TopP can be marked by the so-called ‘topic markers (TM)’ in Chinese: *ne*, *a* or *ya*. This also holds for fronted *wh*-words :<sup>10</sup>

(27) [Nǎ-gè cài] ne, Zhāngsān zuì xǐhuān chī?  
 which-Cl dish TM Zhangsan most like eat  
 ‘Which dish, Zhangsan likes eating most?’

### 2.4.2 *Wh*-adverb *zen(me)yang* ‘how’

The second piece of evidence comes from the *wh*-adverb *zěnmeyàng* ‘how’. Tsai (1994) argues that *zěnmeyàng* is ambiguous between an adverbial ‘manner’ reading and a nominal ‘instrument’ reading and claims further that the preverbal *zěnmeyàng* cannot undergo

<sup>8</sup> It is argued that the same operation takes scrambled elements out of their phi-feature checking clause into a higher, non-agreement-related (topic) position.

<sup>9</sup> One might wonder why a *wh*-word in its simple form, such as *shéi* ‘who’, can be more easily topicalized as shown in (i).

(iii) Shei, Zhāngsān bù xiǎng jiàn?  
 who Zhangsan Neg want see  
 ‘Who doesn’t Zhangsan want to see?’

*Shei* ‘who’ by its very meaning applies to an restrictive set {*x* | *x* ∈ human} intrinsically, while *shénme* ‘what’ {*x* | *x* ∉ human} is much more encompassing insofar as it includes everything that is not human, the set such as {*x* | *x* ∈ book}, {*x* | *x* ∈ table}...etc. Therefore, *shéi* ‘who’ is less difficult to topicalize than *shénme* ‘what’. Importantly, this sentence is still highly contextually restricted: a group of persons is required in the previous discourse and the question word *shéi* ranges over this group (set) and picks out an individual from this group to constitute a possible answer.

<sup>10</sup> These particles are treated as topic markers by many authors, such as Li and Thompson (1976), Gasde and Paul (1996), Paul (2005), Cheung (2008), etc.

fronting. Let us begin with some simple data on adverbials. In Chinese it is possible for adverbials to occur in topic position, as illustrated by (28):

- (28) a. Tā yòng máobǐ xǐe-le yì-shǒu shī.  
 he use writing-brush write-Perf one-Cl poem  
 ‘He wrote a poem with a writing brush.’
- b. [Yòng máobǐ]<sub>i</sub>, tā t<sub>i</sub> xǐe-le yì-shǒu shī.  
 use writing-brush he write-Perf one-Cl poem  
 ‘With a writing brush, he wrote a poem.’

Wang & Wu (2006) and Cheung (2008) show that adverbial *zěnmeyàng* ‘how’ cannot be fronted.

- (29) a. Lǎowú zěnmeyàng xīurǔ Lìsì ?  
 Laowu how insult Lisi  
 ‘How did Laowu insult Lisi?’
- b. \*Zěnmeyàng<sub>i</sub>, Lǎowú t<sub>i</sub> xīurǔ Lìsì ?  
 how Laowu insult Lisi (=Wang & Wu 2006 : (16))

The contrast above shows that the topicalization of the *wh*-adverb *zěnmeyàng* is barely acceptable in Chinese. Under my analysis, *zěnmeyàng* ‘how’ does not apply to a restrictive set and thus cannot undergo topicalization. One might wonder what happens if it becomes D-linked. Before answering this question, there is another question: can it be D-linked at all? I think the answer is *no* since only nominals can be D-linked, but not adverbs. My hypothesis is that if we force a *wh*-adverb to be D-linked, it becomes a nominal. For example, in the following sentences, *zěnmeyàng* ‘how’ is replaced by *yòng shénme bǐ* ‘with what kind of writing tool’, where the nominal set is understood as {writing tool}. In this situation, the D-linked nominal *wh*-phrase can undergo topicalization as expected.

- (30) a. Tā yòng máobǐ xǐe-le yì-shǒu shī.  
 he use writing-brush write-Perf one-Cl poem  
 ‘He wrote a poem with a writing brush.’
- b. Tā [yòng shénme bǐ] xǐe-le yì-shǒu shī ?  
 he use what pen write-Perf one-Cl poem  
 ‘With what kind of pen did he write a poem?’
- c. [Yòng shénme bǐ]<sub>j</sub> tā t<sub>j</sub> xǐe-le yì-shǒu shī ?  
 use what pen he write-Perf one-Cl poem  
 ‘With what kind of pen, he wrote a poem?’

In fact, this observation is supported by the choice function mechanism analysis proposed in Reinhart (1998). For Reinhart the choice function mechanism only works for nouns, not for adverbs, since a noun but not an adverb applies to an N-set from which a choice function can pick out a member as variable. Based on this notion, we can see that an adverb can hardly be D-linked. That the *wh*-adverb *zěnmeyàng* cannot undergo topicalization is accounted for under our hypothesis: only restrictive *wh*-phrases can undergo topicalization.

### 2.4.3 Locality constraints

It is generally accepted that A'-movement obeys island constraints. However, the island effects are not systematically observed in topicalisation structures in Chinese (cf. 31a-b). Many previous works (Huang (1984), Huang, Li & Li (2009)) point out that Chinese allows an empty pronoun in all argument positions (*pro*), in contrast to English, which only allows an empty pronoun in a Caseless position (*PRO*). The distribution of *pro* is governed by a Generalized Control Rule (GCR) that requires an empty pronoun to be co-indexed with the closest nominal. The apparent island violation can be explained by the fact the topic cannot bind the *pro*.

- (31) a. Lǐsì, [[e<sub>i</sub> chàng gē de] shēngyīn] hěn hǎotīng .  
 Lisi, sing song DE voice very good  
 'Lisi, the voice with which (he<sub>i</sub>) sings is very good.'

- b.\* Lǐsì, wǒ hěn xǐhuān [[e<sub>i</sub> chàng gē de] shēngyīn].  
 Lisi, I very like sing song DE voice  
 'Lisi, I like the voice with which (he<sub>i</sub>) sings.'

Huang, Li & Li (2009: 210)

The *ex-situ wh*-words behave exactly like non *wh*-topics from this perspective.

- (32) a. Nǎ-gè tóngxué<sub>i</sub>, [[e<sub>i</sub> chàng gē de] shēngyīn] hěn hǎotīng.  
 which-Cl student, sing song DE voice very good  
 'Which student, the voice with which (he<sub>i</sub>) sings is very good?'

- b.\* Nǎ-gè tóngxué<sub>i</sub>, nǐ hěn xǐhuān [[e<sub>i</sub> chàng gē de] shēngyīn].  
 which-Cl student, you very like sing song DE voice  
 'Which student, you like the voice with which (he<sub>i</sub>) sings?'

Alternatively, Zhang (2002) argues that topicalization shows island effects only in the episodic eventuality contexts (specific eventualities), not in stable state context, such as individual-level predicates, habitual eventualities, and irrealis eventualities (including those denoted by the sentences that contain modal verbs and modal adverbials)<sup>11</sup>. In the following non-episodic eventuality contexts (some of which are slightly modified from the original ones in Zhang (2002)), no island effects are detected: neither for the normal topics in the (a) cases nor for the *wh*-topics in the (b) cases. The results show that the episodic eventuality constraint also holds for *wh-ex-situ*.

#### (33) Complex-NP (relative clause)

- a. Zhè-bù diànyǐng<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén bù-shǎo.  
 this-Cl movie see-Exp DE person not-few  
 'As for this movie, the people who [saw (it)] are many.'

- b. Nǎ-bù diànyǐng<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén bù-shǎo?  
 which-Cl movie see-Exp DE person not-few  
 'Which movie, the people who [saw (it)] are many?'

<sup>11</sup> For Zhang (2002) topicalization is derived by movement only in the episodic eventuality contexts. The traces indicated in my examples (non episodic contexts) are merely indicating the normal original sites of the topics.

(34) Sentential subject

- a. Zhè-shǒu gē<sub>i</sub>, [ jiějie chàng t<sub>i</sub> ] bǐjiào hǎo-tīng.  
this-Cl song elder-sister sing comparatively good-listening  
'As for this song, the elder sister sings (it) better.'
- b. Nǎ-shǒu gē<sub>i</sub>, [ jiějie chàng t<sub>i</sub> ] bǐjiào hǎo-tīng ?  
which-Cl song elder-sister sing comparatively good-listening  
'Which song, the elder sister sings (it) better?'

(35) Adjunct clause (temporal clause)

- a. Zhè-bù diànnǎo<sub>i</sub>, [ nǐ yòng t<sub>i</sub> ] de-shíhòu, yào xiǎoxīn.  
this-Cl computer you use when should attention  
'As for this computer, when you use (it), you should pay attention!'
- b. Nǎ-bù diànnǎo<sub>i</sub>, [ nǐ yòng t<sub>i</sub> ] de-shíhòu, yào xiǎoxīn?  
which-Cl computer you use when should be-careful  
'Which computer, when you use (it), you should be careful?'

(36) *Wh*-island

- a. Zhè-jiàn shì<sub>i</sub>, Zhāngsān bù zhīdào zěnmē zuò t<sub>i</sub>.  
this-Cl thing Zhangsan not know how do  
'As for this thing, Zhangsan doesn't know how to do.'
- b. Nǎ-jiàn shì<sub>i</sub>, Zhāngsān bù zhīdào zěnmē zuò t<sub>i</sub>?  
which-Cl thing Zhangsan not know how do  
'What thing, Zhangsan doesn't know how to do (it)?'

The test in this section shows that the episodic eventuality constraint is also an important argument in support of the claim that fronted *wh*-words are topics, since they behave exactly like normal nominal topics.<sup>12</sup>

## 2.4.4 Resumptivity

Cheung (2014) claims that extracted *wh*-topics cannot be related to resumptive pronouns in the variable site. However, as we can see from the example (37), a fronted *wh*-topic can be perfectly linked to a resumptive pronoun.

- (37) Nǎ-wei lǎoshī<sub>j</sub>, suǒyǒu-de xuéshēng dōu hěn xǐhuān tā<sub>j</sub>?  
Which-Cl teacher all-DE student all very like him

<sup>12</sup> One of the anonymous reviewers provides the following sentences that violate the episodicity constraint. I believe that the truth must be more complicated than what is described by Zhang (2002). For one thing, Huang (1982)'s generalized control rule must also play a very important role.

(iv) Complex NP island

Wǒ-de nà-liàng chē, [dāngchū mài gei wǒ de] nà-jiān gōngsī yǐjīng pòchǎn le.  
my that-Cl car then sell to me DE that-Cl company already broke LE  
'As for my car, the company that sold it to me is already broke.'

(v) Adjunct island

Nà-liàng chē, [nà-cì pào-shuǐ yǐhòu], yǐnqíng jiù fā-bú-dòng le.  
that-Cl car that-time submerge-water after engine then ignite-not LE  
'As for the car, after it was submerged in water last time, the engine can no longer be ignited.'



‘Which teacher<sub>j</sub>, all of the students like him<sub>j</sub> very much?’

## 2.5 Base-generated *wh*-topics (Type III)

Now let us turn to the argument used by Cheung against the analysis of *wh* ex-situ as topics. If a fronted *wh* phrase were a topic, so Cheung, then we would expect it to come in two kinds, gapped and gapless, on a par with standard non *wh*-topics (cf. 38a). However, when the gapless topic *huā* ‘flower’ in (38a) is replaced by a *wh*-phrase, the result is unacceptable (cf. (38b)):

- (38) a. Huā a, wǒ zuì xǐhuān méiguīhuā.  
 flower TM I most like rose  
 ‘As for flowers, I like roses most.’
- b. \* [Shénme / Nǎ-zhǒng huā], nǐ zuì xǐhuān méiguīhuā?  
 what which-Cl flower you most like rose  
 (‘As for what/what kind of flowers, do you like roses most?’)

Importantly, the contrast observed in (38) illustrates a general semantic constraint on interrogatives, which is totally independent of the fact that the relevant *wh*-word stays in-situ inside the TP or is extracted to the TP-external topic position. In general, it is impossible to question a KIND item in a context containing only its SUB-KIND item. In other words the ungrammaticality of (38b) is due to the impossibility of questioning the ‘kind’ *flower* based on the SUB-KIND *rose*, not due to the fact that *shénme huā* ‘what flower’ is in the TP-external position, as evidenced by the pair below:

- (39) a. Wǒ xǐhuān shǒushì zhōng de jièzhǐ.  
 I like jewelry among DE ring  
 ‘Among jewelry I like rings most.’
- b. \* Nǐ xǐhuān shénme zhōng de jièzhǐ?  
 you like what among DE ring  
 (‘For which x, rings are sub-kind of x, such that you like rings?’)

In (39a) *shǒushì* ‘jewelry’ denotes a KIND and *jièzhǐ* ‘ring’ is its SUB-KIND. (39b) is ungrammatical even though the relevant *wh*-word *shénme* ‘what’ stays in-situ. The offending cases involve only “KIND – SUB-KIND” relationship. Other possible logical relationships, such as “PART–WHOLE”, however, allow for a D-linked *wh*-topic (Cf. (42) immediately below). The following examples show that gapless *wh*-topics are acceptable provided the *wh*-words apply to restrictive sets.

- (40) a. Zhōngguó, wǒ xǐhuān de dàchéngshì bùduō.  
 China I like DE big-city not-many  
 ‘As for China, the big cities that I like are not many.’
- b. [Nǎ-gè guójiā / \*Shénme], nǐ xǐhuān de dàchéngshì bùduō?  
 which-Cl country what you like DE big-city not-many  
 ‘[Which country/\*what], its big cities that [you like] are not many?’

- (41) a. Shànggè-xīngqī de jiāotōng-shìgù, xìngkuī jǐngchá lái-de jíshí.  
 last-week DE traffic-accident fortunately police come-DE in-time  
 ‘As for the traffic accident of the last week, fortunately the policemen arrived in time.’  
 b. Shànggè-xīngqī de [ shénme shìgù / \*shénme], xìngkuī jǐngchá lái-de jíshí?  
 last-week DE what accident what fortunately police come-DE in-time  
 ‘For [what accident /\*what] of the last week x, such that fortunately the policemen arrived in time in x?’
- (42) a. Dàxiàng ne, bízi hěn cháng.  
 elephant TM nose very long  
 ‘As for elephants, their noses are long.’  
 b. Shénme dòngwù ne / Nǎ-zhǒng dòngwù ne, bízi hěn cháng?  
 what animal TM which-kind animal TM nose very long  
 ‘What kind of animal, its nose is very long?’

These tests confirm that when a *wh*-element is in a topic position, it must not only obey general restrictions on topicalization, but general semantic constraints on interrogatives. Accordingly, Cheung (2008)’s example (38) intended as an argument against *wh*-topics can be explained by a semantic constraint on interrogatives in general.

## 2.6 Summary

In contrast to previous work on *wh*-fronting (Tang 1988, Wu 1999), I argue that only D-linked *wh*-phrases, i.e. *wh*-phrases which apply to a restrictive set either syntactically or contextually, can occur in the topic position, because only D-linked *wh*-phrases show semantic and syntactic properties similar to those of ordinary topics. Importantly, I don’t mean that a D-linked *wh*-phrase must undergo topicalization since it can be in a topic position or in a focus position or remain in-situ in its original position. The notion of *wh*-topic is also justified by cross-linguistic data. Therefore, an extracted *wh*-topic cannot be reduced to any kind of extracted *wh*-focus, contrary to Cheung (2008, 2014). Furthermore, Cheung (2008) denies the existence of base-generated *wh*-topics. Upon closer scrutiny, however, her counter-example involves a general semantic constraint on questions which is independent from the fact that the relevant *wh*-phrase stays in-situ or ex-situ. As a result, both extracted and base-generated *wh*-topics exist in Mandarin.

## 3. Extracted and Base-generated *wh*-foci (Type II & Type IV)

As already mentioned, Cheung (2008, 2014) tries to reduce all cases of *wh*-ex-situ to cleft constructions. In the first part of this section I will go over her major arguments in favor of the cleft focus approach. I will then re-examine the data and some theoretical points presented in her analysis. Finally, I will show that not all of the *wh*-ex-situ cases can be analyzed as focus-construction, because not all of them obey the general constraints observed for cleft focus sentences.

### 3.1 Cheung (2008, 2014)’s account

The logic underlying Cheung’s (2008) argumentation is the following: first she makes a distinction between information focus and contrastive focus; then she postulates the similarities between the preposed *wh*-elements and contrastive foci and argues that *wh*-fronting derives a focus cleft pattern; finally she offers some arguments against an analysis of extracted *wh*-phrases as topics (Type I in this paper). This section examines the first two

points, a detailed account of Cheung's (2008, 2014) anti-topicalization arguments being provided in Section 4. The crucial data for Cheung's (2008, 2014) analysis are given in (43), faithfully reproducing the presentation and translation by Cheung (2008:54) herself:

- (43) a. Speaker A: (Shì) [shénme], Mǎlì mǎi-le ?  
                   be       what       Mary buy-Perf  
                   ‘What was it that Mary bought?’
- b. Speaker B: Shì [màozi], tā mǎi-le                   (shì ‘be’ is obligatory)  
                           be       hat       she buy-Perf  
                           ‘It was a hat that she bought.’
- (Cheung 2008: 54; her translations)

She assumes that in a contrastive focus construction (considered as on a par with the cleft-sentence by her) an element extracted to the left periphery domain must be marked by the copula *shì* ‘be’ (cf. 43b). By contrast, in (43a), where the preposed element is a *wh*-word, the presence of *shì* ‘be’ is optional according to Cheung (2008, 2014).

### 3.2 Focus-constructions in Chinese

In this section, I will show that, although it is correct that *wh*-focus constructions exist in Chinese, this does not mean that all fronted *wh*-phrases can be systematically treated as foci nor that all of the ex-situ *wh*-foci are derived by movement.

Ex-situ *wh*-foci involve cleft foci with so-called bare *shì* ‘be’ (cf. Paul & Whitman 2008).<sup>13</sup>

- (44) Shì [[nǐ-de tàidù]<sub>j</sub>, tāmen bù xǐhuān t<sub>j</sub>].  
       be   your   attitude they Neg like  
       ‘It is your attitude that they don’t like.’

There are two different ways to analyze *shì* ‘be’: one is to treat it as a focus marker (Xu 2004) and the other is to treat it as a normal main verb that takes the entire sentence as its complement (cf. 45). In the second view, the clefted XP *nǐ-de tàidù* ‘your attitude’ occupies a position in the periphery of the complement clause of *shì* ‘be’, not in the periphery of the matrix clause. The unacceptability of (45) confirms that (45) is a cleft focus which has to obey the exclusiveness condition:

<sup>13</sup> Importantly, in the cleft focus construction that not only involves the copula *shì* ‘be’ but also the particle *de*, fronting is banned. This holds both for fronting to the left and to the right of the subject, as already observed by Teng (1979).

- (vi) a. \* Shì [nǐ-de tàidù]<sub>j</sub>, tāmen bù xǐhuān t<sub>j</sub> de.  
           be   your   attitude they Neg like       DE  
           ‘It is your attitude that they don’t like.’
- b. \* Tāmen shì [nǐ-de tàidù]<sub>j</sub> bù xǐhuān t<sub>j</sub> de.  
               they   be   your   attitude Neg like       DE  
               ‘It is your attitude that they don’t like.’

For the differences between *shì* ...*de* and bare *shì*, often glossed over in the literature, cf. Paul & Whitman (2008).

- (45) \* **Shì** [nǐ-de tàidù]<sub>j</sub>, tāmen bù xǐhuān t<sub>j</sub>,  
 be your attitude they Neg like  
 yě shì nǐde yīzhuó.  
 also be your clothing  
 (\* ‘It is your attitude that they don’t like, and it is also your way of clothing.’)

Let us now turn to a constraint on the extraction of the object in bare *shì* ‘be’ focus sentences. The object cannot be preposed and preceded by *shì* ‘be’ if the main verb is an action verb.

- (46) a. [Nǐ-de gǒu], wǒ zài gōngyuán-lǐ zhǎodào le. (Topicalization)  
 your dog I at park-in find SFP  
 ‘Your dog, I found (it) in the park.’  
 b. \* **Shì** [ nǐ-de gǒu] wǒ zài gōngyuán-lǐ zhǎodào le. (Bare *shì*)  
 be your dog I at park-in find SFP  
 (‘It was your dog that I found in the park.’)

This constraint on ex-situ cleft foci is neglected in Cheung (2008, 2014). As a result, her examples intended to illustrate ex-situ foci are generally rejected by native speakers, precisely due to the presence of an action verb (cf. (47)).

- (47) \* Shì Měiguó, wǒ qùnián qù-le.  
 be US I last-year go-Perf  
 ‘It was the US that I went last year.’  
 (Example presented as fully grammatical in Cheung 2008: 65)

Furthermore, my informants spontaneously corrected Cheung’s sentences ((43a-b) and (47)) by using pseudo-cleft constructions as in (48). Such constructions contain a null head noun; *shì* ‘be’ here is the copula and *de* serves to link the relative clause to the null head noun. The pseudo-cleft constructions are very often used when the foci are objects.

- (48) a. [DP [Mǎli mǎi] de Ø ] shì shénme? (cf. (42a), *Speaker A*)  
 Mary buy DE be what  
 ‘What was (the thing) that Mary bought?’  
 b. [DP [Mǎli mǎi] de Ø ] shì màozi (cf. (42b), *Speaker B*)  
 Mary buy DE be hat  
 ‘(What) Mary bought was a hat.’  
 c. [DP [Wǒ qùnián qù] de Ø ] shì Měiguó. (cf. (46))  
 I last-year go DE be US  
 ‘(The country) where I went to last year is the US.’

By contrast, the ex-situ cleft focus is perfect in (44) with a non-episodic predicate, repeated below as (49):

- (49) Shì [nǐ-de tàidù], tāmen bù xǐhuān.  
 be your attitude they Neg like  
 ‘It is your attitude that they don’t like.’

Similarly, in the sentences that encode non-episodic eventualities, for example stage predicates, the ex-situ cleft focus is perfectly acceptable (cf. 50).

- (50) a. Shì [wǒ gēn tā shuō huà de fāngshì]<sub>i</sub>, tā hěn zàiyì t<sub>i</sub>.  
 be I with him speak word DE way he very care  
 ‘It is the way in which I speak with him that he cares about.’
- b. Shì [nǐ huà huà de fēnggé]<sub>i</sub>, dàjiā hěn xīnshǎng t<sub>i</sub>.  
 be you paint painting DE style everyone very appreciate  
 ‘It is the style of your painting that everyone appreciates.’
- c. Shì nà-bù diànyǐng<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén hěn duō.  
 be that-CL movie see-Exp DE person very many  
 ‘It is that movie that the people who [saw (it)] are many.’

The contrast observed here seems to suggest that an extracted focus is hardly acceptable in sentences encoding episodic eventualities with action verbs, such as *mǎi* ‘buy’ in (43), *zhǎo* ‘look for’ in (46) and *qù* ‘go’ in (47). However, an extracted focus is fully acceptable in sentences encoding non-episodic eventualities, such as experiencer verbs *xǐhuān* ‘like’ in (49), *zàiyì* ‘care’ in (50a), *xīnshǎng* ‘appreciate’ in (50b) and stative predicate *hěn duō* ‘(be) many’ in (50c). Even if the relevant NP *nà-bù diànyǐng* ‘that movie’ is extracted from inside the island in (50c), island effects are not observed in a non-episodic eventuality context, which is predicted by the generalization in Zhang (2002). I assume that *wh*-foci should also show this general contrast observed for non-interrogative cleft focus in Chinese. This assumption is borne out. We have shown that extracted *wh*-focus in episodic eventuality contexts were barely acceptable, such as in (43, 47). Here are acceptable sentences encoding non-episodic eventualities with extracted *wh*-foci.

- (51) a. Shì [shéi-de tàidù]<sub>i</sub>, tāmen bù xǐhuān t<sub>i</sub>?  
 be whose attitude they Neg like  
 ‘Whose attitude is it that they don’t like?’
- b. Shì [nǎ-bù diànyǐng]<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén hěn-duō?  
 be which-CL movie see-Exp DE person very-many  
 ‘Which movie is it that the people who [saw (it)] are many?’

An NP can also be base-generated in the left periphery and preceded by *shì* ‘be’ to form a TP-external focus-sentence (52a), whose interrogative counterpart (52b) is acceptable. This shows that a *wh*-focus is not necessarily derived by movement, which is a very important argument in support of the main claim of this paper (see Section 4). Note that this type of construction has not been examined in previous studies. (52b) is clearly a case of base-generation, because in Chinese *jiào-hǎo* ‘shout-bravo’ is an intransitive verb. Neither ‘the performance of Mary’ in (52a) nor ‘whose performance’ in (52b) can be its object. Syntactically, there is thus no way to reconstruct ‘the performance of Mary’ within the TP ‘everyone shouted “bravo” yesterday’.

- (52) a. Shì [Mǎlì de biǎoyǎn]<sub>i</sub>, dàjiā zuótiān dōu jiào-hǎo.  
 be Mary DE performance everyone yesterday all shout-good  
 ‘It is (for) the performance of Mary that everyone shouted “bravo!” yesterday.’

- b. Shì [ shéi de biǎoyǎn ], dàjiā zuótiān dōu jiào-hǎo ?  
 be who DE performance everyone yesterday all shout-good  
 ‘It was (for) whose performance that everyone shouted “bravo!” yesterday?’
- c. \* Dàjiā zuótiān dōu jiào-hǎo [ Mǎlì de biǎoyǎn ].  
 everyone yesterday all shout-good Mary DE performance

To conclude, an ex-situ cleft focus can either be derived by movement (cf. (51)) or by base-generation (cf. (52)).

One crucial difference between a topic structure and a focus structure is the relevance of the [+ episodic] nature of the event for extraction. A topic can be extracted from a clause irrespective of its [+ episodic] nature; extraction from an island, however, is possible only in a non-episodic eventuality context. By contrast, for a focus, the non-episodic eventuality constraint holds for extraction in general, i.e. for extraction not crossing any island. (53) shows that the extracted topics survive in non-island episodic eventuality contexts.

- (53) a. [Nǐ-de gǒu]<sub>i</sub>, wǒ zài gōngyuánlǐ zhǎodào t<sub>i</sub> le.  
 your dog I at park-in find SFP  
 ‘As for your dog, I found (it) in the park.’
- b. [Měiguó]<sub>i</sub>, wǒ qùnián yǐjīng qù-guò t<sub>i</sub> le.  
 US I last-year already go-Exp-Perf SFP  
 ‘As for the US, I’ve already visited (there) last year.’

*Wh*-topics pattern exactly like non-interrogative topics in this respect (cf. 54).

- (54) [Nǎ-xiē guójiā]<sub>i</sub>, nǐ qùnián yǐjīng qù-guò t<sub>i</sub> le?  
 which-Pl countries you last-year already go-Exp-Perf SFP  
 ‘Which countries (are those where) you have already visited last year?’

### 3.3 Problem of application of the Exhaustivity test in Cheung (2008)

One of the main arguments used in favor of her analysis by Cheung (2008) is based on the exhaustivity test (Zubizarreta & Vergnaud (2006)). The idea is that a contrastively focused *wh*-question as in French gives rise to the exhaustivity excluding a list answer (cf. 55), while the normal *wh*-question (considered as an information focus), as in English, does not (cf. 56).

- (55) Speaker A: C’est [qui]<sub>C-FOC</sub> qui a écrit un livre sur les rats? (French)  
 ‘It is who that wrote a book about rats?’

Speaker B: \*C’est [<sub>DP</sub> **le chat**]<sub>C-FOC</sub> qui a écrit un livre sur les rats, et c’est aussi [<sub>DP</sub> **la chauve-souris**]<sub>C-FOC</sub>  
 ‘It is the cat that wrote a book about rats, and also the bat.’  
 (Zubizarreta & Vergnaud 2006: 525 (8, 9))

- (56) Speaker A: Who wrote a book about rats?  
 Speaker B: [<sub>DP</sub> The cat]<sub>I-FOC</sub> wrote a book about rats, and [<sub>DP</sub> the bat]<sub>I-FOC</sub> did too.

According to Cheung (2008, 2014), Chinese shows the same contrast between the in-situ *wh*-questions pattern in (57) and the extracted *wh*-questions pattern in (58).

- (57) Speaker A: Mǎlì mǎi-le shénme dōngxi?  
 Mary buy-Perf what thing

‘What thing(s) did Mary buy?’

Speaker B: i. Tā mǎi-le [màozi]<sub>I-FOC</sub>.  
 she buy-Perf hat  
 ‘She bought a hat.’

ii. Tā mǎi-le [màozi]<sub>I-FOC</sub>, yě mǎi-le [wàitào]<sub>I-FOC</sub>.  
 she buy-Perf hat also buy-Perf coat  
 ‘She bought a hat, and also a coat.’

(58) Speaker A: (Shì) [shénme dōngxi]<sub>C-FOC</sub>, Mǎli mǎi-le \_\_\_\_?  
 be what thing Mary buy-Perf \_\_\_\_?  
 ‘What thing was it that Mary bought?’

Speaker B: i. Shì [màozi]<sub>C-FOC</sub>, tā mǎi-le \_\_\_\_.  
 be hat she buy-Perf \_\_\_\_.  
 ‘It was a hat that she bought.’

ii. \*Shì [màozi]<sub>C-FOC</sub>, tā mǎi-le \_\_\_\_ Shì [wàitào]<sub>C-FOC</sub>,  
 be hat she buy-Perf be coat  
 tā yě mǎi-le \_\_\_\_.  
 she also buy-Perf \_\_\_\_.  
 ‘It was a hat that she bought. It was a coat that she also bought.’  
 (Cheung’s (2008) original presentation and translations)

There are two immediate problems with this reasoning. First, the answers in (58AB i, ii) violate the non-episodicity constraint observed for ex-situ foci. Second, once again, the absence/presence of *shì* ‘be’ leads to two completely different structures, as explained above. Accordingly, it cannot be presented as optional as Cheung does by enclosing it in parenthesis.

The correct way of applying such a test is the following. A question with an extracted *wh*-phrase (without *shì* ‘be’) permits a list answer, as shown in (59), whereas a question with an extracted *wh*-phrase preceded by *shì* ‘be’ requires a unique answer. The contrast between these two examples proves that different structures are involved. (59A) is a case of topicalization which does not show exhaustivity effects, while (60A) is a cleft focus which does show exhaustivity effects. The list answer in (60B) as the response to (59A) is banned, and only the single answer (60C) is permitted.

(59) A: [Nǎ-bù diànyǐng]<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén bù-shǎo? (Topic)  
 which-Cl movie see-Exp DE person not-few  
 ‘Which movie, the people who [saw (it)] are many?’

B: *Hālì Bōtè*, kàn-guò de rén bù-shǎo; *Zhǐhuán Wáng*, kàn-guò de rén yě bù-shǎo.  
 ‘*Harry Potter*, the people who saw (it) are many; *The Lord of the Rings*, the people who saw (it) are numerous as well.’

(60) A: Shì [nǎ-bù diànyǐng]<sub>i</sub>, [kàn-guò t<sub>i</sub>] de rén bù-shǎo? (Focus)  
 be which-Cl movie see-Exp DE person not-few  
 ‘Which movie is it that the people who [saw (it)] are many?’

B: # *Shì Hāli Bōtè, kàn-guò de rén bù-shǎo; shì Zhǐhuán Wáng, kàn-guò de rén yě bù-shǎo.*

‘It is *Harry Potter* that the people who saw (it) are many; it is also *The Lord of the Rings* that the people who saw (it) are many.’

C: *Shì Hāli Bōtè, kàn-guò de rén bù-shǎo.*

‘It is *Harry Potter* that the people who saw (it) are many.’

### 3.4 Summary

Although Cheung (2008, 2014) shows correctly that a TP-external focus construction exists in Chinese, it is not correct to reduce the extracted *wh*-topic constructions to the extracted *wh*-focus constructions. As argued for in this section, extracted *wh*-foci must obey general constraints on focus-constructions, such as the constraint on non-episodic eventualities. However, such a constraint does not apply in extracted *wh*-topic constructions. Furthermore, a *wh*-phrase can also be base-generated in TP-external focus-constructions and need not necessarily move there. Cheung (2008) does not discuss this latter type of *wh*-focus at all.

## 4. Mapping *wh*-topics and *wh*-foci to the left periphery in Chinese

In this section, I propose an analysis of *wh*-ex-situ in Chinese based on the recent research on the split-CP architecture in Mandarin. As I showed in the previous sections, there are four types of *wh*-ex-situ constructions:

**Type I: extracted *wh*-topic**

**Type II: extracted *wh*-focus**

**Type III: base-generated *wh*-topic**

**Type IV: base-generated *wh*-focus**

Recall that Tang (1988) and Wu (1999) only examine extracted *wh*-topics; Cheung (2008) reduces extracted *wh*-topics to extracted *wh*-foci preceded by *shì* ‘be’ and denies the existence of base-generated *wh*-topics. As for *shì* ‘be’ marked base-generated *wh*-foci, they have not been discussed at all in previous studies. We have demonstrated that these four structures behave differently, both in syntax and in semantics. For example, extracted *wh*-topics and *wh*-foci obey locality constraints, while base-generated *wh*-topics and *wh*-foci do not; extracted and base-generated *wh*-topics show topic-hood properties (D-linking effects). Extracted and base-generated *wh*-foci are subject to the ‘episodic eventuality constraints’; however, extracted and base-generated *wh*-topics do not.

As a result, these four types cannot be analyzed in a unified way. Importantly, ‘movement’ is not the only way to derive a *wh*-ex-situ (contra Cheung (2008, 2014)), but base-generation is also a possibility. Depending on the discourse function, an ex-situ *wh*-phrase is hosted by the TP-external TopP or FocP. Based on the recent work on the split-CP architecture in Chinese, I will show that ex-situ *wh*-phrases occur in TopP position for both extracted and base-generated *wh*-topics, and in FocP for extracted and base-generated *wh*-foci. Note that TopP is higher than FocP.

### 4.1 Discourse nature of the ex-situ *wh*-phrases

I begin with the following non-interrogative cases: (61a) is a case of topicalization and (61b) is an ex-situ cleft focus.



(61) a. [<sub>TopP</sub> Nǐ-de yīzhuó a, [<sub>TP</sub> gōngsī de lǎobǎn bù xǐhuān \_\_\_\_ ]].  
 your clothing TM company DE boss Neg like  
 ‘As for your way of dressing, the boss of the company doesn’t like (it).’

b. [<sub>TP</sub> Shì [nǐ-de yīzhuó, [<sub>TP</sub> gōngsī de lǎobǎn bù xǐhuān \_\_\_\_ ]]].  
 be your clothing company DE boss Neg like  
 ‘It is your way of dressing that the boss of the company doesn’t like.’

Accordingly, in my analysis, (62a) and (62b) are two completely different structures: one is *wh*-topicalization and the other is TP-external *wh*-focus construction. Thus, they are not reducible to a single structure.

(62) a. [<sub>ForceP</sub> [<sub>TopP</sub> Nǎ-yí-bù diànyǐng ne, [<sub>TP</sub> Zhāngsān zuì bù xǐhuān \_\_\_\_ ]]] ?  
 which-one-Cl film TM Zhangsan most Neg like  
 ‘Which movie, Zhangsan doesn’t like at all?’

b. [<sub>ForceP</sub> [<sub>TP</sub> Shì nǎ-yí-bù diànyǐng, [<sub>TP</sub> Zhāngsān zuì bù xǐhuān \_\_\_\_ ]]] ?  
 be which-one-Cl movie Zhangsan most Neg like  
 ‘Which movie is it that Zhangsan doesn’t like at all?’

Importantly, the presence of *shì* ‘be’ in *wh*-focus cases is not optional as claimed by Cheung (2008); on the contrary, *shì* ‘be’ is obligatory in order to obtain the focus interpretation in (62b). Since the presence of *shì* ‘be’ is obligatory in all of the non-interrogative focus-sentences, there is no reason either to postulate that its presence becomes optional in *wh*-focus cases. If *shì* ‘be’ does not appear in (62b), the resulting sentence is not analyzed as a case of *wh*-focus cleft, but as a case of *wh*-topicalization. When a *wh*-word appears in a topic position, it is subject to all of the independent syntactic constraints on topicalization; it is also subject to semantic constraints. Similarly, a *wh*-focus must also obey the general constraints for cleft foci in Chinese. As already shown in section 3 above, the cleft focus pattern is very problematic in sentences encoding episodic eventualities. The corresponding *wh*-fronting cases show exactly the same contrast.

Under my assumption, some of the “anti-topicalization” arguments given in Cheung (2008) can now be accounted for. Cheung (2008) provides (63) in order to show that a TP-external *wh*-phrase cannot be followed by a topic marker, whether *shì* ‘be’ is present or not:

(63) (Shì) [shénme dōngxì]<sub>C-FOC</sub> (\*a /ya), nǐ mǎi-le \_\_\_\_ ?  
 be what thing TM/TM you buy-Perf  
 ‘What thing was that you bought?’ (Cheung 2008: 100: (96))

The way of presenting the data in (63) is very problematic, because two different structures are involved. A topicalisation and a focus cleft. These two structures must be separated for testing, as shown in (64a-b).

(64) a. \* Shì shénme dōngxì (a /ya), nǐ mǎi-le ?  
 be what thing TM/TM you buy-Perf  
 (‘What thing was it that you bought?’)

b. Shénme dōngxì (a /ya), nǐ méi mǎi-dào ?  
 what thing TM/TM you Neg buy  
 ‘What thing, haven’t bought (it)?’

(64a) involves a focus cleft and the relevant sentence is ungrammatical with or without the presence of the topic markers, because it violates the non-episodicity constraint. The object *shénme dōngxi* ‘what thing’ cannot undergo fronting when it is the patient of an action verb *mǎi* ‘buy’. As (64b) shows, the extracted *wh*-topic *shénme dōngxi* ‘what thing’ can be marked by *ne* or *a* without any problem. We also note that the presence of the negative element makes sentence more natural, as observed in Wu (1999) and Yuan & Dugarova (2012).

## 4.2 Split CP and *wh*-ex-situ in Mandarin

Some important work has been done on the mapping between Information Structure and the split CP architecture in Chinese. Based on the split CP hypothesis, the cartographic thesis proposed in Rizzi (1997), Paul (2002, 2005) establishes the following hierarchy:

(65) ForceP > TopP > *lián* ‘even’ FocP > TP > ....

What is important for my analysis is that the discourse function (topic or focus) of a *wh*-word is correlates with the functional projection that hosts it. In other words, we can simply replace the relevant non-interrogative topic in a sentence with its corresponding *wh*-word. The co-occurrence of a topic phrase and a focus phrase is also possible, and in that case the former precedes the latter.

(66) a. Zuótiān de wǎnhuì, shì Mǎlì de biǎoyǎn, dàjiā juéde  
yesterday DE party be Mary DE performance everyone think  
zuì jīngcǎi.  
most wonderful (topic > focus)  
‘As for the party last night, it was the performance of Mary that everyone thought wonderful.’

b. \* Shì Mǎlì de biǎoyǎn, zuótiān de wǎnhuì, dàjiā juéde  
be Mary DE performance yesterday DE party everyone think  
zuì jīngcǎi.  
most wonderful (\*focus > topic)

(67) a. Nǎ-yì-chǎng wǎnhuì, shì Mǎlì de biǎoyǎn, dàjiā juéde  
which-one-CL party be Mary DE performance everyone think  
zuì jīngcǎi ?  
most wonderful (*wh*-topic > focus)  
‘(In) which party, it was the performance of Mary (during the party) that everyone thought wonderful?’

b. \* Shì Mǎlì de biǎoyǎn, nǎ-yì-chǎng wǎnhuì, dàjiā juéde  
be Mary DE performance which-one-CL party everyone think  
zuì jīngcǎi ?  
most wonderful (\*focus > *wh*-topic)

c. Zuótiān de wǎnhuì, shì shéi de biǎoyǎn, dàjiā juéde  
yesterday DE party be who DE performance everyone think  
zuì jīngcǎi ?  
most wonderful (topic > *wh*-focus)  
‘As for the party last night, whose performance was it that everyone thought wonderful?’

- d. \* Shì shéi de biǎoyǎn, zuótiān de wǎnhuì, dàjiā juéde  
 be who DE performance yesterday DE party everyone think  
 zuì jīngcǎi ?  
 most wonderful (\**wh*-focus > topic)

- (68) a. Nǎ-yì-chǎng wǎnhuì, shì shéi de biǎoyǎn, dàjiā juéde  
 which-one-CL party be who DE performance everyone think  
 zuì jīngcǎi ?  
 most wonderful (*wh*-topic > *wh*-focus)  
 ‘(At) which party, it was whose performance that everyone thought wonderful?’

- b. \* Shì shéi de biǎoyǎn, nǎ-yì-chǎng wǎnhuì, dàjiā juéde  
 be who DE performance which-one-CL party everyone think  
 zuì jīngcǎi ?  
 most wonderful (\* *wh*-focus > *wh*-topic)

(67-68) justify my assumption that Topic and Focus target different syntactic projections and that *wh*-topicalization and *wh*-focus construction are two independent structures. Therefore, topicalization in the sense of Wu (1999) and contrastive focus-construction in the sense of Cheung (2008) are not competing analyses for the ex-situ *wh*-phrases. A *wh*-topic occupies a syntactically higher position than a *wh*-focus.

## 5. Conclusion

This paper has established four types of *wh*-ex-situ structures in Mandarin Chinese: extracted and base-generated *wh*-topics on the one hand, and extracted and base-generated *wh*-foci on the other. A *wh*-focus preceded by the copula *shì* ‘be’ always follows a *wh*-topic. Given that these four types of *wh*-ex-situ behave differently both in syntax and in semantics, uniform analysis must be rejected (*contra* Cheung (2008, 2014)). A *wh*-topic is only allowed when D-linked, while a *wh*-focus is not subject to this condition. On the other hand, a *wh*-focus cannot be extracted from a predicate that implies an episodic eventuality, while no such constraint applies to an extracted *wh*-topic (except when an island involved). Importantly, all four types of *wh*-ex-situ must obey general semantico-logical constraints on interrogatives.

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