

DISJUNCTION IN MANDARIN CHINESE: *YAOME* XP *YAOME* YP

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## ABSTRACT

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*Yaome* XP *yaome* YP is often translated into English as “*either* XP *or* YP”. Both allow a disjunctive interpretation when they occur in a sentence. This similarity, however, ends there. First, there are restrictions on the types of syntactic phrases that the paired *yaome* conjoins while *either or* is free to conjoin phrases of different types in English. In particular, *yaome* does not conjoin nominal phrases while *either or* doesn’t exhibit such a restriction. This asymmetry (namely the asymmetry that *yaome* doesn’t conjoin DPs, while *either or* does) shows an interesting phenomenon, specifically the sentence ‘Either John hit Bill or Mary’ is ambiguous in English but not in Mandarin. Second, the paired *yaome* and *either or* differ in their placement in environments that licenses Negative Polarity Items (NPIs). Particularly, paired *yaome* doesn’t occur in the scope of negation, in interrogatives and in the antecedent clause of conditionals, while *either or* occurs in these environments. This behavior of *yaome* indicates that it is a Positive Polarity Item and therefore must escape from environments that license NPIs.

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To my parents and siblings.

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# CHAPTER 1

## INTRODUCTION

In the syntax of coordination literature, *either* and *or* seem to combine conjuncts of different sizes. As shown in (1), *either* can appear either adjacent to the first disjunct (underlined) or far away from it.

- (1) {*Either*} John {*either*} ate {*either*} rice or beans.

Two major theories, the movement theory (Larson, 1985) and the ellipsis theory (Schwarz, 1999), are proposed to account for the variable placement of *either*. The movement account suggests movement of the coordinator *either*, while the ellipsis account argues that *either* is unable to move, and that the conjuncts are the same size but part of the elements in the second disjunct is being elided. Aligned with the ellipsis theory, den Dikken (2006) also argues that *either* is immobile. However, different from the ellipsis account that *either* overtly marks the left edge of a sentence, the placement of *either* under den Dikken’s account has to do with the ‘ $\theta$ -path’ projected from the contrastive focus of a sentence. In his sense, *either* can occur only in places where a  $\theta$ -path is created.

In addition, *either or* is flexible in that it can be adjacent to constituents of various categories, as illustrated in (2). Both *either* and *or* can be placed immediately to the left of a DP object as in (2a). It’s also fine for *either* to be adjacent to a VP while *or* is adjacent to a TP, as shown in (2b). Finally, the sentence in (2c) shows that *either* can immediately precede a TP, while *or* precedes a DP.<sup>1</sup> In these sentences, *either* and *or* appear to display a flexibility in conjoining phrases of different syntactic categories, yet they all derive the same interpretation that ‘it is either rice or beans that John ate’.

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<sup>1</sup>Note that the category of the constituents *or* conjoins could vary depending on one’s theory. The examples in (2) discuss the linear order at surface structure and will leave it open to which theory best accounts for the distribution of *either or*.



- (2) a. John ate either [*DP* rice] or [*DP* beans].  
 b. John<sub>*i*</sub> either [*VP* ate rice] or [*TP* he<sub>*i*</sub> ate beans].  
 c. Either [*TP* John ate rice] or [*DP* beans].

*Yaome...yaome...*, a disjunctive coordinator in Mandarin, is often being translated as *either or*. In (3), the sentence has a disjunctive reading such that it's one of the two things that John will do: 'eat rice' or 'eat noodles'. In other words, in each conjunct, we have a VP.

- (3) Yuehan *yaome* chi fan *yaome* chi mian.  
 John *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> eat noodles  
 'John will either eat rice or noodles.'

Although the paired *yaome* derives a disjunctive interpretation as *either or* does, they behave differently. The sentence in (4) is parallel in interpretation to those in (2). Nonetheless (4) shows that simply translating (2) into (4) yields unacceptable results. Particularly, the sentence is unacceptable in (4a) when *yaome*<sub>1</sub> and *yaome*<sub>2</sub> are placed immediately to the left of each of the objects that are the contrastive disjuncts of the sentence. In addition, the sentence in (4b) is ill-formed when *yaome*<sub>1</sub> precedes a VP, while *yaome*<sub>2</sub> precedes a TP. The same result is found in (4c). Specifically the sentence is not acceptable when *yaome*<sub>1</sub> precedes a TP while *yaome*<sub>2</sub> precedes a DP. The contrast between the two sets of data in (2) and (4) implies that the paired *yaome* is not as flexible as *either or* despite being similar in interpretation.

- (4) a. \*Juehan chi *yaome* fan *yaome* mian.  
 John eat *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
 'John will eat either rice or noodles.'  
 b. \*Juehan<sub>*i*</sub> *yaome* chi fan *yaome* ta<sub>*i*</sub> chi mian.  
 John *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> he eat noodles  
 'John will either eat rice or he eat noodles.'  
 c. \**Yaome* Juehan chi fan *yaome* mian  
*yaome*<sub>1</sub> John eat rice *yaome*<sub>2</sub> noodles

‘Either John will eat rice or noodles.’

Lots of analyses have been proposed on the syntax of coordination regarding disjunction in English (cf. Larson (1985); Munn (1993); Schwarz (1999); den Dikken (2006)). Yet, to the best of my knowledge, scarce work has been done in Mandarin, specifically in the case of paired *yaome*<sup>2</sup>. The goal of this thesis is to examine *yaome...yaome...* in order to account for three puzzles. First, why is there a judgement asymmetry between (5a) and (5b)? This asymmetry is not expected given the similarities between (5a) and (5b). The sentences in (5a) and (5b) are similar in that they are both possible candidates for being an answer to the question in (5). Furthermore, they are identical in that both *yaome*<sub>1</sub> and *yaome*<sub>2</sub> are placed immediately to the left of the contrastive objects ‘rice’ and ‘noodles’. Despite the similarities, the result is quite different in terms of acceptability, while (5a) is unacceptable, (5b) is acceptable. I will call this the **DP puzzle**.

- (5)    Ni   xiang chi shenme?  
         you want eat what  
         ‘What do you want to eat?’
- a.    \*Wo chi *yaome* fan, *yaome* mian.  
         I    eat *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
         ‘I’ll eat either rice or noodles.’
- b.    *Yaome* fan, *yaome* mian.  
         *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
         ‘Either rice or noodles.’

Second, there is an interpretation asymmetry, specifically (6) is ambiguous in English but not in (7) in Mandarin. These are two otherwise identical sentences containing three individuals, a hitting event and a disjunctive coordinator. In English, (6) is ambiguous in that it has two interpretations paraphrased as (6a) and (6b). (7) is a parallel sentence to (6), however it has only one interpretation to most native Chinese speakers. Particularly, in

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<sup>2</sup>Zhang (2007, p.178), who works on coordinations in Mandarin Chinese, mentions *yaome* in a footnote. However, I believe the example doesn’t straightforwardly illustrate the characteristics of *yaome*. See the footnote on p.22 in this thesis for more discussions.

Mandarin, the sentence can only have the interpretation in (7a) but not the one in (7b). In other words, the DP ‘Mary’ in the second disjunct in English can either be the object or the subject of the sentence, resulting in two interpretations. However, in Mandarin, ‘Mary’ can only be the subject but not the object of the sentence.<sup>3</sup>

(6) Either John hit Bill or Mary.

a. It was either Bill or Mary who John hit.

b. It was either John or Mary who hit Bill.

(7) *Yaome* Yuehan da-le Bier, *yaome* Mali.  
*Yaome* John hit-PERF Bill *yaome* Mary

a. It was either Yuehan or Mali who hit Bier.

b. \*It was either Bier or Mali who Yuehan hit.

Why is the same sentence ambiguous in English but not in Mandarin? Is this a fact that results from the syntactic difference between *either or* and paired *yaome* or is it the result of a more general syntactic difference between English and Mandarin? I argue that this interpretation asymmetry follows from both aspects: on one hand from a subcategorization restriction imposed by *yaome*, and, on the other hand, from the fact that Mandarin Chinese doesn’t allow the operation of verb gapping. I will call this the **subject-object puzzle**.

Third, it is generally assumed that a conjunctive entailment can be licensed when a disjunction appears in the scope of negation or the antecedent clause of conditionals (cf. Szabolcsi (2002); Su & Crain (2010); Su et al. (2012)). (8), for instance, has a conjunctive reading when *either or* is in the scope of negation.

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<sup>3</sup>In case the interpretation of (7) is not clear, I hereby provide a context where uttering the sentence in (7) is felicitous. Imagine there’s a person named Zhenni. She has four children, Yuehan, Mali, Bier and Bide. Three of her children, Yuehan, Mali and Bier got into a fight when she was out. While they were fighting in the living room, Bide stayed in his room reading books. After Zhenni’s back, she noticed something was wrong, so she asked her children what had happened when she was out. Bide didn’t observe the entire event since he was in his room reading books during the fight. However, trying to be helpful, he replied to his mom with the sentence in (7) based on his understanding of his peers, specifically the understanding that *Yuehan* and *Mali* always make fun of *Bier*.

(8) Peter doesn't eat either rice or noodles.

$\Rightarrow$  Peter doesn't eat rice  $\wedge$  Peter doesn't eat noodles.

However, no conjunctive entailment can be derived when *yaome* is preceded by negation. As illustrated in (9), no conjunctive interpretation can be derived when negation *mei* scopes over *yaome*. In fact, the sentence is unacceptable. Why does *yaome* behave differently from *either or* in environment of this type? I argue that it is a result of *yaome* being a positive polarity item. I will call this the **polarity puzzle**.

(9) \*Bide mei *yaome* chi fan, *yaome* chi mian.

Peter not *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> eat noodles

\*  $\Rightarrow$  Peter doesn't eat rice  $\wedge$  Peter doesn't eat noodles.

In this thesis, I start with the distribution of *yaome* and I propose a structure to account for its distribution in Chapter 2. Following, in Chapter 3, I restate the DP puzzle and provide an account for it. In chapter 4, I discuss the subject-object puzzle and analyses are provided to account for this puzzle. In Chapter 5, I examine other properties of *yaome* in order to argue that it is a positive polarity item. Finally, a integrated conclusion is provided in Chapter 6.

## CHAPTER 2

### THE DISTRIBUTION AND THE STRUCTURE OF *YAOME*

#### 2.1 The Distribution of *yaome*

*Yaome* is often found preceding verbal elements, idioms, or at the left periphery of a clause.<sup>1</sup> Nevertheless, it's restricted to conjoined elements that are not nominal. This section discusses the general placement of *yaome*, specifically its relation with predicates and with DPs. In Sect.2.1.1, I show that *yaome* is able to conjoin predicates of various types. Following, in Sect.2.1.2, I show that *yaome* doesn't conjoin projections that are nominal. In particular, it doesn't conjoin DPs.

##### 2.1.1 *Yaome* and Predicates

In Mandarin, when using paired *yaome*, speakers tend to place *yaome* right before a verb, as shown in (10a)-(10c), or at the left periphery of a sentence, as shown in (11a)-(11c).

- (10) a. Kim *yaome* [<sub>VP</sub> nian le      diyi zhang], *yaome* [<sub>VP</sub> nian le      dier  
Kim *yaome*<sub>1</sub>      read PERF first chapter *yaome*<sub>2</sub>      read PERF second  
zhang].  
chapter  
'Kim either read the first chapter or read the second chapter.'

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<sup>1</sup> *Yaome* can conjoin idioms as shown in (i) and (ii). However, I will not discuss the relation between *yaome* and idioms given that this is not the focus of this thesis.

- i    Tingdao zhe-ge xiaoxi de ren      *yaome*    xin-ping-qi-he,      *yaome*    nu-qi-chong-tian.  
heard    this-CL news    DE people *yaome*<sub>1</sub> heart-flat-breath-mild *yaome*<sub>2</sub> anger-breath-rise-sky  
'Those who heard the news, they are either calm or furious.'
- ii    Ta chi fan *yaome*    xi-jiao-man-yan      *yaome*    lang-tun-hu-yan.  
he eat rice *yaome*<sub>1</sub> thing-bite-slow-swallow *yaome*<sub>2</sub> wolf-swallow-tiger-swallow  
'He either eats rice slowly or quickly.'

- b. Wo hui jia zhihou, *yaome* [<sub>VP</sub> kan dianshi], *yaome* [<sub>VP</sub> wan  
I back home after *yaome*<sub>1</sub> watch television *yaome*<sub>2</sub> play  
diandong].  
video-game  
'After I get home, I'll either watch television or play video games.'
- c. Bill zuotian *yaome* [<sub>VP</sub> jiandao Zhenni], *yaome* [<sub>VP</sub> jiandao Mali].  
Bill yesterday *yaome*<sub>1</sub> see Jane *yaome*<sub>2</sub> see Mary  
'Yesterday, Bill either saw Jane or saw Mary.'
- (11) a. *Yaome* [<sub>TP</sub> ta chi fan], *yaome* [<sub>TP</sub> ta chi mian].  
*yaome*<sub>1</sub> he eat rice *yaome*<sub>2</sub> he eat noodles  
'Either he ate rice or he ate noodles.'
- b. *Yaome* [<sub>TP</sub> Bier xi-le yifu], *yaome* [<sub>TP</sub> Mali xi-le kuzi].  
*yaome*<sub>1</sub> Bill wash-PERF clothes *yaome*<sub>2</sub> Mary wash-PERF trousers  
'Either Bill washed the clothes or Mary washed the trousers.'
- c. *Yaome* [<sub>TP</sub> Bier xihuan chi shuiguo], *yaome* [<sub>TP</sub> Mali xihuan chi  
*yaome*<sub>1</sub> Bill like eat fruits *yaome*<sub>2</sub> Mary like eat  
shucai].  
vegetables  
'Either Bill likes to eat fruits or Mary likes to eat vegetables.'

We can see that *yaome* conjoins clauses or verbal predicates. In the following, I'll show that it can combine with non-nominal predicates. In addition to copular and degree words, I'll also provide evidence from adjectives, adverbs and prepositional phrases, which are also predicates.

Generally speaking, the copula is assumed to be a verb or verb-like word. Examples involving the copula *be* in English are shown in (12). In (12a), (12b) and (12c), *be* links a subject with a predicate.

- (12) a. John is a doctor.  
b. The sky is blue.  
c. Those flowers are beautiful.

In Mandarin, *shi* can be compared to *be* in English. Unlike in inflectional languages such as English, *shi* doesn't inflect for person and number. The sentences in (13) are parallel sentences to those in (12). In (13a) *shi* appears between the subject and the predicate of the sentence. In (13b) and (13c), instead of *shi*, a degree word *hen* is used in the sentences.<sup>2</sup>

- (13) a. Yuehan **shi** yisheng.  
           John   COP doctor  
           ‘John is a doctor.’  
       b. Tiankong **hen** lan.  
           sky       very blue  
           ‘The sky is very blue.’  
       c. Naxie hua   **hen** piaoliang.  
           those flower very beautiful  
           ‘Those flowers are beautiful.’

The occurrence of adjectival predicates with degree words is not obligatory. As illustrated in (14), the sentences are grammatical without degree words. The difference between having a degree word or not is in the interpretation. As noted in Grano (2012), a positive reading is derived when adjectival predicates occur with degree words. Without the degree words, the interpretation is of a comparison. The sentences in (14) are felicitous in a context where

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<sup>2</sup>For *shi* to occur in sentences with adjectival predicates, the functional element *de* has to be placed to the right of the adjective in the sentences. As shown in (i) and (ii), the placement of *shi* in sentences with adjectival-type predicates is not acceptable when *de* is omitted. There are various analyses for the status of *de*. It can be analyzed as a nominalizer, as a sentence-final particle, or as an element that is required in relative clauses (cf. Paris (1979); Tang (1983); Waltraud & Whitman (2008)). The syntactic status of *de* is itself a controversial matter and I therefore gloss it as DE. The sentence in (i) and (ii) show that the occurrence of *shi* with adjectives is felicitous only if *de* is also present in the sentences. In the literature, this combination of *shi* and *de* is called the *shi...de* construction. It is argued that there are at least four distinct constructions for *shi...de*, and the *shi...de* construction is distinct from bare *shi* (Waltraud & Whitman, 2008). Since the purpose of this thesis is not the *shi...de* construction, I therefore limit the discussion to sentences involve bare *shi* only.

- i    Yuehan shi   zisi   \*(de).  
       John    COP selfish DE  
       ‘John is indeed selfish.’  
   ii   Zhe jian yifu   shi   da   \*(de).  
       this CL   clothes COP big DE.  
       ‘This clothes is indeed big.’

there is a salient standard of comparison and in this case, the adjectives have a comparative rather than a positive interpretation (Grano, 2012).

- (14) a. Naxie hua piaoliang.  
those flower beautiful  
'Those flowers are more beautiful (than other salient entities in the context).'
- b. Yuehan zisi.  
John selfish  
'John is more selfish (than some salient person in the context).'
- c. Zhe jian yifu da.  
this CL clothes big  
'This clothes is bigger (than other salient objects in the context).'

The placement of *yaome* in sentences with *shi* is illustrated in (15). Specifically, (15a) is grammatical when *yaome* conjoins *shi*-phrase, while it is not acceptable when *yaome* follows *shi* as in (15b).

- (15) a. Yuehan *yaome* shi yisheng, *yaome* shi hushi.  
John *yaome*<sub>1</sub> COP doctor *yaome*<sub>2</sub> COP nurse  
'John is either a doctor or a nurse.'
- b. \* Yuehan shi *yaome* yisheng, *yaome* hushi.  
John COP *yaome*<sub>1</sub> doctor *yaome*<sub>2</sub> nurse  
'John is either a doctor or a nurse.'

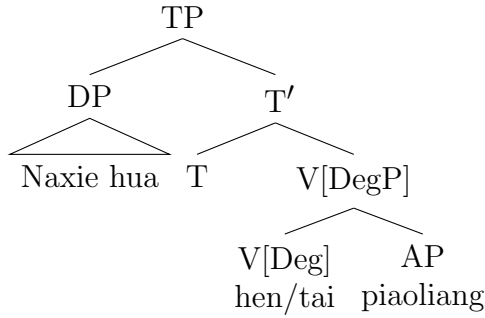
Similarly, the placement of *yaome* in sentences with *hen* patterns the same as those with *shi*. As shown in (16a), the sentence is grammatical when *yaome* conjoins phrases headed by degree words such as *hen* or *tai*. I follow Grano (2012) in assuming that degree words project a functional head. Furthermore, they have a distinct characteristic in that they are able to combine with verbal and adjectival projections, yet uniformly return verbal projections as illustrated in (17).

- (16) a. Naxie hua *yaome* hen/tai piaoliang, *yaome* hen/tai chou.  
those flower *yaome*<sub>1</sub> very/too beautiful *yaome*<sub>2</sub> very/too ugly  
'Those flowers are either very/too beautiful or very/too ugly.'



Figure 2.1 Tree Structure: Degree words with verbal projection

(17)



(structure adopted from Grano, 2012, p.532)

- b. \*Naxie hua hen/tai *yaome* piaoliang, *yaome* chou.  
 those flower very/too *yaome*<sub>1</sub> beautiful *yaome*<sub>2</sub> ugly  
 ‘Those flowers are very/too either beautiful or ugly.’

Additional support for Grano’s argument are VP substitution tests. In English, *do so* can substitute a VP in a discourse as shown in (18).

- (18) a. John [put some apples on the table] and Mary *did so* too.  
 b. Bill will [walk to school] tomorrow and Pete will *do so* the day after.

In Mandarin, *ye shi* patterns similarly to *do so* in that it can also substitute a VP in a discourse. As shown below in (19a) and (19b), the contrast in the grammaticality of these two sentences shows that *ye shi* is a substitution test for VPs but not NPs. Specifically, it can substitute the VP in (19a), but not the DP in (19b). In (20a) and (20b), *ye shi* in the second clause of the sentences can substitute the constituents headed by *hen*. This indicates that *hen* projects a VP. It follows that *yaome*’s occurrence to the left of *hen* and *tai* in (16a) is compatible with the idea that degree words are verbal projections.

- (19) a. Ni [<sub>VP</sub> ai ta], wo [ye shi].  
 you love him I also COP  
 ‘You love him and so do I.’  
 b. \*Ni [<sub>VP</sub> ai [<sub>DP</sub> ta]], wo [<sub>VP</sub> ai [ye shi]].  
 you love him I love also COP

Intended: ‘You love him and I love him too.’

(adapted from Huang et al., 2009, p.27)

- (20) a. Ni [*hen* ai ta], wo [ye shi].  
you very love him I also COP  
‘You love him very much and so do I.’
- b. Ta [*hen* tongqing ni de zaoyu], wo [ye shi].  
I very sympathize you DE bad-experience I also COP  
‘I am sympathetic with your bad experience and so is he.’

As for the ill-formed sentence in (16b), it’s not because of *yaome* not being able to conjoin adjectives such as *piaolian* ‘beautiful’ or *chou* ‘ugly’. As shown below in (21a) and (21b), without the degree words, *yaome* can conjoin adjectival predicates.<sup>3</sup> This indicates that the ill-formness of (16b) is not from *yaome*. Instead, the ill-formness of (16b) seems to come from the fact that degree words do not combine with coordinators. This is shown below in (22) in English. In (22a), *either or* is able to coordinate two adjectives. However, the sentence becomes unacceptable when *either* appears immediately to the right of *very*.

- (21) a. Naxie hua *yaome* [<sub>AP</sub> piaoliang], *yaome* [<sub>AP</sub> chou].  
those flower *yaome*<sub>1</sub> beautiful *yaome*<sub>2</sub> ugly  
‘Those flowers are either beautiful or ugly.’
- b. Ta *yaome* [<sub>AP</sub> pang], *yaome* [<sub>AP</sub> shou].  
He *yaome*<sub>1</sub> fat *yaome*<sub>2</sub> thin  
‘He is either fat or thin.’
- (22) a. He is either tall or short.
- b. \*He is very either tall or short.

So far, I’ve shown that *yaome* is able to conjoin elements that project a verbal phrase such as the copula *shi* and degree words such as *hen* and *tai*. In addition, it also conjoins

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<sup>3</sup>It’s also possible that *yaome* in (21) is conjoining two VPs with zero verbs.

adjectival predicates. Next, I'll show that *yaome* can combine adverbial and prepositional predicates.

In Mandarin, an adverbial predicate can follow or precede a verb, as shown in (23) and (25) respectively. Certain adjectives can perform an adverbial function by adding the suffix *de* (Li & Thompson, 1981). As shown in (23), the functional element *de* is attached to the adjective *xunsu* modifying the VP.

- (23) Wo [<sub>VP</sub> xunsu-de [<sub>VP</sub> pao huijia]].  
 I quick-DE run back.home  
 'I quickly ran back home.'

The placement of *yaome* in sentences with adverbial predicates is illustrated in (24). The sentence shows that *yaome* can be placed to the left of *xunsu-de* 'quickly' or *huanman-de* 'slowly'. However, when the adverb is preverbal, it is not clear whether *yaome* is conjoining the adjunct or the maximal projection of the verb.

- (24) Wo *yaome* [xunsu-de pao huijia], *yaome* [huanman-de zou huijia].  
 I *yaome*<sub>1</sub> quick-DE run back.home *yaome*<sub>2</sub> slow-DE walk back.home  
 'I either quickly ran back home or slowly walk back home.'

To clarify this problem, the sentence in (25) is provided to examine the relation between *yaome* and adverbial predicates that are postverbal.<sup>4</sup>

- (25) Wo pao-de (hen) kuai.  
 I run-DE (very) fast  
 'I run very fast.'

(adapted from Huang, 1988, p.274)

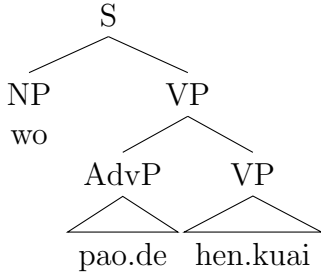
(26a) and (26b) illustrate *yaome*'s placement in sentences like (25). In the examples below, *yaome* can either conjoin the predicate headed by *pao-de* 'run' as in (26a) or the predicate headed by *hen* 'very' in the adverbial position as in (26b).

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<sup>4</sup>Phonologically, *de* is attached to the preceding verb, either as a suffix or a clitic, depending on one's theory', a direct quote from Huang (1988). Therefore, in this case, *de* is not separable to the verb that precedes it.

Figure 2.2 Tree Structure: PP hypothesis

(27)



(adapted from Huang, 1988, p.276)

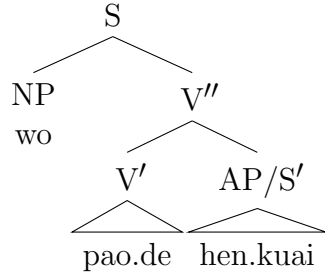
- (26) a. Bide *yaome* [pao-de hen kuai], *yaome* [pao-de hen man].  
 Peter *yaome*<sub>1</sub> run-DE very fast *yaome*<sub>2</sub> run-DE very slow  
 Peter either runs very fast or very slow.
- b. Bide pao-de *yaome* [hen kuai], *yaome* [hen man].  
 Peter run-DE *yaome*<sub>1</sub> very fast *yaome*<sub>2</sub> very slow  
 Peter either runs very fast or very slow.

The structure of the sentence in (25), according to Huang (1988), is a sentence consisting of two predicates, *pao-de* and *hen kuai*. Two hypotheses, the Primary Predication (PP) hypothesis and the Secondary Predication (SP) hypothesis, can account for the syntactic structure of this sentence. Under the PP hypothesis, the second predicate *hen kuai* is treated as the main VP and has the structure in (27) in which *pao-de* is treated as an adverbial adjunct of the main VP. On the other hand, under the SP hypothesis, *hen kuai* is treated as an adjunct as in (28a).

Under the PP hypothesis, *yaome* in (26a) and (26b), assuming a structure in (27), conjoins the highest VP (or the adjunct) and the embedded VP respectively. Under the SP hypothesis, *yaome* in (26a) and (26b), assuming a structure in (28a), conjoins the highest VP (or the embedded VP) and the adjunct respectively. I follow Huang (1988) in assuming that the SP hypothesis is correct. In particular, I assume (25) has the structure in (28a) and the second predicate is the adjunct of the VP *pao-de*. It follows that *yaome* in (26b) is conjoining adverbial conjuncts. An alternative analysis of *yaome*'s placement in (26b) is to

Figure 2.3 Tree Structure: SP hypothesis

(28) a.



(Huang, 1988, p.276)

assume that the phrase headed by *hen* is a verb-like phrase, as shown previously in (17) and (20). Regardless of the analysis, *yaome*'s distribution in (26b) can be accounted for.

The last case that I'm going to discuss is the relation between *yaome* and prepositional predicates. As shown below in (29), based solely on the translation, there seems to be two prepositions, *zai* and *shang*. It's argued that postpositions such as *shang* in Mandarin Chinese are actually nominal expressions (Li, 2012). There are data showing that the placement of the [NP + localizer] is the same as DPs. Furthermore, it doesn't occur in positions where typical prepositional phrases occur (Li, 2012).

- (29) Yuehan *zai* zhuozi *shang* tiaowo.  
 John at table on dance  
 'John is dancing on the table.'

As shown in (30a) and (30b), the [NP + localizer] occupies the subject and object position, respectively, which is typical for DPs. Contrarily, typical prepositional phrases don't occur in these positions, as illustrated in (30c) and (30d).

- (30) a. *Yizi-xia* hen ganjing.  
 chair-under very clean  
 'Under the chair is clean.'
- b. Ni xian jiancha *yizi-xia*.  
 you first examine chair-under  
 'You examine the area under the chair first.'

- c. \* [*Zai* yizi-xia]      hen ganjing.  
       at    chair-under very clean  
       Intended: ‘Under the chair is clean.’
- d. \* Ni    xian jiancha    [*zai* yizi-xia].  
       you first examine at    chair-under  
       Intended: ‘You examine the area under the chair first.’

(adapted from Li, 2012, p.4)

In addition, compare the sentence in (31a) to the sentence in (31b) where there’s a preposition *zai* in the former but not in the later. The ungrammaticality of (31b) shows that the [NP + localizer] needs a preposition.

- (31) a.    Ta *zai* jia-li      gongzuo.  
           he at    home-in work  
           ‘He is working at home.’
- b.    \*Ta *jia-li*      gongzuo.  
           he home-in work  
           Intended: ‘He is working at home.’

(adapted from Li, 2012, p.5)

The sentences in (32a) and (32b) illustrate *yaome*’s placement in sentences with prepositions and they are all grammatical. Contrarily, in (32c) and (32d), having *yaome* conjoining postpositions that are nominal-like results in the unacceptability of the sentence.

- (32) a.    Ta *yaome* [*PP* zai jia],    *yaome* [*PP* zai xuexiao].  
           he *yaome*<sub>1</sub>      at home *yaome*<sub>2</sub>      at school  
           ‘He is either at home or at school.’
- b.    Pinggou *yaome* [*PP* zai zhuozi shang], *yaome* [*PP* zai zhouzhi xia].  
           apple    *yaome*<sub>1</sub>      at table on      *yaome*<sub>2</sub>      at table    under  
           ‘The apple is either on the table or under the table.’
- c.    \*Pinggou zai *yaome* [zhouzi shang], *yaome* [zhouzi xia].  
           apple    at *yaome*<sub>1</sub> table    on      *yaome*<sub>2</sub> table    under  
           Intended: ‘The apple is either on the table or under the table.’

- d. \*Pinggou zai zhouzi *yaome* [shang], *yaome* [xia].  
 apple at table *yaome*<sub>1</sub> on *yaome*<sub>2</sub> under  
 Intended: ‘The apple is either on the table or under the table.’

So far, all the data presented supports the idea all predicates except for nominal predicates and DPs can be conjoined. An interesting question to ask is whether there’s a restriction on the types of VPs that can be conjoined, when the sentence has more than one: the external VP or the internal VP. Examples in (33) are composed of two verbs, *qu* ‘go’ and *da* ‘hit’. In (33a), *yaome*<sub>1</sub> and *yaome*<sub>2</sub> each conjoin an external VP, namely the phrases headed by *qu* ‘go’, and the sentence is acceptable. In addition to (33a), the sentence in (33b) is also well-formed when the paired *yaome* each conjoins an internal VP, namely the phrases headed by *da* ‘hit’. Given the sentences in (33) are all acceptable, this implies that there’s no such preference.

- (33) a. Ban *yaome* [<sub>VP</sub> qu gongyuan da lanqiu], *yaome* [<sub>VP</sub> qu shatan da  
 Ben *yaome*<sub>1</sub> go park hit basketball *yaome*<sub>2</sub> go beach hit  
 paiqiu].  
 volleyball  
 ‘Ben either goes to the park to play basketball or he goes to the beach to play  
 volleyball.’
- b. Ban qu gongyuan *yaome* [<sub>VP</sub> da lanqiu], *yaome* [<sub>VP</sub> da paiqiu].  
 Ben go park *yaome*<sub>1</sub> hit basketball *yaome*<sub>2</sub> hit volleyball  
 ‘Ben goes to the park either to play basketball or volleyball.’

In addition to clauses and the predicates, *yaome* also conjoins phrases headed by modal auxiliaries. The distribution of *yaome* in sentences with modal words is shown in (34). Both *yaome*<sub>1</sub> and *yaome*<sub>2</sub> are satisfied when the auxiliaries are part of the conjuncts as in (34a) and (34b), while unacceptable when they are outside the conjuncts and being separated from the verb as in (34c). The unacceptability of (34c) can be explained if the placement of a verb and modal should be adjacent and *yaome* cannot break this unity.

- (34) a. Ta *yaome* [{bixu/yinggai/hui} qing keting], *yaome*  
 he *yaome*<sub>1</sub> must/should/will clean living.room *yaome*<sub>2</sub>  
 [{bixu/yinggai/hui} qing chufang].  
 must/should/will clean kitchen  
 ‘He must/should/will either clean the living room or the kitchen.’
- b. *Yaome* [ta {bixu/yinggai/hui} qing keting], *yaome* [ta  
*yaome*<sub>1</sub> he must/should/wil clean living.room *yaome*<sub>2</sub> he  
 {bixu/yinggai/hui} qing chufang].  
 must/should/wil clean kitchen  
 ‘He must/should/will either clean the living room or the kitchen.’
- c. ?? Ta [{bixu/yinggai/hui} *yaome* [qing keting]], *yaome* [qing chufang].  
 he must/should/will *yaome*<sub>1</sub> clean living.room *yaome*<sub>2</sub> clean kitchen  
 Intended: ‘He must/should/will either clean the living room or the kitchen.’

Another piece of evidence that supports the adjacency requirement has to do with serial verbs in Mandarin Chinese. (35) is a sentence consisting of two successive verbs. In (35), the two verbs are *bing* ‘sick’ and *si* ‘die’. Syntactically, two successive verbs are considered as an unitary verb and they cannot have any unshared arguments that could break this unity (Hansell, 1993). In other words, the two verbs in (35) cannot be separated.

- (35) Ta *bing si* le.  
 he sick die ASP  
 ‘He got sick and died.’

(Hansell, 1993, p.203)

As shown in (36a), *yaome* can be placed to the left of the serial verb in the sentence. However, as in (36b), separating the two verbs results in the unacceptability of the sentence. If the auxiliaries and the verbs have to be adjacent, we could account for the unacceptability of the sentence in (34c).

- (36) a. Ta *yaome* [*VP bing si* le], *yaome* [*VP shuai duan* jiao le].  
 he *yaome*<sub>1</sub> sick die ASP *yaome*<sub>2</sub> fall break leg ASP  
 ‘He is either sicked-and-died or he fell-and-broke his leg.’



- b. \*Ta **bing** *yaome* **si** le, **shuai** *yaome* **duan** jiai le.  
 he sick *yaome*<sub>1</sub> die ASP fall *yaome*<sub>2</sub> break leg ASP  
 Intended: ‘He is either sicked-and-died or he fell-and-broke his leg.’

In English, having *either or* conjoining phrases of non-identical categories yields acceptable results as shown below in (37).

- (37) He is either crazy or in a bad mood.

In Mandarin, having *yaome* conjoining phrases of the same syntactic category is not necessary but preferred. Compare the sentences in (38a) and (38b) to those in (38c) and (38d), we find that the sentences are well-formed when the two *yaome*(s) take phrases of the same category, namely VPs or TPs, while the result is ill-formed when the category of the phrases *yaome*<sub>1</sub> and *yaome*<sub>2</sub> conjoin are not the same. In this set of data, the semantic type of the conjuncts is arguably the same, and yet the sentence in (38c) is not acceptable.

- (38) a. Wo *yaome* [<sub>VP</sub> kao binggan], *yaome* [<sub>VP</sub> zuo pisa].  
 I *yaome*<sub>1</sub> bake cookie *yaome*<sub>2</sub> make pizza  
 ‘I either bake cookies or make pizzas.’
- b. *Yaome* [<sub>TP</sub> wo kao binggan], *yaome* [<sub>TP</sub> wo zuo pisa].  
*yaome*<sub>1</sub> I bake cookie *yaome*<sub>2</sub> I make pizza  
 ‘Either I bake cookies or I make pizzas.’
- c. \*Wo *yaome* [<sub>VP</sub> kao binggan], *yaome* [<sub>TP</sub> wo zuo pisa].  
 I *yaome*<sub>1</sub> bake cookie *yaome*<sub>2</sub> I make pizza  
 ‘I either bake cookies or I make pizzas.’
- d. ?? *Yaome* [<sub>TP</sub> Wo kao binggan], *yaome* [<sub>VP</sub> zuo pisa].  
*yaome*<sub>1</sub> I bake cookie *yaome*<sub>2</sub> make pizza  
 ‘Either I bake cookies or make pizzas.’

In addition to the data in (38), the data in (39) and (40) also shows a preference of *yaome* conjoining predicates of the same category. Specifically, in (39a), (39b) and (40a), *yaome* coordinates VPs, phrases headed by copula and phrases headed by auxiliary respectively and the sentences are all grammatical. However, it is preferred to not have mismatched

phrases as in (39c), in which *yaome*<sub>1</sub> conjoins a VP while *yaome*<sub>2</sub> conjoins a phrase headed by copula. The unacceptability of (39c) suggesting that the copula may be more auxiliary like or the copula may be making the DP, namely *hushi* ‘nurse’, a focus. In addition, the sentences in (40b) and (40c) show that having one *yaome* conjoining a phrase headed by a modal while the other is conjoining a phrase headed by a verb is not preferred.

- (39) a. Mali weilai *yaome* [chengwei yisheng], *yaome* [chengwei hushi].  
 Mary future *yaome*<sub>1</sub> become doctor *yaome*<sub>2</sub> become nurse  
 ‘Mary will either become a doctor or a nurse in the future.’
- b. Mali weilai *yaome* [shi yisheng], *yaome* [shi hushi].  
 Mary future *yaome*<sub>1</sub> COP doctor *yaome*<sub>2</sub> COP nurse  
 ‘Mary will either be a doctor or a nurse in the future.’
- c. ?? Mali weilai *yaome* [chengwei yisheng], *yaome* [shi hushi].  
 Mary future *yaome*<sub>1</sub> become doctor *yaome*<sub>2</sub> COP nurse  
 Intended: ‘Mary will either be/become a doctor or a nurse in the future.’
- (40) a. Mali *yaome* [hui chi fan], *yaome* [hui he tang].  
 Mary *yaome*<sub>1</sub> will eat rice *yaome*<sub>2</sub> will drink soup  
 ‘Mary will either eat rice or she’ll eat soup.’
- b. ?? Mali *yaome* [hui chi fan], *yaome* [he tang].  
 Mary *yaome*<sub>1</sub> will eat rice *yaome*<sub>2</sub> drink soup  
 Intended: ‘Mary will either eat rice or she’ll have soup.’
- c. ?? Mali *yaome* [chi fan], *yaome* [hui he tang].  
 Mary *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> will drink soup  
 Intended: ‘Mary will either eat rice or she’ll have soup.’

There are some cases where *yaome* seems to conjoin phrases of different syntactic categories (cf. (41)). However, in these examples, the syntactic category of the phrase *yaome* conjoins is not apparent. In (41a)-(41c), *yaome* seems to conjoin a PP and a VP, a AP and a TP and a *shi*-phrase and a VP respectively. It is possible that *yaome* in these cases is conjoining a VP that has a zero BE verb. As for the sentence in (41d), *yaome*<sub>1</sub> is conjoining a VP, while *yaome*<sub>2</sub> conjoins a TP at surface structure. However, *Juehan* could be in Topic

position with the pronoun *ta* referring back to it. Therefore, both *yaome*<sub>1</sub> and *yaome*<sub>2</sub> in (41d) could be conjoining TPs but not a VP and a TP. If the facts are as we described then *yaome* conjoins phrases of identical category.

- (41) a. Ta *yaome* [zai fangjian-li], *yaome* [pao qu chufang le].  
 he *yaome*<sub>1</sub> at room-inside *yaome*<sub>2</sub> run toward kitchen PERF  
 ‘He was either in the room or he went to the kitchen.’
- b. Ta de fangjian *yaome* [ganjing zhengqi], *yaome* [ta genben mei  
 he DE room *yaome*<sub>1</sub> clean neat *yaome*<sub>2</sub> he fundamentally not  
 qing].  
 clean  
 ‘His room is either clean and neat or he didn’t clean it at all.’
- c. Zhi-ge pingguo *yaome* [hai shi ta de], *yaome* [yijing song gei Mary  
 this-CL apple *yaome*<sub>1</sub> still COP he DE *yaome*<sub>2</sub> already give to Mary  
 le].  
 PERF  
 ‘This apple is either still his or it’s already given to Mary.’
- d. Juehan *yaome* [yijing hui jia le], *yaome* [ta genben mei likai  
 Juehan *yaome*<sub>1</sub> already go home PERF *yaome*<sub>2</sub> he fundamentally not leave  
 gongsi].  
 office  
 ‘John either went home already or he didn’t leave his office at all.’

In this section, I discussed the occurrence of *yaome* in different sentences. The distribution of *yaome* is licit when it conjoins predicates, when it conjoins phrases headed by modals or when it is at the left periphery of a sentence. In the following section, I’ll talk about *yaome*’s relation with nominal phrases and I’ll show that *yaome* cannot conjoin nominal phrases.

### 2.1.2 *Yaome* and DP

As shown in the previous section, I argued that *yaome* conjoins predicates of the same syntactic category. In this section, I will show that *yaome* doesn’t conjoin DPs. As shown in (42a) and (42b), the sentences are grammatical when each *yaome* conjoins a VP headed by

*kandao* ‘saw’ or a VP headed by *nian* ‘read’, whereas it’s not acceptable in (42c) and (42d) where each *yaome* conjoins a DP in the sentence.<sup>5</sup>

- (42) a. Ta *yaome* [<sub>VP</sub> *kandao* *gou*], *yaome* [<sub>VP</sub> *kandao* *mao*].  
 he *yaome*<sub>1</sub> saw dog *yaome*<sub>2</sub> saw cat  
 ‘He saw either a dog or a cat.’
- b. Ta *yaome* [<sub>VP</sub> *nian* *shu*], *yaome* [<sub>VP</sub> *nian* *zazhi*].  
 he *yaome*<sub>1</sub> read book *yaome*<sub>2</sub> read magazine  
 ‘He read either a book or a magazine.’
- c. \*Ta *kandao* *yaome* [<sub>DP</sub> *gou*], *yaome* [<sub>DP</sub> *mao*].  
 he saw *yaome*<sub>1</sub> dog *yaome*<sub>2</sub> cat  
 ‘He saw either a dog or a cat.’
- d. \*Ta *nian* *yaome* [<sub>DP</sub> *shu*], *yaome* [<sub>VP</sub> *zazhi*].  
 he read *yaome*<sub>1</sub> book *yaome*<sub>2</sub> magazine  
 ‘He read either a book or a magazine.’

In addition to bare nouns, *yaome* doesn’t conjoin nouns with numeral-classifier. As shown in (43a)<sup>6</sup>, the sentence is grammatical when *yaome* conjoins a phrase headed by *shi*, while

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<sup>5</sup>Note that sentences having *yaome* conjoining a DP become better when the DP is made into the focus of the sentence. In (i), the sentence becomes acceptable when *gou* and *mao* are the focus of the sentence with a phonological pause between the verb and *yaome*<sub>1</sub>. I will return to this when I discuss the DP puzzle.

- i Ta *kandao*, *yaome* [<sub>FoCP</sub> *gou*], *yaome* [<sub>FoCP</sub> *mao*].  
 he saw *yaome*<sub>1</sub> dog *yaome*<sub>2</sub> cat  
 ‘It is either a dog or a cat that he saw’

<sup>6</sup>In Mandarin, the number can be omitted in the number-classifier set only if the number is “one”. As shown below, without the classifier, the sentence in (iii) is still grammatical. However, it can only mean “one apple” (cf.(i)) but not “five apples” (cf.(ii)).

- i Ta chi le yi-ge pingguo.  
 he eat PERF one-CL apple  
 ‘He ate an apple.’
- ii Ta chi le wu-ge pingguo.  
 he eat PERF five-CL apple  
 ‘He ate five apples.’
- iii Ta chi le ge pingguo.  
 he eat PERF CL apple  
 ‘He ate an apple.’

in (43b) and (43c), the sentences are not acceptable when *yaome* conjoins DPs (see also (15) for *yaome*'s placement in sentences with copula and bare nouns).

- (43) a. Ta *yaome* [shi yi-wei yisheng], *yaome* [shi yi-wei hushi].  
 he *yaome*<sub>1</sub> COP one-CL doctor *yaome*<sub>2</sub> COP one-CL nurse  
 'He is either a doctor or a nurse.'
- b. \*Ta shi *yaome* [yi-wei yisheng], *yaome* [yi-wei hushi].  
 he COP *yaome*<sub>1</sub> one-CL doctor *yaome*<sub>2</sub> one-CL nurse  
 'He is either a doctor or a nurse.'
- c. \*Ta shi yi-wei *yaome* [yisheng], *yaome* [hushi].  
 he COP one-CL *yaome*<sub>1</sub> doctor *yaome*<sub>2</sub> nurse  
 'He is either a doctor or a nurse.'

The restriction on DPs isn't the result of a restriction on the usage of certain nouns or verbs or some prosodic property associated to the size of the complements of verbs. The size of a DP doesn't affect the generalization made here. Slightly longer DPs are provided in (44) and (45). The nominal phrases that are the complement of a verb in (44) are themselves longer, specifically the DPs expand to four syllables as opposed to (42) where the DPs have only one syllable. The DPs in (45) are expanded by adding modifiers to them.

As shown below, the (a) sentences in (44) and (45) are all grammatical given that the phrases *yaome* conjoins are VPs. However, the sentences become ill-formed when *yaome* conjoins two nominal phrases no matter the size of the NPs. In (44b), the sentence is not acceptable when *yaome* conjoins a four-syllable DP. In addition, as shown in (45b) and in (45c) respectively, *yaome* doesn't conjoin a heavier DP that is modified by an adjective phrase such as *keai* 'cute' or a noun phrase within a DP. Note that even though the (b) and (c) sentences in (45) are both unacceptable, the (c)s seems to be worse than the (b)s.

- (44) a. Ta *yaome* [<sub>VP</sub> kandao huang-jin-lie-quan], *yaome* [<sub>VP</sub> kandao ma-er-ji-si].  
 he *yaome*<sub>1</sub> saw Golden-Retriever *yaome*<sub>2</sub> saw Maltese  
 'He saw either a Golden Retriever or a Maltese.'
- b. \*Ta kandao *yaome* [<sub>DP</sub> huang-jin-lie-quan], *yaome* [<sub>DP</sub> ma-er-ji-si].  
 he saw *yaome*<sub>1</sub> Golden-Retriever *yaome*<sub>2</sub> Maltese

‘He saw either a Golden Retriever or a Maltese.’

- (45) a. Ta *yaome* [<sub>VP</sub> kandao keai-de huang-jin-lie-quan], *yaome* [<sub>VP</sub> kandao  
he *yaome*<sub>1</sub> saw cute-DE Golden-Retriever *yaome*<sub>2</sub> saw  
keai-de ma-er-ji-si].  
cute-DE Maltese  
‘He saw either a cute Golden Retriever or a cute Maltese.’
- b. \*Ta kandao *yaome* [<sub>DP</sub> keai-de huang-jin-lie-quan], *yaome* [<sub>DP</sub> keai-de  
he saw *yaome*<sub>1</sub> cute-DE Golden-Retriever *yaome*<sub>2</sub> cute-DE  
ma-er-ji-si].  
Maltese  
‘He saw either a cute Golden Retriever or a cute Maltese.’
- c. \*Ta kandao [<sub>DP</sub> keai-de *yaome* [<sub>DP</sub> huang-jin-lie-quan]], *yaome* [<sub>DP</sub>  
he saw cute-DE *yaome*<sub>1</sub> Golden-Retriever *yaome*<sub>2</sub>  
ma-er-ji-si].  
Maltese  
‘He saw either a cute Golden Retriever or a cute Maltese.’

However, not all coordinators pattern the same in Mandarin. Unlike *yaome*, the disjunction *houzhe* ‘or’ can coordinate phrases of different syntactic type.<sup>7</sup> As illustrated in (46), *houzhe* can coordinate TPs in (46a), VPs in (46b) and DPs in (46c) and (46d).

- (46) a. [<sub>TP</sub> Mama qin-le huang-jin-lie-quan] *houzhe* [<sub>TP</sub> baba qin-le  
mother kiss-PERF Golden-Retrieve or father kiss-PERF  
ma-er-ji-si]  
Maltese

<sup>7</sup>Zhang (2007) mentions a contrast between *yaome* and *houzhe* in that *houzhe* but not *yaome* combines with noun phrases using the examples stated in (i) and (ii). However, the examples don’t straightforwardly illustrate the phenomenon. It’s not clear from the example that the ungrammaticality of (ii) comes directly from *yaome*’s inability of conjoining nominals. It’s also possible that the sentence is ungrammatical because *yaome* cannot appear alone in a sentence. In other words, it has to appear in pairs, such as *yaome...yaome...*

- i Lao Li {*yaome/houzhe*} zai du xiaoshuo, {*yaome/houzhe*} zai du baozhi.  
Lao Li or/or PRG read novel or/or PRG read newspaper  
‘Lao Li is reading a novel or is reading a newspaper.’
- ii Lao Li zai du xiaoshuo {*\*yaome/houzhe*} baozhi.  
Lao Li PRG read novel or/or newspaper  
‘Lao Li is reading a novel or a newspaper.’

(Zhang, 2007, p.178)

‘My mom kissed a Golden Retriever or my father kissed a Maltese.’

- b. Ta [<sub>VP</sub> qin-le keai-de huang-jin-lie-quan] *houzhe* [<sub>VP</sub> bao-le keai-de  
he kiss-PERF cute-DE Golden-Retrieve or hug-PERF cute-DE  
ma-er-ji-si]  
Maltese  
‘He kissed a cute Golden Retriever or hugged a cute Maltese.’
- c. Ta kandao [<sub>DP</sub> keai-de huang-jin-lie-quan] *houzhe* [<sub>DP</sub> keai-de ma-er-ji-si]  
he saw cute-DE Golden-Retriever or cute-DE Maltese  
‘He saw a cute Golden Retriever or a cute Maltese.’
- d. Ta kandao keai-de [<sub>DP</sub> huang-jin-lie-quan] *houzhe* [<sub>DP</sub> ma-er-ji-si]  
he saw cute-DE Golden-Retriever or Maltese  
‘He saw a cute Golden Retriever or a Maltese.’

As noted in Zhang (2007), the placement of coordinators can be affected by the categories of the conjuncts they conjoin. Specifically, different coordinators can have different categorical requirements on conjuncts. Coordinations such as *and* in English can in principle coordinate phrases of various categories. Similarly, in Russian, *i* ‘and’ also coordinates phrases of various categories (cf.(47)).

(47) Russian

- a. Anna i Petja pridut.  
Anna.NOM and Peter.NOM come.3PL  
‘Anna and Peter are coming.’ (DPs)
- b. Anna vymila i narezala ovosci.  
Anna washed and cut.up vegetables  
‘Anna washed and cut up the vegetables.’ (Vs)
- c. Anna byla vysokaja i strojnaja.  
Anna was tall and slender  
‘Anna was tall and slender.’ (APs)
- d. Boris prigatovil obed i Petya prines vino.  
Boris prepared dinner and Peter brought wine  
‘Boris prepared the dinner and Peter brought the wine.’ (clauses)

In some languages such as Japanese and Mandarin, certain coordinators are sensitive to the category of the conjuncts they conjoin. In Mandarin, for instance, the coordinators *gen*, *tong*, *yu* and *ji* (all meaning ‘and’) coordinate nominals only, whereas the coordinators *erqie* and *you* cannot coordinate nominals (cf.(48)) (Zhang, 2007). Therefore, being incapable of conjoining noun phrases is not a restriction applicable to all coordinators in Mandarin but a restriction imposed on certain coordinators such as *yaome*.

- (48) a. Dai Jiaoshou xihuan he pijiu {*gen*/\**you*} lu-cha.  
 Dai Professor like drink beer and/and green-tea  
 ‘Prof. Dai likes to drink beer and green-tea’
- b. Dai Jiaoshou shanliang {*you*/\**gen*} youmo.  
 Dai Professor kind and/and humorous  
 ‘Prof. Dai is kind and humorous’

The same generalization that *yaome* doesn’t conjoin DPs is further illustrated in (49). As shown in (49a) and (49b) where *yaome* conjoins respectively VPs and complex NPs, the sentence is good in the former but not in the later.

- (49) a. Mali *yaome* [<sub>VP</sub> mai-le [<sub>DP</sub> laoshi tuijian de shu]], *yaome* [<sub>VP</sub> Mary *yaome*<sub>1</sub> buy-PERF teacher recommend DE book *yaome*<sub>2</sub> mai-le [<sub>DP</sub> ziji xihuan kan de shu]].  
 buy-PERF self like read DE book  
 ‘Mary either bought the book that her teacher recommended or she bought the book that she would like to read.’
- b. \*Mali mai-le *yaome* [<sub>DP</sub> laoshi tuijian de shu], *yaome* [<sub>DP</sub> ziji Mary buy-PERF *yaome*<sub>1</sub> teacher recommend DE book *yaome*<sub>2</sub> self xihuan kan de shu].  
 like read DE book  
 ‘Mary either bought the book that her teacher recommended or she bought the book that she would like to read.’



The finding here is not restricted to particular verbs. Using a different verb *xi* ‘wash’, (11b) repeated here in (50a), gives you the same the result. Specifically, *yaome* conjoins TPs and verbal predicates (cf.(50a) and (50b)), whereas nominal conjunctions are not acceptable (cf.(50c)).

- (50) a. Yaome [<sub>TP</sub> Bier xi-le yifu], yaome [<sub>TP</sub> Mali xi-le kuzi].  
           *yaome*<sub>1</sub> Bill wash-PERF clothes *yaome*<sub>2</sub> Mary wash-PERF trousers  
           ‘Either Bill washed the clothes or Mary washed the trousers.’
- b. Ta *yaome* [<sub>VP</sub> xi-le yifu], *yaome* [<sub>VP</sub> xi-le kuzi].  
     he *yaome*<sub>1</sub> wash-PERF clothes *yaome*<sub>2</sub> wash-PERF trousers  
     ‘He either washed the clothes or the trousers.’
- c. \*Ta xi-le *yaome* [<sub>DP</sub> yifu], *yaome* [<sub>DP</sub> kuzi].  
     he wash-PERF *yaome*<sub>1</sub> clothes *yaome*<sub>2</sub> trousers  
     ‘He either washed the clothes or trousers.’

In this section, I’ve shown that *yaome* doesn’t conjoin phrases that are nominal. The length, the size or the complexity of a DP is not relevant. What really matters is the intrinsic status of being a nominal phrase. In the following section, I’ll posit a structure for *yaome* along with some examples provided.

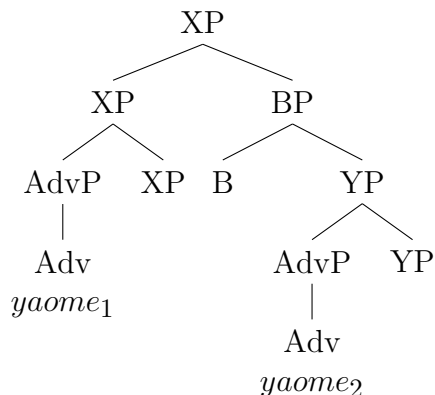
## 2.2 The structure of *yaome*

Following Munn (1993)’s proposal for coordination, I posit that a coordination consisting of the paired *yaome* has the structure illustrated in (51).

In (51), *yaome*<sub>1</sub> and *yaome*<sub>2</sub> are each an adverbial element that adjoins to XP and YP respectively. In addition, XP and YP cannot be DPs. I classify *yaome*<sub>1</sub> and *yaome*<sub>2</sub> as an adverb because of the adverbial characteristics it displays, specifically that it can conjoin constituents of various syntactic types except for noun phrases. Furthermore, I assume that the head B is phonologically null. For instance, in (52), there are no overt conjunctions between ‘rice’ and ‘noodles’, yet it has a conjunctive interpretation. Similarly, in Mandarin Chinese, conjunctions can be phonologically null as shown in (53).

Figure 2.4 Tree Structure: *Yaome*

(51)



(52) I ate rice, noodles and cakes.

(53) Ta chi fan, wo chi mian.  
 he eat rice I eat noodles  
 ‘He ate rice and I ate noodles.’

Note that both *yaome*<sub>1</sub> and *yaome*<sub>2</sub> obligatorily have to be present in sentences to derive a disjunctive interpretation (cf.(54a)). Sentences with only one *yaome* are not acceptable (cf.(54b)).

- (54) a. Ta zoutian *yaome* [hen zao] *yaome* [hen wan] qu xuexiao.  
 he yesterday *yaome*<sub>1</sub> very early *yaome*<sub>2</sub> very late go school  
 ‘He went to school either very early or very late yesterday.’
- b. \*Ta zoutian [hen zao] *yaome* [hen wan] qu xuexiao.  
 he yesterday very early *yaome* very late go school  
 Intended: ‘He went to school very early or very late yesterday.’

This behavior contrasts to *houzhe* ‘or’, another disjunctive coordinator in Mandarin. Specifically, *houzhe* can occur either in pairs or in isolation (cf.(55)).<sup>8</sup>

<sup>8</sup>Certain coordinators in French display a similar behavior. For instance, doubling of coordinators such as *et* ‘and’ and *ou* ‘or’ is optional (cf.(i)), while obligatory with *ni* ‘nor’ and *soit* ‘or’ (cf.(ii)) (Gross, 1973; Mouret, 2004).

i Luc connaît (et) Max et Léa.  
 Luc knows and Max and Léa

- (55) a. Ta zoutian *houzhe* [hen zao] *houzhe* [hen wan] qu xuexiao.  
 he yesterday or very early or very late go school  
 ‘He went to school very early or very late yesterday.’
- b. Ta zoutian [hen zao] *houzhe* [hen wan] qu xuexiao.  
 he yesterday very early or very late go school  
 ‘He went to school very early or very late yesterday.’

### 2.2.1 TP

The sentence in (56) is an instance of *yaome*<sub>1</sub> and *yaome*<sub>2</sub> conjoining a TP. The syntactic structure of the sentence is illustrated in (57).

- (56) *Yaome* [<sub>TP</sub> ni chi fan], *yaome* [<sub>TP</sub> wo chi mian].  
*yaome*<sub>1</sub> you eat rice *yaome*<sub>2</sub> I eat noodles  
 ‘Either you eat rice or I eat noodles.’

### 2.2.2 *vP* & *VP*

The sentence in (58) is an instance of *yaome* conjoining a verb phrase either at the *vP* or *VP* level.

- (58) Ni *yaome* [<sub>*vP*</sub> [<sub>*VP*</sub> chi fan]], *yaome* [<sub>*vP*</sub> [<sub>*VP*</sub> chi mian]].  
 you *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> eat noodles  
 ‘You either eat rice or eat noodles.’

When conjoining *vPs*, the two DPs that are specifiers of *v* undergo across-the-board (ATB) movement (see Johnson, 1994, 2009, for ATB movement) to [Spec, TP] as in (59).

- (59) Ni *yaome* [<sub>*vP*</sub> chi fan], *yaome* [<sub>*vP*</sub> chi mian]

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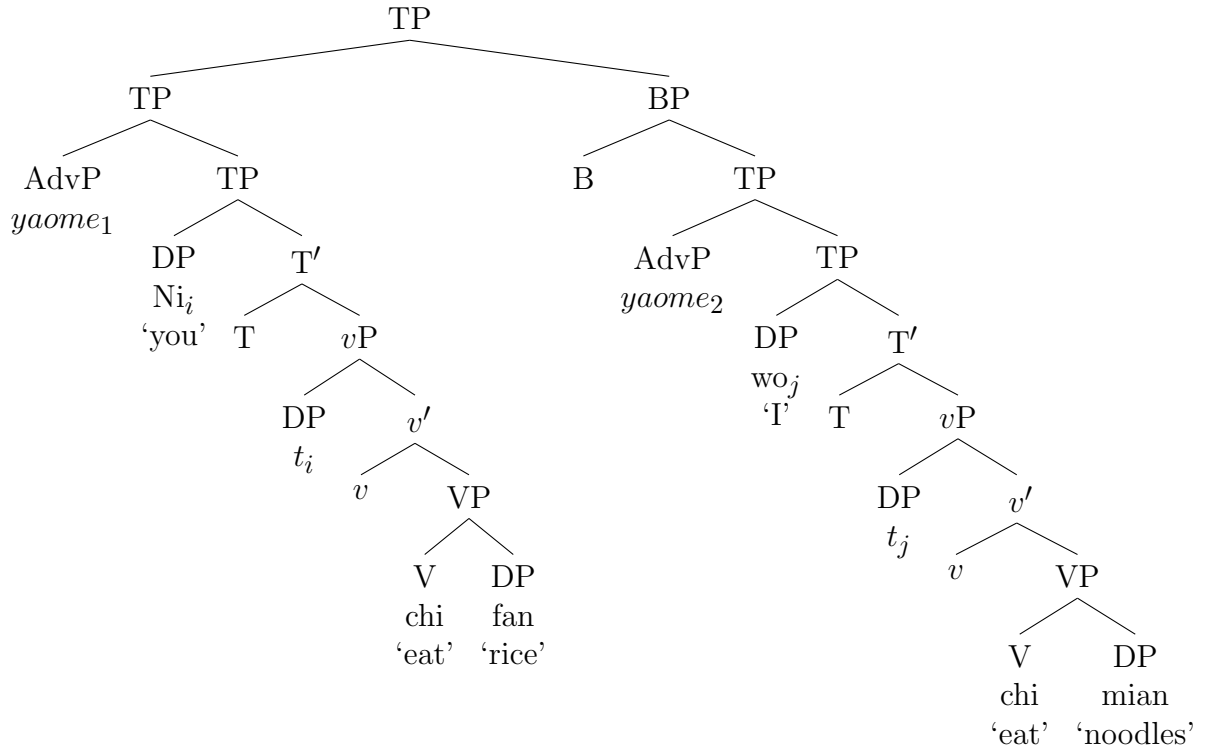
‘Luc knows not only Max but also Léa.’

ii Luc connaît \*(soit) Max soit Léa.  
 Luc knows soit Max soit Léa  
 ‘Luc knows either Max or Léa.’

(Mouret, 2004, p.194)

Figure 2.5 Tree Structure: *Yaome* - TP

(57)



It has to be an instance of ATB movement since the presence of an overt DP in the second conjunct results in the ungrammaticality of the sentence (cf.(60)). Two alternative structures, (60a) and (9), can be given to the sentence in (60).<sup>9</sup>

- (60) \*Ni *yaome* chi fan, *yaome* ni/wo/Juehan chi mian.  
 you *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> you/I/John eat noodles  
 'You either eat rice or you/I/John eat noodles.'

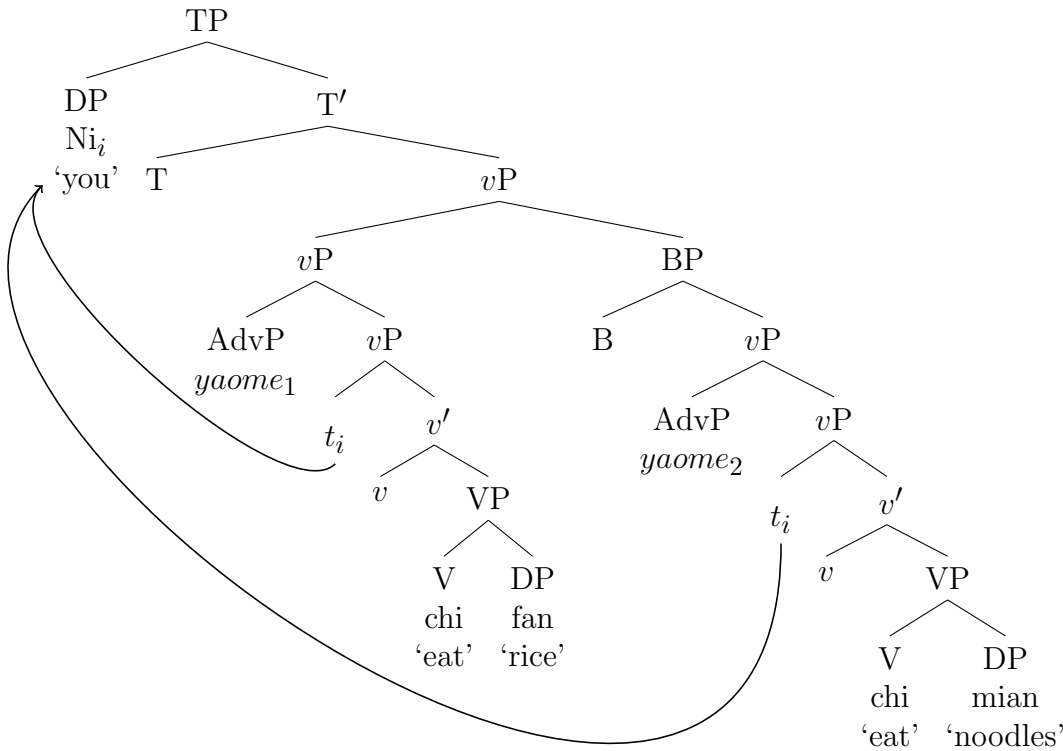
- a. \*Ni *yaome* [<sub>vP</sub> chi fan], *yaome* [<sub>vP</sub> ni chi mian]  
 b. \*Ni *yaome*<sub>1</sub> [<sub>vP</sub> chi fan], *yaome*<sub>2</sub> [<sub>TP</sub> ni chi mian].

However, they are both ruled out. First, (60a) is not possible because of a violation of the Case Filter. Given the structure proposed here, the DP occupying [Spec, *vP*] in the second

<sup>9</sup>The sentence in (60) is slightly better when the subject in the first disjunct is topicalized, and *yaome*<sub>1</sub> conjoins a TP where the subject is covert (cf.(i)). In this case, *yaome*<sub>1</sub> and *yaome*<sub>2</sub> each conjoins a TP.

i Ni<sub>i</sub> *yaome*<sub>1</sub> [<sub>TP</sub> t<sub>i</sub> chi fan], *yaome*<sub>2</sub> [<sub>TP</sub> ni chi mian].

Figure 2.6 Tree Structure: *Yaome* - *vP*

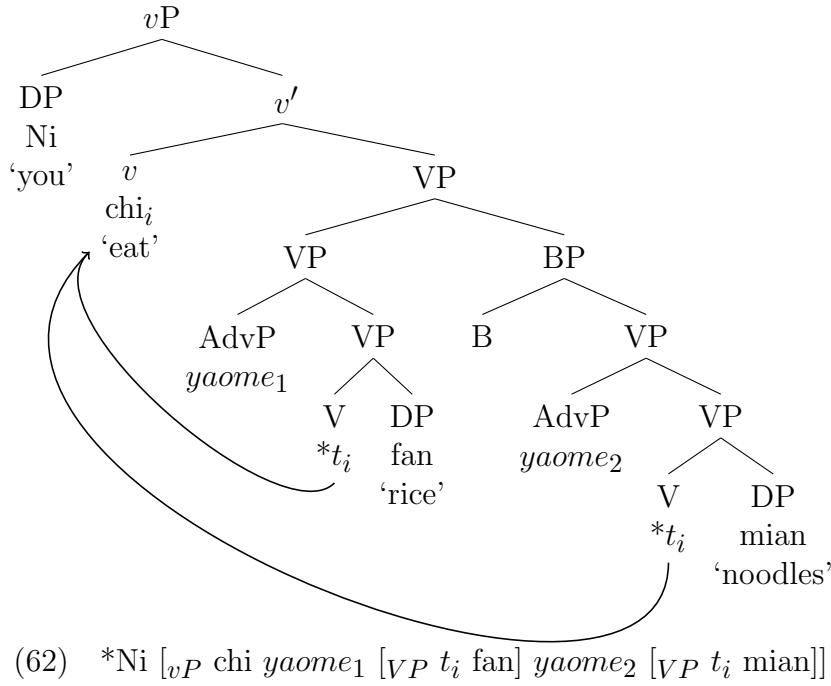


conjunct will be left unCased if it doesn't move. This implies that when conjoining *vP*s, the two DPs in [Spec, *vP*] have to refer to the same individual and undergo ATB movement to avoid a violation of the Case Filter. Second, *yaome*<sub>2</sub> in (60) can be conjoining a TP but not a *vP* (cf.(9)). This can be ruled out by *yaome*'s preference to conjoin phrases of the same syntactic category.

The movement of the verb to *v* is not clear when the phrase *yaome* conjoins is a *vp* and when *vP*s have different verbs. However, when the paired *yaome* conjoins two VPs that have identical verbs (cf.(61)), it does not seem to be possible to have verb raising across conjuncts. As shown in (62), having *yaome* conjoining a trace of a moved verb results in the unacceptability of the sentence. This indicates that *yaome* cannot conjoin a VP whose head is a trace.

- (61) Ni *yaome* [<sub>VP</sub> chi fan], *yaome* [<sub>VP</sub> chi mian].  
 you *yaome*<sub>1</sub> eat rice *yaome*<sub>2</sub> eat noodles  
 'You either eat rice or eat noodles.'

Figure 2.7 Tree Structure: *Yaome* - VP where V is a trace

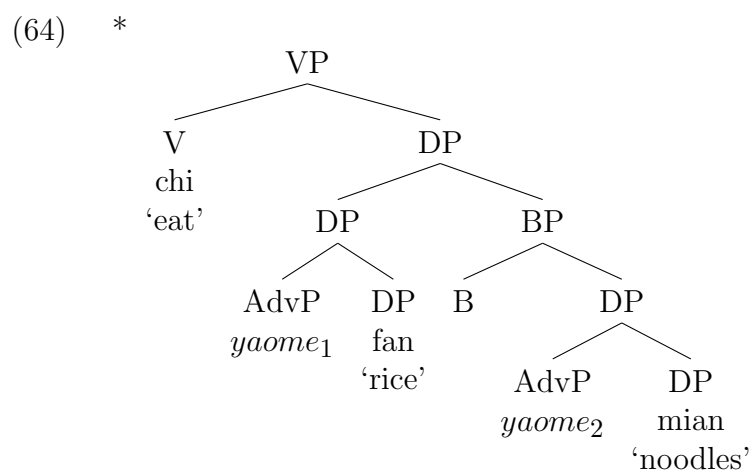


### 2.2.3 DP

(63) is an instance of *yaome* conjoining a DP with the syntactic structure illustrated in (64). It is nevertheless unacceptable, given the constraint that *yaome* doesn't conjoin nominal phrases.

- (63) \*Ni chi *yaome* [<sub>DP</sub> fan], *yaome* [<sub>DP</sub> mian].  
 you eat *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
 'You eat either rice or noodles.'

Figure 2.8 Tree Structure: *Yaome* - DP



## CHAPTER 3

### THE DP-PUZZLE AND THE ANALYSIS OF THE PUZZLE

#### 3.1 The DP-puzzle

Based on the discussion in Sect.2, it's clear that *yaome* conjoins predicates but not DPs. However, the sentence in (5b), repeated here in (65a), seems to challenge this generalization. In particular, as an answer to the question in (65), *yaome* seems to conjoin 'DPs'.

- (65)    Ni   xiang chi shenme?  
         you want eat what  
         'What do you want to eat?'
- a.      *Yaome* fan, *yaome* mian.  
         *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
         'Either rice or noodles.'

Does the sentence in (65a) imply that *yaome* has the ability to conjoin DPs? I argue that this cannot be the case because fragment answers to a question have a more complex structure, specifically the structure of fragment answers involve a syntactic operation of focus movement and ellipsis of a TP (Merchant, 2005; Holmberg, 2015). Following this hypothesis, I argue that *yaome* in (65a) is not conjoining DPs but focus phrases located high in the structure with TPs being elided after movement. Support for this argument are data showing that *yaome* is able to conjoin focus phrases at the left periphery of a sentence.

#### 3.2 The analysis of the DP-puzzle

##### 3.2.1 Why are focused DPs not DPs?

The analysis for the DP puzzle is based on two main observations. First, the syntactic structure of minimal answers to a question is distinct in that the elements that are being



focused undergo movement and raise to a position above TP, higher than the base generated position, followed by the ellipsis of the TP. Second, there are examples of *yaome* conjoining a Focus phrase at the left periphery of a sentence, which supports the idea that *yaome* is able to conjoin a DP that occupies [Spec, FocP].

### 3.2.2 Unique structure of minimal answers to a question

One of the characteristics of answers to a question is that, instead of a complete sentence, a short answer can be provided in response to the target question. Semantically, a question can be seen as a proposition function that comes with a free variable with possible values (Holmberg, 2015). The role of an answer is to assign a satisfying value to its corresponding question. For instance, in (66)<sup>1</sup>, the question “Who did John see?” has a variable, namely the *wh* phrase ‘who’. In order to answer the question, the addressee picks out a value that they believe to be true from a set containing possible individuals, satisfying the requirement of the question. In this case, either a complete sentence (cf.(66)-A) or a fragment answer (cf.(66)-A’) containing a value that satisfies the variable in the question can be provided.

(66) Q: Who did John see?

A: John saw Mary.

A’: Mary.

This property holds cross-linguistically. In Mandarin, either the complete answer in (67b) or the minimal answer in (67c) can be provided in response to the question in (67a).

(67) Mandarin

a. Q: Yuehan kandao shei?

John saw who

‘Who did John see?’

b. A: Yuehan kandao Mali.

John saw Mary

---

<sup>1</sup>Q stands for ‘question’ and A stands for ‘answer’.

‘John saw Mary.’

- c. A’: Mali.  
Mary  
‘Mary.’

Based on the examples in (66) and (67), the relation between a complete answer and a fragment answer is not as clear as when the fragment answer has grammatical morphology and is marked with overt Case. As shown in (68), a minimal answer *marja-n* marked with Accusative Case can be given in response to the question ‘Who did Jussi see?’. This implies that a fragment answer is not in principle structureless, given that it can occur with overt Case (Holmberg, 2015).

(68) Finnish

- a. Q: Kenet Jussi tapasi?  
who-ACC Jussi met  
‘Who did Jussi see?’  
b. A: Marja-n.  
Marja-ACC  
‘Marjan.’

(Holmberg, 2015, p.2)

The minimal answer to the yes-no question in (69) further supports the idea that a fragment answer has a sentential structure. Unlike English where ‘yes’ is given as an affirmative answer to a yes-no question (cf.(70)), a verb is given in languages such as Finnish, Portuguese and Mandarin, as an affirmative answer to a yes-no question which is shown in (69), (71) and (72) respectively. The fact that the minimal answer containing solely a verb in (69) is inflected with tense and person implies that fragment answers to a question, regardless of its ‘incompleteness’ seen at the surface, has a sentential structure just like a complete sentence.

(69) Finnish

- a. Q: Tul-i-vat-ko lapset kotiin?  
come-PST-3PL-Q children home

‘Did the children come home?’

- b. A: Tul-i-vat.  
come-PST-3PL  
‘Yes.’

(Holmberg, 2015, p.3)

(70) Q: Did you kiss him?

A: Yes.

A: # Kissed.

(71) European Portuguese

- a. Q: Deste-lhe o livro?  
gave-him the book  
‘Did you give him the book?’

- b. A: Dei.  
gave  
‘Yes, I did.’

(adapted from Martins, 1994, p.174)

(72) Mandarin

- a. Q: Ni gei ta shu le ma?  
you give him book PERF Q  
‘Did you give him the book?’

- b. A: Gei le.  
give PERF  
‘Yes.’

Following Holmberg (2015), I assume that minimal answers to a question have a full sentential expression. The structure of a minimal answer looks roughly like (73). Specifically, *Mary*, the value to the variable in the question, is base generated inside the TP and then undergoes movement to the specifier of a Focus phrase, a higher position in the structure.

After the movement of the DP, the whole TP of the answer is elided since it can be recovered from the question.

(73) Q: Who did John see?

A: [<sub>FocP</sub> Mary<sub>i</sub> [~~TP John saw t<sub>i</sub>~~]].

Assuming this is the case, then the minimal answer in (65a), repeated here in (74a), is an instance of a DP moving to [Spec, FocP], followed by the ellipsis of the whole TP. The structure of (74a) is shown in (75). Instead of a complete sentence, the answer to the question, *fan* and *mian*, are positioned in [Spec, FocP] following the omission of the TP. In other words, *yaome* in this case is not conjoining a DP but FocPs that contain DPs. This accounts for the placement of *yaome* immediately to the left of a nominal phrase such as ‘rice’ or ‘noodles’ when it’s an answer to a question.

(74) Q: Ni xiang chi shenme?

you want eat what

‘What do you want to eat?’

a. A: *Yaome fan*, *yaome mian*.

*yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles

‘Either rice or noodles.’

(75) *Yaome*<sub>1</sub> [<sub>FocP</sub> fan<sub>i</sub> [~~TP wo xiang chi t<sub>i</sub>~~]] *yaome*<sub>2</sub> [<sub>FocP</sub> mian<sub>j</sub> [~~TP wo xiang chi t<sub>j</sub>~~]]

### 3.2.3 Evidence from the Left Periphery

Mandarin is a language that allows the occurrence of Topic and Focus at the left periphery of a sentence. The ordering of Topic, Focus and TP, following Badan & Del Gobbo (2011), is illustrated in (76a), where a Focus is below Topic and above TP. A violation in the ordering results in the unacceptability of the sentence (cf.(76b)).

(76) a. [<sub>TopP</sub> Wancan, [<sub>FocP</sub> yidalimian<sub>i</sub>, [<sub>TP</sub> wo hui chi t<sub>i</sub>]]].  
           dinner                      spaghetti            I    will eat

‘As for dinner, it’s spaghetti that I’ll eat.’

- b. \* $[_{FocP} \text{Yidalimian}_i, [_{TopP} \text{wancan}, [_{TP} \text{wo hui chi } t_i]]]$ .  
           spaghetti                      dinner                      I            will eat  
           ‘As for dinner, it’s spaghetti that I’ll eat.’

The placement of *yaome* at the left periphery is illustrated in (77a). As shown, *yaome* is adjacent to a nominal phrase when it is at the left periphery of a sentence, presumably when the DP is the focus of the sentence. On the other hand, when the DP is embedded in a verb, it is nevertheless unacceptable (cf.(77b)). The contrast between (77a) and (77b) shows that *yaome* is able to conjoin a focus phrase that contains a DP but not a noun phrase itself.

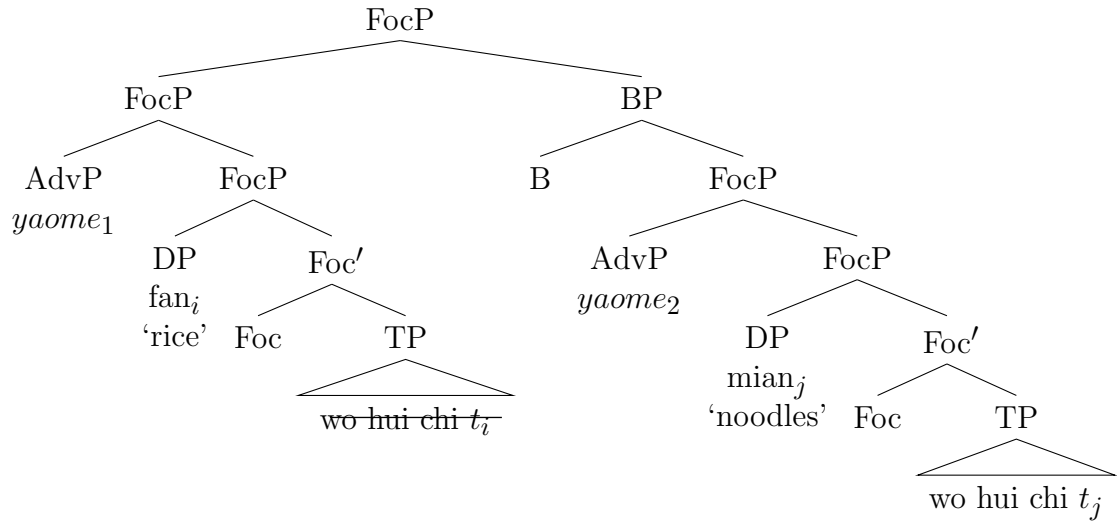
- (77) a. Wancan, *yaome* fan *yaome* mian, wo hui chi.  
           dinner *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles I will eat  
           ‘As for dinner, it is either rice or noodles which I’ll eat.’  
       b. \*Wancan, wo hui chi *yaome* fan, *yaome* mian.  
           dinner I will eat *yaome*<sub>1</sub> rice *yaome*<sub>2</sub> noodles  
           ‘As for dinner, I’ll either eat rice or noodles.’

The structure of (77a) is illustrated in (78) where *yaome*<sub>1</sub> and *yaome*<sub>2</sub> conjoin focus phrases. In each conjunct, the DP that is a complement of a verb undergoes movement to [Spec, FocP]. After the movement, the TP in the first conjunct is elided under the identity it shares with the TP in the second clause (see (79) for tree structure).

- (78) Wancan, *yaome*  $[_{FocP} \text{fan}_i [_{TP} \text{wo hui chi } t_i]]$ , *yaome*  $[_{FocP} \text{mian}_j$   
           dinner *yaome*<sub>1</sub>                      rice                      I            will eat                      *yaome*<sub>2</sub>                      noodles  
            $[_{TP} \text{wo hui chi } t_j]]$ .  
           I will eat  
           ‘As for dinner, it is either rice or noodles which I’ll eat’

Figure 3.1 Tree Structure: *Yaome* - FocP

(79)



## CHAPTER 4

### THE SUBJECT-OBJECT PUZZLE AND THE ANALYSIS OF THE PUZZLE

#### 4.1 The subject-object puzzle

An asymmetry in the interpretation of a sentence involving disjunction is found between English and Mandarin. In English, a sentence such as (6), repeated here in (80), is ambiguous, while a parallel sentence in Mandarin (cf.(7) repeated here in (81)) is not.

(80) Either John hit Bill or Mary.

(81) *Yaome* Yuehan da le Bier, *yaome* Mali.  
*yaome*<sub>1</sub> John hit PERF Bill *yaome*<sub>2</sub> Mary  
'It was either John or Mary who hit Bill.'

Intuitively, (80) can be interpreted as 'John hit someone and the individual being hit was either Bill or Mary.' On the other hand, it's also possible to interpret the sentence as 'Bill was hit by someone and the person who hit him was either John or Mary.' The ambiguity can be resolved by using phonological stress to mark the focus of the sentence (Han & Romero, 2004).<sup>1</sup> The two possible interpretations of the sentence in (80) are illustrated explicitly in (82). In both (82a) and (82b), the DP *Mary* is stressed in the second disjunct. The sentence can have a different interpretation depending on which DP is being stressed in the first disjunct. If the object position DP in the first disjunct is being stressed, a hearer will interpret the DP in the second disjunct as an object (cf.(82a)). On the other hand, if

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<sup>1</sup>Focus intonation is marked by stress. For instance, in (i) and (ii), the first and the second disjunct/conjunct are parallel to each other, the differences are the elements that are being focused (shown in capital letters). The contrastive elements in these sentences are stressed to indicate that they are the focus of the sentence (Han & Romero, 2004).

- i Either [Sita ate BEEF for dinner] or [she ate PORK for dinner]. (focus in capitals)
- ii [PAT visited Sue for CHRISTmas] and [JOHN visited Sue for NEW YEAR]

(Han & Romero, 2004, p.547)

the subject DP in the first disjunct is being stressed, an addressee will interpret the DP in the second disjunct as a subject as well (cf.(82b)). Nevertheless, without the help of focus intonation, the sentence is ambiguous.

- (82) a. Either John hit BILL or MARY.  
           ‘It is either Bill or Mary who John hit.’  
       b. Either JOHN hit Bill or MARY.  
           ‘It’s either John or Mary who hit Bill.’

(81) is never ambiguous to Mandarin speakers. The only possible interpretation of the sentence is the one in (82b) where John or Mary is the person who hit Bill. The reading in (82a) is unavailable. In other words, unlike in English, it is never ambiguous whether the DP in the second conjunct is a subject or an object in Mandarin.

Why is it the case that a sentence is ambiguous in English but not in Mandarin? To answer this question, I would like to propose that the unambiguous interpretation of the sentence in (81) is a result from (i) *yaome*’s inability to conjoin noun phrases, specifically when noun phrases are complements of verbs, and (ii) the impossibility of gapping a verb in Mandarin, while an ellipsis of a VP is possible. Given the reasons provided here, the sentence is never ambiguous in Mandarin Chinese because the DP in the second disjunct can never be the object of the sentence.

## 4.2 The analysis of the subject-object puzzle

### 4.2.1 Ambiguity of the interpretation in English

The ambiguity of the interpretation in English can be explained via three analyses proposed to account for the distribution of *either or* in the literature: movement (cf. Larson (1985)), ellipsis (cf. Schwarz (1999)) and  $\theta$ -path projection (cf. den Dikken (2006)). Regardless of the analysis chosen, the sentence in (80), repeated here in (83), is predicted to be ambiguous.



In other words, under these analyses, *Mary* in the second conjunct can be interpreted as either the agent or the theme of the sentence.

- (83) Either John hit Bill or Mary.

#### 4.2.1.1 Movement

Larson (1985) argues that the scope of *or* is tied to the syntax of scope indicators *either*, *whether* and a phonologically null indicator *O*. In addition, the scope of *or* is assigned via the movement of scope indicators. Given that scope indicators can be displaced from their licensing disjunction and appear in a position far away from it, he proposes that they are base-generated adjacent to the disjunctive phrase and undergo movement to the position where they surface.

Under the movement theory, the interpretation of (83) is ambiguous because there are two possible positions for *either* to be generated. As in (84a), if the scope of *or* is interpreted at the trace, the interpretation of *Mary* being an object is derived. On the other hand, if the scope of *or* is interpreted at where *either* surfaces, as in (84b), the reading of *Mary* being an subject is derived.

- (84) a. Either<sub>*i*</sub> John hit **t<sub>*i*</sub>** *Bill* or *Mary*.  
 b. **Either<sub>*i*</sub>** *John* hit *t<sub>*i*</sub>* *Bill* or *Mary*.

#### 4.2.1.2 Ellipsis

Contrary to the movement theory, Schwarz (1999) argues that *either* is unable to move and overtly marks the edge of a phrase in the first disjunct. Furthermore, *or* takes the same scope indicated by *either* and part of the element in the second disjunct is elided. Under the ellipsis theory, *either* in (83) overtly marks the left edge of the sentence, implying that *or* is taking a TP as well. Two possible structures, (85a) and (85b), can be derived. In (85a), *Mary* is interpreted as the object of the sentence with the ellipsis of *John hit*, while in (85b),

*Mary* becomes the subject of the sentence with the ellipsis of the VP *hit Bill*. The ambiguity of the sentence is expected since two possible structures can be derived under this account.

- (85) a. Either John hit Bill or ~~John hit~~ Mary.  
 b. Either John hit Bill or Mary ~~hit Bill~~.

#### 4.2.1.3 $\theta$ -path projection

den Dikken (2006) proposes a generalization regarding the distribution of *either*. The descriptive generalization is stated in (86).

- (86) *Either* is a phrasal constituent in constructions with
- a. the first disjunct, attaching to it; or
  - b. the first contrastive focus, attaching to
    - i. the contrastive focus itself, or
    - ii. a phrasal node on the  $\theta$ -path projected from the first contrastive focus.

(den Dikken, 2006, p.707)

The definition of the  $\theta$ -path mentioned in (86b-ii) is stated as in (87).

- (87) a. A  $\theta$ -path is a sequence of nodes such that each node is  $\theta$ -linked to the next higher node on the main projection line.
- b.  $\alpha$  is  $\theta$ -linked to  $\beta$  iff its head assigns a  $\theta$ -role to  $\beta$  or receives a theta-role from  $\beta$

(den Dikken, 2006, p.708)

Based on (86), the placement of *either* is affected by the scope of the contrastive focus in the sentence as well as the  $\theta$ -path projected from the contrastive focus. Under this account, the sentence in (83) is ambiguous given that both *Bill* and *John* can have a contrastive focus in the first disjunct, while *Mary* always has contrastive focus in the second disjunct. When the contrastive focus is in *Bill*, the structure of the sentence is the one shown in (88a) where

a  $\theta$ -path is created by the head noun, *Bill*,  $\theta$ -linked to the VP and the  $\theta$ -path extends further up to the TP. This accounts for the reading where *Mary* is the object of the sentence while *either* surfaces at the left edge of the sentence. On the other hand, when the contrastive focus is *John*, the structure is the one in (88b) where *either* appears immediately to the left contrastive focus of the sentence, resulting in the interpretation that *Mary* is the subject of the sentence.

- (88) a. {Either} John {either} hit {either} BILL or MARY.  
 b. {Either} JOHN hit Bill or MARY.

#### 4.2.2 Lack of ambiguity of the interpretation in Mandarin

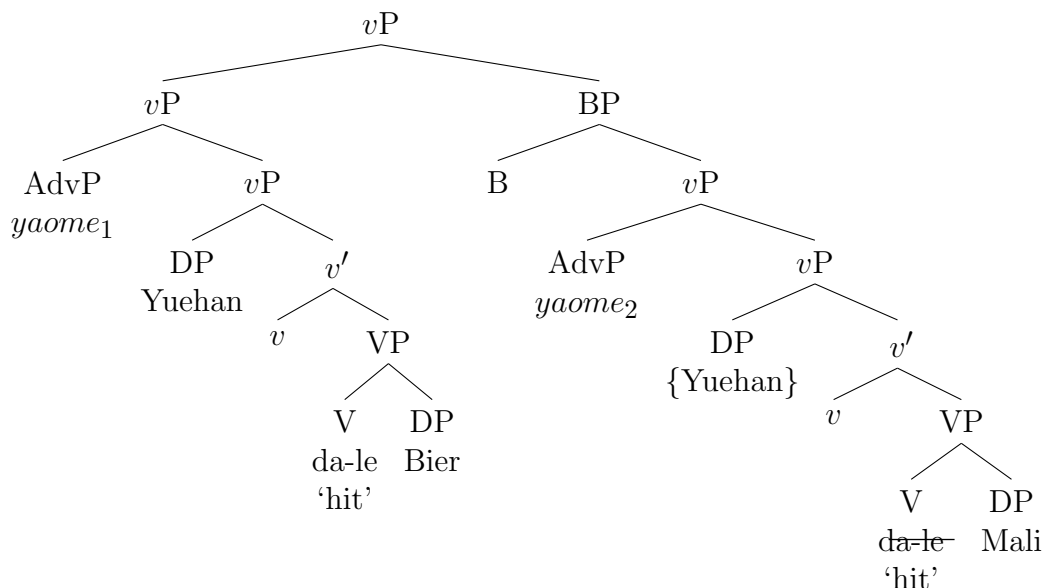
In Mandarin, the sentence in (89) is not ambiguous.

- (89) *Yaome* Yuehan da le Bier *yaome* Mali.  
*yaome*<sub>1</sub> John hit PERF Bill *yaome*<sub>2</sub> Mary  
 ‘It is either John or Mary who hit Bill.’

Three possible structures can be posited for this sentence. In (90a), *yaome* coordinates two *v*Ps with the verb in the second disjunct being elided. This is not possible because verb gapping in Mandarin Chinese is not possible. If gapping were possible, the DP in the second disjunct would be interpreted as an object of the sentence. This would then result in an ambiguous interpretation of the sentence which contradicts the fact that the interpretation of the sentence is transparent. In (90b), having *yaome*<sub>2</sub> conjoining a DP is not possible because it contradicts the observation that *yaome* is unable to conjoin noun phrases. Finally, in (90c), *yaome*<sub>1</sub> and *yaome*<sub>2</sub> conjoin two TPs with an ellipsis of the VP in the second disjunct. I argue that this is indeed the correct structure for the sentence in (89) because there are instances showing that VP ellipsis is a possible operation in Mandarin Chinese, and in this case only a subject reading is possible. In the following, I’ll show that gapping in Mandarin Chinese is not possible which will then rule out the structure in (90a). In addition, I’ll

Figure 4.1 Tree Structure: *Yaome* - Gapping

(91) \**yaome*<sub>1</sub> [<sub>vP</sub> Yuehan da-le Bier], *yaome*<sub>2</sub> [<sub>vP</sub> ~~da-le~~ Mali]



provide data showing that VP ellipsis is possible in Mandarin Chinese, supporting (90c) as being the structure of the sentence in (89).

- (90) a. \**Yaome*<sub>1</sub> [<sub>vP</sub> Yuehan [ da-le Bier], *yaome*<sub>2</sub> [<sub>vP</sub> ~~da-le~~ [<sub>DP</sub> Mali]].  
 b. \**Yaome*<sub>1</sub> [<sub>TP</sub> Yuehan da-le Bier], *yaome*<sub>2</sub> [<sub>DP</sub> Mali].  
 c. *Yaome*<sub>1</sub> [<sub>TP</sub> Yuehan da-le Bier], *yaome*<sub>2</sub> [<sub>TP</sub> Mali [<sub>VP</sub> ~~da-le Bier~~]]

First, a possible analysis would be to have two *vP* conjuncts and gapping of the second verb as shown explicitly in (91). This would be compatible with the subcategory restrictions of *yaome*.

However, this is ruled out because Mandarin doesn't seem to allow canonical gapping in coordinate structures (as opposed to English where gapping of a verb is a possible operation in coordinations).

*Gapping* was originally proposed by Ross (1968) to account for the occurrence of verb omission in coordinate structures. According to Ross (1968), gapping is a grammatical

process that involves ellipsis of a verb in the second conjunct under identity with the verb in the antecedent conjunct. The operation is said to be restricted to coordinate structures. (92) is a canonical gapping sentence in English. As illustrated in (92a), the verb *had* in the second part of the conjunction is elided under the identity it shares with the verb in the antecedent clause. The material that is deleted is called a *gap* and elements that are not deleted are called *remnants* (Han & Romero, 2004). In other words, the gap in (92a) is the elided site of ‘had’ and the remnants are the subject and the object in the second conjunct, namely ‘Bill’ and ‘a mug’.

(92) John had a cup and Bill a mug.

a. John had a cup and *Bill* ~~had~~ a mug.

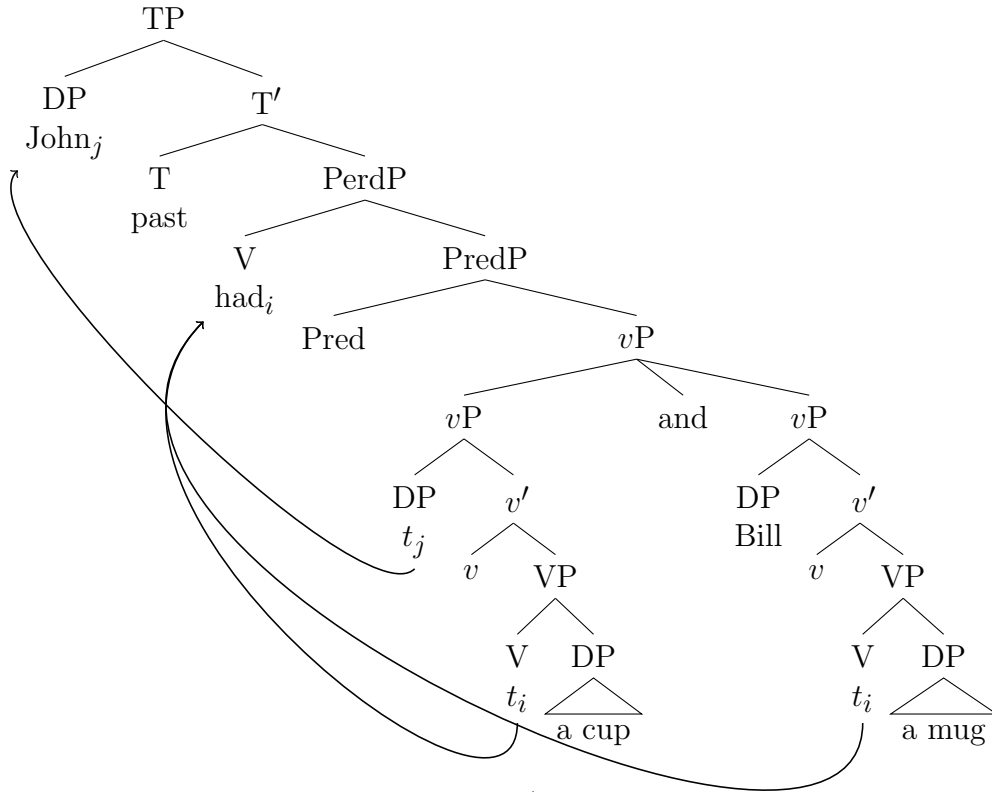
Another account for the omission of a verb in coordinated structures is across-the-board (ATB) movement proposed by Johnson (1994). He distinguishes VP-ellipsis from gapping and argues that the operation of gapping is an instance of movement. Base on this account, the missing verb in the clause is the result of movement, not ellipsis of a verb. Specifically, it’s an instance of two verbs moving out of a conjunct to a higher position in a structure via ATB movement. The structure of the sentence in (92) is illustrated in (93).

Despite the differences between these two accounts, they are both restricted to coordination. In the case of the ellipsis theory, the elided item is identical to the corresponding element in the antecedent clause, while in the case of the movement theory, the traces indicate the path from the base generated position.

(94a) is a parallel sentence to the gapping sentence in (92). It is, however, not acceptable to most Mandarin speakers. A sentence of this type remains unacceptable regardless of the verb that’s being used. As shown in (94b) and (94c), a stative verb such as *like* is used in the former while a non-stative verb such as *receive* is used in the later. Given that they are all unacceptable, we can conclude that the unacceptability has nothing to do with the type of verbs.

Figure 4.2 Tree Structure: ATB movement

(93) John had a cup and Bill a mug



(structure adopted from Johnson, 2009, p.310)

- (94) a. \* Yuehan you chabei, Bier makebei.  
 John have tea-cup Bill mug  
 ‘John had a tea cup and Bill a mug.’
- b. \* Mali xihuan yinyue, Bier dianying.  
 Mary like music Bill movie  
 ‘Mary likes music and Bill movies.’
- c. \* Mali shoudaoi weijin, Bier jiake.  
 Mary receive scarf Bill jacket  
 ‘Mary received a scarf and Bill a jacket.’

Although (94) shows unacceptable sentences, (95) shows a case of an apparent gapping structure which is acceptable. These facts have been approached from different angles, yet both Tang (2001) and Ai (2014) argue that these ‘gapping-like sentences’ are not instances of gapping in Mandarin. According to Tang (2001), pseudo-gapping sentences become ac-

ceptable if an appropriate context is provided. In addition, he proposes that sentences of this type are instances of *Empty Verb Sentences*. His argument for empty verb sentences is based on the discourse in (95). In the discourse, uttering (95b) in reply to the question in (95a) is perfectly fine when a person is ordering a drink in a restaurant. According to Tang (2001), the ‘gap’ in the sentence, namely the place where the verb is not phonetically realized, can have its antecedent from the discourse. Base on this observation, he concludes that Mandarin allows sentences containing an empty verb.

- (95) a. Q: Ni-men xiang he     dian sheme?  
           you-PL want drink bit    what  
           ‘What would you like to drink?’
- b. A: Wo (yi-bei) cha, ta (yi-bei) kafei.  
           I    one-CL tea    he one-CL coffee  
           ‘I would like to drink a cup of tea and he a cup of coffee.’

The structure of *Empty Verb Sentences* proposed by Tang (2001) is shown in (96). The XP in the structure occupies [Spec, TP] and YP is the complement of the empty verb.<sup>2</sup>

- (96)      $[_{TP} \text{XP}[_{VP} [\text{V } \emptyset][\text{YP}]]]$

However, I believe this is not an instance of an *Empty Verb Sentence*. For instance, as shown in (97), English also allows verbs to be omitted in a question-answer discourse. A paired list answer with ellipsis of the verb is given in response to the question in (97). Although there is no verb in the sentence, this does not imply that English allows a structure in which a verb can be null. Instead, I argue that this is the property of being an answer to a question.

- (97)     Q: What did they have for dinner?
- A: John mac n’ cheese and Mary pizzas.

As discussed previously in Sect.3.2.2, some portions of the answers can be omitted as long as the rest of the content is recoverable from its corresponding question. That is to say,

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<sup>2</sup>Notice that the contrast between (94) and (95) is similar to the contrast I assumed before and I believe it leads to a similar analysis.

in being an answer to a question, it is felicitous for interlocutors to provide only the most necessary information, namely the focus, that the question asks for. The case we've seen in (95b) is similar to the case in (97). The answers in these cases, under this assumption, are not instances of the occurrence of 'empty verbs' but instances of TP ellipsis after the movement of the DPs to a higher position in the structure.

So far, I've been arguing that English-like gapping is not possible in Mandarin. However the sentences in (98) may question this assumption. All the ill-formed sentences in (94) become well-formed with the occurrence of number-classifier preceding the objects as shown in (98a) and (98c) or with the occurrence of determiner-classifier preceding the objects as illustrated in (98b).

- (98) a. Yuehan you yi-ge chabei, Bier yi-ge makebei.  
 John have one-CL tea-cup Bill one-CL mug  
 'John had a tea cup. As for Bill, (he had) a mug.'
- b. Mali xihuan zhe-ge yinyue, Bier na-bu dianying.  
 Mary like this-CL music Bill that-CL movie  
 'Mary likes this music. As for Bill, (he likes) that movie.'
- c. Mali shoudaoi lian-tiao weijin, Bier one-jian jiake.  
 Mary receive two-CL scarf Bill one-CL jacket  
 'Mary received two scarves. As for Bill, (he received) one jacket.'

Following Ai (2014), I argue that these pseudo-gapping sentences are the result of a series of syntactic operations involving topicalization, focus movement and TP ellipsis. According to Ai (2014), the subject in the second conjunct in a coordinate structure is an instance of topicalization and the object in the second conjunct undergoes focus movement to [Spec, FocP] with the ellipsis of a TP after the movement. Under his account, the sentence in (98a) has the structure shown in (99) in which the subject *Bier* and the object *yi-ge makebei* undergo movement to [Spec, TopP] and [Spec, FocP] respectively.

- (99) Yuehan you yi-ge chabei, [<sub>TopP</sub> Bier<sub>i</sub> [<sub>FocP</sub> {yi-ge makebei}<sub>j</sub> [<sub>TP</sub> *t<sub>i</sub>* you *t<sub>j</sub>*]]].



It is generally assumed in the literature that Topics in Mandarin can be base generated or undergo movement to [Spec, TopP] (Badan & Del Gobbo, 2011). In the case of pseudo-gapping sentences in Mandarin, the first DP is already at left periphery, and it's not obvious whether it is base generated or moved. However, if we assume that TP ellipsis takes place only when the clauses in the two conjuncts are parallel, then the subject DP in the second conjunct must be base generated in *v*P and raise to TP (Ai, 2014). Furthermore, the subject DP in the second conjunct also undergoes movement from [Spec, TP] to [Spec, TopP]. Although Topic movement in Mandarin doesn't always display movement constraints, a Topic-marker such as *ah* and *ne* can be inserted between a Topic and the rest of the sentence (Badan & Del Gobbo, 2011). As shown in (100), the Topic-marker *ah* can be inserted between the Topic and the Focus in the second conjunct. Ai's account captures the phonological pause that is observed between the subject *Bill* and the object *yi-ge makabei*.

(100) Yuehan you yi-ge chabei, Bier *ah* yi-ge makebei.

As noted in Badan & Del Gobbo (2011), weak crossover effects are observed in focus movement in Mandarin, particularly in *lian-dou* focus constructions. Weak crossover effects are observed when *dou* appears in a separate clause from *lian*, specifically when *dou* is in the embedded clause while *lian* is in the focus position of the matrix clause, as illustrated in (101a).<sup>3</sup> In (101a), the phrase that immediately follows *lian*, namely *fan* 'rice', is the focus of the sentence. Topicalization is also possible in *lian-dou* focus constructions. As shown in (101b), the subject *ta* 'he' is topicalized to the left periphery of the sentence preceding the focus.

(101) a. *Lian fan<sub>i</sub> [TP ta dou bu xiang chi t<sub>i</sub>].*  
           even rice           he all not want eat

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<sup>3</sup>*lian-dou* focus construction derives a meaning similar to English 'even'. Following Badan & Del Gobbo (2011), I assume the following configuration leads to Weak Crossover effects:

i Weak Crossover configuration: \*Op<sub>i</sub>...pron<sub>i</sub>...t<sub>i</sub>  
     (where pron<sub>i</sub> and t<sub>i</sub> do not c-command each other; Op<sub>i</sub> c-commands both)

(Badan & Del Gobbo, 2011, p.64)

‘There’s nothing that he wants to eat, even rice.’

- b. Ta<sub>j</sub> *lian* fan<sub>i</sub> [<sub>TP</sub> t<sub>j</sub> *dou* bu xiang chi t<sub>i</sub>].  
 he even rice all not want eat  
 ‘There’s nothing that he wants to eat, even rice.’

In (102a), there’s no weak crossover effect since *dou* is in the same clause as *lian*, while (102b) exhibits a crossover effect when *dou* is embedded in another clause.

- (102) a. Lian Zhangsan<sub>i</sub> [<sub>NP</sub> [t<sub>j</sub> piping ta<sub>i</sub> de] na-ge nuren<sub>j</sub>] *dou* xihuan t<sub>i</sub>.  
 even Zhangsan criticize him DE that-CL woman all like  
 ‘Even Zhangsan<sub>i</sub>, the woman that criticized him<sub>i</sub> likes t<sub>i</sub>.’
- b. \*Lian Zhangsan<sub>i</sub> Mali renwei [<sub>CP</sub> [piping ta<sub>i</sub> de xhe-ben shu] *dou* hui  
 even Zhangsan Mali think criticize him DE this-CL book all destroy  
 le t<sub>i</sub>].  
 PERF  
 ‘Even Zhangsan<sub>i</sub>, Mary thinks the book that criticized him<sub>i</sub> destroyed t<sub>i</sub>.’

(Badan & Del Gobbo, 2011, p.71)

Similarly, the second conjunct of the pseudo-gapping sentence in (98a) shows identical constraints. As shown in (103a), the sentence shows no weak crossover effect since *dou* is in the same clause as *lian*. On the other hand, the sentence in (103b) shows a weak crossover effect since *lian* and *dou* are in separate clauses.<sup>4</sup> This supports the argument that the second DP in the second conjunct of pseudo-gapping sentences is an instance of focus movement.<sup>5</sup>

<sup>4</sup>In (103), I focus only on the second conjunct of the pseudo-gapping sentence since the constraint on the target clause is not relevant to the antecedent clause under this account. A direct quote from Ai (2014), ‘If gapping in Modern Mandarin is not derived via (ATB) movement, then we do not have to consider all conjuncts at the same time.’

<sup>5</sup>As discussed previously, there’s an interpretation asymmetry in sentences of this types. When the objects in the sentence do not come with number-classifier, the sentence is ill-formed (see (94) for examples). Under Ai’s account, all pseudo-gapping sentences are predicted to be good as long as the subject and the object in the second conjunct undergo topicalization and focus movement before the TP is elided. His analysis cannot account for the asymmetry of NP with or without a number-classifier. It might be that number-classifier NP can be raised easily while non-quantified NP cannot. In this paper, I’ll leave the question open and will not discuss the asymmetry between these two types of nominal phrase. Either more restrictions have to be added to Ai’s analysis or more needs to be said about elements that are restricted in moving to the left periphery of a sentence in Mandarin.

- (103) a. {Xinqing bu hao de Bier}<sub>j</sub>, *lian* {yi-ge makebei}<sub>i</sub>, [<sub>TP</sub> ta<sub>j</sub> *dou* renwei  
mood not good DE Bill even one-CL mug he all think  
[<sub>CP</sub> [<sub>TP</sub> [<sub>DP</sub> mai-le ta<sub>i</sub> de ren] bu xihuan *t<sub>i</sub>*]].  
buy-PERF it DE person not like  
'Bill, who is in a bad mood, thinks those who bought the mug dislike it.'
- b. ?? {Xinqing bu hao de Bier}<sub>j</sub>, *lian* {yi-ge makebei}<sub>i</sub>, ta<sub>j</sub> renwei [<sub>CP</sub> [<sub>TP</sub>  
mood not good DE Bill even one-CL mug he think  
[<sub>DP</sub> mai-le ta<sub>i</sub> de ren] *dou* bu xihuan *t<sub>i</sub>*]].  
buy-PERF it DE person all not like  
'Bill, who is in a bad mood, thinks those who bought the mug dislike it.'

Given the discussion above, I argue that Mandarin does not have gapping like English does. It follows that (104) cannot be the structure of the non-ambiguous sentence in (89) because verb gapping is not a possible operation in Mandarin.

- (104) \**Yaome*<sub>1</sub> Yuehan da-le Bier, *yaome*<sub>2</sub> ~~da-le~~ Mali.

Since coordinating DPs and verb gapping are not possible, we are left with VP ellipsis and a subject interpretation. Unlike gapping, which is not a possible operation in coordinate structures, there are instances of VP deletion in Mandarin. As illustrated in (105a) and (105b), a VP can be deleted in the second conjunct of a coordination structure. In (105a), the VP *dao na* 'arrive there' in the second conjunct is elided while the sentence remains grammatical. Furthermore, ellipsis of a VP is possible even if it is embedded in a bigger chunk of VP. The sentence in (105b) shows that the lower VP *qu Meigou* 'go to America' can be elided, leaving the second conjunct with the outmost VP containing an adjunct.

- (105) a. Ta hua-le wu tian dao na, wo zhi hua-le san tian [<sub>VP</sub>  
he spend-PERF five day arrive there I only spend-PERF three day  
~~dao na~~].  
arrive there  
'He spent five days to get there while I only spent three days to get there'
- b. Ta qu Meigou liang-ci, wo [<sub>VP</sub> [<sub>VP</sub> ~~qu Meigou~~] [<sub>AdvP</sub> yi-ci]].  
he go America two-time I go America one-time  
'He went to America twice and I went there once.'

Given the examples provided in (105), the only possible structure of the unambiguous sentence in Mandarin is the one in (106), where *yaome*<sub>2</sub> conjoins a TP while the VP is being elided. As a result, the DP that follows *yaome*<sub>2</sub> can only be interpreted as the subject but not the object.

(106) *Yaome*<sub>1</sub> Yuehan da-le Bier, *yaome*<sub>2</sub> [*TP* Mali ~~da-le Bier~~]

To sum up, the interpretation of (89) is not ambiguous since only one structure can be associated to this sentence. It cannot be an instance of *yaome*<sub>2</sub> conjoining a DP that is the complement of a verb as in (90b) because *yaome* is banned from conjoining DPs. In addition, it's not an instance of verb gapping as in (90a) since canonical gapping is not possible in Mandarin and pseudo-gapping operation involves moving elements to the left periphery. Given that VP ellipsis is the only possible operation, the sentence is thus never ambiguous in Mandarin.

## CHAPTER 5

### THE POLARITY PUZZLE AND THE ANALYSIS OF THE PUZZLE

So far we have seen that *yaome* differs from *either or* in English due to a subcategorization restriction. In this chapter, I'll show that *yaome* is also different from English in terms of entailments. In addition, I'll argue that *yaome* is in fact a Positive Polarity Item (PPI) that its distribution patterns with other PPIs in Mandarin.

#### 5.1 Disjunction and Conjunctive Entailment

It is generally assumed that conjunctive entailments are licensed when negation (or a downward entailing operator) c-commands disjunction (Szabolcsi, 2002; Crain, 2008; Su et al., 2012). *Nobody*, for example, is a downward entailing operator while *everyone* is not. As shown in (107a), when *nobody* c-commands the disjunction *or*, a conjunctive interpretation is derived. Contrarily, in (107b), no conjunctive meaning is derived when *or* is in the scope of *everyone*.

- (107) a. Nobody in this class plays the violin or the guitar.  
           $\Rightarrow$  nobody in this class plays the violin  $\wedge$  nobody in this class plays the guitar.
- b. Everybody in this class plays the violin or the guitar.  
           $*\Rightarrow$  everyone in this class plays the violin  $\wedge$  everyone in this class plays the guitar

(Su et al., 2012, p.962)

This generalization can be extended to *either or* as illustrated in (108). A conjunctive meaning is derived when *either or* is in the scope of *nobody* (cf.(108a)), but this is not the

case when it's in the scope of *everybody* (cf.(108b)). The only difference between using *or* and *either or* is that there is a sense of emphasis when using *either or*.<sup>1</sup>

- (108) a. Nobody in this class plays either the violin or the guitar.  
 $\Rightarrow$  nobody in this class plays the violin  $\wedge$  nobody in this class plays the guitar.
- b. Everybody in this class plays either the violin or the guitar.  
 $\Rightarrow$  everyone in this class plays the violin  $\wedge$  everyone in this class plays the guitar

*Houzhe*, a disjunctive coordinator meaning ‘or’ in Mandarin, patterns much like English disjunction. *Houzhe* also allows a conjunctive interpretation in the scope of a downward entailing operator. (109a) and (109b) are Mandarin versions of the sentences in (107a) and (107b). In (109a), when *houzhe* ‘or’ is in the scope of *meiyouren* ‘nobody’, the interpretation is the same as in English. On the other hand, the conjunctive meaning is not derived when *houzhe* is in the scope of *meigeren* ‘everybody’.

- (109) a. Ban shang, *mei-you-ren* yanzou xiaotiqin *houzhe* jita.  
class PREP not-have-person play violin or guitar  
 $\Rightarrow$  nobody in the class plays the violin  $\wedge$  nobody in the class plays the guitar
- b. Ban shang, *mei-ge-ren* dou yanzou xiaotiqin *houzhe* jita.  
class PREP every-CL-person all play violin or guitar  
 $\Rightarrow$  everyone in this class plays the violin  $\vee$  everyone in the class plays the guitar  
 $\Rightarrow$  everyone in this class plays the violin  $\wedge$  everyone in the class plays the guitar

(Su et al., 2012, p.964)

Given that *either or* patterns the same as *or*, it's expected that paired *yaome* patterns the same as *houzhe*. In other words, a conjunctive meaning should be derived when *yaome* is

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<sup>1</sup>Thanks Cara Feldscher for her judgement on the examples in (108).

in the scope of a downward entailing operator but not when there is no downward entailing operator. As shown in (110b), when *meigeren* ‘everyone’ scopes over *yaome*, no conjunctive interpretation is derived. However, the example in (110a) shows that *yaome* patterns differently from the cases we’ve seen so far in that it doesn’t derive a conjunctive interpretation when it’s in the scope of *meiyouren* ‘nobody’. In fact, the sentence is unacceptable.

- (110) a. \*Ban shang, [mei-you-ren] *yaome* yanzou xiaotiqin *yaome* yanzou jita.  
class PREP not-have-person *yaome*<sub>1</sub> play violin *yaome*<sub>2</sub> play guitar  
 $\Rightarrow$  nobody in the class plays the violin  $\wedge$  nobody in the class plays the guitar
- b. Ban shang, [mei-ge-ren] *yaome* yanzou xiaotiqin *yaome* yanzou jita.  
class PREP every-CL-person *yaome*<sub>1</sub> play violin *yaome*<sub>2</sub> play guitar  
 $\Rightarrow$  everyone in this class plays the violin  $\vee$  everyone in the class plays the guitar

This contrast between *houzhe* and *yaome* can also be found when they occur with a negation such as *mei*, meaning ‘not’. The sentence in (111a) has a conjunctive reading when the negation *mei* scopes over *houzhe*, while in (111b), the sentence is not acceptable and the conjunctive interpretation can not be derived when *yaome* is in the scope of negation.

- (111) a. Ta mei yong diannao *houzhe* shouji.  
he not use computer or cell-phone  
 $\Rightarrow$  he didn’t use computer  $\wedge$  he didn’t use cell phone
- b. \*Ta mei *yaome* yong diannao, *yaome* yong shouji.  
he not *yaome*<sub>1</sub> use computer *yaome*<sub>2</sub> use cell-phone  
 $\Rightarrow$  he didn’t eat rice  $\wedge$  he didn’t eat noodles

A conjunctive entailment can also be licensed when disjunction appears in the antecedent clause but not in the consequent clause of a conditional (Su & Crain, 2010). As shown in (112a), a conjunctive interpretation can be derived when *or* appears in the antecedent clause of conditionals. However, as illustrated in (112b), when the disjunction occurs in the consequent clause of a conditional, the conjunctive reading can not be derived.

- (112) a. If a boy bought cake *or* ice-cream, then he got a plate.  
 $\Rightarrow$  if a boy bought cake, then he got a plate  $\wedge$  if a boy bought ice-cream, then he got a plate
- b. If a boy got a plate, then he ordered cake *or* ice-cream  
 $*\Rightarrow$  if a boy got a plate, then he ordered cake  $\wedge$  if a boy got a plate, then he ordered ice-cream

(Su & Crain, 2010, p.190)

Similar observations apply to Mandarin. Specifically, when *houzhe* ‘or’ occurs in the antecedent clause of a conditional, a conjunctive entailment is derived (Su & Crain, 2010). In (113a), a conjunctive entailment is licensed when *houzhe* is in the antecedent clause of a conditional. On the other hand, in (113b), the conjunctive meaning is not available when *houzhe* is in the consequent clause of the sentence.

- (113) a. Ruguo xiaonanhai mai-le dangao *houzhe* bingjiling, ta jiu na-le  
 if boy buy-PERF cake or ice-cream he then take-PERF  
 diezi.  
 plate  
 ‘If a boy bought cake or ice-cream, then he got a plate.’ =conjunctive
- b. Rugou xiaonanhai na-le diezi, ta jiu mai-le dangao *houzhe*  
 if boy take-PERF plate he then buy-PERF cake or  
 bingjiling.  
 ice-cream  
 ‘If a boy got a plate, then he bought cake or ice-cream.’ =disjunctive

(Su & Crain, 2010, p.191)

Interestingly, when *yaome* takes the place of *houzhe* in the first clause of a conditional, the result is different. As illustrated in (114a), *yaome* doesn’t derive a conjunctive entailment in the antecedent clause of a conditional. In fact, the sentence in (114a) is unacceptable. In (114b), when *yaome* takes the place of *houzhe* in the consequent clause, the result is the same as (113b) in that both sentences derive a disjunctive interpretation.



- (114) a. \* Rugou xiaonanhai *yaome* mai-le dangao *yaome* bingjiling, ta jiu  
 if boy *yaome*<sub>1</sub> buy-PERF cake *yaome*<sub>2</sub> ice-cream he then  
 na-le diezi.  
 take-PERF plate  
 \* $\Rightarrow$  If a boy bought cake or ice-cream, then he got a plate. =conjunctive
- b. Rugou xiaonanhai na-le diezi, ta jiu *yaome* mai-le dangao  
 if boy take-PERF plate he then *yaome*<sub>1</sub> buy-PERF cake  
*yaome* bingjiling.  
*yaome*<sub>2</sub> ice-cream  
 ‘If a boy got a plate, then he bought cake or ice-cream.’ =disjunctive

## 5.2 The analysis of the polarity puzzle

As discussed in the previous section, no conjunctive entailment can be derived when negation *mei* scopes over *yaome* or when *yaome* is in the antecedent clause of conditionals. In fact, the sentences are unacceptable. Why does *yaome* behave differently from *either or* in environment of this type? I argue that it is a result of *yaome* being a positive polarity item. In the following, I’ll show that *yaome* is a positive polarity item. Not only is *yaome* unable to derive a conjunctive interpretation when it’s in the scope of a downward entailing operator or in the antecedent clause of a conditional, the occurrence of *yaome* in these environments is in fact ill-formed.

Negation, interrogatives and the antecedent clause of conditionals are classic negative polarity environments (Ernst, 2008). Given the fact that *yaome* cannot be in the scope of negation or in the antecedent clause of conditionals, I argue that *yaome* is a PPI and cannot occur in environments where NPIs are licensed. In the following, I’ll show that the placement of *yaome* patterns in the same way as other PPIs in Mandarin.

Speaker oriented adverbs such as *probably*, *unfortunately*, and *strangely* are PPIs (Ernst, 2009).<sup>2</sup> Environments where PPIs are allowed and barred are shown in (115a) and (115)

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<sup>2</sup>Ernst (2009) argues that speaker oriented adverbs are PPIs and they are usually unacceptable in environment that licenses NPIs. Here, I compare *yaome* with these adverbs because they are banned in the same environment. However, I’ll leave open the question whether *yaome* is speaker oriented or not.

respectively. In particular, their placement is restricted under negation as in (115b) and they are usually banned in questions and antecedent clauses of conditionals as in (115c) and (115d).

- (115) a. George { probably/ unfortunately/ strangely } has not sold his house.  
 b. \* George has not {probably/ unfortunately/ strangely} sold his house.  
 c. \* Has George {probably/ unfortunately/ strangely} sold his house?  
 d. \* If George has {probably/ unfortunately/ strangely} sold his house, then we should be sure to get his new address.

(Ernst, 2008, p.70)

Adverbs such as *dagai* ‘probably’, *xianran* ‘obviously’ and *xingkui* ‘fortunately’ are PPIs in Mandarin (Ernst, 2008). They can appear to the left of negation such as *mei* or *bu*, which is illustrated in (116a) and (116b) respectively.

- (116) a. Dawei {dagai/ xianran/ xingkui} *mei* lai.  
 David probably obviously fortunately not come  
 ‘David probably didn’t come./ Obviously, David didn’t come./ Fortunately, David didn’t come.’  
 b. Dawei {dagai/ xianran/ xingkui} *bu* lai-le.  
 David probably obviously fortunately not come-PERF  
 ‘David is probably not coming./ David is obviously not coming./ Fortunately, David is not coming.’

(adapted from Ernst, 2008, p.71)

However, sentences become ill-formed when these adverbs appear in the scope of negation. The sentences in (117a) and (117b) explicitly show that the occurrence of *dagai*, *xianran* and *xingkui* in the scope of negation is unacceptable.

- (117) a. \* Dawei mei {dagai/ xianran/ xingkui} lai.  
 David not probably obviously fortunately come

‘David probably didn’t come./ Obviously, David didn’t come./ Fortunately,  
David didn’t come.’

- b. \*Dawei bu {dagai/ xianran/ xingkui} lai-le.  
Daive not probably obviously fortunately come-PERF  
‘David is probably not coming./ David is obviously not coming./ Fortunately,  
David is not coming.’

In addition to the scope of negation, the occurrence of these adverbs in interrogatives or in the antecedent clause of a conditional is bad as well. This is illustrated in (118a) and (118b).

- (118) a. \*Dawei {dagai/ xianran/ xingkui} lai-le ma?  
David probably obviously fortunately come-PERF Q  
‘Had Peter {probably/ obviously/ fortunately} come?’
- b. \*Ruguo Dawei {dagai/ xianran/ xingkui} lai-le, ni jide  
If David probably obviously fortunately come-PERF you remember  
gaosu wo.  
tell me  
‘Remember to tell me if David {probably/ obviously/ fortunately} had come.’

The same result is found with *yaome*. Specifically it doesn’t occur in environments that license NPIs. As illustrated in (119a), the sentence with negation scoping over *yaome* is ill-formed. In addition, it cannot occur in interrogatives as shown in (119b) or in the antecedent clause of conditionals as in (119c).

- (119) a. \*Mali mei *yaome* jinlai, *yaome* chuqu le.  
Mary not *yaome*<sub>1</sub> come.in *yaome*<sub>2</sub> get.out PERF  
‘Mary didn’t either come in or get out.’
- b. \*Mali *yaome* jinlai *yaome* chuqu le ma?  
Mary *yaome*<sub>1</sub> come.in *yaome*<sub>2</sub> get.out PERF Q  
‘Did Mary either come in or get out?’

- c. \*Rugou Mali *yaome* jinlai *yaome* chuqu le, ni jide gaosu  
 if Mary *yaome*<sub>1</sub> come.in *yaome*<sub>2</sub> get.out PERF you remember tell  
 wo.  
 me  
 ‘Remember to tell me if Mary either came in or got out.’

Contrarily, when *houzhe* takes the place of *yaome* in these sentences, they become grammatical. This contrast can be seen if we compare the set of sentences in (119) to those in (120).<sup>3</sup> The examples in (120) show that *houzhe* is not sensitive to environments that license NPIs.

- (120) a. Mali mei jinlai *houzhe* chuqu le.  
 Mary not come.in or get.out PERF  
 ‘He didn’t come in or get out.’
- b. Mali jinlai *houzhe* chuqu le ma?  
 Mary come.in or get.out PERF Q  
 ‘Did Mary come in or get out?’
- c. Rugou Mali jinlai *houzhe* chuqu le, ni jide gaosu wo.  
 if Mary come.in or get.out PERF you remember tell me  
 ‘Remember to tell me if Mary came in or got out.’

In this chapter, I showed that *yaome* is distinct in a way that it is sensitive to environments in which NPIs are licensed. This explains why *yaome* cannot derive a conjunctive entailment like other disjunctions in English and Mandarin. Although *yaome* is able to de-

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<sup>3</sup>Note that *houzhe* in (120b) needs the help of question particles such as *ma* to derive an interrogative meaning. In Mandarin, *haishi* ‘or’ is often used to derive alternative questions. It is a coordinator that conveys the meaning of disjunction and the interpretation of an interrogative. In (i), *haishi* conveys the interrogative meaning without the help of any question particles. Mandarin distinguishes disjunctions used in alternative questions from those used in declaratives (Erlewine, 2014). Based on the observations above, it seems that *yaome* occurs only in declaratives, while *houzhe* is neutral in that it is able to appear either in declaratives or interrogatives.

i. Mali jinlai *haishi* chuqu le?  
 Mary come.in or get.out PERF  
 ‘Did Mary come in or get out?’

rive a disjunctive meaning like other disjunctive coordinators, its distribution is relatively restricted because of its status as a PPI.

## CHAPTER 6

### INTEGRATED CONCLUSION

The paired *yaome* patterns differently from disjunctive coordinators such as *either or*. Although they both derive a disjunctive interpretation, they do not have the same distribution. As discussed in this thesis, *yaome* conjoins predicates or clauses. However, it cannot conjoin noun phrases. The occurrence of *yaome* immediately to the left of a nominal phrase in answers to a question is not an exception of *yaome* conjoining DPs. Instead, it is a property of being an answer to a question. It follows that *yaome* in this case is not conjoining a DP but FocPs containing DPs. This characteristic of *yaome* further explains why the same sentence in Mandarin is not ambiguous. The unambiguous interpretation results from *yaome* not being able to conjoin DPs and gapping being an impossible operation in Mandarin. Furthermore, unlike other disjunctive coordinators, *yaome* is sensitive to environments that license NPIs. The fact that *yaome* cannot occur in the scope of negation, interrogatives and in the antecedent clause of conditionals indicates that it is a PPI.

## APPENDIX

## APPENDIX

Gloss & Abbreviation are as follows,

accusative – ACC

aspect – ASP

classifier – CL

copula – COP

de – DE

nominative – NOM

past tense – PST

perfect tense – PERF

plural – PL

preposition – PREP

progressive – PRG

questions – Q



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