A POST-SYNTACTIC APPROACH TO THE A-NOT-A QUESTIONS

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In this paper, A-not-A questions are analyzed in a post-syntactic approach. The operation that forms the A-not-A questions consists of two M-merger stages. First, Lowering is carried out to attach the A-not-A operator to the target. Afterward, Local Dislocation applies to pick up the candidate for reduplication. M-merger of the A-not-A operator to its target is a movement of Morphosyntactic Word to another Morphosyntactic Word. Since movement of a Morphosyntactic Word to Subword is prohibited for the A-not-A operation, adjoined modifiers cannot feed the A-not-A formation. On the other hand, the A-not-A operator can only pick its adjacent MWd as the candidate for reduplication, because linear order should be obeyed. Based on different reduplication domains, various subtypes of A-not-A questions, such as A-not-AB and AB-not-A, can be derived. To summarize this study, the A-not-A constructions are analyzed in a unified fashion.

Key words: The A-not-A operator, M-merger, Lowering, Local Dislocation, Morphosyntactic Word, Subword, Reduplication

1. Introduction

This paper aims at providing a unified analysis for the various subtypes of the A-not-A construction in Mandarin Chinese. The A-not-A construction in this paper is analyzed in a post-syntactic approach. According to Huang (1991), the A-not-A construction is derived in two ways. First, the A-not-A operator is generated in the head of INFL, and the verbs raises to the head of INFL to derive the A-not-AB construction. Second, by means of anaphoric ellipsis, the AB-not-A construction is derived. I propose that the various subtypes of the A-not-A construction in Mandarin Chinese are phonologically triggered and built through M-merger, a post-syntactic movement in PF. Since the formation of the A-not-A questions are sensitive to the hierarchical structure and locality conditions are observed as in (1b), I claim that the A-not-A constructions is derived in two stages. First, the A-not-A operator attaches to its target by Lowering (Embick & Noyer, 2001).The A-not-A operator lowers to the Morphosyntactic Word (MWd hereafter) which is immediately c-commanded by the A-not-A operator. After the attachment of the A-not-A operator to its target,

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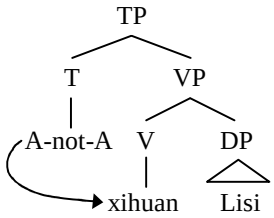
another M-merger mechanism, Local Dislocation, is applied and triggers reduplication to produce the surface form of the A-not-A question.

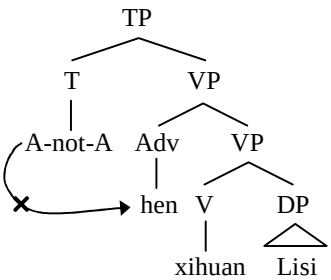
(1) a. Zhangsan xihuan-bu-xihuan Lisi
Zhangsan like-not-like Lisi
'Does Zhangsan like Lisi or not?'
b. *Zhangsan hen-bu-hen xihuan Lisi
Zhangsan very-not-very like Lisi
c. *Zhangsan hen xihuan-bu-xihuan Lisi
Zhangsan very like-not-like Lisi

In this paper, I follow Huang's analysis (1991) that the A-not-A operator is generated under the head of T (namely Infl). The A-not-A operator must lower to its immediately c-commanded MWd to derive the grammatical sentence. In (1a), *.xihuan* 'like' is the MWd and is immediately c-commanded by the A-not-A operator, so Lowering of the A-not-A operator to it is acceptable. However, in (1b), although the adverb *hen* 'very' is also defined as MWd and immediately c-commanded by the A-not-A operator, *hen* 'very' is not a X-bar theore1tic head. Therefore, the A-not-A operator cannot attaches *hen* 'very' to derive the A-not-A question. Moreover, in (1c), locality of the A-no-A construction is observed. *hen* 'very' plays as an intervening element to prevent the A-not-A operator from M-merging with the MWd *xihuan* 'like'. When the A-not-A operator crosses the intervening MWd *hen* 'very' and then M-merges with the MWd *xihuan* 'like', the sentence is ungrammatical as in (1c).

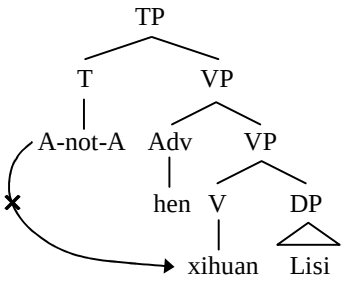
(1a)



*(1b)



*(1c)



In short, the formation of A-not-A questions is a two-step derivation. By Lowering, the A-not-A operator determines the target node. And then, through Local Dislocation, the A-not-A operator defines the domain of reduplication.

According to Kuo (1992), the A-not-A operator applies to [+V] elements like verbs and adjectives in (2a) and (2b). However, I observe that the A-not-A operator can apply to prepositions like (2c) and even nominal elements like (2d). [1]

(2) a. Zhangsan chi-bu-chi hanbao
Zhangsan eat-not-eat hamburger
'Does ZhangSan eat hamburger or not?'

b. Zhangsan gao-bu-gao
Zhangsan high-not-high
'Is Zhangsan high or not?'

c. Zhangsan zai-bu-zai tushuguan
Zhangsan in-not-in library
'Is Zhangsan in the library or not?'

d. lü-bu-lü ka bu zhongiao
green card-not-green card not important
'It's not important whether you have Permanent Resident Card of the U.S.'

I argue that the A-not-A operator is not just sensitive to the element taking [+V] feature. Any syntactic category which is an X'-theoretic head immediately c-commanded by the A-not-A operator can be M-merged with the A-not-A operator deriving a grammatical sentence.

According to previous studies, subtypes of A-not-A questions are produced either through reduplication in PF (Huang, 1991) or ellipsis of VP in core syntax (Huang 1991, Hsieh 2001 & Huang 2008). However, I argue that the various subtypes can be produced just through reduplication in PF. The various surface forms of the A-not-A construction are derived due to different reduplication domains. In this paper, I will show how reduplication rules are applied to generate A-not-AB and AB-not-A constructions, the two main subtypes of

[1] This sentence is provided by T.-H. Jonah Lin. I am grateful to him for this example.

A-not-A questions. The operation of reduplicative rules strictly observes linear sequencing. This further shows that the A-not-A questions are formed through post-syntactic operations.

Section 2.1 re-examines previous analysis of the A-not-A constructions in Mandarin Chinese. Section 2.2 introduces the theory of post-syntactic movement. Section 3 shows how the post-syntactic approach derives the A-not-A questions. (3.1) illustrates how the A-not-A M-merges with various syntactic categories, such as verbs, adjectives and preposition in (3.1.1), adverbial elements in (3.1.2), Aspects in (3.1.3), and nominals in (3.1.4). In (3.2), I display how reduplication rule operates to form the various subtypes of A-not-A questions. Section 4 is the conclusion.

2. Literature Review

2.1 Previous Analysis of the A-not-A Questions

C.T.-Huang (1991) claimed that the A-not-A operator is generated at INFL and the verb raises to INFL to derive the subtypes of the A-not-A questions. After reduplication applies, the A-not-AB construction, one of the subtypes of the A-not-A questions, is formed. On the other hand, with anaphoric ellipsis of VP, another subtype of the A-not-A questions, the AB-not-A construction, is generated. However, in Huang's analysis, the two main subtypes of A-not-A questions are not formed in a unified fashion. In this paper, we derived the various subtypes uniformly on different reduplication domains.

Ernst (1994) argued that the A-not-A operator is adjoined to the VP projection. However, Ernst's proposal cannot be supported if we examine following sentences.

(3) a. Zhangsan zai-bu-zai shuijiao *aspect*
Zhagnsan Asp-not-Asp sleep
'Is Zhangsan sleeping or not ?'

b. Zhangsan shi-bu-shi xihuan Lisi *copula*
Zhangsan SHI-not-SHI like Lisi
'Is it the case that ZhangSan likes Lisi?'

In (3), the A-not-A operator applies to the modal *keneng* 'likely' and the copula *shi* 'be'. Modals like *keneng* 'likely' is hierarchically higher than VP, and the focus copula *shi* is located in the Modal node (Tsao, 1994), or the focused projection, which dominates the Modal projection or VP on Li's analysis (2005). If the A-not-A operator were adjoined to VP as Ernst (1994) claimed, neither (3a) nor (3b) could be grammatical. In addition, according to the examples in (2), the application of the A-not-A operator is not limited to verbal elements. Therefore, the claim that the A-not-A operator is adjoined to VP projection cannot be correct.

Gasde (2004) stated that the A-not-A operator is generated on the head of the functional projection called Force 2 Phrase (F2P hereafter). F2P is hierarchically higher than VP but beneath TP. The element which is targeted by the A-not-A operator can raise to the head of F2P to derive A-not-A questions. According to Gasde's (2004) analysis, the element which is targeted by the A-not-A operator bears the [+Q] feature. Therefore, the element which is operated by the A-not-A operator should raise to the head of F2P in order to check [+Q] feature. Nevertheless, maximal projection can be the target for the A-not-A operator to derive A-not-A questions. How the maximal projection can be moved to $F2^0$ for checking [+Q] feature need to be further explained.

Kuo (1992) claimed that the element which is targeted by the A-not-A operator should have [+V] feature such VP and AP as in (4a) and (4b). However, I observe that the A-not-A operator can target the element without [+V] features such as PP even NP in (4c) and (4d).

(4) a. Zhangsan xihuan-bu-xihuan Lisi
Zhangsan like-not-like Lisi
'Does Zhangsan like Lisi or not?'

b. Zhangsan gao-bu-gao
Zhangsan high-not-high
'Is Zhangsan high or not?'

c. ZhangSan zai-bu-zai tushuguan
ZhangSan in-not-in library
'Is ZhangSan in the library or not?'

d. lü-bu-lü ka bu zhongiao
green card-not-green card not important
'It's not important whether you have Permanent Resident Card of the U.S.'

e. *Zhangsan zhi-bu-zhi chi niurou
Zhangsan only-not-only eat beef

I argue that the target for the A-not-A operator is not just limited to elements with the [+V] feature. The A-not-A operation is a MWd-to-MWd movement. Any element which is the closest MWd to the A-not-A operator and takes [+predicative] feature can be the target for the A-not-A operator. In (4c), the preposition *zai* 'in' can be regarded as the predicate. In (4d), the element *lüka* 'green card' is a reduced clause as a sentential subject. *lüka* 'green card' can raise to the empty predicate to receive [+predicative] feature. Therefore, the A-not-A operator can lower to the preposition and the nominal element in (4c) and (4d) to derive grammatical sentence. However, *zhi* 'only' in (4e) is an adjoined adjunct and not a predicate. The adverb *zhi* 'only' doesn't take [+predicative] feature. As a result, (4e) is ungrammatical.

In short, Huang doesn't (1991) analyzed the subtypes of the A-not-A construction in a unified way. The proposal of Ernst (1994), Gasde (2004) and Kuo (1992) are problematic. In this paper, I try to provide a unified analysis for the A-not-A questions.

2.2 Post-Syntactic Movement

Given that the A-not-A construction is morphophonologically triggered, I argue that the formation of the A-not-A construction is derived by post-syntactic movement in PF. Embick and Noyer (2001) argue for two mechanisms of Morphological Merger (M-merger, hereafter), Lowering and Local Dislocation. By the operation of M-merger, two elements can exchange their relation in a structure. Lowering unite syntactic terminals node which are spelled out together but separate in overt-syntax by the operations of downward movement in PF. Lowering is operated by a downward movement distinct from the core-syntax operations, which is upward movement. Local Dislocation is operated in a non-hierarchical structure. After linearization, two elements exchange the relation of adjacency or precedence by the operation of Local Dislocation.

Lowering is sensitive to syntactic headedness, and has non-local characteristics. An intervening adjoined element may not prevent Lowering operation from applying. Take the definite marker in Bulgarian as an example (Embick & Noyer, 2001: 568-9):

(5) a. kniga-ta
book-DEF

b. xubava-ta kniga
nice-DEF book

c. dosta glupava-ta zabeležka
quite stupid-DEF remark

d. *mnog-ət star teatər
very-DEF old theater

The definite marker *-ta* in Bulgarin appears suffixed to either nominals or adjectives. When nominals are modified by adjectives, the definite marker *-ta* suffixes the first adjectives in a sequence. DEF *–ta* picks up the head of its complement as the target and then M-merges with its target by Lowering. For example, *kniga* ‘book’ in (5a) is a nominal and *xubava* ‘nice’ in (5b) is the first adjective in a sequence; therefore, DEF *–ta* respectively lowers to *kniga* ‘book’ in (5a) and *xubava* ‘nice’ in (5b) to derive definite nominals. Because of non-local characteristics of the operation of Lowring, the intervening elements like the adjunct modifier *dosta* ‘quite’ do not prevent DEF *–ta* from combining with the head of AP, *glupava* ‘stupid’ in (5c). However, the adverb is an adjunct and cannot be targeted by the definite marker as in (5d). This shows that Lowering is sensitive to structure.

Another mechanism of M-merger is Local Dislocation. Local Dislocation occurs after linearization; therefore, Local Dislocation is sensitive to linear order such as adjacency and precedence relation. Two elements can exchange the relations of adjacency and precedence by the operation of Local Dislocation. That is, two elements can be inverted in the string. Local Dislocation has local properties. When Local Dislocation applies, intervening adjuncts cannot be

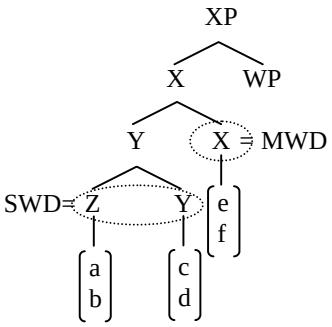
ignored. Take the superlatives in English as an example (Embick & Noyer, 2001: 564-5):

(6) a. John is the smart-est student.
a'. John is the –est smart student.
b. John is the most amazingly smart student.
c. *John is the t amazingly smart-est student.

The deep structure of (6a) is shown as in (6a'). The superlative morpheme precedes the adjactice *smart*. In (6a), there is no modifier between the adjective *smart* and superlative morpheme *–est*; as a result, the superlative morpheme can M-merge with the adjacent adjective *smart* by the operation of Local Dislocation. The linear order of the superlative morpheme is changed. The adjective become precedent to the superlative morpheme *–est* after the operation of Local Dislocation. In (6b), superlative marker *–est* cannot Local-Dislocate to *smart* because the superlative marker *–est* is not adjacent to the adjective *smart*. The adverb *amazingly* behaves as an intervening element between the superlative marker *–est* and the adjective *student*. Therefore, *most* is inserted to express superlativeness. However, when the superlative marker *–est* goes across the adjoined adjunct *amanzingly* and then M-merge with the adjective *smart*, the sentence is ungrammatical as in (6c).

The elements that undergo post-syntactic movement are Morphosyntactic words (MWd) and Subwords (SWd). Elements which are subject to post-syntactic movement should have equal properties. An item which is an MWd must move to an MWd. An SWd must target the element which is also an SWd. The definitions and structure of MWd and SWd are as follows (Embick and Noyer, 2001:574):

(7) a. A node X^0 is a MWd iff X^0 is the highest segment and X^0 is not contained in another X^0.
b. A node X^0 is a SWd if X^0 is a terminal node and not an MWd.



In above structure, X is the highest segment and is not contained in another terminal node. X is dominated by itself. Therefore, X is a MWd. Y is dominated

by X' and Z is contained in Y. Therefore, Neither Y nor Z is the MWd. Both Y and Z are SWds. Besides, any terminal node which had undergone movement in core-syntax or been adjoined by another head in Morphology is regarded as a SWd.

In this paper, employing post-syntactic approach, I claim that the A-not-A operation is an MWd to MWd movement. The A-not-A operator is defined as an MWd. The A-not-A operator can only lower to a MWd which is immediately dominated by the maximal projection of the A-not-A operator. An SWd cannot be the target for the A-not-A operator. In addition, if there is an intervening MWd or SWd between the A-not-A operator and its target, the A-not-A operation fails.

3. Analysis

3.1 The A-not-A Operator Applies on Various Syntactic Categories

Given that the A-not-A construction is phonologically triggered, I try to employ post-syntactic operations in the PF to derive the A-not-A questions. I argue that the formation of the A-not-A construction is through two stages of M-merger. First, the A-not-A operator targets the MWd which is the head that is closest to it and undergoes Lowering to it. Then, Local Dislocation applies and triggers reduplication to yield the surface form of the A-not-A question. In this section, I will illustrate how Lowering applies to various syntactic categories such as VP, AP, PP, Aspect, and Nominals to derive A-not-A questions. In section 3.2, I will show that the surface form of A-not-A questions is produced by Local Dislocation and Reduplication.

3.1.1 Application of the A-not-A Operator on VP, AP, and PP

Based on the following procedure, the A-not-A operator targets the syntactic categories to derive A-not-A questions.

(8) a. The A-not-A operator targets the closest X'-theoretic head that it c-commands.
b. Closeness of the head is qualified as following:
(i) The closest head is a X'-theoretic head of the maximal which is immediately dominated by the maximal projection of the A-not-A operator.
(ii) The target must have overt phonological realization.
c. There is not any non-X'-theoretic head or SWd intervening between the A-not-A operator and its target.
d. Intervention is defined by c-command relation.

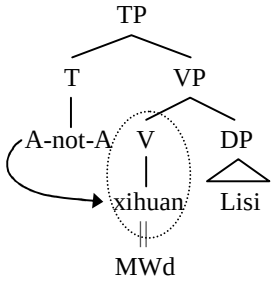
Following this procedure, grammaticality of sentences in (1), which are

re-produced in (9), can be explained.

(9) a. Zhangsan xihuan-bu-xihuan Lisi
Zhangsan like-not-like Lisi
'Does Zhangsan like Lisi or not?'
b. *Zhangsan hen-bu-hen xihuan Lisi
Zhangsan very-not-very like Lisi
c. *Zhangsan hen xihuan-bu-xihuan Lisi
Zhangsan very like-not-like Lisi

In (9a), *xihuan* 'like' is the highest segment and not contained by another terminal node; therefore, *xihuan* 'like' is a MWd. Moreover, the A-not-A operator takes the VP *xihuan Zhangsan* 'like Zhangsan' as its complement. *xihuan* 'like' is immediately c-commanded by the the A-not-A operator. As a result, *xihuan* 'like' in (9a) is the closest MWd to the A-not-A operator. The A-not-A operator can M-merge with *xihuan* 'like'to derive the A-not-A question. However, the adverb *hen* 'very' cannot be operated by the A-not-A operator as in (9b). *hen* 'very' in (9b) is a MWd because *hen* 'very' is the highest segment and not contained by another terminal node. However, *hen* 'very' is not a X´-theoretic head immediately c-commanded by the A-not-A operator. *hen* 'very' is not the closest MWd to the A-not-A operator. Lowering of the A-not-A operator to *hen* 'very' fails as in (9b). Furthermore, when the adverb *hen* 'very' is adjoined to VP as in (9c), the A-not-A operator cannot crosses the modifier *hen* 'very' to M-merge with the verb *xihuan* 'like' by the operation of Lowering. The intervening adverb *hen* 'very' prevents the A-not-A operator from Lowering to its target, the X´- theoretic head *xihuan* 'like'. Derivation of A-not-A questions is as following:

(9a)



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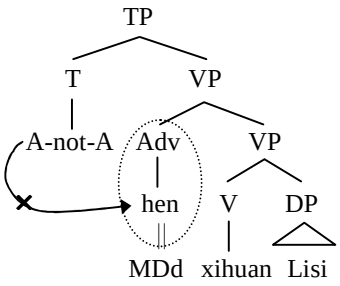

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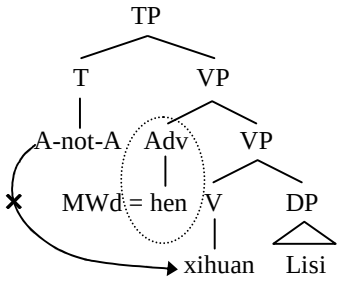


In Bulgarian, we observe that the interaction of definite marker *–ta* and adverbs is similar to interaction of the A-not-A operator and adverbs in (9). Example 10 shows that the suffixation of the definite markers in Bulgarian is sensitive to hierarchical structure. The definite marker attaches the head of its complement as its target. In (10a), the definite marker *-ta* takes NP *kniga* 'book' as its complement and suffixes to *kinga* 'book'. In (10c), the definite marker skips the modifier *mnogo* 'very' to suffixes with the head of AP *starij* 'old'. In (10b), the definite marker is prevented from suffixing with the adverb *mnogo* 'very'. Suffixation of definiteness in Bulgarian illustrates non-local characteristics. Therefore, suffixation of the definite marker to its target is operated by Lowering.

10. a. kniga-ta (Embick & Noyer, 2001: 568)
book-DEF

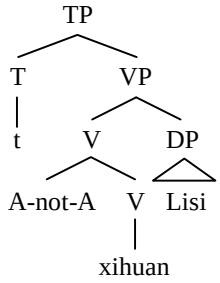
b. * mnog-ət star teatər (Embick & Noyer, 2001: 569)
very-DEF old theater

c. mnogo starij-ə teatər (Embick & Noyer, 2001: 569)
very old-DEF theater

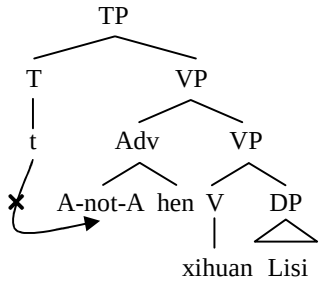
Comparing derivation of definiteness in Bulgarian with A-not-A questions in Mandarin Chinese, we find that A-not-A constructions in Chinese and definiteness in Bulgarian are operated in the quite similar track. The A-not-A operator in Chinese and definite marker in Bulgarian both pick up the

X´-theoretic head as their target. The A-not-A constructions in Chinese and Definiteness in Bulgarian are derived by the operation of Lowering. Furthermore, adverbs cannot be operated by operation of Lowering to derive A-not-A questions in Chinese and definiteness in Bulgarian.

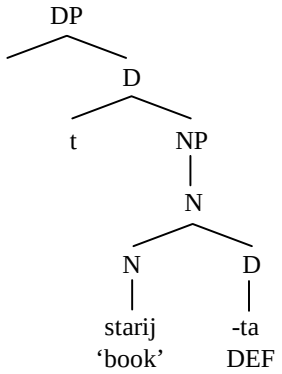
(9a) *The A-not-A Construction in Chinese*



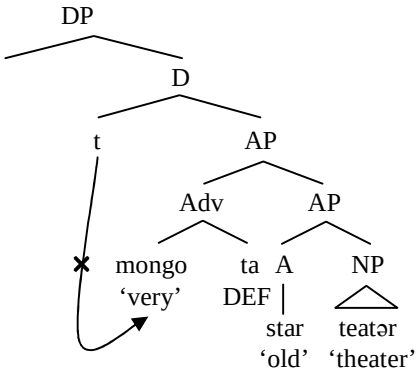
*(9b) *M-merger of the A-not-A operator and adverbs*



(10a) *Suffixation of Definite Marker in Bulgarian*

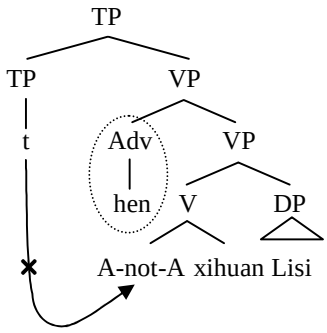


*(10b) *M-merger of the definite marker and adverbs*

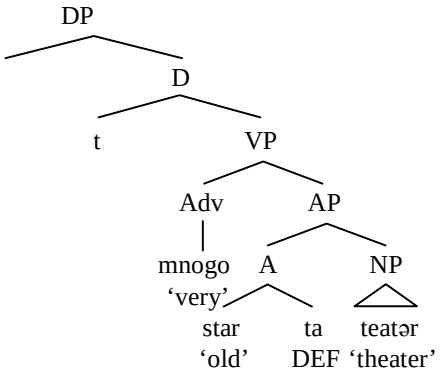


However, in A-not-A constructions, adverbs have stronger intervening effects. Locality is more salient in A-not-A questions. Any intervening element can block the operation of Lowering. The A-not-A operator is prevented from going across the intervening element to M-merge with its target as in (9c) while the definite marker in Bulgarian can skip the intervening adverb to M-merge with the head of its complement as in (10c).

(9c) *Locality of A-not-A Construction*



(10c) *Suffixation of Definiteness is Non-Local*



In short, operation of Lowering in A-not-A construction is more constricted. The A-not-A operator can only choose the closest X′-theoretic head as its target. Moreover, when the A-not-A operator M-merges with its target, intervening elements cannot be ignored. Given that derivation of A-not-A questions are extremely sensitive to the sentence structure, we can make sure the A-not-A construction is actually operated by the operation of Lowering. If the A-not-A operator targeted its element only by operation of Local Dislocation, why adverbs cannot be operated by the A-not-A operator couldn't be explained. Operation of Local Dislocation focuses on linear order of elements. If the A-not-A operator targeted its element by operation of Local Dislocation, we couldn't explain why the A-not-A operator cannot M-merge with the adverb like *hen* 'very', which is adjacent MWd to the A-not-A operator as in (9b).

In the introduction, I have mentioned that the syntactic category which can be applied by the A-not-A operator is not limited to VP. Any node which is defined as the MWd and is a X'-structural head can derive A-not-A question. The following examples show that the A-not-A operator can M-merge with an adjective or preposition if there is no intervening element. This is similar to the case of verbs in (9).

(11) a. Zhangsan gao-bu-gao *adjective*
Zhangsan high-not-high
'Is Zhangsan high or not?'
a'. * Zhangsan hen gao-bu-gao
Zhangsan very high-not-high
a". * Zhangsan hen-bu-hen gao
Zhangsan very-not-very high
b. Zhangsan zai-bu-zai tushuguan *preposition*
Zhangsan in-not-in library
'Is Zhangsan in the library or not?'

b'. * Zhangsan changchang zai-bu-zai tushuguan
Zhangsan usually in-not-in library
b". * Zhangsan changchang-bu-changchang zai-bu-zai tushuguan
Zhangsan usually-not-usually in-not-in library
'Is Zhangsan usually in the library or not?'

(11a) and (11b) are grammatical because the MWd-to-MWd merging applies without the intervening effect. (11a'') and (11b'') are unacceptable because the target of A-not-A application is not a X′-structural head. (11a') and (11b') are ungrammatical because of the intervention of the adverbs.

So far, it appears that an adjoined modifier cannot be the target for the A-not-A operator. Furthermore, an adjunct modifier blocks the lowering of the A-not-A operator. However, (12a) and (12b) seems to be counterexamples.

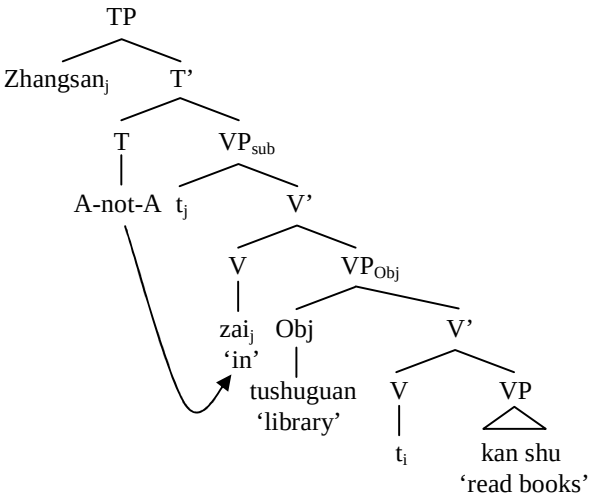
(12) a. Zhangsan zai-bu-zai tushuguan kan shu
Zhangsan in-not-in library read book
'In order to read the book, is Zhangsan in the library or not?'
b. Zhangsan zai tushuguan kan-bu-kan shu
Zhangsan in library read-not-read book
'In the library, does Zhangsan read books or not?'

According to (12), it seems that the A-not-A operator can M-merge either with the adjoined PP *zai tushuguan* 'in the library' like (12a) or with VP *kan shu* 'read the book' like (12b). In (13), VP is modified by a PP which is headed by *xiang* 'toward', but the A-not-A operator cannot skip the adjoined PP *xiang Lisi* 'toward Lisi' in (13b). (cf. (12b))

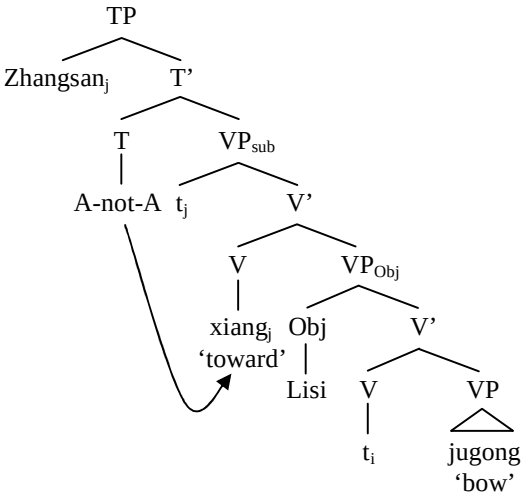
(13) a. Zhangsan xiang-bu-xiang Lisi jugong
Zhangsan toward-not-toward Lisi bow
'Does Zhangsan bow to Lisi or not?'
b. * Zhangsan xiang Lisi jugong-bu-jugong
Zhangsan toward Lisi bow-not-bow
'Does Zhangsan bow to Lisi or not?'

I follow the claim of Li & Thompson (2005) that prepositions in Mandarin Chinese have verb-like characteristics, which are called coverbs. *Zai* 'in' and *xiang* 'toward' in (12a) and (13a) are coverbs and respectively take VPs *kan shu* 'read the book' and *jugong* 'bow' as their complements. Therefore, *zai* 'in' and *xiang* 'toward' are regarded as the MWds which are heads closest to the A-not-A operator. As a result, *zai* 'in' and *xiang* 'toward' in (12a) and (13a) can be M-merged with the A-not-A operator to derive A-not-A questions. The derivations for (12a) and (13a) are as the following:

(12a)



(13a)

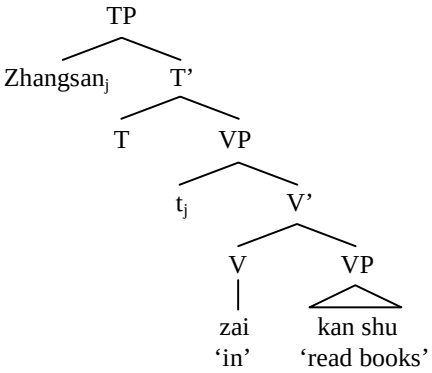


In (12a), *zai* 'in' takes VP *kanshu* 'read books' as its complement. And then, *zai* 'in' raises to the subject-selecting light verb in core-syntax. Similarly, *xiang* 'toward' taking VP *jugong* 'bow' as its complement raises to subject-selecting light verb. Example 14 shows that raising of preposition is detectable.

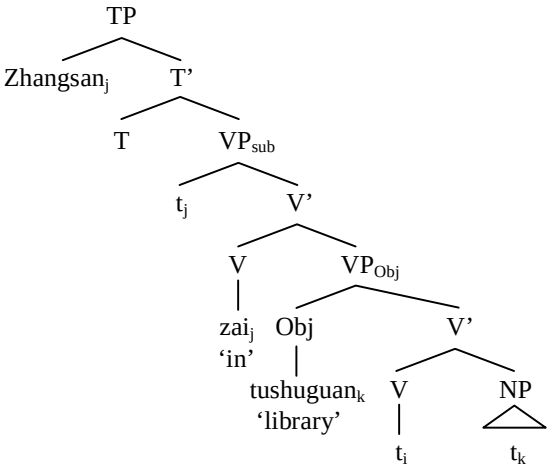
(14) a. Zhangsan zai kanshu
Zhangsan is reading
'Zhangsan is reading'

b. Zhangsan zai tushuguan
Zhangsan in library
'Zhangsan is in the library'

(14a)



(14b)

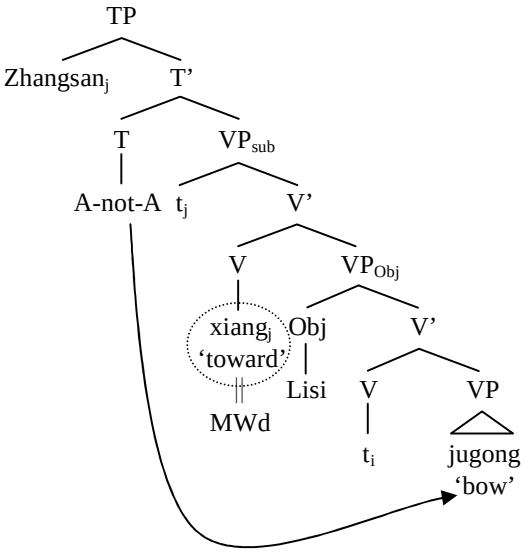


After prepositions raise to the subject-selecting light verb in core-syntax, prepositions become the highest segment which is dominated by the maximal projection of the A-not-A operator in the structure. Prepositions like *zai* 'in' in (12a) and *xiang* 'toward' in (13a) are X'-theoretic heads. *Zai* 'in' in (12a) and *xiang* 'toward' in (13a) are the closest MWds to the A-not-A operator. Since the subject *Zhangsan* had raised to TP Spec, the subject won't prevent the A-not-A operator from lowering to closest MWd *zai* 'in' in (12a) and *xiang* 'toward' in (13a) to derive A-not-A questions. As a result, (12a) and (13a) are grammatical.

If (13b) has the similar structure as in (12a) and (12b), why (13b) is ungrammatical can be explained. In (13b), preposition *xiang* 'toward' is the

closest MWd to the A-not-A operator. The closest MWd *xiang* 'toward' of the A-not-A operator is the intervening element when the A-not-A operator goes across the closest *xiang* 'toward' to M-merge with the lower MWd *jugong* 'bow' by the operation of Lowering. Therefore, (13b) is ungrammatical.

*(13b)



However, if (12b) had similar structure to (12a), (13a), and (13b), grammaticality of (13b) would be difficult to explain. If preposition *zai* 'in' were the highest segment which is dominated by the maximal projection of the A-not-A operator and closest MWd to the A-not-A operator, we could wrongly concluded that the A-not-A operator is allowed to skip the intervening MWd *zai* 'in' to M-merge with the lower MWd *kan* 'read'. After examining (15), we find that (12b) has different structure from (12a), (13a), and (13b). ((12b) and (12a) are respectively re-stated as in (15a') and (15b'))

(15) a. zai tushuguan, Zhangsan kan-bu-kan shu
In library Zhangsan read-not-read book
'In the library, does Zhangsan read books or not? '

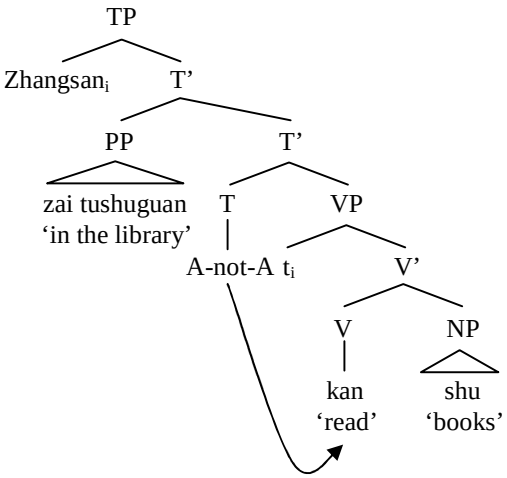
a'. Zhangsan zai tushuguan kan-bu-kan shu
Zhangsan in library read-not-read book
'In order to read the book, is Zhangsan in the library or not?'

b. * zai-bu-zai tushuguan, Zhangsan kan shu
in-not-in library Zhangsan read book

b'. Zhangsan zai-bu-zai tushuguan kan shu
Zhangsan in-not-in library read book
'In order to read the book, is Zhangsan in the library or not?'

Comparing (15a) with (15b), we find that PP *zai tushuguan* 'in the library' in (15a) can be topicalized while PP in (15b) can't. (15a) shows that PP *zai tushuguan* 'in the library' is an adverbial and higher than T^0, which is similar to when-clause. I claim that higher adverbial PP *zai tushuguan* 'in the library' in (15a) is adjoined to the head of TP. Since adverbial PP in (15a) is higher than T^0, the A-not-A can lower to the MWd *kan* 'read' to derive the A-not-A question without intervening effect as in (15a).

(15b) = (12b)



3.1.2 Application of the A-not-A Operator on Adverbial-Like Elements

Given that the A-not-A operation is Lowering operation targeting the closest X'-structural head, adverbs cannot be targeted by the A-not-A operator to derive A-not-A constructions. However, the following examples in (16a) and (16b) seem to be counterexamples.

(16) a. Zhangsan chang-bu-chang qu Taipei
Zhangsan often-not-often go Taipei
'Does Zhangsan often go to Taipei or not?'
b. Zhangsan ceng-bu-ceng qu Taipei
Zhangsan ever-not-ever go Taipei
'Has Zhangsan ever often been to Taipei or not?'

If the element *chang* 'often' in (16a) and *ceng* 'ever' in (16b) were adjunct modifiers of VP, they would be blocking elements to M-merger of the A-not-A operator. However, if we contrast *chang* 'often' and *ceng* 'ever' in (16) with the real adverbs *changchang* 'usually' and *cengjin* 'ever' in (17), we find that that the elements *chang* 'often' and *ceng* 'ever' in (16) and the adverbs in (17) may

have distinct categorical properties.

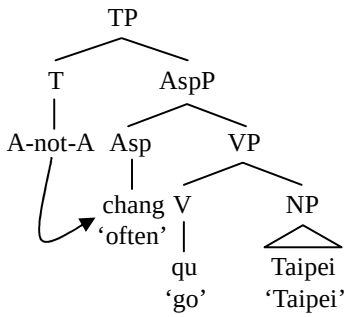
(17) a. * Zhangsan changchang-bu-changchang qu Taipei
Zhangsan often-not-often go Taipei
b. * Zhangsan cengjing-bu-cengjing qu Taipei
Zhangsan ever-not-ever go Taipei

In (16), the elements *chang* ‘often’ and *ceng* ‘ever’ can be M-merged with the A-not-A operator by the operation of Lowering. In (17), adverbs *changchang* ‘often’ and *cengjing* ‘ever’ cannot be operated by the A-not-A operator. It shows that elements *chang* ‘ever’ and *ceng* ‘every’ in (16) and adverbs *changchang* ‘often’ and *cengjing* ‘ever’ in (17) are not alike. In previous section, I have mentioned that the adverb like *hen* ‘very’ in (9) and (11) cannot be targeted by the A-not-A operator because the adverb is not a X’-structural head. More examples that the A-not-A operator cannot M-merge with real adverbial elements are illustrated as the following:

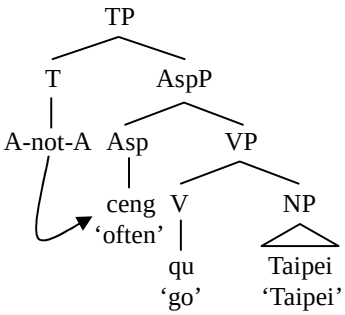
(18) a. * Zhangsan manmandi-bu-manmandi zou
Zhangsan slowly-not-slowly walk
b. * Zhangsan guyi-bu-guyi xüanhua
Zhangsan deliberately-not-deliberately shout

In (18), neither the manner adverb *manmandi* ‘slowly’ nor subject-oriented adverb *guyi* ‘deliberately’ can be operated by the A-not-A operator. It shows that real adverbs cannot host the A-not-A operator. On the other hand, in (16), since *chang* ‘often’ and *ceng* ‘ever’ can be M-merged with the A-not-A operator by Lowering, *chang* ‘often’ and *ceng* ‘ever’ should be a closest MWd to the A-not-A operator and a X’-structural head. Moreover, *chang* ‘often’ and *ceng* ‘ever’ have aspectual reference, so I assume *chang* ‘often’ and *ceng* ‘every’ are aspect-like elements and generated at the aspect head. In this way, *chang* ‘often’ and *ceng* ‘ever’ are the closest X’-theoretic head to the A-not-A operator. Therefore, M-merger of *chang* ‘often’ and *ceng* ‘ever’ with the A-not-A operator is acceptable as in (16).

(16a)



(16b)

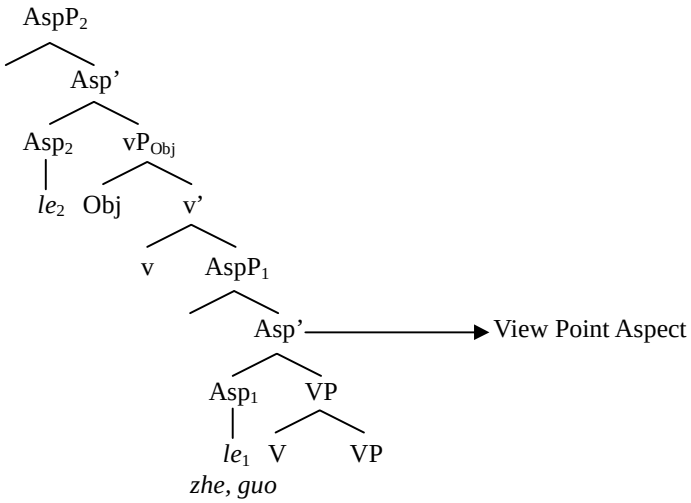


3.1.3 Application of the A-not-A Operator and Aspects

The A-not-A operation fails if aspect markers such as verb-*le*$_1$, sentence-*le*$_2$, and *zhe* incorporate with verbs.

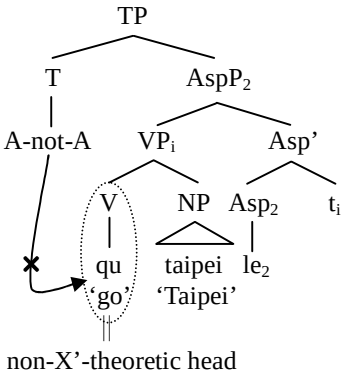
(19) a. * Zhangsan qu-bu-qu le$_1$ Taipei
Zhangsan go-not-go LE$_1$ Taipei
b. * Zhangsan qu-bu-qu taipei le$_2$
Zhangsan go-not-go Taipei LE$_2$
c. * Zhangsan qu taipei le$_2$-bu-le$_2$
Zhangsan go Taipei LE$_2$-bu- LE$_2$
d. * Zhangsan kai-bu-kai zhe che
Zhangsan drive-not-drive ZHE car

Here, I will tentatively follow the structure of Aspects argued for by Liao (2004: 106) to explain the grammaticality of the examples in (19).

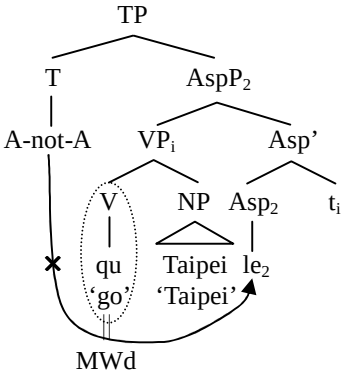


According to Liao (2004), the complement of the sentential Asp *le*$_2$ will move to Asp Spec. In this way, the complement of Asp *le*$_2$ in (19b), VP *qu Taipei* 'go to Taipei', will be moved to Spec of Aspect *le*$_2$. Although the head of moved VP *qu* 'go' is a MWd, *qu* 'go' cannot M-merge with the A-not-A operator. After VP headed by *qu* 'go' moves to Spec of sentence-*le*$_2$, *qu* 'go' is not a X'-structural head, which is similar to the case that the head of adjunct *hen* 'very' in (9b) and (11a') cannot be targeted by the A-not-A operator. Moreover, *qu* 'go' is not immediately dominated by the maximal projection of the A-not-A operator and the MWd *qu* 'go' is not the closest MWd to the A-not-A operator. As a result, M-merger of the A-not-A operator and *qu* 'go' derive an ungrammatical sentence as in (19b). On the other hand, after VP *qu Taipei* 'go to Taipei' moves to Spec of sentence-*le*$_2$, the non-closest MWd *qu* 'go' behaves as an intervening element and block the operation of Lowering of the A-not-A operator, which is similar to the intervening effect triggered by adjoined modifiers like *hen* 'very' in example (9c) and (11a'). The A-not-A operator cannot go across an intervening element to M-merge with the MWd *le*$_2$ to derive a grammatical A-not-A question. Unacceptable derivation of (19b) and (19c) are as the following:

*(19b)



*(19c)



However, according Liao (2004), aspects *le*$_{1,}$ *zhe*, and *guo* is on the same structural layer. In this way, the asymmetry of A-not-A application on *le*$_{1,}$ *zhe*, and *guo* cannot be explained.

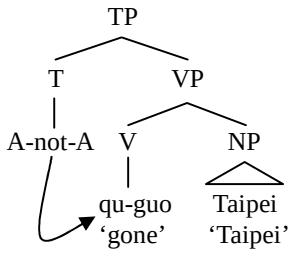
(20) a. Zhangsan qu-mei-qu guo Taipei
Zhangsan go-not-go GUO Taipei
'Has Zhangsan ever been to Taipei or not?'
b. * Zhangsan qu-bu-qu le$_1$ Taipei
Zhangsan go-not-go LE$_1$ Taipei
c. * Zhangsan kai-bu-kai zhe che
Zhangsan drive-not-drive ZHE car

For this reason, I suggest that the aspect *guo* may be generated on a different locus from *le*$_1$ and *zhe*. The following example shows that *guo* holds a closer relationship with the verb than *le*$_1$ and *zhe*.

(21) a. Zhangsan qu guo le$_1$ Taipei
Zhangsan go GUO LE$_1$ Taipei
'Has ZhangSan ever been to Taipei?'

Based on this observation, I assume that *guo* and the verb *qu* 'go' forms a V-V compound. In (20a), the compound *qu-guo* 'gone' is generated on the head of VP, which is the complement of the A-not-A operator. The compound *qu-guo* 'gone' is the highest segment in the structure, so the compound *qu-guo* 'gone' is a MWd. Since *qu-guo* 'gone' is a X'-structural head and be immediately dominated by the maximal projection of the A-not-A operator, *qu-guo* 'gone' is the closest MWd to the A-not-A operator. The A-not-A operator can attach to the compound *qu-guo* 'gone' to derive a grammatical A-not-A question by the operation of Lowering as in (20a).

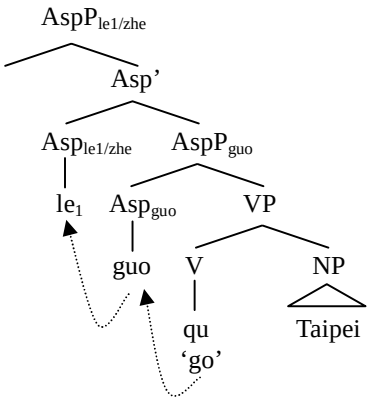
(20a)



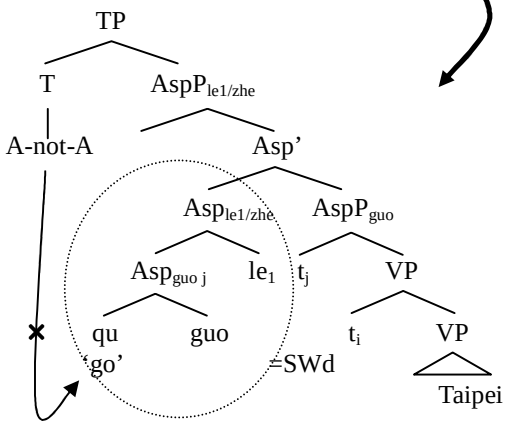
If *guo* of V-*guo* in (21a) were an Aspect head which is generated on the lower layer than Aspect *le*$_1$ and *zhe* as the diagram in (21a'), the grammatical A-not-A question in (20a) couldn't be derived. According to Embick and Noyer (1999: 283), a terminal node, which is composed of a complex X^0 due to movement and

operation in core-syntax, will be defined as the SWd. In the structure of (20a'), *qu* 'go' is a SWd, because *qu* 'go' incorporates with the Asp *guo* in core-syntax. However, M-merger of the A-not-A operator and its target must be the MWd-to-MWd movement. The A-not-A operator in (20a') picks up the SWd *qu* 'go' as its target. In this way, the grammatical A-not-A question in (20a) couldn't be derived.

*(21a')

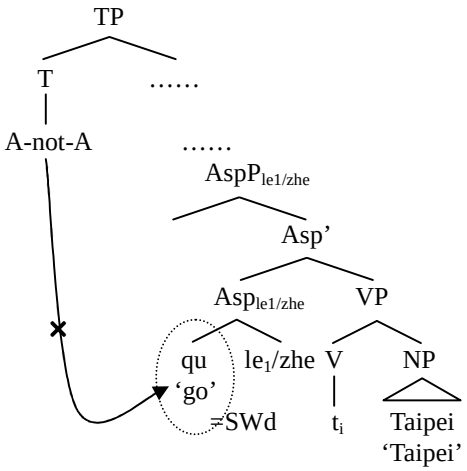


*(20a')



Differs from *guo* in (20a), *le$_1$* and *zhe* in (20b) and (20c) are real aspect heads. The aspect heads *le$_1$* and *zhe* take VP *qu Taipei* 'go to Taipei' as their complements. In core-syntax, the head of VP *qu* 'go' raises and incorporates with aspect heads such as *le$_1$* and *zhe*. However, after incorporation of *qu* 'go' and aspect heads, *qu* 'go' becomes a SWd. Therefore, the A-not-A operator cannot target *qu* 'go' to derive A-not-A questions by the operation of Lowering as in (20b) and (20c).

*(20b/c)



3.1.4 Application of the A-not-A Operator on Nominal Elements

In certain cases, the A-not-A operator can even attach to a nominal element as in (22a). But the application of the A-not-A operator to a nominal is not always acceptable, as the ungrammaticality of (22b) shows.

(22) a. lü-bu-lüka bu zhongiao
green-not-green card card not important
'It's not important whether you have the Permanent Resident Card of the U.S.'

b. * Zhangsan niuroumian-bu-niuroumian
Zhangsan beef noodle-not-beef noodle

In (23a), the A-not-A operator can M-merge with the noun *lüka* 'the Permanent Resident Card of the U.S. (green card)' while the A-not-A application on the noun *niuroumian* 'beef noodle' in (18b) fails.

Based on Tang's (2003) analysis, *lüka* 'green card' in (22a) can be regarded as a verbless clause as the sentential subject and (22b) is a verbless sentence. However, I tentatively assume that (22a) and (22b) may have different structures.

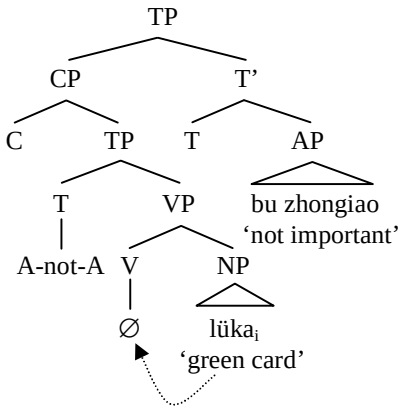
Contrast (22a), which is re-stated in (23a), with (23b), we find that the element *lüka* 'green card' in (23a) may not be a real nominal element but a reduced clause.

(23) a. lü-bu-lüka bu zhongiao =(22a)
green card-not-green card not important
'It's not important whether you have the green card or not.'

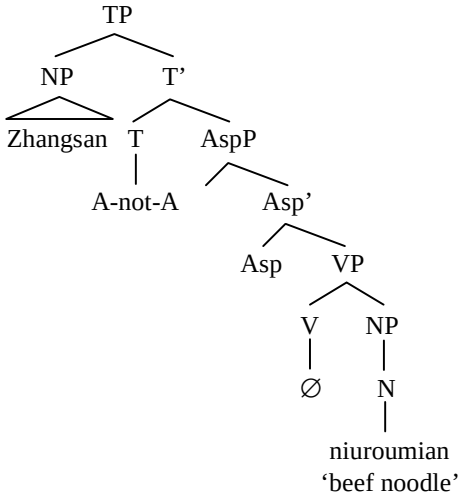
b. Zhangsan iu-mei-iu lüka bu zhongiao
Zhangsan have-not-have green card not important
'It's not important whether Zhangsan have the green card or not.'

In (23a), *lüka* 'green card' is not a real nominal but a reduced clause. *lüka* 'green card' is headed by the empty predicate as the case in (22b), in which the nominal element *niuroumian* 'beef noodle' is headed by the empty predicate. However, (23a) is the clause which lacks the subject, but (22b) has the subject *Zhangsan*. Structures of (23a) and (22b) are as the following:

(23a)=(22a)



*(22b)



Sentential subject in (23a) lacks the aspect phrase but (22b) doesn't. Owing to

the lack of subject, the complement NP *lüka* ‘green card’ raises to the node of empty predicate and the sentential clause is nominalized, which can be paralleled with (24a).

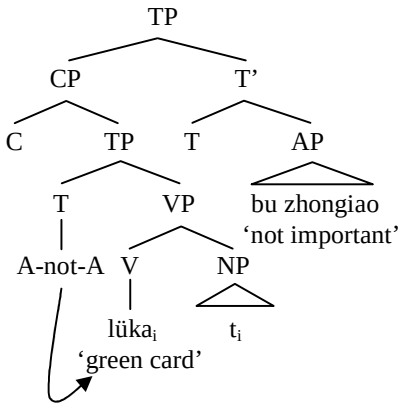
(24) a. zhe jian shi bu zhongiao
this CL affair not important
‘This affair is not important.’

After the nominal *lüka* ‘green card’ raises to the empty predicate, the nominal *lüka* ‘green card’ gets the property of the predicate meanwhile. In this time, the nominal *lüka* ‘green card’ becomes [+predicative]. According to Kuo (1992), the A-not-A operator must operate to the element with [+V] feature. In this paper, I claim that the element which can be operated by the A-not-A operator should have [+predicative] feature. That’s why *lüka* ‘green card’ can be attached by the A-not-A operator. After the nominal *lüka* ‘green card’ raises to the empty predicate, *lüka* ‘green card’ becomes the closest MWd taking [+predicative] feature to the A-not-A operator. Therefore, the A-not-A operator can lower to *lüka* ‘green card’ to derive acceptable A-not-A construction as in (23a).

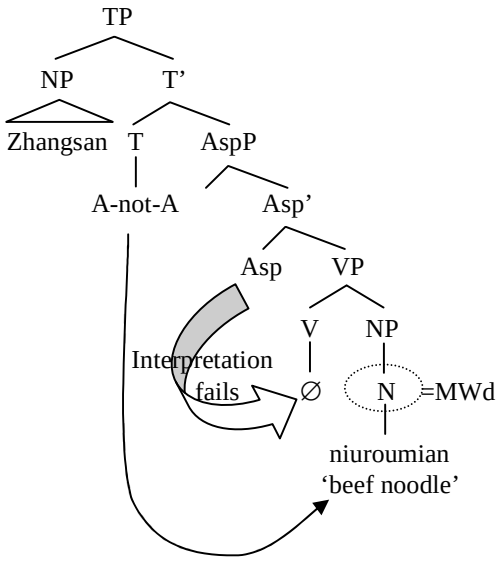
In (22b), since the empty predicate doesn’t have overt phonological realization, the empty predicate cannot be targeted by the A-not-A operator. And then, the empty predicate won’t prevents the A-not-A operator from lowering to the X’-theoretic head of NP, *niuroumian* ‘beef noodle’, because the empty predicate lacks overt phonological realization. In (22b), the A-not-A operator can skip the empty predicate to M-merge with the head of NP, *niuroumian* ‘beef noodle’ without the intervening effect. The reason why (22b) is still unacceptable is due to problematic semantic interpretation. (22b) is the root clause and there is the aspect layer which is selected by the empty predicate. However, since the aspect node cannot grant the nominal element *niuroumian* ‘beef noodle’ semantic interpretation in (22b); therefore, (22b) is unacceptable.

On the other hand, (22a) lacks AspP layer, because the nominal element *lüka* ‘green card’ raises to the empty predicate. The empty predicate gets nominal feature and it cannot select the aspect node. Without the aspect layer, semantic interpretation in (22a) is not problematic. As a result, (22a) is grammatical while (22b) is unacceptable. Derivation of (22a) and (22b) are as the following:

(22a)=(23a)



*(22b)



3.2 Deriving A-not-A Questions by Reduplication

After the A-not-A operator attaches to its target by Lowering, the A-not-A operator Local Dislocates to the target node and triggers reduplication. The A-not-A operator determines the reduplication domain and then yields the surface form of the A-not-A question. The reduplication domain can be the first syllable of the targeted element, the targeted element itself, and the maximal projection that contains the targeted element. I propose that reduplication strictly follows the linear order. The A-not-A operator cannot skip the adjacent

constituent to copy the next constituent. Based on different reduplication domains, various subtypes of A-not-A questions, such as A-not-AB and the AB-not-A constructions, can be derived. They are illustrated in sections 3.2.1 and 3.2.2 respectively.

3.2.1 Deriving A-not-AB Questions by Reduplication

The subtype A-not-AB construction is derived by the following procedure:

i. The A-not-A operator targets its adjacent element and then decides the reduplication domain. The reduplication domain can be:
   (a) the first syllable of the adjacent MWd= (25a)
   (b) the adjacent MWd = (25b)
   (c) the maximal projection of the adjacent MWd = (25c)
ii. The A-not-A operator copies the material.
iii. The reduplicant is put at the LEFT of the base.
iv. Negative constituent *'bu'* or *'mei'* is inserted between the reduplicant and the base.

(25)[2] a. Zhangsan **tao**-bu-**tao**yan Lisi
Zhangsan hate-not-hate Lisi
'Does Zhangsan hate Lisi or not?'

b. Zhangsan **taoyan**-bu-**taoyan** Lisi
Zhangsan hate-not-hate Lisi
'Does Zhangsan hate Lisi or not?'

c. Zhangsan **taoyan-Lisi** bu **taoian-Lisi**
Zhangsan hate Lisi not hate Lisi
'Does Zhangsan hate Lisi or not?'

In (25a), the A-not-A operator copies the first syllable of the MWd *taoyan* 'hate'. Afterward, the reduplicant *tao* is put at the left of the base *taoyan* 'hate' and then the negative constituent *bu* is inserted to derive the surface form of (25a). Similarly, in (25b) and (25c), the A-not-A operator picks up the MWd *taoyan* 'hate' and the maximal projection of the MWd *taoyan Lisi* 'hate Lisi' respectively as the reduplication domain. Reduplicants are put at the left of the bases and the negative constituent *bu* is inserted to derive surface forms of (25b) and (25c). Derivation of (25a), (25b), and (25c) are as the following:

[2] The boldface specifies the reduplicative domain.

(25a)[3] ***The A-not-A operator copies the first syllable of the adjacent MWd***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***tao****yan* 'hate']*[$_{NP}$ *Lisi*]]
COPY
↓*Put the copy on the **LEFT** of the base*
[$_{\textbf{copy}}$ ***tao***]*****[A-not-A] * [[$_{v}$ ***tao****yan* 'hate']*[$_{NP}$ *Lisi*]]
↓*Insertion of the negative constituent*
[$_{\textbf{copy}}$ ***tao***] **+** [**bu**] + [[$_{v}$ ***tao****yan* 'hate']+[$_{NP}$ *Lisi*]]

(25b) ***The A-not-A operator copies the adjacent MWd***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ *Lisi*]]
COPY
↓*Put the copy on the **LEFT** of the base*
[$_{\textbf{copy}}$ ***taoyan***]*****[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ *Lisi*]]
↓*Insertion of the negative constituent*
[$_{\textbf{copy}}$ ***taoyan***] **+** [**bu**] + [[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ *Lisi*]]

(25c) ***The A-not-A operator copies the maximal projection of the adjacent MWd***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]
COPY
↓*Put the copy on the **LEFT** of the base*
[$_{\textbf{copy}}$ ***taoyan***]*****[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]
↓*Insertion of the negative constituent*
[$_{\textbf{copy}}$ ***taoy*****an** 'hate' ***Lisi***] **+** [**bu**] + [[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ ***Lisi***]]

3.2.2 Deriving AB-not-A Questions by Reduplication

The other subtype, the AB-not-A construction is derived by the following procedure:

i. The A-not-A operator targets its adjacent element and then decides the reduplication domain. The reduplication domain can be:
   (a) the maximal projection of the adjacent MWd = (26a)
   (b) the adjacent MWd = (26b)
ii. The A-not-A operator copies the material.
iii. The reduplicant is put at the RIGHT of the maximal projection that contains the targeted element.
iv. Negative constituent 'bu' or 'mei' is inserted between the

[3] The marker '*' specifies relation of precedence and adjacency between constituents.

reduplicant and the base.

(26) a. Zhangsan taoyan-Lisi bu taoyan-Lisi
Zhangsan hate Lisi not hate Lisi
'Does Zhangsan hate Lisi or not?'

b. Zhangsan taoyan Lisi-bu-taoyan
Zhangsan hate Lisi-not-hate
'Does Zhangsan quite hate Lisi or not?'

c. Zhangsan taoyan Lisi bu
Zhangsan hate Lisi not
'Does Zhangsan hate Lisi or not?'

d. * Zhangsan taoyan Lisi-bu-tao
Zhangsan hate Lisi -not-hate

In (26a) and (26b), the A-not-A operator copies the adjacent MWd *taoyan* 'hate' and the maximal projection of the MWd *taoyan Lisi* 'hate Lisi' respectively. The reduplicants are put at the right of the predicate and the negative constituent *bu* is inserted. The surface structures of (26a) and (26b) are produced. (26c) points to a different option. In (26c), the reduplicant *taoyan* 'hate' is not spelled-out. Therefore, we get the surface form of (26c). In (26d), the A-not-A picks up the first syllable of the MWd *taoyan* 'hate'. However, in this case a syllable is not a legitimate element for reduplication, and thus the sentence is ungrammatical.

(26a) ***The A-not-A operator copies <u>the maximal projection</u> of the adjacent MWd***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]
COPY ↓*Put the copy on the **RIGHT** of the base*
[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]* [$_{\textbf{copy}}$ ***taoyan Lisi***]
↓*Insertion of the negative constituent*
[[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ ***Lisi***]] **+** [**bu**] + [$_{\textbf{copy}}$ ***taoyan*** *'hate'* ***Lisi***]

(26b) ***The A-not-A operator copies <u>MWd</u>***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ *Lisi*]]
COPY ↓*Put the copy on the **RIGHT** of the base*
[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]* [$_{\textbf{copy}}$ ***taoyan***]
↓*Insertion of the negative constituent*
[[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ ***Lisi***]] **+** [**bu**] + [$_{\textbf{copy}}$ ***taoyan*** *'hate'*]

(26c) ***The copy of the A-not-A is not spell-out***

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
↓COPY
[A-not-A]* [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ *Lisi*]]
COPY ↓*Put the copy on the **RIGHT** of the base*
[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]* [$_{\mathbf{copy}}$ ***taoyan***]
↓*Insertion of the negative constituent*
[[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ ***Lisi***]] **+** [**bu**] + [$_{\mathbf{copy}}$ ***taoyan*** *'hate'*]
Not spell-out

(26d)** ***The A-not-A operator copies <u>MWd</u>

[A-not-A]* [[$_{v}$ *taoyan* 'hate']*[$_{NP}$ *Lisi*]]
Non-legitimate element for copying ↓COPY
[A-not-A]* [[$_{v}$ ***tao****yan* 'hate']*[$_{NP}$ *Lisi*]]
COPY ↓*Put the copy on the **RIGHT** of the base*
[A-not-A] * [[$_{v}$ ***taoyan*** 'hate']*[$_{NP}$ ***Lisi***]]* [$_{\mathbf{copy}}$ ***tao***]
↓*Insertion of the negative constituen*
[[$_{v}$ ***taoyan*** 'hate']+[$_{NP}$ ***Lisi***]] **+** [**bu**] + [$_{\mathbf{copy}}$ ***tao*** *'hate'*]

4. Conclusion

In this study, I propose a post-syntactic approach to the A-not-A questions. Operation of the A-not-A construction undergoes two-stage M-merger. First, the A-not-A operator picks up the closest MWd as its target to derive the A-not-A construction by operation of Lowering. The MWd which is targeted by the A-not-A operator should be a X'-theoretic head. The SWd and the MWd which is not a X' theoretic head will block Lowering of the A-not-A operator. On the other hand, the A-not-A operator undergoes Local Dislocation with the target and determines the reduplication domain. Various subtypes are derived according to different reduplication domain. In this way, the A-not-A questions are analyzed in a unified manner.

References

Embick, David and Noyer, Rolf. (2001). Movement Operation after Syntax. *Linguistic Inquiry, 32*(4): 555-595.

Embick, David and Noyer, Rolf. (1999). Locality in Post-Syntactic Operation. *MIT Working Paper in Linguistics* 34, 265-317

Ernst, Thomas. (1994). Conditions on Chinese A-not-A Questions. *Journal of Chinese*

Linguistics 3, 241–264.
Gasde, Horst-Dieter. (2004). Yes/no questions and A-not-A questions in Chinese revisited. *Linguistics* 42(2), 293-326.
Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the Piece of Inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, Kenneth Halle and Samuel Jay Keyser (eds), 111-176. Cambridge, Mass: MIT Press.
Hagstrom, Paul. (2006). A-not-A Questions. In *The Blackwell Companion to Syntax*, Martin Everaert and Henk van Riemsdijk (eds.), 173-213. Malden: Blackwell Publishing.
Huang, C.-T. James. (1982). *Logical Relations in Chinese and the Theory of Grammar*. Ph.D. dissertation, MIT.
Huang, C.-T. James. (1991). Modularity and Chinese A-not-A Questions. In *Interdisciplinary Approaches to Language*, Carol Georgopoulos and Roberta Ishihara (ed), 305-322. Dordrecht: Kluwer.
Huang, Rui-Heng. (2008). Deriving VP-NEg Questions in Modern Chinese: A Unified Analysis of A-not-A Synta. *Taiwan Journal of Linguistics* 6 (1), 1-54.
Huang, Rui-Heng. (2008). On Licensing Alternative WH in Mandarin Chinese. Presented in 16th IACL in Peking University.
Hsieh, Miao-Ling. (2001). *Form and Meaning: Negation and Question in Chinese*. Ph.D. dissertation, University of Southern California.
Kuo, Chin-Man. (1992). *A-not-A Questions in Mandarin Chinese*, M.A. thesis, National Tsing-Hua University, Taiwan.
Law, Paul. (2006). Adverbs in A-not-A Questions in Mandarin Chinese. *Journal of East Asian Linguistics*, 15(2), 97-136.
Li, Huei-Chi. (2005). *On Chinese Focus and Cleft Constructions*. Ph.D. dissertation, National Tsing-Hua University, Taiwan.
Liao, Wei-Wen. (2004). *The Architecture OF Aspect and Duration*. M.A. thesis, National Tsing-Hua University, Taiwan.
Li, Charles & Thompson, Sandra. (2005). *Mandarin Chinese: A Functional Reference Grammar*. Taipei: Crane.
McCawley, James D. (1994). Remarks on the syntax of Mandarin yes-no questions. *Journal of East Asian Linguistics* 3, 179-194.
Shen, Li & Lin, T.-H. Jonah. (2005). Agentivity Agreement and and Lexicalization in Resultative Verbal Compounding. ms. National Tsing Hua University.
Schaffar, Wolfram & Chen Lansun. (2001). Yes-No Questions in Mandarin and the Theory of Focus. *LinguisticsI* 39(5), 837-870.
Tsao, Feng-Fu. (1994). Han Yu De Fenlieju: Zhuti Jiaodian Hexie Gong Chu De Jiekou 'Clef Sentence in Chinese: The Structure of Topic and Focus'. *Procedding of the 3th International Chinese Language and Teaching Conderence*. 93-106
Tsao, Feng-Fu and Hsieh Chia-Ling. (2000).Huayu De Jujiao Fenlieju Zai Tan. ' Chinese focus constructions revisited'. In *Proceedings of the Sixth World Chinese Teaching Conference: Linguistic Analysis* 1, World Chinese Education Association (ed.), 42-56. Taipei: Taiwan: World Chinese Publishing.
Tang, Ting-Chi. (1987). *Studies on Chinese Morphology and Syntax*. Taipei: Student

Book
Tang, Ting-Chi. (1989). *Studies on Chinese Morphology and Syntax 2*. Taipei: Student Book
Tang, Sze-Wing. (2001). Nominal Predication and Focus Anchoring. *ZAS Paper in LinguisticsI* 22, 159-172.
Tang, Sze-Wing. (2003). Verbless Adverbial Clause and Economy. In *Chinese Syntax and Semantics*. Xu Jie, Donghong Ji and Lua Kim Teng (eds.), 157-176. Singapore: Parson Education Asia.
Zhang, Niina. (2001). The Structur of Depictive and Resultative Constructions in Chinese. *ZAS Papers in Linguistics 22*, 191-221.
Zhu, De-Xi. (1985). Hanyu Fanyan Li De Liangzhong Fanfu Wenju 'Two Alternative Questions in Chinese'. *Zhongguo Yuwen 'Journal of Chinese Linguistics'* 1, 11-20.
Zhu, De-Xi. (1991). V-neg-VO Yu VO-neg-V Liangzhong Fanfu Wenju Zai Hanyu Fanyan De Fenbu 'A Preliminary Survey of the Dialectal Distribution of the Interrogative Sentence Satterns: V-NEG-VO and VO-NEG-V in Chinese'. *Zhongguo Yuwen 'Journal of Chinese Linguistics'* 5, 321-332.

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