

# On the Licensing of A-not-A Forms in Chinese and the DP Hypothesis\*

Miao-Ling Hsieh

*National Taiwan Normal University*

This paper focuses on the non-interrogative existential interpretation of an A-not-A form. Such an A-not-A form in Chinese is argued to occur in the complement of a polarity determiner that needs to be licensed in an appropriate context. This explains why an existential A-not-A form cannot be licensed in the same clause with a licenser. Evidence supporting this analysis comes from island effects, the selection of verbs, the use of connectors, the use of *daodi* 'indeed' and, finally, the use of *shenme* 'what' as a determiner. This analysis, in turn, supports the Determiner Phrase (DP) Hypothesis proposed by Abney (1987) and the DP analysis proposed for Chinese (Tang 1990, Li 1998, among others).

Key words: A-not-A forms, *wh*-word, DPs, licensing of polarity items, existential interpretation, unselected embedded *if*-questions

## 1. Introduction

It is well known that a *wh*-word in Chinese can have an interrogative or a non-interrogative interpretation depending on its different contexts. In addition, a non-interrogative interpretation may involve either an existential or universal reading. This paper addresses the existential interpretation of an A-not-A-form such as *qu-bu-qu* 'go-not-go' and *you-mei-you* 'have-not-have.' In the literature, little, if any, attention has been paid to the existential interpretation of an A-not-A form mainly because the availability of this interpretation is more restricted compared to that of a *wh*-word. In this paper, I argue that a polarity determiner, which takes the A-not-A clause as its complement, mediates the licensing of the existential interpretation. Thus, it is the polarity determiner, not the A-not-A form itself, that has to be licensed by an appropriate licenser. This analysis supports the DP Hypothesis proposed by Abney (1987) and the DP analysis proposed for Chinese nominals (Tang 1990, Li 1998).

This paper is organized as follows. Section 2 discusses the distributional similarities and differences between an A-not-A form and a *wh*-word. Section 3 includes two possible analyses for the existential interpretation of an A-not-A form, i.e. the CP analysis and the DP analysis, including evidence for the DP analysis.

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Additional evidence supporting the DP analysis is given in Section 4. The discussion of other types of A-not-A forms is included in Section 5. Finally, Section 6 concludes this paper.

## 2. An A-not-A form vs. other *wh*-words

In this section, the similarities and differences between an A-not-A form and a *wh*-word are discussed.

### 2.1 Similarities

In Chinese and many other languages, such as Japanese, *wh*-words can have an interrogative interpretation as well as a non-interrogative indefinite (or indeterminate) interpretation. Consider the examples in (1)-(3).<sup>1</sup>

- (1) Ni xihuan shei (ne)?  
you like who PART  
'Who do you like?'
- (2) Ta shenme dou chi.  
he what all eat  
'He eats anything.'
- (3) a. Ta bu xiang chi shenme.  
he not want eat what  
'He does not want to eat anything.'
- b. Ni xihuan shei ma?  
you like who PART  
'Do you like anyone?'
- c. Yaoshi ni xiang chi shenme dehua, qing gaosu wo.  
if you want eat what the:case please tell I  
'If you want to eat anything, please tell me.'

The examples shown above, in addition to the interrogative interpretation in (1), illustrate that a *wh*-word can have non-interrogative interpretations as shown in (2) and (3). According to Huang (1982) and Li (1992), *wh*-words in Mandarin Chinese are polarity items licensed in affective contexts (cf. Lin 1996, 1998 and Hsiao 2002).

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<sup>1</sup> The abbreviations used in the English glosses of the Chinese sentences in this paper are given as follows:

ASP: aspect  
CL: classifier

DE: the modification marker  
PART: particle

Li (1992) argues that an indefinite *wh* and its licenser should be viewed as involving a binder-variable relation.<sup>2,3</sup> Similarly, Cheng (1997) claims that *wh*-words need to be licensed by triggers and bound by binders (cf. Hsin 1999). They need to be licensed because they are polarity items. On the other hand, the binding is required because *wh*-words are indefinites, which lack inherent quantificational force (cf. Heim 1982). For the interrogative interpretation and the universal reading, the trigger and the binder are the same. They are the *wh*-particle *ne* (or its null counterpart) and *dou* ‘all’ respectively. As far as the existential interpretation is concerned, the triggers include the negative marker as in (3a), the yes/no question marker *ma* as in (3b) and the conditional marker *yaoshi* ‘if’ as in (3c). However, the quantificational force is mainly contributed by existential closure, which is associated with VP.

An A-not-A form is constituted of an adjective or verb preceded by part of the adjective or verb and the negative marker. Two negative markers are used, i.e. *bu* and *mei*, depending on the verb/aspect that is involved. Four examples are given in (4).

- (4) a. Ta mang-bu-mang?  
       he busy-not-busy  
       ‘Is he busy?’  
       b. Ta xi(huan)-bu-xihuan Zhangsan?  
       he like-not-like Zhangsan  
       ‘Does he like Zhangsan?’  
       c. Ta you-mei-you tou qian?  
       he have-not-have steal money  
       ‘Did he steal money?’  
       d. Ta shi-fou laoshi?  
       he be-not.be honest  
       ‘Is he honest?’

As shown in (4a-b), the A-not-A form for the adjective *mang* ‘busy’ is *mang-bu-mang*, and the one for the verb *xihuan* ‘like’ is either *xihuan-bu-xihuan* or *xi-bu-xihuan*, with the former repeating the whole verb and the latter the first syllable. In (4c), *you-mei-you* is used because of its perfective aspect. Finally, as shown in (4d), when the copula *be* is involved, it combines with *fou* (= *bu shi*), forming *shi-fou*.

<sup>2</sup> This is the so-called ‘unselected binding,’ which can be loosely defined as binding between members of an unrelated operator-variable pair.

<sup>3</sup> In Lin (1996, 1998), only existential *wh*-phrases are analyzed as restricted free variables, occurring in contexts where indefinites do not have existential import. A *wh...dou* construction is an elliptical *wulun*-construction (‘no-matter’), in which *dou* is a generalized distribution operator.

A clause with an A-not-A form is typically interpreted as an interrogative. A question that immediately arises is what type of question is involved. As a matter of fact, it is established by Huang (1982) that an A-not-A question behaves like a *wh*-question, rather than a yes/no question marked by *ma*.<sup>4</sup> A piece of evidence supporting this is given in Hsieh (2001) by using *daodi* ‘indeed’ as a test, as shown in (5).<sup>5</sup>

- (5) a. Zhangsan daodi you-mei-you tou qian?  
Zhangsan indeed not-have-not steal money  
‘Did Zhangsan steal the money indeed?’  
b. Zhangsan daodi xihuan shei?  
Zhangsan indeed like who  
‘Who does Zhangsan like indeed?’  
c. \*Zhangsan daodi qu ma?  
Zhangsan indeed go PART  
‘Did Zhangsan go indeed?’

While the A-not-A question and the *wh*-question in (5a) and (5b) occur with *daodi* ‘indeed,’ the yes/no question in (5c) cannot.

Moreover, as shown in (6) through (8) below, a yes/no question can be answered by *shi de* ‘yes,’ but neither an A-not-A question nor a *wh*-question can be.

- (6) a. Zhangsan qu ma?  
Zhangsan go PART  
‘Will Zhangsan go?’  
b. Qu/Bu qu/Shi de.  
go/not go/yes DE  
‘Yes, he will go./No, he won’t go./Yes.’  
(7) a. Zhangsan qu-bu-qu?  
Zhangsan go-not-go  
‘Will Zhangsan go?’  
b. Qu/Bu qu/#Shi de.  
go not go yes DE  
‘Yes, he will go./No, he won’t go./Yes.’

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<sup>4</sup> See also Tang (1981, 1984).

<sup>5</sup> As pointed out by one reviewer, it might not be appropriate to translate *daodi* as ‘indeed.’ The use of *daodi* is similar to *what...the hell* in English, but unlike the latter, which is a sign of some form of resignation, and then acceptance of a situation, the speaker of the former may only show impatience. But because of a lack of a better translation, I will continue to use ‘indeed.’

- (8) a. Zhangsan xihuan shei?  
 Zhangsan like who  
 ‘Who does Zhangsan like?’  
 b. Lisi/#Shi de.  
 Lisi yes DE  
 ‘Lisi/Yes.’

The above tests show that an interrogative A-not-A form behaves like a *wh*-question, rather than a yes/no question. Given the similarities between an A-not-A question and a *wh*-question, a question that immediately arises is whether an A-not-A form has a non-interrogative interpretation, just like other *wh*-words.

First, it is clear that just like a *wh*-word, an A-not-A form can also have a universal reading. This is illustrated in (9) and (10).

- (9) a. Shei dou keyi qu.  
 who all may go  
 ‘Anyone can go.’  
 b. [Shei qu] dou meiyou guanxi.  
 who go all not.have matter  
 ‘It does not matter whoever goes.’  
 (10) [Ta qu-bu-qu] dou keyi.  
 he go-not-go all O.K.  
 ‘It is O.K. whether he goes or not.’

As shown in the above examples, the licensing is done by *dou*.<sup>6</sup> Given this, one might wonder whether an A-not-A form also allows an existential reading, just like other *wh*-words. Let us consider the examples in (11).

- (11) a. \*Wo tingshuo [ta qu-bu-qu] le.  
 I hear he go-not-go ASP  
 ‘I heard if he would go.’  
 b. \*Zhangsan chengren [ta you-mei-you tou qian] le.  
 Zhangsan admit he have-not-have steal money ASP  
 ‘Zhangsan admitted if he stole the money.’

Both examples in (11) are not acceptable. Note that in those examples, the verbs

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<sup>6</sup> The licensing of an A-not-A form by *dou* ‘all’ is very interesting, but different from the licensing of the existential interpretation. For this reason, I deal with it in a separate paper.

*tingshuo* ‘hear’ and *chengren* ‘admit’ do not select a question. They are precisely ungrammatical because they cannot take interrogative complements. But the same verbs can take an A-not-A clause when they occur under the scope of negation, in a yes/no question or in the antecedent of a conditional. Consider the following examples.<sup>7</sup>

- (12) a. Wo meiyou tingshuo [ta qu-bu-qu].  
           I not.have hear he go-not-go  
           ‘I didn’t hear if he would go.’

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<sup>7</sup> One reviewer pointed out that the sentences with *chengren* ‘admit’ might not be fully acceptable and the other did not accept the examples with *ma* and *yaoshi* for either verb. However, according to the native speakers who I consulted, they had no problem in accepting (12) and (13). My speculation about the reason why the sentences with *chengren* are not readily acceptable for the first reviewer is as follows. The semantics of an A-not-A clause such as *ta you-mei-you tou qian* should be treated as a disjunction of two propositions:

- (i) a. Ta tou-le qian.  
           he steal-ASP money  
           ‘He stole the money.’  
       b. Ta meiyou tou qian.  
           he not.have steal money  
           ‘He didn’t steal the money.’

But, for this type of speaker, while (iia) below is perfect, (iib) might not be fully acceptable, because for them, a person can only *chengren* ‘admit’ that he has done something the speakers disapproves of.

- (ii) a. Ta chengren [ta tou-le qian].  
           he admit he steal-ASP money  
           ‘He admitted he stole the money.’  
       b. Ta chengren [ta meiyou tou qian].  
           he admit he not.have steal money  
           ‘He admitted that he didn’t steal the money.’

But given appropriate contexts, this kind of restriction does not seem to be real. For example, (iib) can be used when the police wanted to know whether Zhangsan indeed stole the money. Zhangsan might have claimed he stole the money in the beginning, but later admitted he did not steal the money.

As for the second reviewer and the speakers like him/her, they may treat an existential A-not-A clause as a special type of negative polarity items, which can be licensed by negation only, just like *ban-dian* ‘half-bit’ phrases:

- (iii) a. Ta meiyou chi bandian dongxi.  
           he not.have eat half thing  
           ‘He didn’t eat anything.’  
       b. \*Ta chi-guo ban-dian dongxi ma?  
           he eat-ASP half-bit thing PART  
           ‘Did he eat anything?’  
       c. \*Yaoshi ta chi-guo ban-dian dongxi dehua, qing gaosu wo.  
           if he eat-ASP half-bit thing the:case, please tell I  
           ‘If he eats anything, please let me know.’

As long as there is a contrast between (11), on the one hand, and (12a) and (13a), on the other, my point is still valid.

- b. Ni tingshuo [ta qu-bu-qu] le ma?  
 you hear he go-not-go ASP PART  
 ‘Have you heard if he would go?’
- c. Yaoshi ni tingshuo [ta qu-bu-qu] dehua, qing gaosu wo.  
 if you hear he go-not-go the:case please tell I  
 ‘If you hear if he would go, please tell me.’
- (13) a. Zhangsan meiyou chengren [ta you-mei-you tou qian].  
 Zhangsan not.have admit he have-not-have steal money  
 ‘Zhangsan didn’t admit if he stole the money.’
- b. Zhangsan chengren [ta you-mei-you tou qian] le ma?  
 Zhangsan admit he have-not-have steal money ASP PART  
 ‘Did Zhangsan admit if he stole the money?’
- c. Yaoshi Zhangsan chengren [ta you-mei-you tou qian] dehua, qing  
 if Zhangsan admit he have-not-have steal money the:case please  
 gaosu wo.  
 tell I  
 ‘If Zhangsan admits if he stole the money, please tell me.’

From the above data, it is clear that an A-not-A form can have an existential interpretation just like other *wh*-words.<sup>8</sup>

Before I end this section, it should be pointed out that the licensing of a polarity item follows the c-command requirement (Ladusaw 1979).<sup>9</sup> In other words, the licenser must c-command the polarity item by spell-out. This is true for the licensing of an A-not-A form and a *wh*-word. As can be seen from the examples in (14) below, when the requirement is not satisfied, neither the *wh*-word nor the A-not-A form can be licensed.

- (14) a. \*[Meiyou ren guan de na-ge haizi] chi shenme.  
 not.have person take:care DE that-CL child eat what  
 ‘The child who nobody took care of ate anything.’

<sup>8</sup> As a matter of fact, such a reading has been neglected in the literature. For example, Cheng (1984) specifically points out that such a reading is not available.

<sup>9</sup> I follow the c-command notion as first discussed and defined by Reinhart (1981) as follows:

- (i) c-command  
 Node A c-commands node B if and only if  
 a. A does not dominate B and B does not dominate A; and  
 b. The first branching node dominating A also dominates B.

- b. \*[Meiyou ren guan de na-ge haizi] chengren [ta you-mei-you  
not.have person take:care DE that-CL child admit he have-not-have  
tou qian].  
steal money  
'The child who nobody took care of admitted if he stole the money.'

The negative marker *meiyou* in (14) is deeply embedded in the subject position and thus does not c-command either the *wh*-word or the A-not-A form.

Now, it should be clear that an A-not-A form, just like a *wh*-word, occurs in those environments where a typical polarity item occurs and the licensing of an existential reading follows the c-command requirement.<sup>10</sup> Given this, it seems quite natural to assume that an A-not-A form is a polarity item, which behaves just like a *wh*-word. However, there are some differences between an A-not-A form and a *wh*-word with respect to the licensing condition. This is what I will focus on in Section 2.2.

## 2.2. Differences

As illustrated in (15) through (16), an A-not-A form, unlike a *wh*-word, cannot be licensed by a licenser within the same clause.

- (15) a. Ni xihuan shenme ma?  
you like what PART  
'Do you like anything?'  
b.\*Ni qu-bu-qu ma?  
you go-not-go PART
- (16) a. Yaoshi ni xihuan shenme dehua, qing gaosu wo.  
if you like what the:case please tell I  
'If you like anything, please tell me.'  
b.\*Yaoshi Zhangsan qu-bu-qu dehua, qing gaosu wo.  
if Zhangsan go-not-go the:case please tell I

From the above contrast between an existential A-not-A form and a *wh*-word, it is clear that an A-not-A form should not be treated on a par with a *wh*-word.

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<sup>10</sup> Whether the licensing of a universal reading by *dou* 'all' obeys the c-command requirement or not is a separate issue, which will not be dealt with in this paper.

## 2.3 Summary

In summary, there are similarities between an A-not-A form and a *wh*-word, but they are not exactly the same. Though an A-not-A form cannot be treated as a polarity item exactly like a *wh*-word, this does not exclude the possibility that the container of an A-not-A form is a polarity item. In Section 3, I will turn to two possible analyses based on this premise.

## 3. Two possible analyses

In this section, two possible analyses are proposed for the existential interpretation—the CP analysis and the DP analysis. I will show that the DP analysis is the correct one.

### 3.1 The CP analysis

Assume that the polarity sensitivity of an A-not-A clause is indicated by a polarity feature that sits in the Spec of the CP projected by the A-not-A clause and that this feature has to be licensed by an appropriate licenser. Let us call this the CP analysis.

Now, let us go back to examine the two examples with A-not-A clauses in (15)-(16), repeated here.

- (17) a. \*Ni qu-bu-qu ma?<sup>11</sup>  
           you go-not-go PART  
       b. \*Yaoshi Zhangsan qu-bu-qu dehua, qing gaosu wo.  
           if Zhangsan go-not-go the:case please tell I

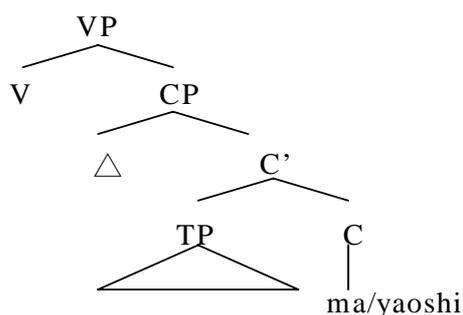
Suppose that the two licensers, *yaoshi* ‘if’ and *ma*, sit in C (Lee 1986), as shown in (18).<sup>12</sup>

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<sup>11</sup> As pointed out by one reviewer, (17a) may be ruled out by vacuous quantification because the yes/no question operator needs to bind a variable, which is not available in (17a). However, this analysis cannot be extended to the case with the conditional clause. Thus, it is not desirable.

<sup>12</sup> Unlike the yes/no question marker *ma*, the conditional marker *yaoshi* occurs in the beginning of the conditional clause. To derive the correct word order, something else has to be said. I will not go into the details of this.

(18)



The polarity feature, which sits in the Spec of CP as indicated by  $\triangle$ , should be able to be licensed by either *yaoshi* or *ma* given the Spec-Head relationship or the m-command requirement, contrary to the fact.<sup>13</sup> Note that (17) cannot be ruled out by the binding requirement, as proposed in Cheng (1997), because the two markers should serve as binders when existential closure is not available as in the cases with *wh*-adjuncts:

(19) a. Ta zai shenme difang shang xue ma?

he in what place attend school PART

‘Is he attending school anywhere?’

b. Yaoshi ni zai shenme difang kandao ta dehua, qing gaosu wo.

If you in what place see he the:case please tell I

‘If you see him anywhere, please tell me.’

However, unlike those in (19), the two examples in (17) are ungrammatical. Therefore, if there was a polarity feature in the Spec of CP, it should be licensed and bound by the yes/no question marker *ma* or by the conditional marker *yaoshi*. The ungrammaticality of (17) thus, rules out the CP analysis.

### 3.2 The DP analysis

The second possibility is to adopt the analysis proposed for unselected embedded questions in Adger and Ouer (2001). Consider the semantic difference between (20) and (21).

<sup>13</sup> When a maximal projection replaces the first branching node in the definition of c-command, c-commands becomes m-command (cf. Chomsky 1986).

- (20) a. The bartender told me who was drunk/whether I was drunk.  
 b. The bartender told me that/ $\Phi$  I was drunk.  
 (21) The bartender inquired if/whether he was sober.

The bartender in (20), but not the one in (21), knows the correct answer to the question ‘Was I drunk?’. Based on the difference, Groenendijk and Stockhof (1982) distinguish two types of predicates, as given in (22).

- (22) a. *Tell* type of verb: takes a true proposition as a complement  
 b. *Inquire* type of verb: takes a real question as a complement

Verbs, such as *tell*, semantically take a true proposition as a complement, whereas verbs such as *inquire* take a real question as their complement. For this reason, the former type of verb doesn’t occur naturally with an *if*-complement, as illustrated in (23).

- (23)#The bartender admitted/heard/said if I was drunk.<sup>14</sup>

However, the oddness disappears when they occur in the context of negation or a yes/no question, as shown in (24) and (25).

- (24) a. Did Julie admit/hear/say if the bartender was happy? (yes/no)  
 b. Julie didn’t admit/hear/say if the bartender was happy. (neg)  
 (25) a. Was it obvious/clear if the bartender was happy? (yes/no)  
 b. It wasn’t obvious/clear if the bartender was happy. (neg)

Adger and Quer (2001) show that such unselected embedded questions are semantically sensitive to the same set of elements as polarity sensitive items. The licensing environments, for unselected embedded questions, parallel those for items like *any* (Ladusaw 1979) and *either* (Higginbotham 1991).<sup>15</sup> Given this, they propose

<sup>14</sup> This example is taken from Adger and Ouer (2001). They mark the oddness of this kind of sentence with “#.”

<sup>15</sup> *Any* is a typical polarity sensitive item in English. It is a negative polarity item when it is licensed in affective contexts, such as negation and yes/no question. For example,

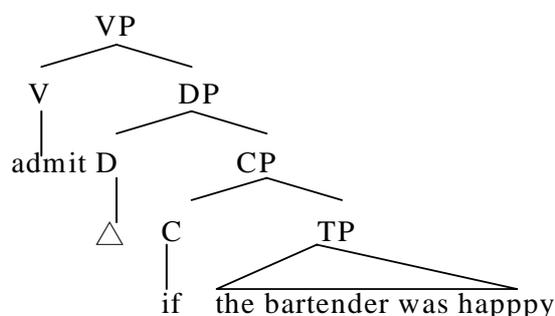
- (i) a. I didn’t announce any result.  
 b. \*?I announced any result.

It can also be licensed as a free choice item in certain modalized sentences and other contexts. For example,

- (ii) a. Any result could frighten him.  
 b. \*? Any result frightened him.

that *if*-questions that are not selected by the main verbs are complements of a polarity determiner.<sup>16</sup> The partial representation for (24a) is given in (26). The polarity determiner is licensed when the appropriate polarity licenser is present.

(26)(Adger & Ouer, 2001)



Let us assume that the existential A-not-A clauses in Chinese are also complements of a polarity determiner. I will call this the DP analysis. Now, let us go back to consider the A-not-A examples in (17) above. Under the DP analysis, the ungrammaticality of (17) can now be explained as follows. The existential interpretation of these A-not-A clauses is not available because the determiner, which sits in D, is higher than the licenser, which sits in C.

What would be the evidence for this analysis? Let us consider one piece of evidence for the DP analysis of unselected embedded *if*-questions in English. Given the fact that a D never allows extraction of its complement, as shown in (27), such an extraction from an unselected embedded *if*-question should be unacceptable. Indeed, this is what is found in (28).

(27) Who did you see { $\Phi$ /\*any/\*all the/\*the} pictures of ?

(28) a. \*What did no one admit if John had stolen?

b. ?What did no one ask if John had stolen?

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Adger and Quer show that in addition to be a negative polarity item, an unselected embedded question can also be licensed as a free choice item just like *any*. For example,

(iii) If he is guilty can be shown by our evidence.

Similarly, *either* is also a polarity sensitive item. It can be a negative polarity item or a free choice item:

(iv) a. I didn't announce either result.

b. \*?I announced either result.

(v) a. Either result could frighten him.

b. \*?Either result frightened him.

<sup>16</sup> Adger and Ouer claim that *either* is the overt counterpart of the polarity determiner that takes an unselected embedded question in English. But see Section 4.4 where I propose that the overt counterpart of the polarity determiner taking an existential A-not-A clause in Chinese is *shenme* 'what.'

The contrast between (28a) and (28b) is also found in the two Chinese examples in (29).

- (29) a. \*Meiyou ren chengren [Zhangsan you-mei-you tou shenme]?  
 not.have man admit Zhangsan have-not-have steal what  
 ‘What did no one admit if Zhangsan had stolen?’
- b. ?Meiyou ren wen [Zhangsan you-mei-you tou shenme]?  
 not.have man ask Zhangsan have-not-have steal what  
 ‘What did no one ask if Zhangsan had stolen?’

The examples in (29) show that the extraction of the object *wh*-word *shenme* in (29a) induces a strong islandhood violation, in contrast to that in (29b), which only yields a milder effect. This supports the DP Hypothesis, which argues for the existence of a polarity sensitive determiner.

### 3.3 Summary

The initial investigation in this section shows that the CP analysis is not feasible, while it supports the DP analysis for the licensing of an existential A-not-A form. More evidence in support of the DP analysis is given in the next section.

## 4. More evidence for the DP analysis

In this section, four more pieces of evidence will be presented in support of the DP analysis.

### 4.1 The selection of verbs

First, consider the complements that verbs such as *mingling* ‘order,’ *quan* ‘persuade’ and *yaoqiu* ‘request’ select. As shown in (30) through (33), an existential A-not-A form is possible only when it serves as the complement of a verb that selects a nominal complement.<sup>17</sup>

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<sup>17</sup> Some speakers who I consulted can accept (31b) and (d) and (32b) and (d). This is consistent with my analysis. In my analysis, if a verb can take a nominal complement, it can also take an existential A-not-A clause because the latter is projected as a DP.

- (30) a. Wo yaoqiu ta qu.  
I request he go  
'I requested him to go.'
- b. Wo yaoqiu ta yi-jian shi.  
I request he one-CL thing  
'I request one thing from him.'
- c. \*Wo yaoqiu ta qu-bu-qu.  
I request he go-not-go
- d. Wo meiyou yaoqiu ta qu-bu-qu, na shi ta ziji de shi.  
I not.have request he go-not-go that be he self DE matter  
'I didn't request him to go or not to go. That is his own business.'
- (31) a. Wo mingling ta qu.  
I order he go  
'I ordered him to go.'
- b. \*Wo mingling ta yi-jian shi.  
I order he one-CL thing
- c. \*Wo mingling ta qu-bu-qu.  
I order he go-not-go
- d. \*Wo meiyou mingling ta qu-bu-qu, na shi ta ziji de shi.  
I not.have order he go-not-go that be he self DE matter
- (32) a. Wo quan ta qu.  
I persuade he go  
'I persuaded him to go.'
- b. \*Wo quan ta yi-jian shi.  
I persuade he one-CL thing
- c. \*Wo quan ta qu-bu-qu.  
I persuade he go-not-go
- d. \*Wo meiyou quan ta qu-bu-qu, na shi ta ziji de shi.  
I not.have persuade he go-not-go that be he self DE matter
- (33) a. Wo pai ta qu.  
I send he go  
'I sent him to go.'
- b. \*Wo pai ta yi-jian shi.  
I send him one-CL thing
- c. \*Wo pai ta qu-bu-qu.  
I send he go-not-go
- d. \*Wo meiyou pai ta qu-bu-qu, na shi ta ziji de shi.  
I not.have send he go-not-go that be he self DE matter

From the given examples, it is clear that verbs such as *mingling* ‘order,’ *quan* ‘persuade’ and *pai* ‘send’ do not select a nominal complement unlike verbs such as *yaoqiu* ‘request.’ This parallels the fact that the former, but not the latter, do not take a complement with an A-not-A form. Assuming that an existential A-not-A clause is a complement of D, projecting DP, this explains why it can only be allowed to occur as the complement of those verbs which take nominal complements.

#### 4.2 The use of connectors

The second piece of evidence for the DP analysis comes from the use of connectors. Consider the following examples with connectors. It is clear that *he/gen* ‘and’ is used to conjoin two nominal phrases, while *erqie* ‘and’ conjoins two clauses (cf. Aoun & Li 2003).

- (34) a. Wo hen xihuan [zhe-ge xuesheng] he/gen [na-ge xuesheng].  
 I very like this-CL student and that-CL student  
 ‘I like this student and that student.’  
 b. [Wo xihuan ta] erqie/\*he/\*gen [Zhangsan ye xihuan ta].  
 I like he and Zhangsan also like he  
 ‘I like him and Zhangsan also likes him.’

For verbs that take nominal or clausal complements such as *xiang zhidao* ‘wonder,’ their complements can be conjoined by a clausal connector *erqie* ‘and’ or a DP connector *he/gen* ‘and.’

- (35) a. Wo xiang zhidao [ta ai-bu-ai ta] erqie [ta you-mei-you qian].  
 I want know he love-not-love she and he have-not-have money  
 ‘I wonder whether he loves her and he has money.’  
 b. Wo xiang zhidao [ta ai-bu-ai ta] he/gen [ta you-mei-you qian].  
 I want know he love-not-love she and he have-not-have have money  
 ‘I wonder whether he loves her and he has money.’

In contrast, only *he/gen* can be used for an existential A-not-A clause.

- (36) a. Ta meiyou chengren [ta ai-bu-ai ta] he/gen [ta you-mei-you qian].  
 he not.have admit he love-not-love she and he have-not-have money  
 ‘He didn’t admit if he loves her or if he has money.’

- b. \*Ta meiyou chengren [ta ai-bu-ai ta] erqie [ta you-mei-you qian].  
he not.have admit he love-not-love she and he have-not-have money  
'He didn't admit if he loves her or if he has money.'

This clearly shows the existential A-not-A clause is indeed projected as a DP.

#### 4.3 The use of *daodi* 'indeed'

The third piece of evidence comes from the use of *daodi* 'indeed.' It is well known that *daodi* has to c-command the interrogative *wh*-word and an A-not-A form in a question:<sup>18</sup>

- (37) a. Ni daodi xihuan shei?  
you indeed like who  
'Who do you like indeed?'  
b. Ni daodi you-mei-you qian?  
you indeed have-not-have money  
'Do you have money indeed?'
- (38) a. \*Shei daodi you qian?  
who indeed have money  
'Who has money indeed?'  
b. \*You-mei-you ren daodi tou qian?  
have-not-have person indeed steal money  
'Did anyone steal the money?'

Now consider the following examples, where *daodi* occurs with an alleged existential A-not-A form.

- (39) a. Wo meiyou tingshuo [ta daodi qu-bu-qu].  
I not.have hear he indeed go-not-go  
'I didn't hear if he would go indeed.'  
b. Zhangsan meiyou chengren [ta daodi you-mei-you tou qian].  
Zhangsan not.have admit he indeed have-not-have steal money  
'Zhangsan didn't admit if he stole the money indeed.'

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<sup>18</sup> *Daodi* can be used without a *wh*-word as follows:

- (i) Ta daodi zhi shi yi-ge haizi.  
He indeed only be one-CL kid  
'He is only a kid indeed.'

Now compare the use of an existential A-not-A form with that of a *wh*-word. While both sentences in (39) are acceptable, (40) is not:

- (40) \*Yaoshi ta daodi chi-le shenme dehua, qing gaosu wo.  
 if he indeed eat-ASP what the:case please tell I  
 ‘If he indeed eats anything, please tell me.’

This actually turns out to be a piece of evidence for the DP analysis for the following reason. Under the DP analysis, what matters is the polarity determiner that sits in D. The A-not-A form can still be interrogative in form and can then be modified by *daodi*. In contrast, *wh*-words are interpreted existentially themselves and thus cannot be modified by *daodi*.

#### 4.4 The use of *shenme* ‘what’ as a determiner

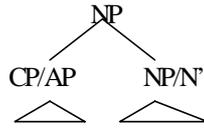
Last but not the least, let us consider one more piece of evidence which supports the DP analysis. Consider the use of *shenme* ‘what’ in the following examples:

- (41) a. Wo meiyou kanjian [shenme [keyi de] ren].  
 I not.have see what suspicious DE person  
 ‘I didn’t see any suspicious person.’  
 b. \*Wo meiyou kanjian [[keyi de] shenme ren].  
 I not.have see suspicious DE what person
- (42) a. Wo meiyou kanjian [[zuotian dongshou de] shenme ren].  
 I not.have see yesterday move:hand DE what person  
 ‘I didn’t see anyone who started the fight yesterday.’  
 b. \*Wo meiyou kanjian [[shenme [zuotian dongshou de] ren].  
 I not.have see what yesterday move:hand DE person

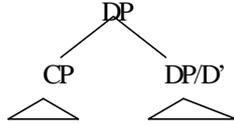
This use of *shenme*, just like other *wh*-words, introduces an indefinite phrase and when it is used existentially, it is interpreted as ‘some’ or ‘any.’ In Hsieh (2004a) and (b), *shenme* is analyzed as an indefinite determiner and sits under D when it is followed by a noun. Furthermore, Hsieh distinguishes two types of adjectives/relative clauses and claims that they have a syntactic correlate: i-level predicates denote permanent properties and are adjoined to NP/N’, while s-level predicates denote temporary properties and are adjoined to DP/D’:<sup>19</sup>

<sup>19</sup> This is a revised version of a proposal by Larson & Takahashi’s (2002) for Japanese. For Larson & Takahashi, an i-level predicate is adjoined to NP, while a s-level predicate is adjoined to DP.

(43) a. i-level predicate



b. s-level predicate



Thus, the adjective phrase *keyi de* in (41), involving an i-level predicate, is adjoined to NP, and the relative clause *zuotian dongshou de* in (42), introducing an s-level predicate, is adjoined to DP. The example, in (41b), is ruled out because *shenme ren* projects a DP and the NP modifier *keyi de* cannot modify a DP. On the other hand, the presence of the DP modifier *zuotian dongshou de* in (42b) makes the whole sentence ungrammatical because *shenme*, sitting in D, cannot take another DP as its complement.

Interestingly, a contrast is found when an existential A-not-A clause occurs with *shenme*. Consider the following examples.

- (44) a. Wo meiyou kanjian [*\*(shenme)* [*keyi* \_\_\_\_\_ *bu keyi* \_\_\_\_\_ *de*] ren].  
 I not.have see what suspicious not suspicious DE person  
 ‘I didn’t see any suspicious person at all.’
- b. \*Wo meiyou kanjian [[*zuotian you-mei-you dongshou de*] (*shenme*) ren].  
 I not.have see yesterday have-not-have move:hand DE what person  
 ‘I didn’t anyone who started the fight yesterday.’

As shown in (44a), *shenme* is obligatory when an i-level predicate is used. If Hsieh’s (2004a&b) analysis that *shenme* is used as a determiner here is correct, it can be taken to be the overt counterpart of the polarity determiner proposed in this paper. The example in (44b) can be ruled out if it is assumed that there must be a c-command relationship between the polarity determiner *shenme* and the A-not-A form.

Then the question is why *shenme* is obligatory in (44a) as compared to the examples in (12a) and (13a), as repeated here.

- (45) a. Wo meiyou tingshuo [ta qu-bu-qu].  
 I not.have hear he go-not-go  
 ‘I didn’t hear if he would go.’
- b. Zhangsan meiyou chengren [ta you-mei-you tou qian].  
 Zhangsan not.have admit he have-not-have steal money  
 ‘He didn’t admit if he stole money.’

A possible answer for this has something to do with some blocking effect. Consider the following sentences, which contain gapless relative clauses.

- (46) a. Wo meiyou tingshuo [(shenme) [ta you-mei-you tou qian de] shi].  
 I not.have hear what he have-not-have steal money DE matter  
 ‘I didn’t hear anything such as whether he stole the money.’
- b. Zhangsan meiyou chengren [(shenme) [ta ai-bu-ai ta de] shi].  
 Zhangsan not.have admit what he love-not-love she DE matter  
 ‘Zhangsan didn’t admit anything such as whether he loves her.’

Unlike the examples in (44), *shenme* in such sentences is not required and it can occur in a position preceding a s-level modifier. What matters seems to be whether the relative clause is gapped or gapless. The question which arises is what is the difference between a gapped and a gapless relative clause. In Aoun & Li (2003), a gapped relative clause in Chinese is derived either by the direct movement of the head noun or by an operator movement from the gapped position to the relevant Spec of CP. The former involves an argument, while the latter involves an adjunct. This is shown in (47):

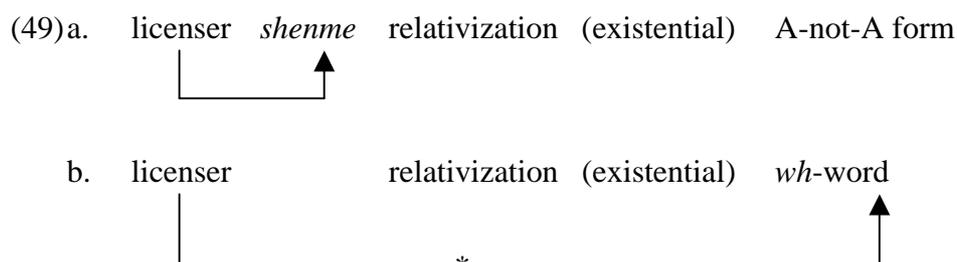
- (47) a. NP relativization  
 [[CP [IP...[t<sub>i</sub>]...]][Head NP]<sub>i</sub>]
- b. Adjunct relativization  
 [[CP Op<sub>i</sub> [IP...[t<sub>i</sub>]...]][Head NP]<sub>i</sub>]

In contrast, a gapless structure just involves a modification relation without movement. Interestingly, the contrast between a gapless structure and a gapped relative clause can also be seen in the licensing of a *wh*-word:

- (48) a. Wo meiyou tingshuo [[shei ai-guo ta de] shuofa].  
 I not.have hear who love-ASP he DE claim  
 ‘I didn’t hear the claim that anyone has loved him.’

- b. \*Wo meiyou kanjian [[shei da de] na-ge ren].  
 I not.have see who hit DE that-CL person  
 ‘I didn’t see the man who anyone hit.’

*Shei* in the gappless structure in (48a) can be associated with the negation. The sentence implies ‘no one has loved him.’ On the other hand, *shei* in the gapped relative clause in (48b) cannot be licensed by the negation. The nominal phrase modified by the relative clause cannot be interpreted as ‘the man who no one hit.’ Thus, it clearly seems that the relativization relation plays an important role. In other words, the licensing of both an A-not-A form and a *wh*-words cannot be interrupted by the relativization relation. The blocking effect might be due to some kind of Minimality requirement which exists between the operators and the *wh*-words: a *wh*-word must be linked to the closest operator (Chomsky 1986, Rizzi 1990, Aoun & Li 1989), or between a licenser and licensee in our case.<sup>20</sup> This explains why *shenme* has to be overt when gapped relative clauses are involved. The relevant relations can be schematized as follows:



As shown in (49a) above, when an existential A-not-A form is present, the licensing relation is not blocked by the relativization relationship because of the occurrence of *shenme*. In contrast, as illustrated in (49b), an existential *wh*-word cannot be licensed because *shenme* is not available to salvage the structure. This not only supports the DP analysis, but also shows *shenme* is the overt counterpart of the polarity sensitive determiner.

#### 4.5 Summary

In this section more evidence is provided for the DP analysis, which argues that the existential reading of an A-not-A form is licensed via a polarity sensitivity determiner sitting in D. This supports Abney’s DP Hypothesis (1987) and the studies

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<sup>20</sup> Please see Li (1992) for the discussion of some Minimality requirement and the blocking effect exhibited in the cases involving the interaction between the indefinite *wh* and the interrogative *wh*.

that propose DPs for Chinese (Tang 1990, Li 1998).<sup>21</sup> Although Chinese linguists still cannot agree with each other about the structure of a nominal phrase, this study and those in Hsieh (2004a&b) as well point to the direction that Chinese has DPs.

## 5. Other types of A-not-A forms

My analysis of the particular type of an A-not-A form can be extended to other types of A-not-A forms. Consider the two examples in (50).

- (50) a. Zhangsan lai-le \_\_\_\_\_ meiyou?  
 Zhangsan come-ASP not.have  
 ‘Did Zhangsan come?’  
 b. Zhangsan xihuan Lisi bu xihuan? (cf. Huang 1991)  
 Zhangsan like Lisi not like  
 ‘Does Zhangsan like Lisi?’

Both sentences in (50) are variants of an A-not-A form. While (50a) involves the use of a negative question particle at the end of a sentence, (50b) contains two VPs--one positive and the other negative. Readers should be able to verify whether what is said above can be applied to the other A-not-A forms. Here, I will only include the examples in (51) and (52).

- (51) a. Yaoshi ni tingshuo [Zhangsan lai-le \_\_\_\_\_ meiyou] dehua, qing gaosu wo.  
 if you hear Zhangsan come-ASP not.have the:case please tell I  
 ‘If you hear if Zhangsan came, please tell me.’  
 b. Yaoshi ni tingshuo [Zhangsan xihuan Lisi bu xihuan] dehua, qing  
 if you hear Zhangsan like Lisi not like the:case please  
 gaosu wo.  
 tell I  
 ‘If you hear if Zhangsan likes Lisi, please tell me.’  
 (52) a. \*Yaoshi Zhangsan lai-le \_\_\_\_\_ meiyou dehua, qing gaosu wo.  
 if Zhangsan come-ASP not.have the:case please tell I  
 b. \*Yaoshi Zhangsan ai Lisi bu ai Lisi dehua, qing gaosu wo.  
 if Zhangsan love Lisi not love Lisi the:case please tell I

<sup>21</sup> See Lin (1997), where the traditional NP analysis is argued to be a competitive analysis to the DP analysis. As for those who assume DPs in Chinese, there is disagreement on the internal structure that a DP has. I will not go into the details of this.

The A-not-A forms here, just like the A-not-A form considered in the previous sections, cannot be licensed by a licenser within the same clause.

On the other hand, the licensing of *haishi* ‘or,’ which introduces an alternative question, is a different story. As shown in (53) and (54), *haishi* ‘or’ is a polarity item and has to be licensed in an affective context as opposed to *huoshi* ‘or.’

- (53) a. Wo kanjian-le Zhangsan huoshi Lisi.  
I see-ASP Zhangsan or Lisi  
‘I saw Zhangsan or Lisi.’  
b. \*Wo kanjian-le Zhangsan haishi Lisi.  
I see-ASP Zhangsan or Lisi  
‘I saw Zhangsan or Lisi.’
- (54) a. Wo meiyou kanjian Zhangsan haishi Lisi.<sup>22</sup>  
I not.have see Zhangsan or Lisi  
‘I didn’t see Zhangsan or Lisi.’  
b. Ni kanjian Zhangsan haishi Lisi le ma?  
you see Zhangsan or Lisi ASP PART  
‘Did you see Zhangsan or Lisi?’  
c. Yaoshi ni kanjian Zhangsan haishi Lisi dehua, qing gaosu wo.  
if you see Zhangsan or Lisi the:case please tell I  
‘If you see Zhangsan or Lisi, please tell me.’

This shows that the licensing of *haishi* does not have to go through the polarity determiner. Like a *wh*-word, *haishi* is a polarity item itself.

In summary, the polarity determiner is also employed for the other types of A-not-A forms, though it is not used for the licensing of *haishi* ‘or.’

## 6. Conclusion

In this paper, I have tried to establish that an A-not-A form cannot be licensed like other *wh*-words. I propose that the existential interpretation of an A-not-A form is licensed via a polarity determiner that takes the A-not-A clause as its complement. This analysis supports Abney’s DP Hypothesis and those studies that propose DPs for Chinese.

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<sup>22</sup> One reviewer pointed out that (53a) is not quite acceptable. More research needs to be done to determine how *haishi* behaves.

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Department of English  
National Taiwan Normal University  
Taipei, TAIWAN  
mlhsieh@cc.ntnu.edu.tw

## 中文 A-Not-A 形式的認可以及 DP 假說

謝妙玲

國立台灣師範大學

中文的 A-Not-A 形式，正如其他的 *wh* 詞語 (*wh*-word) 一樣，在特定的語意情境下如：否定句、假設句或其他，有非疑問的解讀 (interpretation)，也就是說他們是兩極化詞語 (polarity item)，需要有認可語 (licenser) 來認可 (license) 而得到不同的解讀。本文討論有關 A-Not-A 形式之非疑問用法的認可問題，他們的存在解讀 (existential interpretation) 的認可和 *wh* 詞語有所不同：前者與其認可語不可以出現在同一個子句中。本文的分析是此種 A-Not-A 形式的認可，並非直接認可，乃是由一表示兩極的指示詞 (polarity determiner) 做為媒介，而 A-Not-A 形式所在的子句則是此指示詞的補語。此分析的證據來自孤島作用 (island effect)，動詞的選擇 (selection)，連接詞的使用，「到底」的用法，以及「什麼」作為指示詞的使用。這樣的分析支持 DP (指示詞片語) 的假說，也就是支持中文有 DP 的說法。

關鍵詞：A-Not-A 形式、*wh* 詞語、指示詞詞組、兩極化詞語的認可、存在解讀、非選擇包孕 *if* 問句