

# On the Notion of Minimal Disjointness

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## Abstract

This paper examines the analysis and theory developed by Aoun, Joseph and Yen - hui Audrey Li (1988): Minimal Disjointness, which embodies a disjointness requirement and a minimality effect. The main theme of the theory is the binding relation between an embedded subject pronoun and a quantificational matrix subject in Chinese. In principle, minimal disjointness is proposed to prevent a pronoun from being bound by the closest A'-binder in the domain of the least "Complete Functional Complex (CFC)" containing the pronoun and a SUBJECT. This is to suggest that the pronoun can be coindexed with a higher A'-binder, say, in this case, a quantifier. This study extends the notion of minimal disjointness to include a condition of Exceptional Bounding Verbs (EBV), which may contribute significantly to the theory in its explanatory value.

Key words: Minimal disjointness, Pronoun, Referential, Bound

## INTRODUCTION

Aoun and Audrey Li (1988) in their survey of earlier work suggest a way of examining the interpretation of pronominals in Chinese: a minimal disjointness requirement. The notion of minimality, they argue, has an important function in the formulation of the disjointness requirement. A minimal disjointness requirement is the combination of an A'-disjointness requirement and a minimality effect, which requires

that a pronoun not be bound by the closest A'-binder in the domain of the least "Complete Functional Complex (CFC)" containing the pronoun and a SUBJECT. This is to imply, as they suggest, that the pronoun can be bound to the other higher distinct A'-binder, namely, in this case, a quantificational antecedent.

It is the purpose of this paper to argue that there are sentences in Chinese that do not show what Aoun and Audrey Li have argued for; the concept of minimal disjointness is therefore required to be modified in some way so as to solve the problems. Before moving on to a possible analysis of the minimal disjointness requirement, let me first instantiate the requirement using evidence from Chinese.

## 1. Minimal Disjointness In Chinese

Aoun and Audrey Li (henceforth A&L) discuss that there exist two kinds of pronouns in Chinese: referential pronoun (RP) and bound pronoun (BP). A pronoun is referential when its referent is a name, whereas a pronoun is bound when its binder is a quantifier. Compare, for example:

- (1) a. Zhangsan<sub>i</sub> shuo wo xihuan ta<sub>i</sub>  
           say I like him

“Zhangsan said that I liked him.”

- b. Meigeren<sub>i</sub> dou shuo wo xihuan ta<sub>i</sub>  
    everyone all say I like him

“Everyone said that I liked him.”

In (1a) *ta* ‘him’ is a referential pronoun since it is coindexed with a name called ‘Zhangsan’, while in (1b) *ta* is a bound pronoun for its referent is ‘Meigeren’, a quantifier. As they point out, furthermore, only referential pronouns, but not bound pronouns, can appear in the subject position of an embedded clause:

- (2) a. Zhangsan<sub>i</sub> shuo ta<sub>i</sub> de le jiang  
           say he get ASP prize

“Zhangsan said that he got the prize.”

- b. \*Meigeren<sub>i</sub> dou shuo ta<sub>i</sub> de le jiang  
    everyone all say he get ASP prize

“Everyone said that he got the prize.”

However, this does not exclude the possibility of bound pronouns occurring in the subject position of an embedded clause provided that such a clause is in a lower position:

- (3) Meigeren; dou yiwei ni shuo ta; de le jiang  
 everyone all think you say he get ASP prize  
 “Everyone thought that you said that they got the prize.”

On the basis of examples such as these, A&L present a schema to conclude the distribution of the pronouns, as in (4) below:

(4)	<u>Contexts</u>	<u>RP</u>	<u>BP</u>
a.	NP <sub>i</sub> V [S' NP <sub>i</sub> V NP]	√	*
b.	NP <sub>i</sub> V [S' NP V NP <sub>i</sub> ]	√	√
c.	NP <sub>i</sub> V [S' NP V [S' NP <sub>i</sub> V NP]]	√	√

Basically what this schema suggests is that the notion of SUBJECT is applied to bound pronouns only. Thus, since Chinese does not have AGR (Huang 1982), the local domain for the referential pronoun in (4a) is the embedded clause, and for the bound pronoun is the whole sentence. As has been seen as a universal grammatical property, a pronoun, whether bound or referential, must be free in its minimal domain. Therefore, the bound pronoun in the structure of (4a) is not allowed.

Based on this observation, A&L claim that pronouns, both bound and referential, must conform the following two requirements:

(5) a. The A-disjointness Requirement

A pronoun must be A-free in the least Complete Functional Complex (CFC) in which it occurs

b. The A'-disjointness Requirement

A pronoun must be A'-free in the least CFC containing a SUBJECT and the pronoun

Following Lebeaux (1983), Chomsky (1986), and Battistella (1987), A&L's further evidence in support of the requirements shown in (5) comes from the fact that since anaphors undergo movement at LOGICAL FORM (LF) in Chinese, the reference relationship among a name, an anaphor *ziji* 'self', and a pronoun would result in the unacceptability of a sentence:

- (6) \*Zhangsan<sub>i</sub> shuo ziji<sub>i</sub> juede ta<sub>i</sub> hen youqian  
 say self feel he very rich.

“Zhangsan said that self felt he was rich.”

This is because the anaphor ziji undergoes LF movement to an A'-position, as shown in (7):

- (7) [<sub>S</sub>'<sub>1</sub> Zhangsan<sub>i</sub> shuo [\*ziji<sub>i</sub> [<sub>x</sub><sub>i</sub> juede [<sub>S</sub>'<sub>2</sub> ta<sub>i</sub> hen youqian]]]]

As far as the A-disjointness requirement is concerned, the minimal domain for the pronoun ta in (7) is the lowest clause, and since it is free in this domain, the A-disjointness requirement is satisfied. With respect to the A'-disjointness requirement, however, the minimal domain for the pronoun is the whole sentence because it contains a SUBJECT (i.e. Zhangsan). Recall that the A'-disjointness requirement requires a pronoun be A'-free; the sentence is therefore out as the anaphor ziji is moved to an A'-position at LF. The pronoun is A'-bound in virtue of being assigned the same index with the anaphor.

Moreover, A&L argue that the A'-disjointness requirement is obliged to merge a minimality effect:

- (8) A pronoun must be free from the most local A'-binder in the smallest CFC containing the pronoun and a SUBJECT.

“the most local A'-binder” is defined as:

A is the most local A'-binder of B iff there is no C such that C is an A'-binder and A c-commands C, C c-commands B.

They assert that the acceptability of a sentence can be improved if there is a modal (e.g. hui ‘will’) or wh-word appears between the quantifier and the pronoun. For example, the ungrammatical sentence of (2b) can thus be improved by adding a modal in it as in (9) below:

- (9) Meigeren<sub>i</sub> dou shuo ta<sub>i</sub> hui de jiang  
 everyone all say he will get prize

“Everyone said that he would get the prize.”

The sentence in (9) shows that when an operator (i.e. the modal hui ‘will’) occurs between the quantifier and the pronoun, it upgrades the acceptability of the sentence by virtue of the fact that the operator is raised to an A'-position at LF (see Huang 1982). By the definition of the minimal disjointness requirement in (8), the operator becomes the most local A'-binder for the pronoun ta, and since the operator is not coindexed with the

pronoun, they are free from coindexing. The pronoun, therefore, can be bound to the quantifier. The LF representation of (9) in (10) illustrates this notion:

(10) Meigeren<sub>i</sub> [x<sub>1i</sub> dou shuo [huij [ta<sub>i</sub> x<sub>2j</sub> de jiang ]]]

“Everyone said that he would get the prize.”

Other examples (their 13) which involve wh-words are shown in (11):

(11) a. Meigeren<sub>i</sub> dou xiang zhidao shi-bu-shi ta<sub>i</sub> de le jiang  
everyone all want know be-not-be he get ASP prize

“Everyone wonders whether he got the prize.”

b. Meigeren<sub>i</sub> dou xiang zhidao ta<sub>i</sub> weishenme de jiang  
everyone all want know he why get prize

“Everyone wonders why he got the prize.”

c. Meigeren<sub>i</sub> dou xiang zhidao ta<sub>i</sub> gen shei fen jiangpin  
everyone all want know he with whom share prize

“Everyone wonders with whom he shared the prize.”

d. Meigeren<sub>i</sub> dou xiang zhidao ta<sub>i</sub> de le shenme jiang  
everyone all want know he get ASP what prize

“Everyone wonders what prize he got.”

The corresponding LF representations of (11) are in (12):

(12) a. Meigeren<sub>i</sub> [x<sub>1i</sub> dou xiang zhidao [shi-bu-shi<sub>j</sub> [x<sub>2j</sub> ta<sub>i</sub> de le jiang]]]

“Everyone wonders whether he got the prize.”

b. Meigeren<sub>i</sub> [x<sub>1i</sub> dou xiang zhidao [weishenme<sub>j</sub> [ta<sub>i</sub> x<sub>2j</sub> de jiang]]]

“Everyone wonders why he got the prize.”

c. Meigeren<sub>i</sub> [x<sub>1i</sub> dou xiang zhidao [shei<sub>j</sub> [ta<sub>i</sub> gen x<sub>2j</sub> fen jiangpin]]]

“Everyone wonders with whom he shared the prize.”

d. Meigeren<sub>i</sub> [x<sub>1i</sub> dou xiang zhidao [shenme<sub>j</sub> [ta<sub>i</sub> de le x<sub>2j</sub> jiang]]]

“Everyone wonders what prize he got.”

Clearly, in this case, when a wh-word is raised to an A'-position at LF, it becomes the most local A'-binder. According to the minimal disjointness condition mentioned in (8),

the coindexing between the quantifier and the pronoun is therefore justified. In fact, A&L try to show that the difference in the acceptability of such coindexing lies in whether there is an operator intervening between the quantifier and the pronoun (at LF). More precisely, we may give the implication that the operator, in this case, behaves just like a ‘rescuer’.

This observation can be further supported, as A&L mention, by inserting a negative constituent in a higher clause to become an A’-binder (as Kurata (1986) suggests that a negative item will undergo LF movement) so as to improve the acceptability of a pronoun occurring in the sentence:

- (13) [Meigeren<sub>i</sub> dou mei gaosu renheren [ta<sub>i</sub> de le jiang]]  
 everyone all not tell anyone he get ASP prize  
 “Everyone did not tell anyone that he got the prize.”

Based on arguments such as these, A&L offer the following contexts and argue that there should be a contrast between the context in (a-b) and (c) in the acceptability of the sentences (where QP stands for quantificational phrase):

- (14) a. modal/negation/wh-word.....QP<sub>i</sub>.....pronoun<sub>j</sub>  
 b. QP<sub>i</sub>.....pronoun<sub>j</sub>.....modal/negation/wh-word  
 c. QP<sub>i</sub>.....modal/negation/wh-word.....pronoun<sub>j</sub>

The paralleling sentences in (15) exemplify (14):

- (15) a. \*[Wo hui zhidao [meigeren<sub>i</sub> dou shuo [ta<sub>i</sub> de le jiang]]]  
 I will know everyone all say he get ASP prize  
 “I will know that everyone says that he got the prize.”  
 b. \*[Meigeren<sub>i</sub> dou shuo [ta<sub>i</sub> zhidao [wo hui de jiang]]]  
 everyone all say he know I will get prize  
 “Everyone said that he knew that I would get the prize.”  
 c. [Meigeren<sub>i</sub> dou shuo [ta<sub>i</sub> hui zhidao [wo de jiang]]]  
 everyone all say he will know I get prize  
 “Everyone said that he would know that I got the prize.”

It is obvious that the sentences in (15) exhibit such a contrast, i.e., only the context in (14c) is acceptable since the QP is not the most local A’-binder. A similar effect of such notion can also be warranted to apply to structures which involve a raising anaphor ziji ‘self’, as an example mentioned earlier in (6). The ungrammatical sentence of (6) can be ‘rescued’ by inserting the modal hui ‘will’ into it so that the anaphor ziji is not subject to the

minimal disjointness condition. The sentence, then, can be turned into acceptable.

- (16) a. Zhangsan<sub>i</sub> dui ziji<sub>i</sub> shuo ta<sub>i</sub> hui hen youqian  
           to self say he will very rich  
           “Zhangsan said to himself that he would be rich.”

LF representation:

- b. [Zhangsan<sub>i</sub> ziji<sub>i</sub> x<sub>1</sub><sub>i</sub> dui shuo [hui<sub>j</sub> [ta<sub>j</sub> x<sub>2</sub><sub>j</sub> hen youqian]]]

In conclusion to this overview, essentially A&L argue that, first, both referential and bound pronouns must obey A-disjointness and A'-disjointness requirements, and second, A'-disjointness requirement needs to incorporate a minimality effect. In the next section, I will show that although the data presented in A&L's arguments provide a strong support, it must be mentioned that such data would not suffice for them to make such a claim. The concept of minimal disjointness requirement, unfortunately, is not entirely accurate.

## 2. An Examination Of The Minimal Disjointness

Indeed, the distinction between referential pronouns and bound pronouns is not improper. There is nothing we can nit-pick. Recall that, however, A&L argue that bound pronouns in Chinese can not appear in such a context (repeated below):

- |      |  |           |           |
|------|--|-----------|-----------|
| (17) | <u>Contexts</u>  | <u>RP</u> | <u>BP</u> |
| a.   | NP <sub>i</sub> V [s' NP <sub>i</sub> V NP]  | √         | *         |
| b.   | *Meigeren <sub>i</sub> dou shuo ta <sub>i</sub> de le jiang<br>everyone all say he get ASP prize<br>“Everyone said that he got the prize.” |           |           |

Nevertheless, if A&L's observation is correct, how would the following sentences that have the similar structures except for having different verbs in place of shuo 'say' be given an account of?

- (18) a. Meigeren<sub>i</sub> dou ziren ta<sub>i</sub> hen you danliang  
           everyone all self-know he very have courage  
           “Everyone considered himself a courageous person.”
- b. Meigeren<sub>i</sub> dou jiazhuang ta<sub>i</sub> bu zhidao zhejian shi  
           everyone all pretend he not know this matter  
           “Everyone pretended he didn't know the matter.”

c. Meigeren; dou fashi ta; zaiyebu zuo huaishi le  
 everyone all swear he no more do bad thing ASP

“Everyone swore that he no more did the bad things.”

d. Meigeren; dou mengxiang ta; jiushi neige baiwanfuweng  
 everyone all dream he is exactly that millionaire

“Everyone dreamed of being that millionaire.”

In all these acceptable sentences, the bound pronouns are in the subject positions of the embedded clauses and, furthermore, are all ‘naturally’ interpreted as referring to the quantifiers ‘Meigeren’. As a matter of fact, almost all of the speakers under investigation agree that the pronoun ta in (18) are strongly bound to the quantifiers and there can be only one interpretation (i.e. the pronouns can not refer to someone outside the sentences). Thus, if A&L are right in claiming that distance has a significant function in the distribution of bound pronouns, then examples such as (18) would be unexplained, and we are missing a fairly generalization. This can not be the case, of course, since (18) is not the only argument against using (2b) as evidence for proposing such a context and the A’-disjointness requirement. Recall also that A&L provide evidence from the behavior of anaphors in Chinese to support their analysis, as the examples mentioned in (6) and (7), repeated for convenience in (19) and (20), respectively.

(19) \*Zhangsan; shuo ziji; juede ta; hen youqian  
 say self feel he very rich

“Zhangsan said that self felt he was rich.”

LF representation of (19):

(20) [<sub>S</sub><sup>1</sup> Zhangsan; shuo [<sub>S</sub><sup>2</sup> ziji; [<sub>X</sub> juede [<sub>S</sub><sup>2</sup> ta; hen youqian]]]]

As noted earlier, the A-disjointness requirement, but not the A’-disjointness requirement, can be met in this case. Again, if this is a correct analysis, we would expect the following sentence to be ruled out by the same requirement:

(21) Zhangsan; chengren ziji; shuoguo ta; j you nü pengyou  
 admit self have said he have girl friend

“Zhangsan admitted that he himself had said that he had a girl friend.”

However, (21) is perfectly acceptable in terms of the coreferential reading among the name Zhangsan, the anaphor ziji, and the pronoun ta. By the same token, if we examine its LF representation:



(22) [<sub>S'</sub><sub>1</sub> Zhangsan<sub>i</sub> chengren [<sub>Ziji</sub><sub>i</sub> [<sub>x</sub><sub>i</sub> shuoguo [<sub>S'</sub><sub>2</sub> ta<sub>i</sub>/<sub>j</sub> you nü pengyou]]]]  
 we could see that the pronoun ta is clearly A'-bound by the raised anaphor ziji, an obvious violation of the A'-disjointness requirement.

Reasonably, the A-disjointness requirement is not a flawless hypothesis by virtue of the facts that first, depending on what kind of verb in the matrix clause it is still possible for a bound pronoun to occur in the subject position of an embedded clause and, second, a pronoun can be A'-bound by an anaphor at LF in the smallest CFC containing a SUBJECT and the pronoun.

Let us turn now to the minimal disjointness requirement. Consider first the following sentence:

- (23) Meigeren<sub>i</sub> dou bu xiangxin ta\*<sub>i</sub>/<sub>j</sub> hui zuochu nei zhong shi  
 everyone all not believe he will do-out that kind thing  
 “Everyone did not believe that he would do that kind of thing.”

We have already observed that when a modal (such as hui ‘will’) appears between the quantifier and the pronoun, or a negative constituent occurs in a higher clause, it has the ability to improve the acceptability of a pronoun reading (recall the examples in (9-10) and (13)). If this is the case, how can sentence (23) be accounted for? In (23), the pronoun ta is good only if it is interpreted as referring to someone other than Meigeren. Such a reading turns out contrary to our expectation. In particular, there exist two ‘rescuers’ in the sentence: the modal hui and the negative item bu. We might wonder if it is to imply that a sentence such as this is allowed to have only one ‘rescuer’. Nevertheless, this intimation seems to be beside the point. As we shall see below, even if there is only one ‘rescuer’, the pronoun still can not refer to the quantifier:

- (24) a. Meigeren<sub>i</sub> dou bu xiangxin ta\*<sub>i</sub>/<sub>j</sub> zuodechu nei zhong shi  
 everyone all not believe he do-de-out that kind thing  
 “Everyone did not believe that he could do that kind of thing.”  
 b. Meigeren<sub>i</sub> dou tingshuo ta\*<sub>i</sub>/<sub>j</sub> hui lai  
 everyone all hear he will come  
 “Everyone has heard that he will come.”

Consequently, if the above arguments are justifiable, the contexts A&L suggest in (14) would be untenable, and we should be able to manage to counterexemplify the contexts. As we shall observe, the sentences in (25) show that this expectation is not unrealistic.

- (25) a. [wo hui zhidao [meigeren; shifou zhende fashi [ta; jianguo gui]]]  
 I will know everyone if really swear he have seen ghost  
 “I will know if everyone swore that he had seen the ghost.”
- b. [Meigeren; dou zhaoren [ta<sub>i</sub>/j chengjing shuoguo [‘zhengfu  
 everyone all confess he have-en have said government  
 hui kuatai’ zhe ju hua ]]  
 will collapse this clause words  
 “Everyone confessed that he had said the words: the government would  
 collapse.”
- c. \*[Meigeren; dou caice [ta; weisheme you quexi le ]]  
 everyone all guess he why again absent ASP  
 “Everyone guessed why he was absent again.”

Here the counterexamples in (25) are in view that the pronouns in (a) and (b), but not in the structure (c), can be bound to the quantifiers. In other words, such a contrast can not be predicted by the minimal disjointness requirement on pronouns. We might be able to see the problem more thoroughly in terms of the following LF representations:

- (26) a. [wo mei<sub>j</sub> xi<sub>j</sub> xiangdao [meigeren; x<sub>2</sub>; dou fashi [ta<sub>i</sub> jianguo gui]]]  
 I not think everyone all swear he have seen ghost
- b. [Meigeren; [x<sub>1</sub>; dou zhaoren [<sub>S</sub><sup>1</sup> ta<sub>i</sub>/j chengjing shuoguo [<sub>S</sub><sup>2</sup> hui<sub>j</sub>  
 everyone all confess he have -en have said will  
 ‘zhengfu x<sub>2</sub>; kuatai’ zhe ju hua ]]  
 government collapse this clause words
- c. \*[Meigeren; [x<sub>1</sub>; dou caice [<sub>S</sub><sup>1</sup> weisheme<sub>j</sub> [<sub>S</sub> ta<sub>i</sub> x<sub>2</sub> you quexi le ]]  
 everyone all guess why he again absent ASP

As we can see, in (a) the negative constituent mei undergoes LF movement to an A'-position in the higher position (i.e. in the root sentence); therefore, the quantifier meigeren becomes the most local A'-binder for the pronoun ta, and since they are assigned the same index, the pronoun is bound from the most local A'-binder. Thus, the minimal disjointness requirement would wrongly predict that ta can not refer to meigeren in (a). In (b), although the modal hui is raised to an A'-position at LF, as is well known, it cannot move over its local domain. The pronoun's A'-binder is the quantifier meigeren. They are therefore interpreted as coreferential in virtue of sharing the same index. The requirement

would also make the wrong prediction in (b). In (c), after being raised at LF, the wh-word weisheme intervenes between the quantifier and the pronoun. Because the wh-word and the pronoun are not coindexed, the latter is A'-free. The coindexing between the quantifier and the pronoun is hence wrongly allowed by the minimal disjointness requirement.

Earlier we saw that a wh-word can also function as a 'rescuer' in the acceptability of a pronoun, as the examples shown in (11). Once more, if this claim is right, how do we explain the following sentences that have resembling structures except for having different verbs taking place of xiang-zhidao 'want-know'?

(27) a. Meigeren<sub>i</sub> dou wufa queren shi-bu-shi ta\*<sub>i/j</sub> sha le ren  
 everyone all cannot confirm be-not-be he kill ASP person  
 "Everyone could not confirm whether he killed the person."

b. Meigeren<sub>i</sub> dou caice ta\*<sub>i/j</sub> weisheme name youqian  
 everyone all guess he why very rich  
 "Everyone guessed why he was so rich."

c. Meigeren<sub>i</sub> dou bu zhidao ta\*<sub>i/j</sub> yao zhao shei  
 everyone all not know he want look for whom  
 "Everyone didn't know whom he was looking for."

d. Meigeren<sub>i</sub> dou bu qingchu ta\*<sub>i/j</sub> ai chi sheme  
 everyone all not clear he love eat what  
 "Everyone was not sure what exactly he liked to eat."

How can we account for the fact that sentences (27) are subject to exactly the same requirement as (11)? In all these cases, the sentences contain operators (i.e. wh-words) which will undergo LF movement, and thus the pronouns shall be able to refer to the quantifiers in terms of A&L's theory. As can be seen, however, this is not true in (27). To further demonstrate that the minimal disjointness requirement proposed by A&L is indeed inadequate, it is worth observing again the following LF representation of (27):

(28) a. Meigeren<sub>i</sub> [x<sub>1i</sub> dou wu<sub>j</sub> x<sub>2j</sub> fa queren[shi-bu-shi<sub>k</sub> [x<sub>3k</sub> ta\*<sub>i/j</sub> sha le ren]]]  
 everyone all not can confirm be-not-be he kill ASP person

b. Meigeren<sub>i</sub> [x<sub>1i</sub> dou caice [weisheme<sub>j</sub> [ta\*<sub>i/j</sub> x<sub>2j</sub> name youqian]]]  
 everyone all guess why he very rich

c. Meigeren<sub>i</sub> [x<sub>1i</sub> dou bu<sub>j</sub> x<sub>2j</sub> zhidao [shei<sub>k</sub> [ta\*<sub>i/j</sub> yao zhao x<sub>3k</sub> ]]]  
 everyone all not know whom he want look for

d. Meigeren<sub>i</sub> [x1<sub>i</sub> dou bu<sub>j</sub> x2<sub>j</sub> qingchu [sheme<sub>k</sub> [ta\*<sub>i</sub>/j ai chi x3<sub>k</sub>]]]  
 everyone all not clear what he love eat

Need no further explanation, sentences like (27) lend clear support to the view that the minimal disjointness requirement may not be precisely the condition associated with the pronominal system in Mandarin Chinese.

Overall, then, in addition to pointing out that there are defects in the proposed A'-disjointness requirement, our evidence further shows, unsurprisingly, that the assumption of the minimal disjointness requirement can barely be sufficient of satisfactory.

### 3. Modification Suggestions

Two possible solutions may be suggested to deal with the problems pointed out in this paper: either give up the minimal disjointness requirement altogether, or modify it in some way so that the new theory can be consistent with the examples shown in (18), (21), (23), (25), and (27). It would be unfortunate to abandon the requirement entirely, since it seems to have veritable explanatory value in cases like those mentioned in section 1. Therefore, it appears more sensible to modify the requirement somehow such that it can handle those counterexamples. Following Chomsky's Exceptional Case Marking (1981, 1986, 1996), one possibility, then, would be to set up a set of Exceptional Bounding Verbs (EBV) concerning primarily the A'-disjointness requirement as well as a minimality effect. The function of Exceptional Bounding Verbs may be defined as follows:

#### (29) Exceptional Bounding Verbs (EBV)

A bound pronoun in the subject position of an embedded clause may exceptionally be assigned the same index with the most local A'-binder if the verb of the matrix clause is an EBV.

EBV: zi-ren 'self-know', jiazhuang 'pretend', fashi 'swear', chengren 'admit', xiang-zhidao 'want-know', and mengxiang 'dream', zhaoren 'confess'.

In general, this class of verb has something to do with one's mental faculty by which he/she deliberately chooses or decides on a course of action regarding himself/herself. Compare, for example:

- (30) a. \*Meigeren<sub>i</sub> dou shuo ta<sub>i</sub> de le jiang  
 everyone all say he get ASP prize  
 “Everyone said that he got the prize.”
- b. Meigeren<sub>i</sub> dou fashi ta<sub>i</sub> zaiyebu zuo huaishi le  
 everyone all swear he no more do bad thing CRS  
 “Everyone swore that he no more did the bad things.”
- c. Meigeren<sub>i</sub> dou mengxiang ta<sub>i</sub> jiushi neige baiwanfuweng  
 everyone all dream he exactly is that millionaire  
 “Everyone dreamed of being that millionaire.”

As was indicated by A&L, the judgment of bound pronoun interpretation in sentence (30a) varies from speakers to speakers. This is not surprising, indeed. The verb shuo ‘say’ in (a), strictly speaking, is not an EBV in the sense that it does not pertain to one’s own will that initiates the speaking. Unlike sentences (30b-c), the pronoun in each statement can have only one interpretation, i.e., it must refer to the quantifier since the verbs (i.e. fashi and mengxiang) already point to such a demand. Evidence in favor of this argument comes from the following example:

- (31) Meigeren<sub>i</sub> dou shuo ta<sub>i</sub> hui de jiang  
 everyone all say he will get prize  
 “Everyone said that he would get the prize.”

Remember that sentence (30a) can be improved when there is a modal hui ‘will’ intervening between the quantifier and the pronoun, as in (31). Apparently, just as we expect, this is of the same view as the assumption of EBV. As is well known, the verb hui ‘will’ (as far as Chinese is concerned) has to do with one’s own will, the ability to enhance a pronoun’s acceptability is therefore not surprising. Just as Exceptional Case Marking in English, Exceptional Bounding Verbs may be, then, a marked feature in Chinese.

Before the assumption of EBV can be justified, one question is still required to answer: why can a negative element also improve the acceptability of a pronoun interpretation in terms of EBV? To answer it, we shall first recall the earlier example in (13), repeated as (32):

- (32) [Meigeren<sub>i</sub> dou mei gaosu renheren [ta<sub>i</sub> de le jiang]]  
 everyone all not tell anyone he get ASP prize  
 “Everyone did not tell anyone that he got the prize.”

I assume it has the following LF representation:

(33) [Meigeren<sub>i</sub> [x<sub>1</sub> mei<sub>j</sub> dou x<sub>2</sub> gaosu renheren [ta<sub>i</sub> de le jiang]]  
 everyone not all tell anyone he get ASP prize

Since this sentence is not involved with EBV, following (29), the most local A'-binder is the raising negative constituent mei 'not', and since they are free from the coindexing, the pronoun can be bound by the quantifier. In other words, this is to entail that when a verb of the matrix clause is not an EBV, the sentence is still subject to the minimal disjointness requirement.

Consider now the effect of the suggested EBV along with the minimal disjointness requirement in the application of cases like (18), (21), (23), (25), and (27). In example (18), repeated as (34),

(34) a. Meigeren<sub>i</sub> dou ziren ta<sub>i</sub> hen you danliang  
 everyone all self-know he very have courage

"Everyone considered himself a courageous person."

b. Meigeren<sub>i</sub> dou jiazhuang ta<sub>i</sub> bu zhidao zhejian shi  
 everyone all pretend he not know this matter

"Everyone pretended he didn't know the matter."

c. Meigeren<sub>i</sub> dou fashi ta<sub>i</sub> zaiyebu zuo huaishi le  
 everyone all swear he no more do bad thing ASP

"Everyone swore that he no more did the bad things."

d. Meigeren<sub>i</sub> dou mengxiang ta<sub>i</sub> jiushi neige baiwanfuweng  
 everyone all dream he is exactly that millionaire

"Everyone dreamed of being that millionaire."

the verbs of the root sentences are all EBVs. According to (29), then, the pronouns in these sentences are all assigned the same indexes as the quantifiers. Their coindexing in each sentence is therefore justified. Turn now to example (21), repeated as (35) below:

(35) Zhangsan<sub>i</sub> chengren ziji<sub>j</sub> shuoguo ta<sub>i</sub>/j you nü pengyou  
 admit self have said he have girl friend

"Zhangsan admitted that he himself had said that he had a girl friend."

LF representation:

(36) [<sub>S</sub>'<sub>1</sub> Zhangsan<sub>i</sub> chengren [ziji<sub>j</sub> [x<sub>i</sub> shuoguo [<sub>S</sub>'<sub>2</sub> ta<sub>i</sub>/j you nü pengyou]]]]

Originally, the A'-disjointness requirement demands that the pronoun be A'-free in the least CFC containing a SUBJECT and ta (in this case, the CFC is the entire sentence).

However, contrary to the prediction of the requirement, the binding among the quantifier, the anaphor, and the pronoun is perfectly acceptable in (36). Such an interpretation is mainly produced by the effect of the matrix verb chengren ‘admit’, which turns out to be an EBV. Definition (29), therefore, accounts for its acceptability: the pronoun is authorized to be A’-bound by the raising anaphor.

Next, we will see what would happen if we apply the revised formulation to example (23) (=37):

- (37) Meigeren<sub>i</sub> dou bu xiangxin ta\*<sub>i/j</sub> hui zuochu nei zhong shi  
 everyone all not believe he will do-out that kind thing  
 “Everyone did not believe that he would do that kind of thing.”

Recall that the pronoun ta in (37) can not refer to the quantifier even if there exist two ‘rescues’ bu and hui intervening between the quantifier and the pronoun. On the surface, our revised formulation does not seem to improve the explanation. Notice that, however, although the modal hui and the negative constituent bu can upgrade the acceptability of the binding relation between the quantifier and the pronoun, it does not imply that it is a must. More specifically, the pronoun in this case need not be A’-bound by the quantifier, as it already receives another reading. The effect, then, should be subject to more discussion.

Turn now to example (25) (=38 below) which shows a contrary expectation to the contexts in (14).

- (38) a. [wo hui zhidao [meigeren<sub>i</sub> shifou zhende fashi [ ta<sub>i</sub> jianguo gui ]]]  
 I will know everyone if really swear he have seen ghost  
 “I will know if everyone swore that he had seen the ghost.”
- b. [Meigeren<sub>i</sub> dou zhaoren [ta<sub>i/j</sub> chengjing shuoguo [‘zhengfu hui kuatai’ zhe ju hua ]]]  
 everyone all confess he have -en have said government  
 will collapse this clause words  
 “Everyone confessed that he had said the words: the government would collapse.”
- c. \*[Meigeren<sub>i</sub> dou caice [ta<sub>i</sub> weisheme you quexi le ]]]  
 everyone all guess he why again absent ASP  
 “Everyone guessed why he was absent again.”

Here sentences (a-b) all contain Exceptional Bounding Verbs: fashi ‘swear’ and zhaoren ‘confess’; thus the binding relations between the quantifiers and the pronouns are acceptable. In (c) (as well as the examples in (27)), as mentioned earlier, because the wh-word’s intervening between the quantifier and the pronoun does not impose the A’-binding relation on the pronoun; as a result, ta in (38c) and (27) can be bound to someone outside the sentence.

Obviously, Exceptional Bounding Verbs in the instances discussed in this paper do play a role in explaining the binding relation. In the next section, we will have more discussion about this type of verb.

## 4. Exceptional Bounding Verbs

There seem to exist two types of bounding verbs in Chinese: Exceptional Bounding Verbs (EBV) and General Bounding Verbs (GBV). Consider the following two non-exhaustive lists:

### (39) a. Exceptional Bounding Verbs

<u>zi-ren</u>	‘self-know’
<u>jiazhuang</u>	‘pretend’
<u>fashi</u>	‘swear’
<u>chengren</u>	‘admit’
<u>xiang-zhdao</u>	‘want-know’
<u>mengxiang</u>	‘dream’
<u>zhaoren</u>	‘confess’

### b. General Bounding Verbs

<u>shuo</u>	‘say’
<u>renwei</u>	‘think’
<u>xihuan</u>	‘like’
<u>xiangxin</u>	‘believe’
<u>zhidao</u>	‘know’
<u>juede</u>	‘feel’

How might we distinguish these two types of verbs semantically? One fundamental feature that EBVs may have in common is that they seem to always report on the subject’s



actions with respect to a mental state, whereas GBVs seem to merely report on the mental state itself. In general, when the embedded subject pronoun is referential, there seems to be no obvious distinction between these two types of verbs. For instance,

- (40) a. Zhangsan<sub>i</sub> shuo ta<sub>i</sub> de le jiang  
           say he get ASP prize  
           “Zhangsan said that he got the prize.”
- b. Zhangsan<sub>i</sub> jiazhuang ta<sub>i</sub> de le jiang  
           Zhangsan pretend he get ASP prize  
           “Zhangsan pretended that he got the prize.”

As we can see, both types of verbs in (40) are possible. Nevertheless, this is not the case when a bound pronoun appears in the embedded subject position. More clearly, we find only EBVs may occur. Compare:

- (41) a. \*Meigeren<sub>i</sub> dou shuo ta<sub>i</sub> de le jiang  
           everyone all say he get ASP prize  
           “Everyone said that he got the prize.”
- b. Meigeren<sub>i</sub> dou jiazhuang ta<sub>i</sub> de le jiang  
           everyone all pretend he get ASP prize  
           “Everyone pretended that he got the prize.”

When a matrix verb is a GBV, it would behave like a barrier for coreference between the bound pronoun and the matrix subject, as (41a) shows. On the other hand, when the verb is an EBV, this barrier disappears, as illustrated in (41b).

Based on the above observation, we seem to be able to give a schema to conclude the finding:

- (42) a. NP<sub>i</sub> + EBV + [R-pronoun<sub>i</sub> + V + NP]  
           NP<sub>i</sub> + GBV + [R-pronoun<sub>i</sub> + V + NP]
- b. NP<sub>i</sub> + EBV + [B-pronoun<sub>i</sub> + V + NP]  
           \*NP<sub>i</sub> + GBV + [B-pronoun<sub>i</sub> + V + NP]

(42) clearly illustrates why the two groups of bounding verbs can be defined in terms of the notion ‘exceptional’ and ‘general’, as the former shows that even though the embedded subject pronoun is bound, the binding relation between the matrix subject and the pronoun is still licensed, whereas the latter is not.

There seem to exist another difference between EBVs and GBVs: topicalization of the

embedded subject bound pronoun is allowed by GBVs, but not EBVs. Compare, for example:

(43) a.  $t_{i/j}$ , Meigeren<sub>i</sub> dou shuo  $t_j$  de le jiang  
 he everyone all say get ASP prize  
 “He, everyone said that e got the prize.”

b. \*  $t_{i/j}$ , Meigeren<sub>i</sub> dou jiazhuang  $t_{i/j}$  de le jiang  
 he everyone all pretend e get ASP prize  
 “He, everyone pretended that e got the prize.”

In (43a), the pronoun in the structure can only refer to someone outside the sentence. Therefore, topicalization of the pronoun from the embedded subject position to the highest C-specifier position is fine, as this does not violate Koopman and Sportiche’s (1983) Bijection Principle, which requires that every variable be bound by exactly one operator, and every operator bind exactly one variable. Thus, the trace left by the pronoun is a variable, because the pronoun was moved to an A’-position. The trace is bound by one operator only. Consider now the LF representation of (43b) in (44):

(44) \* [ $t_{i/j}$ , Meigeren<sub>i</sub> [ $t_j$  dou jiazhuang [ $t_{i/j}$  de le jiang ]]]  
 he everyone all pretend get ASP prize

As shown in (44), each variable is bound by two operators, i.e., the pronoun and the quantifier; and in a like manner, each operator binds two variables. As the pronoun has been moved to the highest C-specifier position, where the quantifier is unable to c-command it, according to the schema (42), then, the binding between the pronoun and the quantifier can not be licensed, for the pronoun can only be bound by a c-commanding subject in a higher position with the presence of an EBV. This may explain why topicalization of the embedded subject pronoun is allowed with GBVs only: since when a GBV shows up, the bound pronoun in the embedded subject position always takes a different index from the matrix subject, which will ensure that the pronoun does not violate the Bijection Principle.

## 5. Conclusion

In the course of this paper, I have attempted to show that both the A’-disjointness requirement and the minimal disjointness requirement proposed by Aoun and Audrey Li

are somehow unsound. This disagreement can be easily manifested by the following facts:

- (45) a. a bound pronoun in the subject position of an embedded clause in Chinese is possible, as examples shown in (18)<sup>1</sup>  
 b. a pronoun can be A'-bound in the least CFC containing a SUBJECT and the pronoun, as an example in (21)  
 c. an evidence such as (25) shows that the contexts suggested in (14) (their 18) are inadequate since it is possible for (c) to be worse than (a-b)  
 d. modals, negative constituents, and wh-words do not have the effect to improve the acceptability of a pronoun in every case

On the basis of the facts relating to the above disagreements, a modification is hence suggested in this paper to cope with the problems. That is, in addition to both the A'-disjointness requirement and the minimal disjointness requirement, this paper proposes that the requirements are required to be supplemented by a condition of Exceptional Bounding Verbs. Because of their marked peculiarity, an EBV in the matrix clause (or a lower one, sometimes) will guarantee the occurrence of the coindexing between the pronoun and the quantifier.

1. At least for native speakers in Taiwan, this binding relation is not impossible.

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# 論「最小分離」理論的觀念

吳 覺 銘

## 摘 要

本篇論文主要檢視Aoun, Joseph和 Yen-hui Audrey Li (1988)兩人所共同創造的「最小分離」理論，並提出建議，以期補充此理論不足之處。「最小分離」理論主要包括了「分離要件」和「最小成效」。「最小分離」理論主要探討漢語「內嵌句代名詞主詞」與「主句量詞主詞」彼此之間的約束關係。基本上「最小分離」理論是用來解釋為何「內嵌句代名詞主詞」不能在其「管轄範疇」內存有先行詞。也就是說，位於「管轄範疇」外的「量詞主詞」通常可成為其先行詞。然而，在檢視中我們發現，漢語裡頭實際上存在一些此理論的反例。因此，本研究最後提出「例外限制動詞」條件作為「最小分離」理論的補充條款，以期此理論在解釋「嵌句代名詞主詞」與「主句量詞主詞」彼此之間的句法約束關係上更臻完美。

關鍵詞：最小分離，代名詞，指涉功能，黏著(約束)