

Null Arguments in Mandarin Chinese*

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Abstract

In this paper, after reviewing Li's (2014) analysis of null arguments in Mandarin Chinese, I will propose an alternative analysis on the subject/object asymmetry of null arguments. I will claim that null objects are the so-called "argument ellipsis," whereas null subjects are not empty pronouns but traces of empty operators (Browning (1987), Hou and Kitagawa (1987)). The proposed analysis attributes the restricted property of null subjects to constraints on movement of empty operators to specifier of CP.

Keywords: null argument, argument ellipsis, *pro*, null operator

1. Introduction

Mandarin Chinese (henceforth, MC) has null subjects and objects, but the interpretation of null subjects is more restricted than that of null objects, as shown in (1):

- (1) zhe-ge laoshi_i hen hao, wo mei kandao-guo [[e_j bu xihuan e_i de]
this-CL teacher very good I not see-EXP not like DE
xuesheng_j]
student

- a. ‘This teacher₂ is very good. I have not seen students₁ who e_1 do not like (him₂).’
- b. *This teacher₂ is very good. I have not seen students₁ who (he₂) does not like e_1 .’ (Li (2014:46))

Sentence (1) shows that the empty object of a symmetric verb ‘like’, not the empty subject, can be coindexed with the topic phrase ‘this teacher’ across island boundaries and across the subject of the higher clause. Li (2014) tries to account for this subject/object asymmetry by assuming that in MC, null objects are the so-called “argument ellipsis”, whereas null subjects are empty pronouns whose interpretation is constrained by the Generalized Control Rule (henceforth, GCR). In this paper, after pointing out some problems with her analysis, I will propose that null subjects are not empty pronouns but traces of empty operators. The proposed analysis attributes the restricted property of null subjects to constraints on movement of empty operators to specifier of CP.

The organization of this paper is as follows. In section 2, I will demonstrate that although MC allows arguments to be missing, the interpretive possibilities for empty subjects and empty objects differ systematically. In section 3, I will critically review Li’s analysis on null arguments and point out some problems with her analysis. In section 4, I will propose an alternative analysis on null subjects to account for the subject/object asymmetry of null arguments. Section 5 is a conclusion.

2. Subjects and Objects Asymmetry in Mandarin Chinese

In this section, I will review the asymmetric phenomenon on null arguments in MC. Let us consider sentence (1), repeated here as (2):

- (2) zhe-ge laoshi_i hen hao, wo mei kandao-guo [[e_j bu xihuan e_i de]
 this-CL teacher very good I not see-EXP not like DE
 xuesheng_j]
 student
- a. ‘This teacher₂ is very good. I have not seen students₁ who e₁ do not like (him₂).’
- b. *This teacher₂ is very good. I have not seen students₁ who (he₂) does not like e₁.’ (Li (2014: 46))

In (2), the null arguments occur in the relative clause. The null object of the verb ‘like’ can be coindexed with the topic ‘this teacher’ introduced from the previous sentence. On the other hand, the null subject of the verb ‘like’ must have the closest nominal ‘students’ as its antecedent.

The same asymmetry can be seen in null arguments in adverbial clauses. Let us consider the following sentence where the empty object occurs in the adverbial clause modifying the embedded clause:

- (3) wo faxian xiaotou₁ [yinwei jingcha zhao-bu-dao [e₂yuanyi
 I discover thief because policeman seek-not-find willing
 kanguan e₁/e₃ de]] ren₂ deyidi zou le.
 supervise DE person proudly leave LE
 ‘I discover that the thief₁ left proudly because the policemen were not able to find people who were willing to supervise (him_{1/3}).’
 (Li (2014: 47))

The null object is more flexible in terms of selecting its antecedent. It can be coindexed with either the matrix subject ‘thief’ or the topic from discourse. In

contrast, an interpretation of an empty subject in an adverbial clause is more restricted, as illustrated in (4):

- (4) a. Li xiaojie_i hen xihuan Zhangsan ba? Ni yinggai hen gaoxing!
 Li Miss very like Zhangsan BA you should very happy
 ‘Miss Li really likes Zhangsan, right? You should very happy!’
- b. shishishang, we yinwei [^{*}(Li xiaojie)_i bu xihuan Zhangsan] you
 actually I because Li Miss not like Zhangsan have
 diar shiwang
 slight disappointment
 ‘In fact, I somewhat disappointed because ^{*}(Miss Li) does not like
 Zhangsan.’ (Li (2014: 47))

The subject of the adverbial clause in (4b), whose antecedent is ‘Miss Li’ in the previous sentence in (4a), cannot be elided. The contrast between (3) and (4) shows that an interpretation of an empty subject is not so free as that of an empty object.

Null subjects and objects also behave differently as regard to strict and sloppy interpretations. Null objects yield strict and sloppy interpretations, as illustrated in (5):

- (5) a. Zhangsan_i [yinwei wo jiao-guo ta_ide erzi] hen gaoxing
 Zhangsan because I teach-ASP his son very happy
- b. Lisi_j [yinwei wo mei jiao-guo (ta_ide erzi)] hen bu gaoxing.
 Lisi because I not teach-ASP his son very not happy
 ‘Zhangsan_i is happy because I have taught his_i son; Lisi_j is not happy
 because I have not taught [his_j son].’ (^{OK}strict/^{OK}sloppy)
 (Li (2014: 48))

In (5b), the object of the adverbial clause can be elided and then allows both the strict reading ‘Lisi is not happy because I have not taught Zhangsan’s son,’ and the sloppy reading ‘Lisi is not happy because I have not taught Lisi’s son’. On the other hand, null subjects yield neither strict nor sloppy interpretations:

- (6) a. Zhangsan_i [yinwei ziji_ide/ta_ide erzi jiao-guo shuxue] hen
 Zhangsan because self’s/his son teach-ASP math very
 gaoxing;
 happy
- b. Lisi_j [yinwei [_{e_j]} jiao-guo yuyanxue] hen deyi.
 Lisi because teach-ASP linguistics very proud
 ‘Zhangsan_i is happy because self’s_i/his_i son has taught math; Lisi_j is
 proud because $e_{j/*i}$ has taught linguistics.’ *strict/*sloppy/GCR-Lisi
 (Li (2014: 48))

In (6b), the empty subject of the adverbial clause must be coindexed with the closest subject ‘Lisi’. It allows neither the strict interpretation ‘Lisi is proud because Zhangsan’s son has taught linguistics’ nor the sloppy interpretation ‘Lisi is proud because Lisi’s son has taught linguistics’.

Thus far, I have overviewed the differences between null subjects and null objects concerning interpretations. The null subjects can only be coindexed with the closest subject in higher clause as their antecedent. In contrast, the null objects can be across the island boundaries to have the same index with the subject in the matrix clause. In the next section, I will review Li’s analysis of the asymmetry and point out some problems with her analysis.

any features such as [+pronominal], [+anaphoric] or person, number, gender. She assumes that the contents of the true empty element are given by LF-copying of the materials from the context.

Li argues that her analysis accounts for the subject/object asymmetry of null arguments in MC overviewed in the previous section. Let us consider sentence (2), repeated here as (8):

- (8) zhe-ge laoshi_i hen hao, wo mei kandao-guo [[e_j bu xihuan e_i de]
 this-CL teacher very good I not see-EXP not like DE
 xuesheng_j]
 student
- a. ‘This teacher₂ is very good. I have not seen students₁ who e_1 do not
 like (him₂).’
- b. ‘*This teacher₂ is very good. I have not seen students₁ who (he₂)
 does not like e_1 .’ (Li (2014: 46))

According to Li’s analysis, the null subject is the empty pronoun that is subject to the GCR. Then, the null subject is identified by the closest nominal so that it cannot take the subject of the previous sentence as its antecedent, as illustrated in (8b). On the other hand, the null object is the true empty element without any features. The contents of the null object are filled by LF-copying of materials from the context. Hence, the null object can take the subject of the previous sentence as its antecedent, as shown in (8a).

Li also tries to derive strict and sloppy interpretations from her analysis. Let us consider sentence (6), repeated here as (9):

- (9) a. Zhangsan_i [yinwei ziji_i de/ta_i de erzi jiao-guo shuxue] hen
 Zhangsan because self's/his son teach-ASP math very
 gaoxing;
 happy
- b. Lisi_j [yinwei [e_j] jiao-guo yuyanxue] hen deyi.
 Lisi because teach-ASP linguistics very proud
 'Zhangsan_i is happy because self's_i/his_i son has taught math; Lisi_j is
 proud because e_j/_i has taught linguistic.' *strict/*sloppy/GCR-Lisi
 (Li (2014: 48))

Under Li's analysis, the empty subject of the adverbial clause is the empty pronoun. Then, it obeys the GCR so that it is identified by the closest subject of the higher clause. Accordingly, (9b) does not allow the strict interpretation 'Lisi is proud because Zhangsan's son has taught linguistics' or the sloppy interpretation 'Lisi is proud because Lisi's son has taught linguistics'. In contrast, null objects yield strict and sloppy interpretations. Let us look at sentences (5), repeated here as (10):

- (10) a. Zhangsan_i [yinwei wo jiao-guo ta_i de erzi] hen gaoxing;
 Zhangsan because I teach-ASP his son very happy
- b. Lisi_j [yinwei wo mei jiao-guo (ta_i de erzi)] hen bu gaoxing.
 Lisi because I not teach-ASP his son very not happy
 'Zhangsan_i is happy because I have taught his_i son; Lisi_j is not happy
 because I have not taught [his_j son].' (^{OK}strict/^{OK}sloppy)
 (Li (2014: 48))

Li claims that the null object is the true empty element whose contents are given through LF-copying of 'his son' in the previous sentence. Hence, (10b) yields both

the strict reading ‘Lisi is not happy because I have not taught Zhangsan’s son,’ and the sloppy reading ‘Lisi is not happy because I have not taught Lisi’s son’.

Thus far, I have overviewed Li’s analysis. Now, I turn to point out some problems with her analysis. Li argues that the null subject must obey the GCR, and hence it can only be coindexed with the closest nominal in the higher clause. However, her analysis cannot account for the interpretation of the following sentence:

- (11) Lisi_i zai guonei-de gangqin bisai shang de-le
 Lisi in national-GEN piano competition on aim-LE
 diyi, Zhangsan_j shuo danshi zai guoji shang e_{i/*j} bu
 champion Zhangsan say however in international on not
 Keneng hui de diyi
 can will aim champion
 Lit. ‘Lisi became the champion in the national piano competition;
 however, Zhangsan says that (Lisi) will not become the champion at the
 international level’. *GCR

In (11), the empty subject in the embedded clause of the second sentence can take the subject of the first sentence ‘Zhangsan’ as its antecedent, skipping the closest subject in the higher clause of the same sentence.

Likewise, Li’s analysis incorrectly excludes the following grammatical sentences:

- (12) Zhangsan: ni zhidao [wo-de yaoshi]_i zai nali ma?
 You know my-GEN key in where Q
 ‘Do you know where my key is?’

- Lisi: Wo zhidao.
 I know
 ‘I know.’
- Zhangsan: qing ni gaosu wo [_{CP} [_{TP} *e*_i zai nali]]
 Please you tell me in where.
 ‘Please tell me where (my key) is.’
- Lisi: [*e*_i] zai ni-de zhuozi shang
 in you-GEN table on
 ‘Lit. *e* is on your table.’

In (12), the null subjects both in Zhangsan’s utterance and in Lisi’s utterance can be interpreted as the topic ‘my key’ without any difficulties. The GCR prevents the empty subjects from taking the topic element introduced into the discourse by the different sentence.

Moreover, Li’s analysis cannot explain the interpretation of the following sentence:

- (13) a. Zhangsan_i juede [ta_ide lunwen] hui bei jieshou;
 Zhangsan think his dissertation will-BEI accept
 ‘Zhangsan thinks that his dissertation will be accepted.’
- b. Lisi ye juede [*e*] hui bei jieshou. ^{OK}Strict/*sloppy
 Lisi also think will BEI accept
 ‘Lit. Lisi thinks that [*e*] will be accepted, too.’

(cf. Oku (1998: 166))

In violation of the GCR, the null subject in the embedded clause in (13b) takes the subject of the embedded clause in (13a) to yield the strict reading ‘Lisi thinks that

Zhangsan's dissertation will be accepted, too'. Thus, the sentences from (11) to (13) pose a serious problem to Li's analysis based upon the GCR.

In summary, we have reviewed Li's analysis and pointed out several problems with her analysis. In what follows, I will propose an alternative analysis on null subjects.

4. An Alternative Analysis of Null Subjects in Mandarin Chinese

In this section, I will propose an alternative analysis of null subjects. Browning (1987) and Hou and Kitagawa (1987) put forth the so-called 'empty operator' hypothesis, according to which the base-generated null nominal pronoun moves to the specifier of CP to yield operator variable chains. Given this hypothesis, I will assume that empty operators move from the base-generated null subject positions to specifier of CP (Huang (1984)).

First, let us consider sentence (2), repeated here as (14):

- (14) zhe-ge laoshi_i hen hao, wo mei kandao-guo [[e_j bu xihuan e_i de]
 this-CL teacher very good I not see-EXP not like DE
 xuesheng_j]
 student
- a. 'This teacher₂ is very good. I have not seen students₁ who e_1 do not like (him₂).'
 b. *This teacher₂ is very good. I have not seen students₁ who (he₂) does not like e_1 .' (Li (2014: 46))

In this sentence, the empty subject of the verb 'like' can be coindexed with 'students' in the matrix clause in the same sentence, but not with the topic phrase 'this teacher' in the previous sentence. When the empty subject refers to 'students', (14) has the

following structure:

- (15) This teacher₂ is very good. I have not seen students₁ [_{CP} Op₁ who [_{TP} t₁ do not like (him₂)]]]

In this structure, the empty operator moves to the specifier of CP introducing the relative clause, where it takes ‘students’ as its antecedent. In order to take ‘this teacher’ in the previous sentence as its antecedent, the empty operator must move out of the relative clause:

- (16) *This teacher₂ is very good. [_{CP} Op₂ [_{TP} I have not seen students₁ [_{CP} t’₂ [_{TP} t₂ do not like e₁]]]]]

However, this movement violates the Complex NP constraint. Accordingly, the null subject in (14) cannot be coindexed with the topic phrase ‘this teacher’.

The same analysis also holds of (7), repeated here as (17):

- (17) ta₁ shuo wo₂ yinwei [e_{2/*1,3} bu xihuan Zhangsan] you diar
he say I because not like Zhangsan have slight
bu-hao-yisi.
embarrassed
‘He said I was somewhat embarrassed because *e* did not like Zhangsan.’
(Li (2014: 47))

The empty subject of the adverbial clause can only be coindexed with the subject of the embedded clause. This is because (17) has the following structure under the proposed analysis:

- (18) [_{TP} ta₁ shuo [_{CP} wo₂ [_{CP} Op₂ yinwei [_{TP} t₂ bu xihuan Zhangsan]] you
diar bu-hao-yisi]]

In (18), the null operator moves from the subject of the adverbial clause to the specifier of the CP introducing the clause, where it takes the subject of embedded clause. In order to take the subject of the matrix clause or a topic in the previous discourse, the null operator moves out of the adverbial clause to the specifier of the matrix CP. However, this movement is blocked by the Adjunct Condition. Thus, the proposed analysis accounts for the interpretation of (17).

Likewise, the proposed analysis explains the fact that the subject of the embedded clause cannot be empty in (4), repeated here as (19):

- (19) a. Li xiaojie₁ hen xihuan Zhangsan ba? Ni yinggai hen gaoxing!
Li Miss very like Zhangsan-BA you should very happy
'Miss Li really likes Zhangsan, right? You should very happy!'
- b. shishishang, we [yinwei [_{TP} *(Li xiaojie)₁ bu xihuan Zhangsan]]
actually I because Li Miss not like Zhangsan
you diar shiwang
have slight disappointment
'In fact, I somewhat disappointed because *(Miss Li) does not like
Zhangsan.' (Li (2014: 47))

The intended meaning of (19b) is that the empty subject is coindexed with the subject of the previous sentence. This meaning requires (19b) to have the following structure:

- (20) [_{CP} Op₁ we [_{CP} t'₁ yinwei [_{TP} t₁ bu xihuan Zhangsan]] you diar shiwang]

In (20), the null operator moves out of the adverbial clause to the specifier of the matrix CP in order to take the subject of the previous sentence as its antecedent. However, this movement violates the Adjunct Condition. Thus, the proposed analysis accounts for (19b).

Next, let us consider sentence (11), repeated here as (21):

- (21) Lisi_i zai guonei-de gangqin bisai shang de-le
 Lisi in national-GEN piano competition on aim-LE
 diyi, Zhangsan_j shuo danshi zai guoji shang e_{i/*j} bu
 champion Zhangsan say however in international on not
 Keneng hui de diyi
 can will aim champion
 Lit. 'Lisi became the champion in the national piano competition;
 however, Zhangsan says that (Lisi) will not become the champion at the
 international level'.

The second sentence of (21) has the following structure:

- (22) [_{CP} Op₁ [_{TP} Zhangsan says [_{CP} t'₁ that [_{TP} t₁ cannot become the champion in the international level]]]]

The null operator Op moves from the subject position in the embedded clause through the specifier of the embedded CP to the specifier of the matrix CP, where Op takes the appropriate antecedent 'Lisi' from the previous sentence.

The same analysis holds of sentence (12), repeated here as (23):

- (23) Zhangsan: ni zhidao [wo-de yaoshi] zai nali ma?
 You know my-GEN key in where Q
 ‘Do you know where my key is?’
- Lisi: Wo zhidao.
 I know
 ‘I know.’
- Zhangsan: qing ni gaosu wo [CP [TP e zai nali]]
 Please you tell me in where.
 ‘Please tell me where (my key) is.’
- Lisi: [e]zai ni-de zhuozi shang
 in you-GEN table on
 Lit. ‘e is on your table.’

Under the proposed analysis, the sentences involving the null subjects have the following structures:

- (24) a. [CP Op₁ [TP qing ni gaosu wo [CP t’₁ [TP t₁ zai nali]]]]
 Please you tell me in where.
 ‘Please tell me where (my key) is.’
- b. [CP Op₁ [TP t₁ zai ni-de zhuozi shang]]
 in you-GEN table on
 Lit. ‘e is on your table.’

In these structures, the empty operators move to the specifier of the matrix CP, where they take the topic phrase ‘my key’ in the discourse. The movement does not

violate any conditions on movement. Therefore, the null subjects in (24) can take the topic phase.

Finally, let us consider the difference between (9) and (13), repeated here as (25) and (26), with regard to strict reading:

- (25) a. Zhangsan_i [yinwei ziji_i de/ta_i de erzi jiao-guo shuxue] hen
 Zhangsan because self's/his son teach-ASP math very
 gaoxing;
 happy
- b. Lisi_j [yinwei [_{e_j]} jiao-guo yuyanxue] hen deyi.
 Lisi because teach-ASP linguistics very proud
 ‘Zhangsan_i is happy because self's_i/his_i son has taught math; Lisi_j is
 proud because _{e_j} has taught linguistics.’ *strict/*sloppy
 (Li (2014: 48))
- (26) a. Zhangsan_i juede [ta_i de lunwen] hui be jieshou;
 Zhangsan think his dissertation will-BEI accept
 ‘Zhangsan thinks that his dissertation will be accepted.’
- b. Lisi ye juede [_e] hui bei jieshou. ^{OK}Strict/*slopp
 Lisi also think will BEI accept
 Lit. ‘Lisi thinks that [_e] will be accepted, too.’
 (cf. Oku (1998: 166))

Sentence (25) allows neither strict reading nor sloppy reading. The empty subject of the adverbial clause can only be coindexed with the subject of the matrix clause in the same sentence. On the other hand, (26b) has the strict reading in which the empty subject of the embedded clause can be coindexed with the subject of the embedded clause in (26a). The proposed analysis gives (25) and (26) the following

structures (27a) and (27b) respectively:

- (27) a. [CP [TP Lisi [CP Op₁ yinwei [TP t₁ jiao-guo yuyanxue]]hen deyi]]
 b. [CP Op₁ [TP Lisi ye juede [CP t'₁ [TP t₁ hui bei jieshou]]]]

In (27a), the null operator moves to the specifier of the CP introducing the adverbial clause, where it takes *Lisi*, the subject of the matrix clause, as its antecedent. In order to take the subject of the adverbial clause in the previous sentence and then yield the strict reading, the null operator must move to the specifier of the matrix CP. However, this movement violates the Adjunct Condition. In (27b), in contrast, the null operator moves to the specifier of the matrix CP, where it takes the subject of the embedded sentence in (26a) as its antecedent to yield the strict reading. Thus, the proposed analysis explains the contrast between (25) and (26).

5. Conclusion

In this paper, I have considered the properties of null arguments in MC which show that the interpretation of null subjects is more restricted than that of null objects. Li (2014) tries to derive this subject/object asymmetry from the assumption that in MC, null objects are the so-called “argument ellipsis”, whereas null subjects are empty pronouns whose interpretation is constrained by the Generalized Control Rule. I have pointed out several problems with her analysis and then provided an alternative analysis to account for the asymmetry by proposing that null subjects are not empty pronouns but traces of empty operators. The proposed analysis reduces the restricted properties of null subjects to constraints on movement of empty operators to specifier of CP.

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