CHAPTER III

LITERATURE REVIEW

This chapter reviews some previous studies on movement paradoxes in both English and Mandarin Chinese.

Some GB researchers have tried to explain the movement paradox by saying that there is no movement for the predicates cited as examples of movement paradox. A seemingly-moved category is in fact base-generated where it appears (William, 1994; Jacobson, 1992; Cormack and Smith, 1997; Manzini and Roussou, 2000; Zhang, 2001). However, the base-generated approach they adopt is similar to the category mismatch approach in LFG (Huang 1989; Her 1999; Bresnan, 2001; Falk, 2001). We take the near-synonym pair in Mandarin Chinese 擅長 *shan4chang2* 'be-good-at' and 拿手 *na2shou3* 'be-good-at' for example.

(34) a. 他 最 擅長 [語言學]$_{NP}$
ta1 *zui4* *shan4chang2* [*yu3yan2xue2*]$_{NP}$
he most be-good-at linguistics
'He is good at linguistics.'

b. [語言學]$_{NP}$, 他 最 擅長
[*yu3yan2xue2*]$_{NP}$ *ta1* *zui4* *shan4chang2*
linguistics he most be-good-at
'He is good at linguistics.'

(35) a. *他 最 拿手 [語言學]$_{NP}$

ta1 zui4 na2shou3 [yu3yan2xue2]$_{NP}$

he most be-good-at linguistics

'He is good at linguistics.'

b. [語言學]$_{NP}$, 他 最 拿手

[*yu3yan2xue2*]$_{NP}$ *ta1 zui4 na2shou3*

linguistics he most be-good-at

'He is good at linguistics.'

(34b) and (35b) are topicalization sentences in transformation theory. A predicate like 擅長 *shan4chang2* 'be-good-at', which is transitive syntactically and semantically, subcategorizes for an NP complement and this required NP complement can be realized as OBJ immediately following the predicate, as in (35a). The NP complement 語言學 *yu3yan2xue2* 'linguistics' is base-generated as OBJ in (34a) and extracted to the TOP position in (34b) by a transformation operation. Therefore, it is proved that transformation does exist between two sentences (34a) and (34b). But, there is no transformation between (35a) and (35b). The predicate 拿手 *na2shou3* 'be-good-at' is intransitive syntactically but transitive semantically in that it subcategorizes for an NP complement, as 擅長 *shan4chang2* 'be-good-at' does, but the required NP complement cannot be realized as OBJ following the predicate as in (35a). The NP complement 語言學 *yu3yan2xue2* 'linguistics' can

only be base-generated as TOP to make the sentence grammatical. So whether there is a transformation operation depends on the idiosyncratic property of the predicate. Some initial phrases in topicalization sentences are topicalized from their original object positions while some of them are base-generated at the initial positions. And it is then suggested that movement paradox does not raise any problem for the transformational approach.

The LFG approach proposes that there is no transformation operation for any predicate and the complement that each predicate requires is base-generated at the position where it is. Thus, the NP complement 語言學 *yu3yan2xue2* 'linguistics' is base-generated as OBJ in (34a) and as TOP in (34b). Similarly, the NP complement 語言學 *yu3yan2xue2* 'linguistics' is base-generated as TOP in (35b). And (35a) is ungrammatical for the predicate 拿手 *na2shou3* 'be-good-at' is intransitive syntactically. On the other hand, the a-structure and f-structure of these two near-synonym pairs 擅長 *shan4chang2* 'be-good-at' and 拿手 *na2shou3* 'be-good-at' are the same.

(36) a-structure

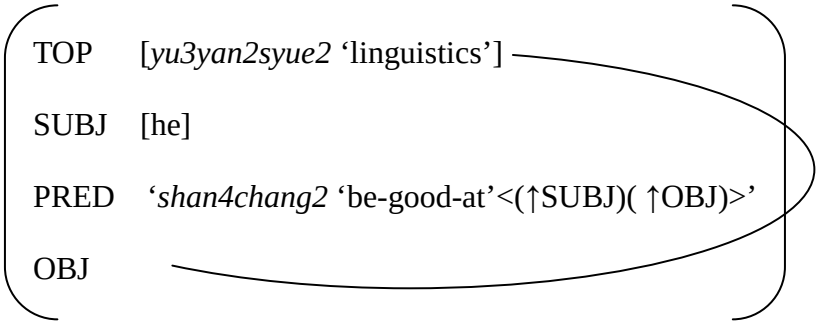
a. *shan4chang2* 'be-good-at' ＜x / [－o] y / [－r]＞
SUBJ OBJ

b. *na2shou3* 'be-good-at' ＜x / [－o] y / [－r]＞
SUBJ OBJ

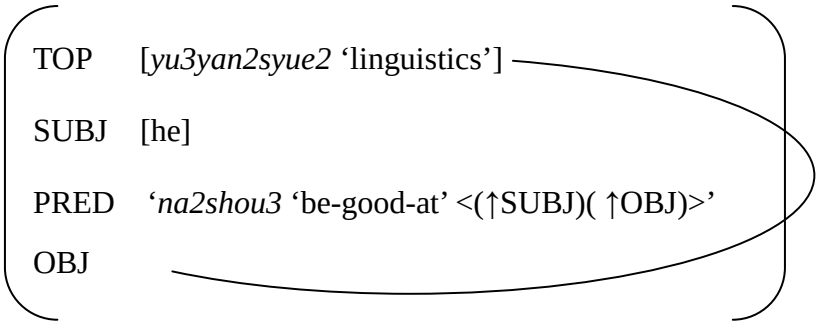
These two predicates both require two argument roles: *x* and *y* (*x* must be more prominent than *y*). The intrinsic feature of these two argument roles is [－o] and [－r], respectively. The grammatical function that these two argument roles map to is SUBJ and OBJ, respectively. The f-structures of (34b) and (35b) are illustrated as followed.

(37) f-structure

a. *shan4chang2* ‘be-good-at’:



b. *na2shou3* ‘be-good-at’



The difference between these two predicates is that the mapping relation from f-structure to c-structure Φ^{-1} (the inversion of phi) of the OBJ required by 拿手 *na2shou3* ‘be-good-at’ must be an “empty category”. In f-structure, the required

OBJ function must be identified with the matrix TOP to fulfill the completeness condition and thus the required NP complement 語言學 *yu3yan2xue2* ‘linguistics’ must be realized as TOP. For the analysis mentioned above, (34) and (35) can be explained by the correspondence of c-structure and f-structure without any loss of generality in LFG.

In what follows, we will review four relevant studies conducted by Zhang (2001, 2004), Bresnan (2001), Huang (1989) and Her (1999), respectively.

3.1 Zhang (2001, 2004)

Zhang (2001) proposes the “Remerge Theory of Movement” (RM) to argue against Chomsky’s (1993) “Copy theory” (CT). She discusses movement paradox in her paper “Move is Remerge” (Zhang, 2001) and quotes Breul’s (2001) examples as follows.

(38) a. *He didn’t think of [that he might be wrong]$_{CP}$.

b. [That he might be wrong]$_{CP}$, he didn’t think of.

(39) a. *We talked about [that he was sick]$_{CP}$ for days.

b. [That he was sick]$_{CP}$, we talked about for days.

CT claims that movement is a copying operation which leaves a copy behind in its base-generated position. One of the two identical copies is deleted at PF,

leaving, nonetheless, material at LF (Schneider-Zioga, 1996; Zhang, 2001; Fox, 2002). Nevertheless, in (38) and (39), if the *that-clause* of b-sentences has an identical copy in the position of the complement of the prepositions *of* or *about*, then the a-sentences should all be grammatical, but in fact, they are ungrammatical.

Zhang (2001) calls this circumstance "a kind of anti-reconstruction effect of c-selection" and suggests that "to move" is "to remerge", not Chomsky's (1993) "copy and move". For instance, to move X is to merge X again, not to move X to a new position.

According to Zhang's RM, there is no movement; the ungrammaticality of (39a) is the result of the wrong c-selection of the merger between *about* and the *that-clause*. Though Zhang's (2001) RM is similar to the concept of base-generation in LFG, there are some differences between the two accounts. RM assumes that the remerged element *that he was sick* does not have an identical silent part in the complement position of *about*, whereas LFG assumes that the topicalized phrase *that he was sick* is identical with the missing complement of *about*. In addition, it is not clear in Zhang's RM theory what kind of syntactic element or what category type can or cannot remerge with a sentence in the topic position.

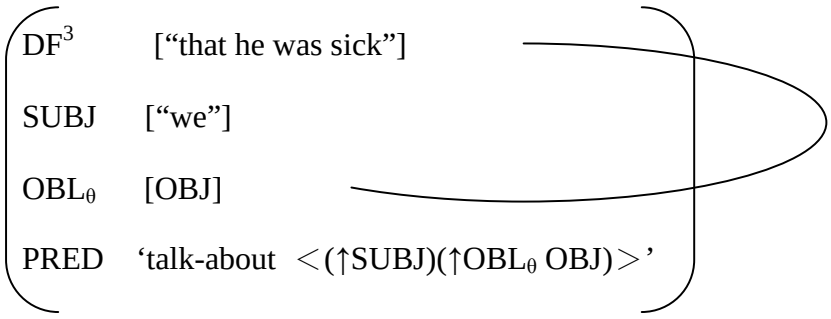
3.2 Bresnan (2001)

Brenan (2001), in initially pointing out the movement paradoxes in

transformational theories, argues that the movement paradoxes discussed in her book can be treated as category mismatches which are predictable in LFG theory. She proposes that in cases where the f-structure attribute of an element can mismatch with the position of the element in the c-structure, such cases may be due to an imperfect correspondence between structure and function. The example she offers is in (40). (41) and (42) show the f-structure and c-structure, respectively.

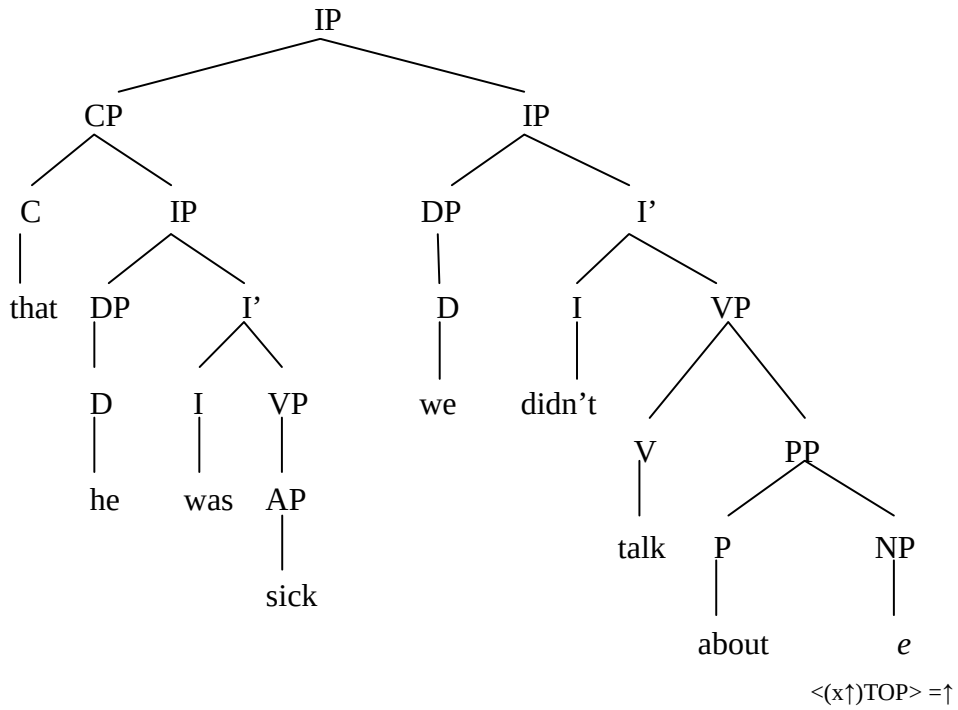
(40) [That he was sick]$_{CP}$, we talked about.

(41) f-structure



[3] In LFG, functions like TOPIC and FOCUS can be called (grammaticized) discourse functions(DF). (Bresnan, 2001).

(42) c-structure



(Bresnan, 2001: 182)

As the example shows, LFG theory assumes that the original position of the initial CP in the c-structure is the complement of IP, not derived from another position. The relationship between the initial topicalized phrase and the gap is identification, as in (41), not extraction. The identification is represented graphically by a line connecting the two values. In addition, mapping principles require CP to map to one non-argument function[4], such as TOP, FOC, or ADJ. As for the example in (40), if CP maps to the ADJ function, the f-structure will be incomplete[5]. So CP must map either to TOP or FOC.

[4] In LFG, non-argument functions are TOPIC, FOCUS and ADJ (adjunct) (Falk, 2001).
[5] An f-structure in which all argument functions selected by the head actually appear is a complete f-structure; conversely, one that is missing (at least) one argument is incomplete (Falk, 2001).

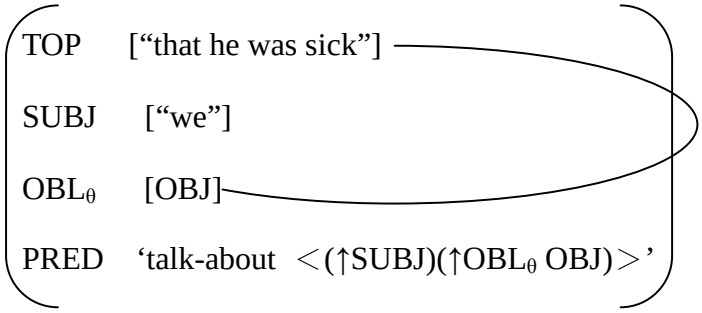
LFG theory proposes that the gap '*e*' in the c-structure will identify with certain discourse function in the f-structure. Bresnan (2001) formulates a principle for the identification of the gap in the c-structure with the DF in the f-structure. The principle is quoted in (43).

(43) Principle for Identifying Gaps:

Associate XP → *e* with <(X↑) DF> =↑ (Bresnan, 2001: 182)

In English, DF in (41) must be TOP while XP must be DP/NP, so the f-structure of (40) must be as in (44).

(44)



Since f-structure (44) satisfies the Completeness and Coherence condition, the sentence in (40) is a grammatical sentence. LFG theory proposes that argument roles, grammatical functions, and syntactic categories belong to separate structural levels with different correspondence constraints, so a mismatch between each level is possible. As long as the f-structure of a sentence is satisfied, the sentence is

grammatical whether the category type of the topicalized phrase is c-selected by the predicate or not.

In other words, any syntactic category can be topicalized and be identified with the gap on the condition that the f-structure is complete and coherent.

However, this assumption has its limitations as exemplified in the following example.

(45) a. *I like [that he kisses me on the cheek]$_{CP}$.

b. [That he kisses me on the cheek]$_{CP}$, I like.

c. * [Kissed me on the cheek]$_{VP}$, I like.

d. * [Happy with the result]$_{AP}$, I like.

e. * [Of poem with a red cover]$_{PP}$, I like.

The lexical entry of *like* is “like [__ NP]” which means that it c-selects an NP as its object complement. (45a) is ungrammatical in that *like* took a wrong type of complement. On the other hand, (45b) is grammatical as the *that-clause* is base-generated in the topicalized position and satisfies the subcategorized requirement of *like* by identification with the missing OBJ in the object complement position of *like* and avoids the situation whereby the predicate c-selects the wrong type of complement. Based on Bresnan’s category mismatch, since CP can be base-generated in the topicalized position to satisfy the subcategorization

requirement of *like*, other category types such as VP, PP, and AP should be able to do the same thing. But in fact, it seems that only CP can be the base-generated topicalized phrase that satisfies the c-selection requirement of *like*. A topicalized VP, AP, or PP will lead to ungrammatical sentences as in (45c), (45d), and (45e). In the next section, we will discuss if there is a similar situation in Mandarin Chinese.

3.3 Huang (1989) ; Her (1999)

Huang (1989) states that the phenomenon of movement paradoxes in Mandarin Chinese is due to the idiosyncratic behavior of the predicate.

(46) a. [這 件 事]$_{NP}$, 你 作主
[*jhe4 jian4 shih*]$_{NP}$ *ni3* *zuo4 jhu3*
this CLS matter you take-charge
'You take charge of this matter.'

b. * 你 作主 [這 件 事]$_{NP}$
ni3 *zuo4 jhu3* [*jhe4 jian4 shih*]
you take-charge this CLS matter
'You take charge of this matter.'

c. *你 作主
ni3 *zuo4 jhu3*
you take-charge
'You take charge of something.'

(47) a. [語言學]$_{NP}$, 他 最 拿手

[*yu3yan2xue2*] *ta1* *zui4* *na2shou3*

linguistics he most be-good-at

'He is good at linguistics.'

b. *他 最 拿手 [語言學]$_{NP}$

ta1 *zui4* *na2shou3* [*yu3yan2xue2*]

he most be-good-at linguistics

'He is good at linguistics.'

c. *他 最 拿手

ta1 *zui4* *na2shou3*

he most be-good-at

'He is good at something'

Examples (46) and (47) show that some predicates in Mandarin Chinese that Huang proposes require their object to be realized as TOP. Thus the subcategorized pattern of these predicates is <TOPIC SUBJ>. However, Her (1999) observes that the subcategorized pattern Huang proposes has its limitations. Her suggests that the subcategorization pattern of the Mandarin Chinese verbs listed in Huang's paper is still <SUBJ OBJ>. In order to explain the movement paradox examples, he suggests that a constraint should be added in the lexical entries of verbs like 作主 *zuo4jhu3* 'take-charge' to ensure that the required OBJs have the attribute-value pair [BACKGROUND +]. This attribute-value pair means that the OBJ is always

missing and anaphorically controlled by the matrix TOP to satisfy the Completeness and Coherence conditions. The lexical entry of 作主 *zuo4zhu3* ‘take-charge’ and the relevant phrase structure rules in Her’s paper are as in (48).

(48) *zuo4zhu3* V

(↑PRED) = ‘TAKE-CHARGE-OF <SUBJ OBJ>’
(↑OBJ BACKGROUND) =$_c$ ＋

S’ → XP S
(↑TOPIC) =↓ ↑=↓
(↓ BACKGROUND) = ＋
(↑…) =↓

S → (NP) VP
(↑SUBJ) = ↓ ↑=↓

NP → V (NP)
↑=↓ (↑OBJ) = ↓
(↓BACKGROUND) = －

Furthermore, Her (1999) indicates that there is no need to identify a missing OBJ with its matrix TOP through any special specification in Mandarin Chinese because this identification is quite general.

Nevertheless, Her still does not account for which of the possible category types can appear in the topic position to identify with the missing object of 拿手 *na2shou3* ‘be-good-at’:

(49) a. [數學]$_{NP}$, 他 最 拿手

[*shu4xue2*] *ta1* *zui4* *na2shou3*

math he most be-good-at

'He is good at math.'

b. [修理 電視]$_{VP}$, 他 最 拿手

[*xiu1li3* *dian4shi4*] *ta1* *zui4* *na2shou3*

fix television he most be-good-at

'He is good at fixing televisions.'

c. *[小王 賣 車]$_{CP}$, 他 最 拿手

[X*iao3Wang2* *mai4* *che1*] *ta1* *zui4* *na2shou3*

XiaoWang sell car he most be-good-at

'cf. He is good at XiaoWang's selling cars.'

d. * [跟我一起]$_{PP}$, 他 最 拿手

[*gen1 wo3 yi4qi3*] *ta1* *zui4* *na2shou3*

be together with me he most be-good-at

'cf. He is good at getting along with me.'

Although the predicate 拿手 *na2shou3* 'be-good-at' c-selects an NP as its object complement, the required NP-complement can not immediately follow the predicate 拿手 *na2shou3* 'be-good-at'. So the subcategorization requirement must be satisfied through the identification of the matrix TOP and the missing OBJ. In line

with Bresnan's view of category mismatch, the identification between the matrix TOP and the missing OBJ has no constraint and thus phrases of any category type should be able to be the matrix TOP that can be identified with the missing OBJ. This is true for VP, as in (49b), but not true for CP and PP, as in (49c) and (49d).

Huang (1989) lists the following examples and proposes a limitation on what can be realized as the NP topic of the predicate 拿手 *na2shou3* 'be-good-at'.

(50) a. [象棋]$_{NP}$ 他 最 拿手
[*xiang4qi2*]$_{NP}$ *ta1* *zui4* *na2shou3*
Chinese chess he most be-good-at
'cf. He is good at playing Chinese chess.'

b. * [張三]$_{NP}$ 他 最 拿手
[*Zhang1San1*]$_{NP}$ *ta1* *zui4* *na2shou3*
Zhang San he most be-good-at
'He is good at Zhang San.'

c. * [木板]$_{NP}$ 他 最 拿手
[*mu4ban3*]$_{NP}$ *ta1* *zui4* *na2shou3*
wood board he most be-good-at
'He is good at wood board.'

Huang (1989) assumes that (50b) and (50c) are ungrammatical due to the fact that 'the topic-position NPs are semantically selected and well-restricted by the

predicate', that is, the topic arguments of 拿手 *na2shou3* 'be-good-at' can only be "NPs referring to a kind of technique or knowledge which can be mastered." Thus, the topic NP argument of a predicate must be semantically selected by the predicate. However, for some speakers, (50b) and (50c) are acceptable grammatical sentences. It seems that some NP arguments can co-occur with the predicate only when the meaning of the predicate is extended through the use of the mechanism of "metonymy".

Her (1999) and Huang (1989) adopt LFG theory to explain movement paradox in Mandarin Chinese, but they still do not state clearly the constraints on or limitations to the OBJ-TOP category mismatch.

3.4 Summary

For the remarks mentioned above, we believe that not all phrasal categories can be realized as TOP in both English and in Mandarin Chinese. That is to say, there must be some limitations constraining the realization of phrases realizing as TOP that identify with OBJ. All in all, we will give preference to Bresnan's (2001) and Her's (1999) approaches in our analysis though not follow them completely. Our concern is to find out the category types that can be realized as TOP identifying with OBJ in the f-structure.