

CHAPTER V

ANALYSIS AND DISCUSSION

Having noted that three category types can be realized as TOP of predicates with movement paradoxes in Mandarin Chinese, we will now go on to examine the Mandarin Chinese predicates with movement paradoxes. In the following sections, these predicates will be divided into two types. Section 5.1 discusses the first two types and the category types that can be realized as TOP of this type. Section 5.2 examines the third type, the VLVQ construction (see Chang, 2007), and the category types that can be realized as TOP of this construction. Therefore, in each of the following sections, the construction of the predicates will be discussed first.

5.1 The First Two Types of Predicates with Movement Paradoxes

In this study, predicates with movement paradoxes in Mandarin Chinese are divided into three types as shown in Table 2.

Table 2 Three types of predicates with movement paradoxes in Mandarin Chinese

Types	Examples
VO	拿手 <i>na2shou3</i> ‘be-good-at’ 作主 <i>zuo4zhu3</i> ‘take-charge-of’ 出面 <i>chu1mian4</i> ‘present-oneself’ 攪局 <i>jiao3ju2</i> ‘mess-up’ 放手 <i>fang4shou3</i> ‘let-go’ 負責 <i>fu4ze2</i> ‘be-responsible-for’ 在行 <i>zai4hang2</i> ‘be-good-at’ 無能為力 <i>wu2neng2wei2li4</i> ‘can-do-nothing-for’

	一竅不通 <i>yi2qiao4bu4tong1</i> ‘know-nothing-about’ 略知一二 <i>lüe4zhi1yi1er2</i> ‘know-little-about’
SV	心領 <i>xin1ling3</i> ‘decline-with-thanks’
VLVQ	罵來罵去 <i>ma4lai2ma4qu4</i> ‘scold’ 談來談去 <i>tan2lai2tan2qu4</i> ‘talk-about’ 算來算去 <i>suan4lai2suan4qu4</i> ‘calculate’ 吃來吃去 <i>chi1lai2chi1qu4</i> ‘eat’

The section attempts to explore and explicate the properties of predicates illustrated with some examples from the corpus and to propose a plausible explanation for the category types that can be realized as TOP of these predicates.

VO compounding is a word-formation mechanism in Mandarin Chinese which combines the predicate and its required complement to form a single lexical unit (e.g., Chao 1968, Li & Thompson 1981). Her (1999) notes that most VO compound verbs are intransitive. They do not require any complement in the lexical entry and do not allow any phrasal category to be realized as an overt object in the c-structure, as in the example in (54).

(54) 結+婚 *jie2hun1* ‘get-married’

a. 結婚 *jie2hun1* ‘get-married’ [__]

b. 他 和 瑪莉 結婚

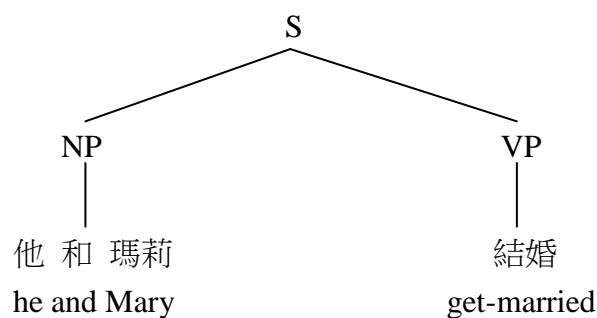
ta1 he2 Mary jie2hun1

he and Mary get-married

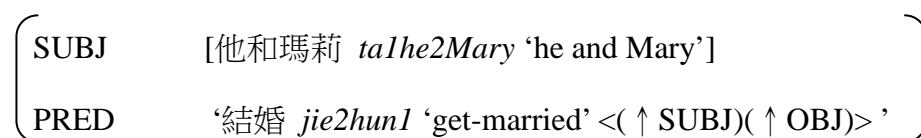
‘He and Mary got married.’

- c. *他 結婚 瑪莉
ta1 jie2hun1 Mary
 he get-married Mary
 ‘He got married with Mary.’

d. c-structure



e. f-structure



In Her's (1999) study, the VO compound predicate 結婚 *jie2hun1* 'get-married' is intransitive in that the position of the object immediately following the predicate has been occupied, so there is no other position for another overt object.

However, some other VO compound verbs are transitive such as 負責 *fu4ze2* 'be-responsible-for' (Her, 1999). It requires an OBJ in the f-structure and allows an overt object in the c-structure. Thus, it can either have an overt object immediately followed as in (55a) or have a missing object anaphorically controlled by the matrix topic as in (55b).

(55) 負責 *fu4ze2* ‘be-responsible-for’a. 負責 *fu4ze2* ‘be-responsible-for’ [__ NP/VP]

b. 我 負責 這 個 活動

wo3 fu4ze2 zhei4 ge huo2dong4

I be-responsible-for this CLS activity

‘I am responsible for this activity.’

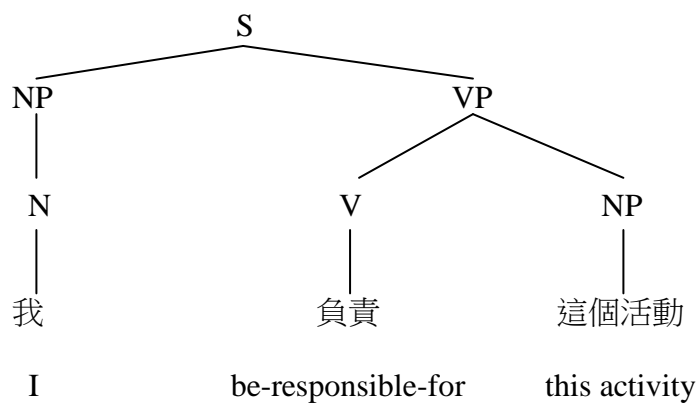
c. 這 個 活動 我 負責

zhei4 ge huo2dong4 wo3 fu4ze2

this CLS activity I be-responsible-for

‘I am responsible for this activity.’

d. c-structure



e. f-structure of (b)

SUBJ	[我 <i>wo3</i> ‘I’]
PRED	‘負責 <i>fu4ze2</i> ‘be-responsible-for’ <(↑ SUBJ)(↑ OBJ)>’
OBJ	[這個活動 <i>zhei4gehuo2dong4</i> ‘this activity’]

f. f-structure of (c)

TOP	[這個活動 <i>zhei4gehuo2dong4</i> ‘this activity’]
SUBJ	[我 <i>wo3</i> ‘I’]
PRED	‘負責 <i>fu4ze2</i> ‘be-responsible-for’ <(↑ SUBJ)(↑ OBJ)>’
OBJ	

As for predicates like 拿手 *na2shou3* ‘be-good-at’, 作主 *zuo4zhu3* ‘take-charge-of’, 出面 *chu1mian4* ‘present-oneself’, 攪局 *jiao3ju2* ‘mess-up’, and 放手 *fang4shou3* ‘let-go’, they are not transitive for they do not require any complement in the lexical entry. Thus, it will be ungrammatical for an overt object to occupy the position of object in the c-structure, as exemplified in (56a). However, these predicates are not intransitive in that they do require an NP argument in their a-structure and f-structure. Without the required complement, the sentence will be ungrammatical as it will violate the Completeness condition, as exemplified in (56b). The missing object must be anaphorically controlled by the matrix topic to fulfill the a-structure and f-structure, as in (56c).

(56) 作+主 *zuo4zhu3* ‘take-charge-of’

a. 作主 *zuo4zhu3* ‘take-charge-of’ [__]

b. *你 作主 休假期

ni3 zuo4zhu3 xiu1jia4ri4qi2

you take-charge-of the date of the break

‘You take charge of the date of the break.’

c. *你 作主

ni3 zuo4zhu3

you take-charge-of

‘You take charge of something.’

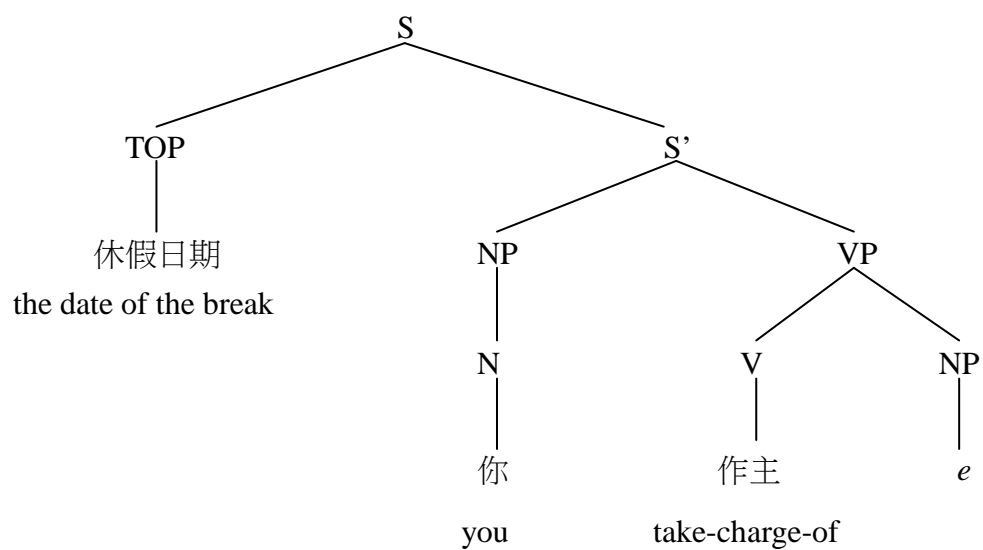
d. 休假期 你 作主

xiu1jia4ri4qi2 ni3 zuo4zhu3

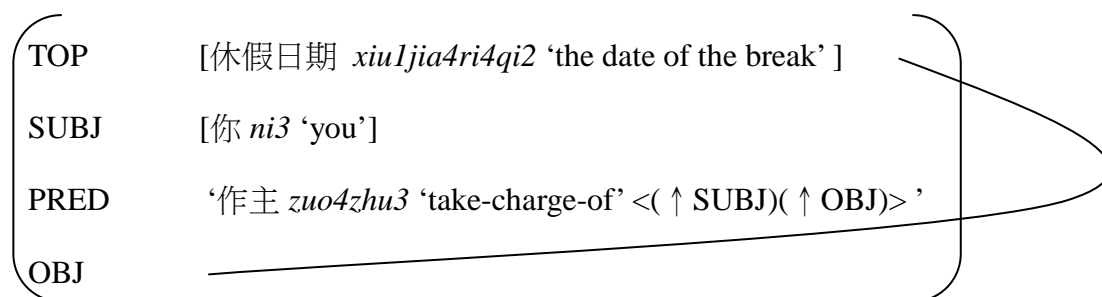
the date of the break you take-charge-of

‘You take charge of the date of the break.’

e. c-structure



f. f-structure



It is proposed that these predicates are semi-transitive verbs meaning that these predicates require an NP complement but that this required NP complement is not allowed to be lexically overt (Her, 1999). The semi-transitivity of these predicates is due to the interaction between two conflicting rules assumed by Her (1999) shown in (57).

(57) a. [−transitive]

[V incorporates OBJ] → V:

b. [+transitive]

As discussed in Her (1999), the rule in (57a) influences the c-structure of these predicates only while the rule in (57b) affects the f-structure of these predicates. As a result, these predicates are abnormal for the subcategorizing of an OBJ in f-structure, and do not allow this OBJ to be lexically overt post verbal objective NPs in the c-structure. Thus, the post verbal position in the c-structure must be empty.

In Mandarin Chinese, semi-transitive verbs like 拿手 *na2shou3* ‘be-good-at’

subcategorize for two argument roles in the a-structure, x and y (x must be more prominent than y) which will map to the grammatical function SUB and OBJ, respectively. Since NP is a typical category type that can be the most typically mapped to SUBJ and OBJ function, the required overt object must be an NP. But the OBJ function required by the PRED in the f-structure of 拿手 *na2shou3* ‘be-good-at’ must map to an empty category or a gap e in the c-structure, as in (58).

(58) a. 拿手 *na2shou3* ‘be-good-at’ [_]

b. * 他 最 拿手 [數學]_{NP}

ta1 zui4 na2shou3 [shu4xue2]_{NP}

he most be-good-at math

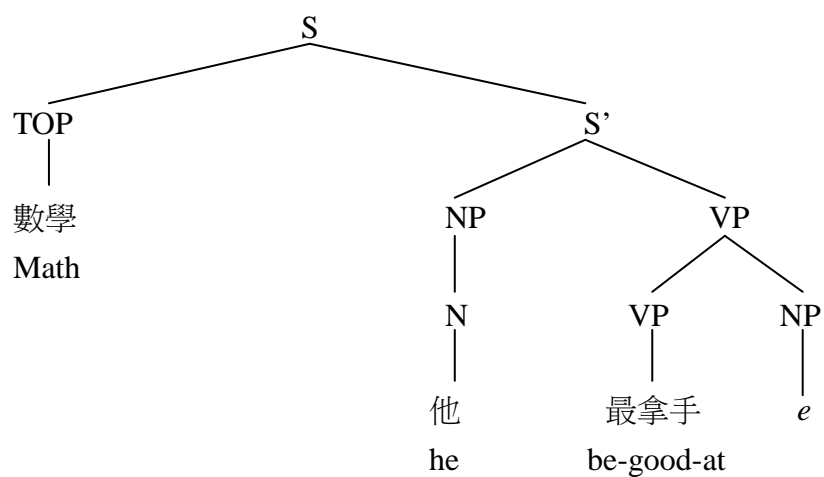
‘He is good at math.’

c. [數學]_{NP} 他 最 拿手

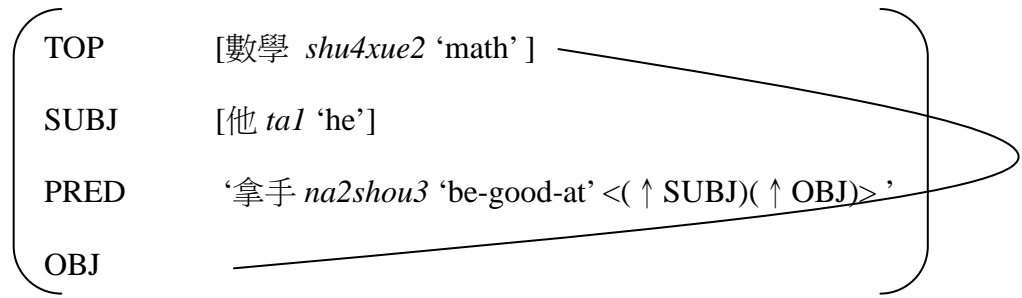
[shu4xue2]_{NP} ta1 zui4 na2shou3

math he most be-good-at

d. c-structure



e. f-structure



The required NP complement of 拿手 *na2shou3* 'be-good-at' in (58) is 數學 *shu4xue2* 'math'. If this NP complement is realized as a lexically overt object at the post verbal position, it will be ungrammatical in that it cannot be mapped to an empty category in the c-structure, as in (58a). This is similar to the analysis Bresnan (2001) uses to explain the movement paradox phenomenon in English. The empty category (the gap *e*) in the c-structure must be identified with a certain discourse function in the f-structure to satisfy the completeness condition, as in (58b), where the missing OBJ identifies with TOP. The TOP identifying with the missing OBJ is supposed to be base-generated at the point where it appears, not be extracted from another position, and thus there is no transformation (Bresnan, 2001). We will review the principle for identifying the gap proposed by Bresnan (2001) in (59).

(59) Associate $XP \rightarrow e$ with $\langle (X \uparrow) DF \rangle = \uparrow$

Since this principle fulfills the f-structure by identification, the category type of *XP* and *DF* is not necessarily the same. If the NP complement can be realized as TOP to

satisfy the requirement of f-structure, other category types like CP and PP should be able to satisfy the requirement, which is contrary to the fact. From the analysis in Section 4, we find out that not all category types can be realized as TOP.

(60) a. [語言學]_{NP} 他 最 拿手

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

linguistics he most be-good-at

‘He is good at linguistics.’

b. [整理房間]_{VP} 他 最 拿手

[*zheng3li3fang2jian1*]_{CP} *ta1* *zui4* *na2shou3*

to arrange a room he most be-good-at

‘He is good at arranging a room.’

c. [你 想 升官]_{CP} 我 無能無力

[*ni3 xiang3 sheng1guan1*]_{CP} *wo3* *wu2neng2we2li4*

You want get promotion I can-do-nothing-for

‘You want to get promotion but there is nothing I can do about it.’

d. * [在學校]_{PP} 他 最 拿手

[*zai4xue2xiao4*]_{PP} *ta1* *zui4* *na2shou3*

at school he most be-good-at

‘*He is good at school.’

(61) a. [電腦遊戲]_{NP} 他 最 在行
 [dian4nao3you2xi4]_{NP} ta1 zui4 zai4hang
 computer games he most be-good-at
 ‘He is good at computer games.’

b. [電腦]_{NP} 我 一竅不通
 [dian4nao3]_{NP} wo3 yi1qiao4bu4tong1
 computers I know-nothing-about
 ‘I know nothing about computers.’

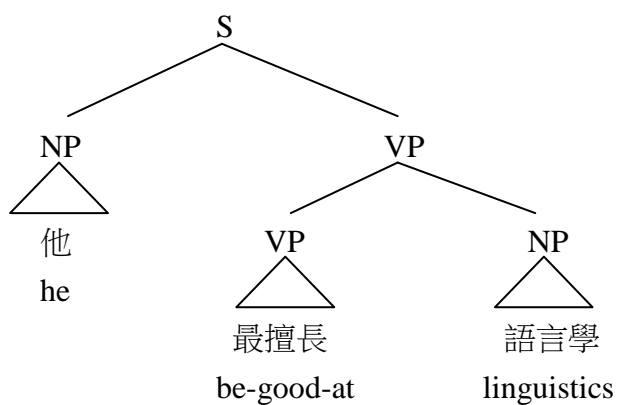
c. [那件事]_{NP} 我 略知一二
 [na4jian4shi4]_{NP} wo3 lue4 zhi1yier4
 that thing I know-a little-about
 ‘I know a little about that thing.’

As for these VO compound verbs, the required NP complement cannot be realized as post verbally OBJ in that the position of the object has been occupied by an NP. We can notice the difference if we compare VO compound verbs with VV compound verbs,. We repeat the comparison of the near-synonym pair in Mandarin Chinese 擅長 *shan4chang2* ‘be-good-at’ and 拿手 *na2shou3* ‘be-good-at’ in the examples in (62) and (63).

(62) a. 擅長 *shan4chang2* ‘be-good-at’

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

c. c-structure

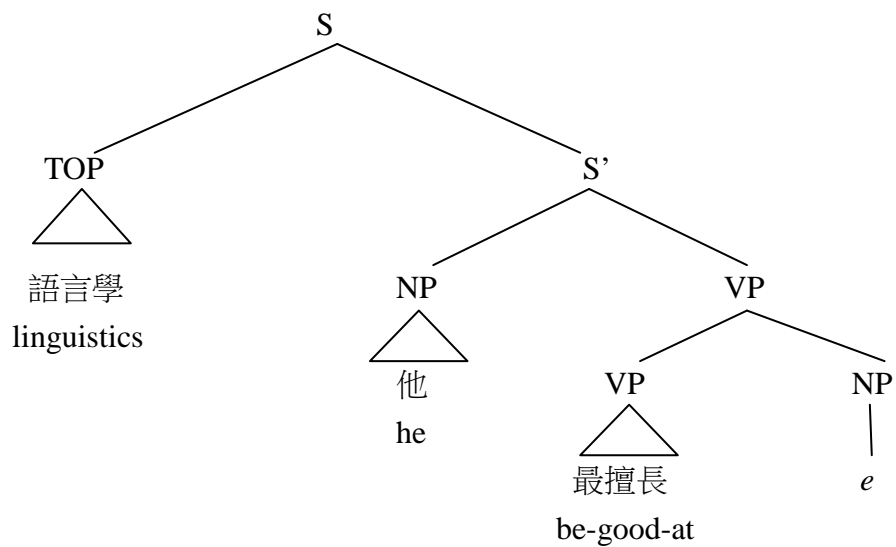


d. f-structure

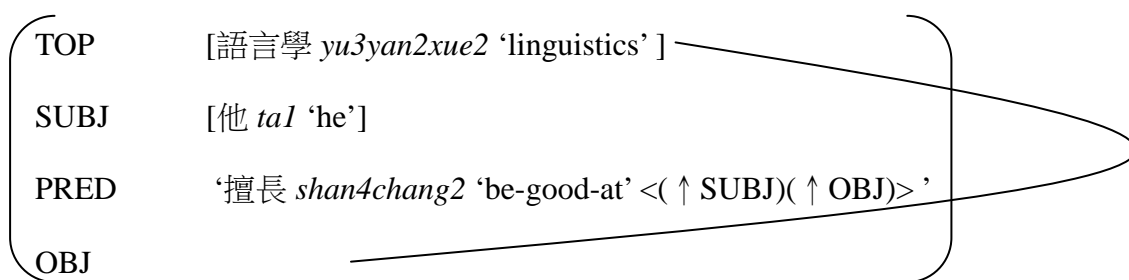
SUBJ	[他 <i>ta1</i> ‘he’]
PRED	‘擅長 <i>shan4chang2</i> ‘be-good-at’ <(↑ SUBJ)(↑ OBJ)>’
OBJ	[語言學 <i>yu3yan2xue2</i> ‘linguistics’]

e. [語言學]_{NP}, 他 最 擅長
[yu3yan2xue2]_{NP} ta1 zui4 shan4chang2
 linguistics he most be-good-at
 ‘He is good at linguistics.’

f. c-structure



g. f-structure



(63) 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.'

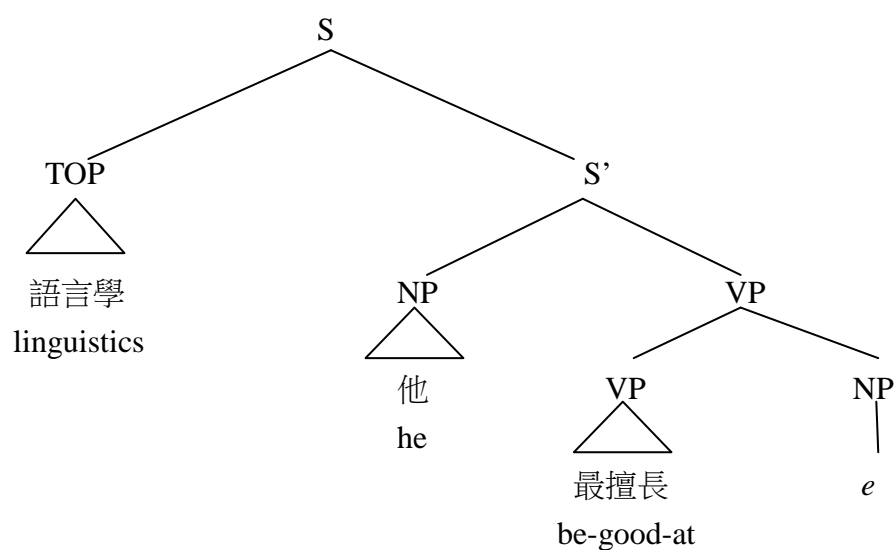
b. [語言學]_{NP}, 他 最 拿手

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

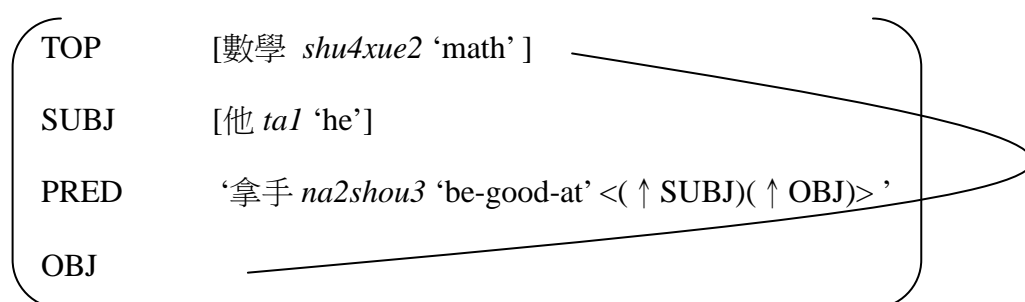
linguistics he most be-good-at

'He is good at linguistics.'

c. c-structure



d. f-structure



As for the transitive VV predicate 擅長 *shan4chang2* ‘be-good-at’, the object position is still empty, so it allows a lexically overt object to immediately follow the predicate.

Similar to VO compound verbs, the required complement must be realized as TOP of verbs like 心領 *xin1ling3le* ‘decline-with-thanks’ to satisfy the f-structure, as shown in (64).

- (64) a. *我 心領 [張三 要 幫 我 打掃 房間]_{CP}
wo3 xin1ling3 [Zhang1San1 yao4 bang1 wo3 da3sao3 fang2jian1]_{CP}
 I decline-with-thanks Zhang San want help me clean the room
 ‘Zhang San wanted to help me clean the room but I declined Zhang San’s
 help me clean the room with thanks.’
- b. [張三 要 幫 我 打掃房間]_{CP} 我 心領了
[Zhang1San1 yao4 bang1wo3 da3sao3fang2jian1]_{CP} wo3 xin1ling3le
 Zhang San want help me clean the room I decline-with-thanks
 ‘Zhang San wanted to help me clean the room but I declined Zhang San’s
 help me clean the room with thanks.’

Based on the data in the corpus and the discussion above, we assume that NP, VP, and CP can be realized as TOP of the first two types of predicates with movement paradoxes. And we further formulate a hierarchy which is similar to the thematic hierarchy⁶ for these three category types according to their frequency of occurrence in the corpus, that is, NP > VP > CP > PP. NP is the highest one in the hierarchy and this means that the category type is the least restricted in being able to be realized as TOP. On the other hand, if one category type can be realized as TOP of one predicate, other category types with a higher priority can be realized as TOP

⁶ Fillmore (1968) was the first to formulate a hierarchy to help determine subject selection. After him, most theories make use of a mapping between an ordered list of semantic roles and an ordered list of grammatical relations. Given a thematic role hierarchy (agent>theme ...) and a syntactic hierarchy (subject>object ...), the mapping usually proceeds from left to right, mapping the semantic role further to the left onto the first unoccupied position in the syntactic hierarchy. Thus, rather than having invariable correspondence relations, typical of the direct mapping approaches, the mapping is controlled by strategies relative to the hierarchies.

of that predicate as well, but not vice versa. We exemplify this in (65) and (66).

- (65) a. [設計網頁]_{VP} 他 最 拿手
 [*she4ji4wang3ye4*]_{VP} *ta1* *zui4* *na2shou3*
 to design website he most be-good-at
 ‘He is good at designing websites.’

- b. [網頁]_{NP} 他 最 拿手
 [*wang3ye4*]_{NP} *ta1* *zui4* *na2shou3*
 website he most be-good-at
 ‘He is good at website.’

- (66) a. [煮那道菜]_{VP} 他 最 拿手
 [*zhu3na4dao4cai4*]_{CP} *ta1* *zui4* *na2shou3*
 to cook that dish he most be-good-at
 ‘He is good at cooking that dish.’

- b. * [從那道菜]_{PP} 他 最 拿手
 [*cong2na4dao4cai4*]_{PP} *ta1* *zui4* *na2shou3*
 from that dish he most be-good-at
 ‘*He is good at from that dish.’

In (65), since the VP can be realized as TOP of 拿手 *na2shou3* ‘be-good-at’, the NP can as well. However, in (66), though the VP can be realized as TOP of 拿手 *na2shou3* ‘be-good-at’, the PP cannot.

5.2 The Third Type of Predicates with Movement Paradoxes: VLVQ⁷ Construction

Some predicates in the VLVQ constructions are semi-transitive as 拿手 *na2shou3* ‘be-good-at’ in that 來 *lai2* and 去 *qu4* can be considered as complements. The restriction that only activity verbs can be the verb in the VLVQ constructions is due to their inherent properties: repetition and continuance. And the meaning of this construction can be concrete activity like 晃來晃去 *huang4lai2huang4qu4* ‘to swing over and over again’ or an abstract activity by extension of meaning like 想來想去 *xiang3lai2xiang3qu4* ‘to think over and over again’ (Su, 2002; Krifka et al., 1995). For example:

- (67) a. 王先生 時常 在學校 跑來跑去
 Wang2xian1sheng1 shi2chang2 zai4xue2xiao4 pao3lai2pao3qu4
 Mr. Wang often at school to run over and over again
 ‘Mr. Wang often runs over and over again at school.’
- b. 他們 每個禮拜 都在飛來飛去
 ta1men2 mei3geli3bai4 dou1zai4fei1lai2fei1qu4
 They every week to fly over and over again
 ‘They fly over and over again every week.’

⁷ Chang (2007) used VLVQ to represent the construction V 來 V 去.

- c. 大家 都在談來談去
da4jia1 dou1zai4tan2lai2tan2qu4
 Everyone to talk over and over again
 ‘Everyone talks over and over again.’

As noted in Chang (2007), a verb that can be in a VLVQ construction must be an activity verb with an atelic event, such as *run*, *fly*, *scold* or *talk* and the meaning of the VLVQ can be interpreted in two ways as in (68).

(68) a. Subject does a concrete activity over and over again, such as *run* or *fly*.

b. Subject does an abstract activity over and over again, such as *scold* or *talk*

(Chang, 2007: 3)

Thus, Chang (2007) also notes that static verbs (胖 *pang4* ‘fat’), perfective verbs (吃完 *chi1wan2* ‘finish eating’) or achievement verbs (死 *si3* ‘die’) cannot be the verb in VLVQ constructions, as in (69).

- (69) a. * 王先生 時常 在胖來胖去
Wang2xian1sheng1 shi2chang2 zai4pang4lai2pang4qu4
 Mr. Wang often get fat
 ‘*Mr. Wang gets fatter.’

- b. * 他們 每個禮拜 都在吃完來吃完去
ta1men2 mei3geli3bai4 dou1zai4chi1wan2lai2chi1wan2qu4
 they every week finish eating
 ‘*They finish eating every week.’

- c. * 蚊子 每天 都在死來死去
wen2zi mei3tian1 dou1zai4si3lai2si3qu4
 mosquito everyday died
 ‘*Mosquito died everyday.’

(Chang, 2007: 4)

In addition, it is proposed that VO compound verbs such as 吃飯 *chi4fan4* ‘have meals’ or 喝酒 *he1jiu3* ‘drink alcohol’ cannot be the verb in VLVQ, as in (70).

- (70) a. * 王先生 時常 在飯店 吃飯來吃飯去
Wang2xian1sheng1 shi2chang2 zai4fan4dian4 chi1fan4lai2chi1fan4qu4
 Mr. Wang often at restaurant have meals
 ‘Mr. Wang often has meals at a restaurant.’
- b. * 王先生 時常 在飯店 喝酒來喝酒去
Wang2xian1sheng1 shi2chang2 zai4fan4dian4 he1jiu3lai2he1jiu3qu4
 Mr. Wang often at restaurant drink alcohol
 ‘Mr. Wang often drinks alcohol at a restaurant.’

On the other hand, it is also found that there is a “syntax-semantics mismatch” in

VLVQ constructions (Chang, 2007). He has mentioned that the VLVQs are intransitive syntactically and transitive semantically whether the verb in the VLVQ is transitive or not and he takes the communication verb 罵 *ma4* ‘scold’ as an example.

- (71) a. 王媽媽 每天(都) 罵 小孩子
Wang2ma1ma1 mei3tian1(dou1) ma4 xiao3hai2zi
 Mrs. Wang everyday scold her child
 ‘Mrs. Wang scolds her child everyday.’
- b. 王媽媽 每天(都) 罵來罵去
wang2ma1ma1 mei3tian1(dou1) ma4 lai2 ma4 qu4
 Mrs. Wang everyday scold over and over again
 ‘Mrs. Wang scolds over and over again everyday.’
- c. * 王媽媽 每天(都) 罵來罵去 小孩子
wang2ma1ma1 mei3tian1(dou1) ma4lai2ma4qu4 xiao3hai2zi
 Mrs. Wang everyday scold over and over again her child
 ‘Mrs. Wang scolds her child over and over again everyday.’
- d. 小孩子啊 王媽媽 每天(都) 罵來罵去
xiao3hai2zia wang2ma1ma1 mei3tian1(dou1) ma4lai2ma4qu4
 the child Mrs. Wang everyday scold over and over
 ‘Mrs. Wang scolds the child over and over everyday.’

(Chang, 2007: 10)

The bare verb 罵 *ma4* ‘scold’ is transitive syntactically and takes two argument roles: *x* which will map to SUBJ and *y* which will map to OBJ, as in (71a). However, the predicate 罵來罵去 *ma4lai2ma4qu4* ‘scold over and over again’ is intransitive syntactically, as in (71b), but retains its transitivity semantically as it still requires a patient role. Since it is intransitive syntactically, the required patient role cannot be realized as an overt post verbal OBJ, as in (71c). If there is an overt patient syntactically, this patient must be realized as the matrix TOP anaphorically controls the missing OBJ. (71b) may be accounted for by the following Principle of Omission under Low Discourse Prominence in Goldberg’s (2005) Construction Grammar.

Principle of Omission under Low Discourse Prominence:

Omission of the patient argument may be possible when the patient argument is construed to be de-emphasized/unprofiled in the discourse via-à-vis the action.

On the other hand, (71d) may be accounted for by the construction topicalization.

The complement which is realized as TOP is the focus in the discourse (Li & Thompson, 1981; Tsao, 1990; Shi, 2000; Goldberg, 2004:29; 2006:196). For examples:

- (72) a. 牛排 我 吃來吃去 還是 這家 最 好吃
niu2pai2 wo3 chi1lai2chi1qu4 hai2shi4 zhe4jia1 zui4 hao3chi1
 steak I eat over and over again still this one most delicious
 ‘cf. The steak in this restaurant is most delicious.’
- b. 這筆帳 我 算來算去 還是 不對
zhe4bi3zhang4 wo3 suan4lai2suan4qu4 hai2shi4 bu4dui4
 this account I check over and over again still be-wrong
 ‘This account is still wrong even though I have checked it over and over again.’
- c. 那本書 我 讀來讀去 還是 不了解 它的內容
na4ben3shu1 wo3 du2lai2du2qu4 hai2shi4 bu2liao3jie3 ta1denei4rong2
 that book I read over and over again still don’t understand its content
 ‘I still don’t understand the content of that book even I read it over and over again.’

From the discussion above, we assume that a VLVQ construction is like the other three types of predicates with movement paradoxes in Mandarin Chinese, where only NP, VP, and CP can be realized as its TOP and the hierarchy mentioned in the previous section is still applicable.

- (73) a. [電腦]_{NP} 他 學來學去 都學不會
[dian4nao3]_{NP} ta1 xue2lai2xue2qu4 dou1xue2bu2hui4
 ‘He cannot learn how to use the computer.’

- b. [修電腦]_{VP} 他 學來學去 都學不會
 [xiu1dian4nao3]_{CP} ta1 xue2lai2xue2qu4 dou1xue2bu2hui4
 ‘He cannot learn how to fix computers.’

- c. * [從那個主題]_{PP} 他 聊來聊去 都不厭煩
 [cong2na4gezhu3ti2]_{PP} ta1 liao2lai2liao2qu4 dou1bu2yan4fan2
 ‘cf. He doesn’t get bored taking about the topic.’

The above discussion and examples show that only NP, VP, and CP can be realized as TOP of the four types of predicates with movement paradoxes in Mandarin Chinese. NP is the highest category type in the hierarchy in that NP is the subcategorized complement of these predicates. Nevertheless, not all NP category types can be realized as TOP. In Section 5.3, we will argue that there are some limitations for NPs and VPs to be realized as TOP.

5.3 Semantic Restrictions for NPs as TOP

Let us begin with the grammatical category, NP, since the noun category seems to be the most significant category. As Bosch et al. (1976) claim, the noun category is one of the most important categories in language.

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

(74) a. [象棋]_{NP} 他 最 拿手
 [xiang4qu2]_{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 (74b) and (74c) are ungrammatical as “the topic-position NPs are semantically selected and well-restricted by the predicates”, that is, the topic arguments of *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, (74b) and (74c) are acceptable grammatical sentences. It seems that some NP arguments which are not semantically selected by the predicate can co-occur with the predicate the meaning of which is extended through the mechanism ‘metonymy’. Cognitively, metonymy refers to the use of a single

characteristic to identify a more complex entity and is one of the basic characteristics of cognition. It makes one entity as a reference point to another entity, which is continuous or proximate to that reference point (Nunberg, 1978). It is common for people to take one well-understood or easy-to-perceive aspect of something and use that aspect to stand either for the thing as a whole or for some other aspect or part of it (e.g., the infant's association of the nipple with milk.)

Lakoff and Johnson (1980) illustrated the following examples:

(75) a. The pen is mightier than the sword. (Lakoff. G. and Johnson, 1980: 38)

b. The STEAK left without paying.

c. The sails crossed the ocean.

We can see how metonymy is used in these three examples. In (75a), the *pen* represents the thought or publishing written with a pen; the *sword* represents certain military force. (75b) is a common usage in a restaurant for a waitress referring to a customer. *The STEAK* represents the customer ordering the dish steak. So this sentence means the customer leaves without paying, not the dish *steak*. The part-whole relation also exists between two entities. In (75c), the relation exists between *sails* and *ships* are part-whole relation. *Sails* is metonymic since *sails* are the most salient part in identifying *ships* in the ocean. Now, we will discuss the data

mentioned earlier:

- (76) a. [張三]_{NP} 老王 最 拿手
 [Zhang1San1]_{NP} Lao3Wang2 zui4 na2shou3
 Zhang San Lao Wang most be-good-at
 ‘Lao Wang is good at Zhang San.’

- b. [木板]_{NP} 老王 最 拿手
 [mu4ban3]_{NP} Lao3Wang2 zui4 na2shou3
 wood board Lao Wang most be-good-at
 ‘Lao Wang is good at wood board.’

- c. [IBM]_{NP} 老王 最 拿手
 [IBM]_{NP} Lao3Wang2 zui4 na2shou3
 IBM Lao Wang most be-good-at
 ‘Lao Wang is good at IBM.’

For some native speakers, these three sentences are grammatical although the topic NPs do not refer to technique or knowledge that can be mastered as Huang (1989) suggested. That might be because these sentences involve the usage of metonymy. The topic NPs in (76) all represent certain abstract meanings instead of their literal meanings. For instance, 張三 *Zhang1San1* ‘Zhang San’ in (76a) might represent a customer. And 張三, 老王最拿手 *Zhang1San1, Lao3Wang2 zui4 na2shou3* ‘Lao Wang is good at Zhang San’ might mean that in a company, 老王 *Lao3Wang2* ‘Lao

Wang' is the salesman who is good at communicating with the customer 張三 *Zhang1San1* 'Zhang San'. And 木板 *mu4ban3* 'wood board' in (76b) might represent the skill in carving the board or the ability to tell the quality of the board. So 木板, 老王最拿手 *mu4ban3, Lao3Wang2 zui4 na2shou3* 'Lao Wang is good at wood board.' can mean that 老王 *Lao3Wang2* 'Lao Wang' is good at carving the board or picking the board of the best quality. Similarly, *IBM* in (76c) may represent people working for the IBM Company or represent the products of IBM. Thus, *IBM*, 老王最拿手 *IBM, Lao3Wang2 zui4 na2shou* 'Lao Wang is good at IBM' could mean that 老王 *Lao3Wang2* 'Lao Wang' is good at dealing with people working for IBM. It could also mean that 老王 *Lao3Wang2* 'Lao Wang' is good at fixing the malfunctions of IBM computers. From these examples, we can conclude that certain NPs not referring to technique or knowledge may be realized as TOP of some predicates as long as their meanings can be shifted to conform to the semantic restrictions of the predicate by certain mechanisms such as metonymy. And the interpretation of the sentence depends on the meaning of the predicate and the context. Therefore, it seems that there is no specific semantic restriction for an NP to be base-generated as TOP of Mandarin Chinese predicates with movement paradoxes.

5.4 PP with TOP-Introducing Marker

As discussed above, a PP cannot be realized as TOP, as in (77a). However, there is a certain kind of PP that can be realized as TOP of the predicates discussed above.

- (77) a. * [從那道菜]_{PP} 他 最 拿手
 [*cong2na4dao4cai4*]_{PP} *ta1* *zui4* *na2shou3*
 from that dish he most be-good-at
 ‘*He is good at from that dish.’
- b. [關於 電影製作的話]_{PP} 他 最 拿手
 [*guan1yu2* *dian4ying3zhi4zuo4de hua4*]_{PP} *ta1* *zui4* *na2shou3*
 about movie-making he most be-good-at
 ‘He is good at things about movie-making.’
- c. [關於 旅行的行程的話]_{PP} 他 作主就好
 [*guan1yu2* *lü3xing2dexing2cheng2dehua4*]_{PP} *ta1* *zuo4zhu3* *jiu4hao3*
 about the schedule of tour he take-charge-of
 ‘He takes charge of things about the schedule of tour.’
- d. [至於 西藏的議題]_{PP} 他 最 在行
 [*zhi4yu2* *xi1zang4deyi4ti2*]_{PP} *ta1* *zui4* *zai4hang2*
 about the issue of Tibet he most be-good-at
 ‘He is good at the issue of Tibet.’

In (77b~d), complements realized as TOPs are in the PP category, but these PP complements are a little different from the PP complement in (77a) in the marker 關

於...的話 *guan1yu2...dejua4* ‘things about...’or 至於 *zhi4yu2* ‘about’, which is used to introduce TOP in Mandarin Chinese. The PP complements in (78) all have this TOP-introducing marker, so they can be realized as TOP.

- (78) a. [關於 電腦病毒的話]_{pp} 我 無能為力
[guan1yu2 dian4nao3bing4du2dejua4]_{pp} wo3 wu2 neng2 wei2 li4
 about computer virus I can-do- nothing-for
 ‘There is nothing I can do about things about computer viruses.’

- b. [關於 網頁設計的話]_{pp} 他 最 拿手
[guan1yu2 wang3ye4she4ji4dehua4]_{pp} ta1 zui4 na2 shou3
 about website design he most be-good-at
 ‘He is good at things about website design.’

- c. [關於那個主題的話]_{pp} 他 聊來聊去 都不厭煩
[guan1yu2na4gezhu3ti2dehua4]_{pp} ta1 liao2lai2liao2qu4 dou1bu2yan4fan2

Tsao (1987) proposes three common semantic relationships between topic and subject: (i) the possessor and the possessed, (ii) whole and part, and (iii) class and member. Examples are as follows:

- (79) a. 關於 那個人的話 右腿 斷了
guan1yu2 na4geren2dehua4 you4tui3 duan4le
 about that person right leg has been broken
 ‘About that person, his right leg has been broken.’

- b.* 關於 右腿的話 那個人 斷了
guan1yu2 you4tui3dehua4 na4geren2 duan4le
 about right leg that person has broken
 ‘*About the right leg, that person has broken.’

- (80) a. 至於 那箱 蘋果 三個 他 吃掉了
zhi4yu6 na4xiang1 ping2guo3 san1ge ta1 chidiao4le
 about that box apple three he has eaten
 ‘About that box of apples, he has eaten three of them.’

- b.* 至於 三個 蘋果 那箱 他 吃掉了
zhi4yu6 san1ge ping2guo3 na4xiang1 ta1 chidiao4le
 about three apple that box he has eaten
 ‘*About three apples, he has eaten that box.’

- (81) a. 至於 魚 嘛 鮪魚 現在 最 貴
zhi4yu2 yu2 ma wei3yu6 xian4zai4 zui4 gui4
 about fish AUX tuna now most expensive
 ‘About the fish, tuna fish is the most expensive now.’

- b.* 至於 鮪魚 嘛 魚 現在 最 貴
zhi4yu2 wei3yu6 ma yu2 xian4zai4 zui4 gui4
 about tuna AUX fish now most expensive
 ‘*About tuna fish, the fish is the most expensive now.’

In (79), the relationship between the topic 那個人 *na4geren2* ‘that person’ and the

subject 右腿 *you4tui3* ‘right leg’ is possessor to possessed. In (80), the relationship between the topic 那箱蘋果 *na4xiang1ping2guo3* ‘that box of apples’ and the subject 三個 *san1ge* ‘three’ is whole to part. In (81), the relationship between the topic 魚 *yu2* ‘fish’ and the subject 鮪魚 *wei3yu6* ‘tuna’ is class to member. The b-sentences are all ungrammatical in that the subjects precede the topics. Thus, it is suggested that PPs with the topic-introducing marker 關於 ... 的話 *guan1yu2...dehua4* ‘things about...’ and 至於 *zhi4yu2* ‘about’ are different from PPs without these two markers. Therefore, PPs with these two topic-introducing markers will not be put into the hierarchy NP > VP > CP > PP and they may be considered as a specific kind of PP.

5.5 Summary

There are three types of predicates with movement paradoxes in Mandarin Chinese: VO compound verbs, SV verbs and VLVQ constructions. These verbs are semi-transitive i.e., they are intransitive syntactically and transitive semantically. Consequently, they require an NP complement but it cannot be realized as an overt post verbal object. This required NP complement must be anaphorically controlled by the matrix TOP to satisfy the completeness condition of the f-structure. In addition, only three category types, NP, VP, and CP can be realized as TOP identical to the missing OBJ. The occurrence frequencies of these three category types in the

corpus form a hierarchy: NP > VP > CP > PP. The high frequency of the occurrence of NPs is due to their being least restricted in their ability to be realized as TOP. However, not all items in these three category types can be realized as TOP, they must conform to the semantic restrictions of the predicates. As for those that do not conform to the requirement of the predicates, they might also cohere with the semantic restrictions by some mechanism such as type-shifting or metonymy.