

# THE CHINESE SERIAL VERB CONSTRUCTION PROPER

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(Excerpt from Master's Thesis)

## 1.0 Introduction

Although *serial verb constructions* (SVCs) in Chinese have been the subject of a number of studies, *serial verb constructions proper* (SVCPs) have rarely been investigated by Chinese linguists. It is these Chinese SVCPs, which have the sequence of NP V NP V (NP), that is the concern of this thesis.

Following is an example of an SVCP

(1) zhangsan yang zhu mai

Zhangsan raise pig sell

Zhangsan raises pigs and sells pigs.

Chinese is an SVO language, that is to say, a sentence should consist of a subject followed by a verb, which, if transitive, should be followed by an object. In (1), there is no problem for the first three words. *Zhangsan* appearing before *raise* is the subject of the verb and the NP *pig* appearing after *raise* is its direct object. However, for the second verb *sell* there is no following noun phrase even though it is a transitive verb.

Mark C. Baker's (1989) theory of SVCPs, which provides an account for a similar phenomenon in some African languages, provides the theoretical framework used in this thesis. I will be using this approach to investigate different types of Chinese SVCPs and I will show that no matter whether the SVCP is composed of two transitive verbs, a transitive and an intransitive or two intransitives, the construction can be accounted in a relatively simple and straightforward manner.

## Abbreviations

Following abbreviations are used in this thesis:

Adv	: adverb
Adv.P:	adverbial phrase
Ag	: agent
AP	: adjective phrase
COMP:	complementizer
Det.	: determiner
Go	: goal
INFL	: inflection
LE	: an aspect or a particle in Chinese
Loc	: locative
MW	: measure word
N	: noun
NP	: noun phrase
P	: preposition
PP	: prepositional phrase
Q	: quantifier
SVC	: serial verb construction
SVCP	: serial verb construction proper
Th.	: theme
V	: verb
Vi	: intransitive verb
VP	: verb phrase
Vt	: transitive verb

# THE APPLICATION OF BAKER'S THEORY TO THE CHINESE SVCP (PART I)

## 2.1 How Baker's theory works for the Chinese SVCP

### 2.1.1 Both V1 and V2 are dyadic verbs

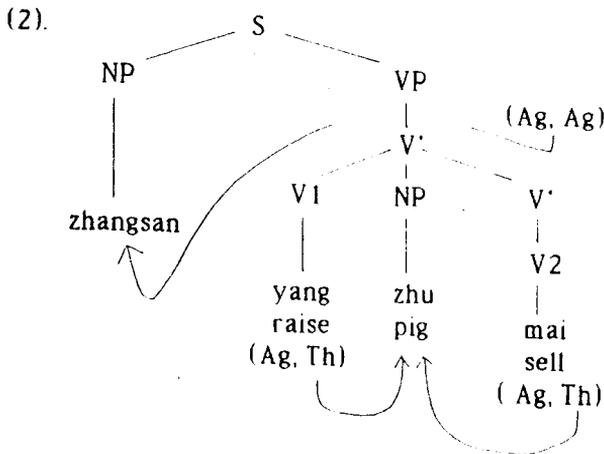
In Chinese there is a type of serial verb construction (SVCP) that is composed of a sequence of two transitive verbs with a shared object between them as example (1) shows.

(1). zhangsan yang zhu mai

Zhangsan raise pig sell

Zhangsan raises pigs and sells pigs.

In this sentence, *Zhangsan* is the agent who both raises pigs and sells pigs. And *pig* is the shared object of both *raise* and *sell*. Following Baker, we have the tree structure illustrated in (2).



The SVCP here is the higher V' consisting of V1 *raise*, the shared theme NP *pig*, and V2 *sell* projected to the V' level.

This structure is consistent with Baker's Head Licensing Condition (HLC). In accordance with HLC, at each point a bar level can either increase by one or remain the same. In (2), from V1 to the higher V', the bar level increases by one; from V2 to the lower V', the bar level also increases by one. But from lower V' to higher V', the bar level remains the same. Moreover, consistent with the HLC, the SVCP in this structure has two heads--V1 *raise* and V2 *sell*.

According to Baker (1989:546), there are three possible structures for a double-headed V': the V' immediately dominates (i) two V<sup>0</sup>s; (ii) a V<sup>0</sup> and a V'; or (iii) two V's. For the correct representation of the structure of SVCP, (i) and (iii) are ruled out since (i) violates the principle of word order as explained in Chapter III and (iii) represents the structure for coordination. In Baker's opinion, only [V' V1 NP V'2], i.e. the tree structure in (2), is appropriate for the SVCP.

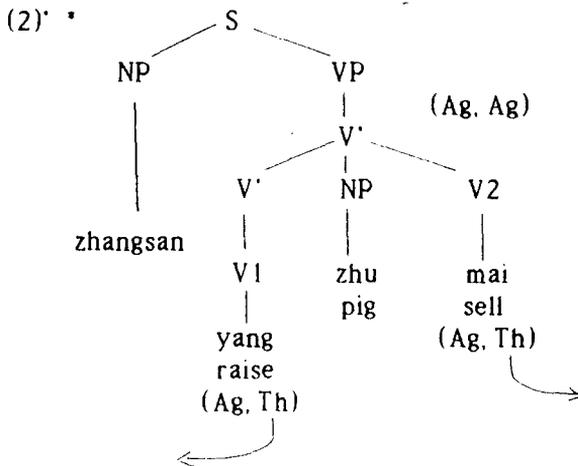
The tree structure of (2) also conforms with the principles of word order and theta-role assignment in Chinese. The principle of word order says that at the X' level, X theta-marks a phrase in a direction opposite to the one employed at the X<sup>0</sup> level. And the principle of theta-role assignment requires that X may theta-mark a phrase if X or the projection of X is a structural sister of the phrase.

According to Travis (1987:127), at the X<sup>0</sup> level in Chinese, X assigns a theta-role and Case rightward to an NP. Within the SVCP in (2), V1 *raise* and the NP *pig* are sisters; V1 is at the zero bar level and *pig* is to its right. Hence, the verb *raise* can assign a theme role and an object Case to the NP

*pig*, as the arrow in (2) shows. The V2 *sell* is not sister of *pig*, but its V' projection is. According with the principle of word order and theta-role assignment, V2 theta-marks an NP leftward. Thus, *pig* receives theme roles from both V1 and V2 and the theme role assignment of these two verbs is satisfied.

The fact that the NP *pig* receives two theme roles is not a violation of Baker's theory. It agrees with the Theta-Criterion, which says that an argument is allowed to receive more than one theta-role if and only if all its theta-roles are assigned to the same structural position.

As shown in (2)', the position of the V<sup>0</sup> and lower V' in the SVCP can not be exchanged. In other words, V1 must be a bare verb and V2 must project to one bar level. Otherwise, the theme role assignment of the verbs cannot be satisfied.



In (2)', the lexical property of agent role assignment is satisfied for both verbs. Yet, the property of theme role assignment is not satisfied for either. According to the principle of word order as it applies to Chinese, a verb assigns an internal theta-role and Case rightward to an NP at the X<sup>0</sup> level

and theta-marks the same NP to the left at the X' level. However, on the right side of the verb *sell* and on the left side of V' *raise* there is no NP for them to Case-mark or theta-mark. The lexical properties of the two verbs are thus not satisfied in this tree diagram and the Projection Principle is violated. Furthermore, the NP *pig* cannot get a theta role and Case since it appears to the left of the verb *sell* and to the right of V' *raise*. This is a violation of the Theta Criterion and the Case Filter. This indicates that the verb before the shared object should be a bare V rather than a V' and the verb after the shared object must project to the V' level. If the positions of V<sup>0</sup> and V' were exchanged, the principle of word order, the Theta Criterion, Case Theory and the Projection Principle would be violated.

There are several advantages in employing Baker's theory to account for the Chinese SVCP. In the first place, it explains why there is no NP after V2 *sell* in SVCs such as (1), which is repeated here.

(1). zhangsan yang zhu mai

Zhangsan raise pig sell

'Zhangsan raises pigs and sells pigs.'

Chinese is an SVO language. In non-SVCs, both *raise* and *sell* have their agent arguments to the left and their theme arguments to the right.

(3). a. zhangsan yang zhu  
(Agent) (Theme)

Zhangsan raise pig

'Zhangsan raises pigs.'

b. zhangsan mai zhu  
(Agent) (Theme)

Zhangsan sell pig

'Zhangsan sells pigs.'

However, if we look at (1) carefully, we can see that after the second verb *sell*, there is no NP. In other words, the theme is missing.

We cannot assume that the NP that follows *sell* is not required since (4) shows that it is obligatory.

- (4) \* zhangsan mai  
zhangsan sell

Yet if we put an NP after the second verb in an SVCP like (1), the sentence (5) is ungrammatical.

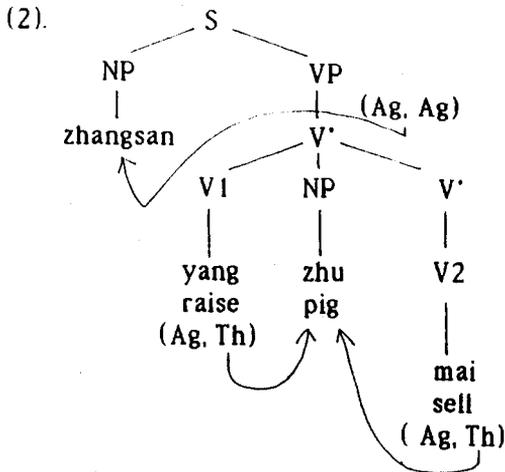
- (5) \* zhangsan yang zhu mai zhu  
Zhangsan raise pig sell pig

How can we account for the fact that the transitive verb *sell* does not allow its object to follow it, in apparent violation of the Projection Principle?

This phenomenon obtains a good explanation in Baker's theory. The fact that there is no NP following V2 does not necessarily mean that *sell* does not have a theme argument. Rather than having its own object, *sell* simply shares the object with V1 *raise*.

Furthermore, the fact that (5) is ruled out can also obtain an explanation from Baker's theory. V2 *sell* has only one internal role to discharge. It has two choices: assign the theme role either to the shared NP, or to the NP following it. As discussed by Baker, object sharing in an SVCP is obligatory, so that *sell* must discharge its theme role to the shared NP *pig*. As a result, the NP after *sell* cannot get any theta role. This is a violation of the Theta-Criterion; (5) is thus ruled out.

Baker's theory also accounts for the theta-role assignment properties of both verbs. As we showed in discussing the tree structure in (2), the theme role assignment of the two verbs, i.e., *raise* and *sell*, is satisfied



Apart from a theme role, each verb also has an agent role to assign. The VP in (2) is the maximal projection of both *raise* and *sell* and it is the structural sister of the subject NP *zhangsan*. In accordance with the principle of word order and the theta-role assignment, the two verbs can therefore assign agent roles to the NP *zhangsan* through the VP. In this way, the lexical properties of theta-role assignment are satisfied for both verbs and the Projection Principle is obeyed. Moreover, this gives the right interpretation for the sentence, since *zhangsan* is the person who both raised and sold the pigs.

A good theory not only tells us which sentences are good, but also tells us which sentences are bad. Another advantage of using Baker's theory to explain the Chinese SVCP is that it accounts for the fact that V2 can be a triadic verb, but V1 cannot.

### 2.1.2 V2 as triadic verbs

In the following sentences V1 is a dyadic verb and V2 a triadic verb.

- (6). a. ta changchang mai shu sung ren  
 S/He often buy book send person

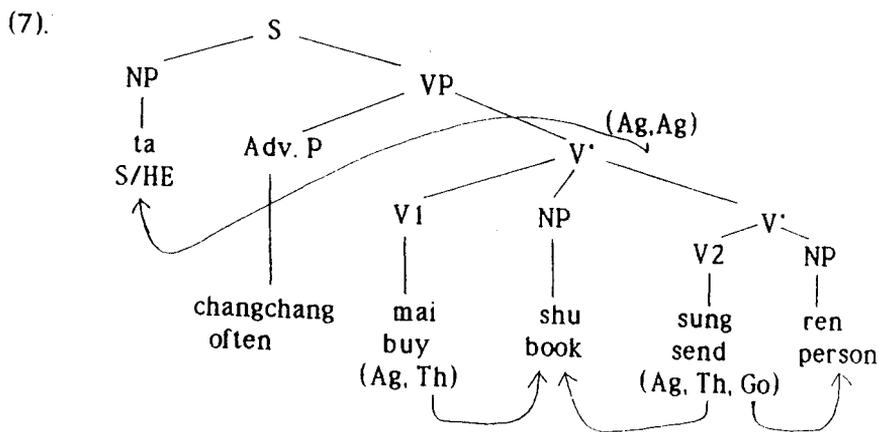
'S/He often buys books and gives them to others.'

b. wo xie-le ge zhitiao di-gei ta

I write-Le MW note pass-give s/he

'I wrote a note and gave it to her/him.'

In (6a), apart from the external argument *s/he*, the V2 *send* has two internal arguments, i.e., *book* and *person*. The structure of (6a) can be expressed in (7).



In (7), the NP *person*, is generated inside the lower V'. In other words, *person* is only the argument of V2. In order to take this argument, V2 must project to the V' level. Since V2 and the NP *person* are sisters and since *person* is to the right of V2, V2 can assign a goal role to the NP. V2 cannot assign a theme role to *person* because the order of thematic role assignment is fixed. According to Baker (1989:540), all triadic verbs compose with their arguments one at a time in a set order, and this order of composition corresponds to hierarchical relationships at d-structure. In particular, dative verbs combine first with the goal, then with the theme, and finally with the agent. Hence, at the lowest level, V2 *send* first assigns a goal rather than a

theme role to its sister category, the NP *person* V2 is not the sister of the NP *book*, but V2's projection (i.e., the lower V') is. At the V' level, the verb assigns a theme role leftward to the shared NP *book*, which can also receive a theme role from V1 *buy*, as V1 is the sister of *book*, occurs to its left, and is at the zero bar level. Thus, the theme and goal role assignments of the two verbs are satisfied and the sentence is grammatical.

### 2.1.3 V1 as a triadic verb

In the Chinese SVCP, just as in the SVCP of Yoruba and Sranan (Baker 1989:522), triadic verbs cannot appear before dyadic verbs.

(8) A triadic verb occurs before a dyadic verb in SVCP.

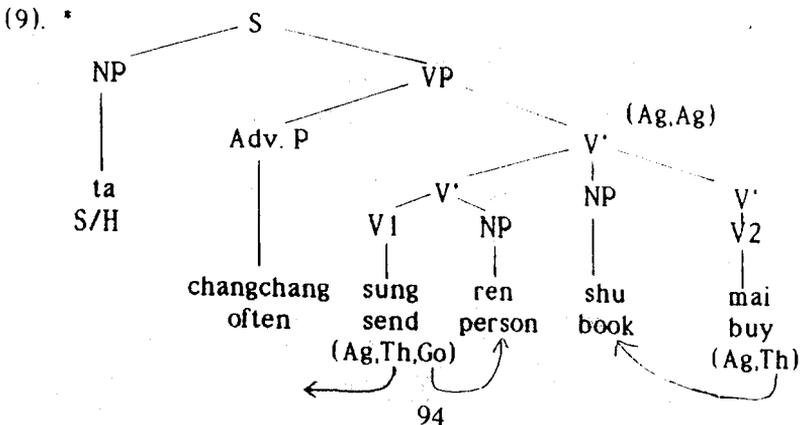
a \* ta sung ren shu mai

s/he send person book buy

b \* wo di-gei ta ge zhitiao xie-le

I pass-give s/he MW note write-LE

As shown in Baker, 1989, a triadic verb, (for example, the verb *send* in (6a)), must project to the V' level in order to theta-mark the indirect object *person*. If it exchanges positions with the dyadic verb *buy*, then neither the verb *send* nor *buy* can theta-mark the shared NP *book*, as illustrated by the following tree structure.



The SVCP in (9) is the higher V' consisting of two lower V's and a shared object between them. Within the lower V' on the left side (i.e., the V' *send person*), the verb *send* can assign a goal role to the NP *person* as the NP is the sister of *send* which is at zero bar level. However, *send* cannot theta-mark the NP *book*. This is because, firstly, according to the principle of word order, *send* theta-marks an adjacent NP rightward at the zero bar level. The NP *book* is to the right of *send*, yet the verb is not adjacent to the NP. As a result, the verb cannot discharge any thematic role to *book* at the zero bar level. Secondly, the projection of *send* (i.e. the left lower V') cannot assign a theme role to the NP *book* either, since at the one bar level theta-marking is leftward and to the left of *send* within its projection, there is no NP. The theme role of the verb *send* in this sentence thus has no recipient, and the sentence is thus ungrammatical.

Thus, a conclusion can be reached that V1 in an SVCP cannot be a triadic verb.

## 2.2 Some apparent counterexamples

In Chinese, it appears that in some examples, V1 can be followed by two nominals, as the examples in (10) show.

(10). a. zhangsan you wo dongxi chi

Zhangsan steal I thing eat

'Zhangsan stole food from me and ate the food.'

b. zhangsan qiang lisi qian hua

Zhangsan rob Lisi money spend

'Zhangsan robbed money from Lisi and spent the money.'

The two examples in (10), although SVCPs, are different from the examples in (1) and (5) in that in the examples of (1) and (5) there is a

single nominal between V1 and V2, while in the sentences of (10) there are two. For example, in (10a), *I* and *thing* occur between *steal* and *eat*.

In non-SVCP sentences, verbs like *steal* and *rob* usually take two nominals after them.

- (11) a. zhangsan tou-le wo yi-jian yifu  
Zhangsan steal I one-MW clothes  
'Zhangsan stole a dress from me.'
- b. zhangsan qiang lisi yi-kuai shoubiao  
Zhangsan rob Lisi one-MW watch  
'Zhangsan robbed a watch from Lisi.'

The nominals immediately following these verbs are typically personal pronouns or proper names while the second nominals are ordinary nouns. This sequence looks like a triadic verb with its goal and theme arguments.

An uncontroversial triadic verb in Chinese also has two nominals following it. Like the two nominals in (11a) and (b), the first is usually a personal pronoun or proper name and the second an ordinary noun.

- (12) zhangsan gaosu wo yi-ge mimi  
(Go.) (Theme)  
Zhangsan tell I one-MW secret  
'Zhangsan told me a secret.'

The two nominals following the triadic verb *tell* in (12) function as the goal and theme of the verb, respectively. The two nominals after *steal* and *rob*, however, behave differently. They do not function as two separate NPs. Rather, they function as one NP, being the theme of the verb. This indicates that verbs such as *steal* and *rob* in Chinese are dyadic. The examples in (10) are not real counterexamples.

That *steal* is a dyadic verb with a single NP complement can be seen from the following test.

### 2.2.1 Passivization Test

It is known that in English and other languages, a sentence with a finite dyadic verb can be passivized by converting the direct object into the subject of the sentence and making certain other modifications, as the following examples illustrate.

- (13). a. They built a house in 1989. (Active)  
b. A house was built in 1989 (by them). (Passive)

In an English sentence with a finite triadic verb, both the theme and goal of the triadic verb can become subjects of sentences through passivization.

- (14). a. He gave me a book.  
b. Goal as the subject  
I was given a book (by him).  
c. He gave a book to me.  
d. Theme as the subject  
A book was given to me (by him).

Sentence (15) exemplifies the active voice of two Chinese sentences with dyadic verbs. In these two sentences, the NPs before the verbs are the agents and those after the verbs are the themes. In (15a), *cat* is the agent (here functioning as a subject) and *fish* is the theme (functioning as direct object).

- (15). Active voice  
a. mao chi-le yu  
cat eat-LE fish

'The cat ate the fish.'

b. ta piping-le wo

s/he criticize-LE I

'S/He criticized me.'

The sentences of (15) can be passivized by preposing the themes and putting a BEI before the agents as (16) shows.

(16). Passive voice

a. yu bei mao chi-le

fish BEI cat eat-LE

'The fish was eaten by the cat.'

b. wo bei ta piping-le

I BEI S/He criticize-LE

'I was criticized by him/her.'

As the result of passivization, the direct object of *eat* in (15a) (i.e., *fish*) is put into the subject position in (16a). Also, the preposition BEI is added in front of the agent *cat*. The passive voice of a sentence with a dyadic verb thus has the form of Theme+BEI+Agent+Verb+Other.

Sentences with triadic verbs in Chinese, however, seem to follow different patterns from their English counterparts in passive sentences. In Chinese, *gei* 'give' and *gaosu* 'tell' are typical triadic verbs. In the active form of sentences, both verbs have two NP complements.

(17). a. ta gaosu-le wo yi-ge mimi

s/he tell-LE I one-MW secret

'S/HE told me a secret.'

b. ta gei-le wo yi-jian yifu

s/he give-LE I one-MW clothes

'S/He gave me a dress.'

In (17a), *wo* 'I' is the goal and *yi-ge mimi* 'a secret' is the theme of the verb *gaosu* 'tell'. However, neither of them can be put into the subject position. It seems that sentences with triadic verbs cannot be passivized.

(18). Theme as subject

a. \* yi-ge mimi bei ta gaosu-le wo  
one-MW secret BEI s/he tell-LE I

'One secret was told by him.'

b. \* yi-jian yifu bei ta gei-le wo  
one-MW clothes BEI s/he give-LE I

'A dress was given to me by him.'

Goal as subject

c. \* wo bei ta gaosu-le yi-ge mimi  
I BEI s/he tell-LE one-MW secret

'I was told a secret by him.'

d. \* wo bei ta gei-le yi-jian yifu  
I BEI s/he give-LE one-MW clothes

'I was given a dress by him.'

Both goal and theme (two nominals) as subject

e. \* wo yi-ge mimi bei ta gaosu-le  
I one-MW secret BEI s/he tell-LE

f. \* wo yi-jian yifu bei ta gei-le  
I one-MW dress BEI s/he give-LE

In (18), BEI marks the agents, indicating the persons who performed the acts. In (a) and (b), the theme of the verb is realized as subject. But, the sentences are not acceptable in Chinese. Nor are those sentences with the

goals of the verbs functioning as subjects, as in (c) and (d), or sentences in which both the theme and the goal are preposed, as in (e) and (f).

Thus, a conclusion can be reached that a triadic verb in Chinese can not be passivized. In other words, neither the theme nor the goal nor the combination of both theme and goal of a triadic verb can be put into the subject position.

Using this conclusion, let's check the behavior of verbs like *steal* and *rob*, which also have two nominals following them in active sentences. We still take the sentences in (11) as our examples.

- (11). a. zhangsan tou-le wo yi-jian yifu  
Zhangsan steal-LE I one-MW clothes  
'Zhangsan stole a dress from me.'
- b. zhangsan qiang lisi yi-kuai shoubiao  
Zhangsan rob Lisi one-MW watch  
'Zhangsan robbed a watch from Lisi.'

(19). The passive voice of the sentences

- a. wo yi-jian yifu bei zhangsan tou-le  
I one-MW clothes BEI Zhangsan steal-LE  
'One of my dresses was stolen by Zhangsan.'
- b. lisi yi-kuai shoubiao bei zhangsan qiang-le  
Lisi one-MW watch BEI zhangsan rob-LE  
'One of Lisi's watches was robbed by Zhangsan.'

It turns out that the two nominals after *steal* and *rob* in (11) can be put together at the beginning of sentences (in subject position). In other words, sentences with *steal* or *rob* as their main verbs can be passivized. This indicates that the behavior of the nominals after *steal* and *rob* is different

from the themes and goals of *gei* 'give' or *gaosu* 'tell'. They do not function as two NPs, but as a single (theme) NP. This suggests that *Steal* and *rob* are not triadic verbs, but dyadic verbs.

### 2.2.2 BA construction test

Another piece of evidence that verbs such as *steal* and *rob* are not triadic verbs in Chinese comes from the BA construction test.

According to Chu (1983:206), the BA construction in Chinese is a unique form in the sense that no other languages have been found to have a structure with the same functions as the BA sentence. The basic form of the BA-sentence is usually represented as: Subject+BA+NP+V+ (Complement). The NP between BA and V can be understood as the theme of V. That BA can occur with the theme complement of verbs can be proved in the following sentences with dyadic verbs. Our former examples in (15) are still used to illustrate this point.

#### (15). Non BA construction of sentences with dyadic verbs

- a. mao chi-le yu  
cat eat-LE fish  
'The cat ate the fish.'
- b. ta piping-le wo  
s/he criticize-LE I  
'S/He criticized me.'

#### (20). With BA

- a. mao ba yu chi-le  
cat BA fish eat-LE  
'The cat ate the fish.'

- b. ta ba wo piping-le  
 s/he BA I criticize  
 'S/He criticized me.'

(15b) is a sentence without the BA construction. *S/he* is agent and *I* is the theme (or the direct object) of *piping* 'criticize'. If this sentence is changed into the BA construction, the theme is put between BA and the verb *criticize*, as (20b) indicates. The examples in (20) show that BA can occur with the theme complement of dyadic verbs.

As noted in the last section, the theme and goal of a true triadic verb cannot occur in the subject position. However, this doesn't mean that phrases with triadic verbs only appear in the format of V NP<sub>goal</sub> NP<sub>theme</sub>. With the help of the particle BA, a theme can be put before a goal. Compare in this regard (17) from above and (21):

- (17). a. ta gaosu-le wo yi-ge mimi  
 s/he tell-LE I one-MW secret  
 'S/HE told me a secret.'

- b. ta gei-le wo yi-jian yifu  
 s/he give-LE I one-MW clothes  
 'S/He gave me a dress.'

- (21). a. ta ba yi-ge mimi gaosu-le wo  
 s/he BA one-MW secret tell-LE I  
 'S/He told me a secret.'

- b. ta ba yi-jian yifu gei-le wo  
 s/he BA one-MW clothes give-LE I  
 'S/He gave me a dress.'

In (21a), *one secret*, the theme of the triadic verb *tell*, appears between BA and the verb. As we will see from the following example, BA does not permit goals of triadic verbs to follow it.

- (22). a. \* ta ba wo gaosu-le yi-ge mimi  
           s/he BA I tell-LE one-MW secret  
       b. \* ta ba wo gei-le yi-jian yifu  
           s/he BA I give-LE one-MW clothes

In (22), where the goals of the triadic verbs, *tell* and *give*, instead of the themes occur between BA and the verbs, the sentences are not acceptable. The examples in (20), (21) and (22) reflect one characteristic of BA, namely that it can only allow the themes of verbs, either dyadic or triadic, to follow it.

If verbs such as *steal* and *rob* were triadic, the nominals following them would function as themes and goals and the themes would be able to occur between BA and the verbs. However, an investigation reveals that BA cannot be followed by *either* of the two postverbal nominals in these examples. Compare in this regard (11) from above and (23):

- (11). a. zhangsan tou-le wo yi-jian yifu  
           Zhangsan steal-LE I one-MW clothes  
           'Zhangsan stole a dress from me.'  
       b. zhangsan qian-le lisi yi-kuai shoubiao  
           Zhangsan rob-LE Lisi one-MW watch  
           'Zhangsan robbed a watch from Lisi.'
- (23). The second nominal occurs between BA and verbs  
       a. \* zhangsan ba yi-jian yifu tou-le wo  
           Zhangsan BA one-MW clothes steal-LE I

- b. \* zhangsan ba yikuai shoubiao qiang-le lisi  
 Zhangsan BA one-MW watch rob-LE Lisi

The first nominal occurs between BA and verbs

- c. \* zhangsan ba wo tou-le yi-jian yifu  
 Zhangsan BA I steal-LE one-MW clothes
- d. \* zhangsan ba lisi qiang-le yi-kuai shoubiao  
 Zhangsan BA Lisi rob-LE one-kuai watch

In (23 a) and (b), BA is immediately followed by the second nominals of the verbs in the sentences, just as it was in (20) and (21). Yet, the sentences are ungrammatical. So are the sentences with BA followed by the first nominals in (23c) and (d). However, as (24) shows, if the two nominals together follow BA, the sentences will be grammatical. This once again suggests that the two nominals make up a single NP that receives the theme role from a verb.

(24). Two nominals together in BA construction

- a. zhangsan ba wo yi-jian yifu tou-le  
 Zhangsan BA I one-MW clothes steal-LE  
 'Zhangsan stole one of my dresses.'
- b. zhangsan ba lisi yi-kuai shoubiao qiang-le  
 Zhangsan BA Lisi one-MW watch rob-LE  
 'Zhangsan robbed one of Lisi's watches.'

In (24), when the two nominals function as one NP, i.e. the theme of *steal* and *rob*, the sentences are acceptable. This provides us with further evidence that *steal* and *rob* in Chinese are not triadic verbs, but dyadic verbs.

### 2.2.3 The relation between the two nominals after *steal* and *rob*

Chinese doesn't have separate possessive pronouns. When the relation of possession is expressed, a DE can be placed between possessors and possesseees.

- (25). a. wo de jiejie        zai daxuie    dushou  
          I    DE elder-sister at university study  
          'My elder sister is studying at university.'
- b. ta    de    gebe    teng  
          s/he DE arm    ache  
          'His/Her arm aches.'

Sometimes, the DE that expresses the possession can be omitted without affecting the meaning of the sentences.

- (26). a. wo jiejie        zai daxuie    dushou  
          I    elder sister at university study  
          'My elder sister is studying at university.'
- b. ta        gebe    teng  
          s/he    arm    ache  
          'His/Her arms ache.'

This is just the case of the two nouns after *steal* and *rob* in (11). If a DE is put between the two nominals in (11), the acceptability and the meaning of the sentences is not affected, as the following examples show.

- (27). a. zhangsan tou-le wo de yi-jian yifu  
          Zhangsan steal-LE I    DE one-MW clothes  
          'Zhangsan stole a dress from me.'
- b. zhangsan qiang-le lisi de yi-kuai shoubiao  
          Zhangsan rob-LE Lisi DE one-MW watch

Zhangsan robbed a watch from Lisi.

That a DE can be placed between the two nominals following *steal* and *rob* indicates that the relation of the two nominals is that of possessor and possessee.

Crucially, DE cannot be placed between just any two nominals. For example, if it is put between the goal and theme of a triadic verb, such as *wo* 'I' and *mimi* 'secret' in the sentence *ta gaosu-le wo yi-ge mimi* 'He told me a secret.' ((17) above), the result is not grammatical.

(28). \* ta gaosu-le wo de yi-ge mimi  
s/he tell-LE I DE one-MW secret

\* He told my secret.

This indicates that two nominals that follow true triadic verbs do not have the same relation as those after *steal* and *rob*. The *secret* that he told in (28) does not belong to me. *Yi-ge mimi* is the thing that is transmitted by the act of telling. Therefore it is the theme of the verb *tell*. *Wo* is the person that receives the *secret* that *s/he* told, it is thus the goal of the verb *tell*.

Now let's return to the Chinese SVCP in (10).

(10) a. zhangsan tou wo dongxi chi

Zhangsan steal wo thing eat

Zhangsan stole food from me and ate the food.

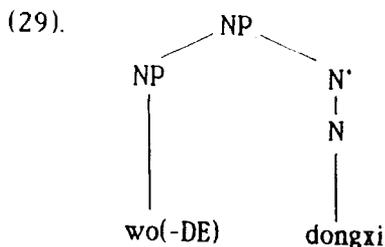
b. zhangsan qiang lisi qian hua

Zhangsan rob Lisi money spend

Zhangsan robbed money from Lisi and spent the money.

The analysis from Section 2.2.1 to 2.2.3 shows that *steal* as well as *rob* in (10b), is a dyadic verb rather than a triadic verb. The nominals after *steal* in (10a), i.e. *wo* and *dongxi* 'thing', can only be analyzed as one NP, the direct

object (or the theme) of both *steal* and *eat*. The relation between the two nominals is possessor and possessee rather than the direct and indirect objects of the verb *steal*. The relation of the two nominals can be illustrated by the following tree structure.



The claim that the two nominals after *steal* or *rob* function as one NP, the theme of the verbs, is further supported by the grammaticality of the following examples in which a DE appears between the two nouns.

(30). a. zhangsan tou wo de dongxi chi

Zhangsan steal wo DE thing eat

'Zhangsan stole food from me and ate the food.'

b. zhangsan qiang lisi de qian hua

Zhangsan rob Lisi DE money spend

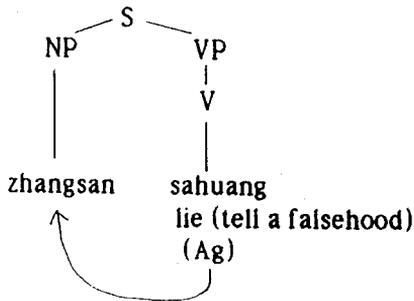
'Zhangsan robbed money from Lisi and spent the money.'

This indicates that examples in (10) are not real counterexamples to Baker's theory. The V1 and V2 in (10a), i.e. *steal and eat*, are both dyadic verbs just as the two verbs in example (1) above are (i.e., *zhangsan yang zhu mai* 'Zhangsan raises pigs and sells pigs'). We are therefore able to maintain the claim that V1 can not be a triadic verb, as first suggested in our discussion in (9).

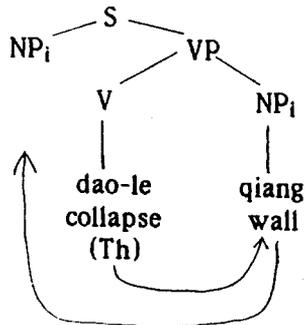
### 2.3 V2 as intransitive verb

Intransitive verbs in Chinese fall into two groups: unaccusative and unergative. Both have only one theta-role to assign. An unaccusative intransitive verb assigns a theme role to a sister category NP while an unergative assigns an agent role. The theta-role assigning properties of these two kinds of verbs can be illustrated by the following structures.

(31). a. Unergative



b. Unaccusative



(31a) is the d-structure as well as the s-structure of the Chinese sentence *zhangsan sahuang* 'Zhangsan tells lies'. The VP headed by *lie* assigns an agent role and a nominative Case to the NP *zhangsan*. The Projection Principle, Theta-Criterion and Case-Filter are all satisfied in this structure.

(31b) is the d-structure of *qiang dao le* 'The wall has collapsed'. According to the requirements of Theta-Theory, an internal role is assigned by a head within a VP. In (31b), the verb *collapse* assigns a theme role to its sister NP *wall* inside the VP. Yet it cannot assign Case to the NP since it is an intransitive verb. In order not to violate Case-Filter, *wall* must move to the subject position to receive a nominative Case from the VP.

### 2.3.1 V2 as unaccusative intransitive

In Section 2.1.1 of this Chapter, I discussed the application of Baker's theory to SVCPs consisting of two transitive verbs. However, as noted in the last chapter, a transitive verb and an unaccusative verb can also compose a SVCP. Let's see whether Baker's theory is applicable to this structure as well.

In Chinese, adjectives can be used as predicates in sentences such as the following.

(32). a. zhei ge nuhar zhen piaoliang

this MW girl real pretty

'This girl is real pretty.'

b. ta shuo de bu duei

s/he say DE not correct

'What s/he said is not correct.'

Such adjectives are treated as intransitive verbs by Li and Thompson (1981:141), whose analysis I will accept. However, there are some differences between Chinese adjectives and intransitive action verbs. For example, adjectives can not be followed by the aspect particles LE, ZHE or GUO when they stand by themselves in the VP while other intransitive verbs can.

(33). a. Adjective intransitive verb co-occurs with a particle

\* zhei ge nuhai zhen piaoliang le (zhe, guo)

this MW girl real pretty LE (ZHE, GUO)

b. Intransitive action verb co-occurs with a particle

zhangsan sahuang le

Zhangsan lie LE

'Zhangsan told a lie.'

*Piaoliang* in (33a) is an adjective functioning as a predicate. When an aspect particle is added after it, the sentence becomes unacceptable. (33b) is an example of an intransitive action verb being followed by a particle, which is grammatical.

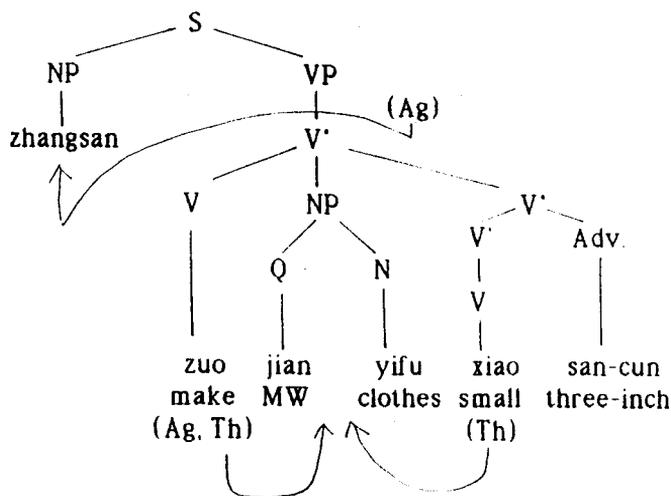
Chinese adjectives can be classified as unaccusative rather than unergative since they describe properties (i.e. sizes, shapes, etc.). As noted by Perlmutter and Postal (1984:98), such predicates are typically unaccusative in human languages.

Chinese adjectival unaccusative verbs can occur in the V2 position of the SVCP.

- (34). zhangsan zuo le jian yifu hsiao san-cun  
 Zhangsan make LE MW coat small three-inch  
 Zhangsan made a coat and it is three inches short.

*Small* in (34) is an unaccusative adjectival predicate. The tree diagram for (34) is illustrated in (35).

(35).



In the above structure, *make* is a verb with two theta-roles while *small* has one theta-role. *Make* assigns a theme role to the NP *clothes* as the verb is at the zero bar level, is the sister of *clothes* and occurs to the left of the NP. In addition, through the percolation to the upper V' and VP, it assigns an agent role to the NP *zhangsan*. As for the unaccusative verb *small*, its projection, i.e., the lower V', assigns the theme role to its sister category, the NP *clothes*, rather than to the NP *zhangsan* in accordance with the principle of word order. Thus, both verbs assign theme roles to the shared NP *clothes* but only V1 *make* assigns an agent role to the NP *zhangsan*.

Unaccusative intransitive verbs other than those corresponding to adjectives in English can also occur in the V2 position of the Chinese SVCP.

(36). a. tamen leiqi yi-du qiang dao le  
 they build one-MW wall collapse LE

'They built a wall and it has collapsed.'

b. ta mai ping jiou sa le  
 s/he buy MW wine spill LE

'S/He bought a bottle of wine and it spilled.'

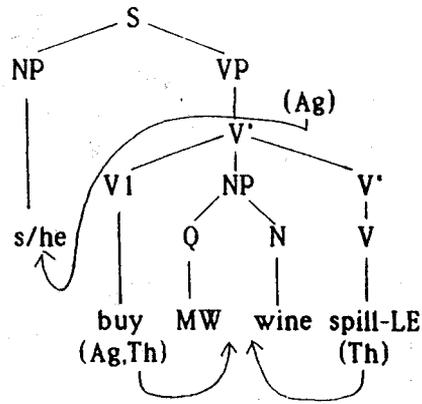
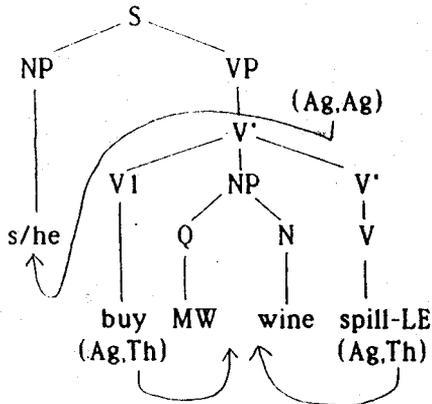
The underlined words in (36) are unaccusative intransitive verbs, which function as V2s in SVCPs in these sentences. The V2s have only theme roles to assign, which they discharge to the objects of V1s. For example, in (36a), it is not *they* that *collapse*, but the *wall* they built. The V1 in this sentence, i.e. *build* has two theta-roles to assign: an agent role to the subject *they* and a theme role to its object *a wall*. In contrast, the V2, i.e. *collapse*, has only one theta role to assign: a theme role to *a wall*.

Like the corresponding English verb *spill*, *sa* 'spill' in (36b) in Chinese can be used as a transitive verb as well as an intransitive verb. When the

action of spilling is caused by *s/he*, *sa* is a transitive verb, but when spilling is caused by things other than *s/he*, *sa* is unaccusative. As a result, (36b) can be interpreted as having either of the following two structures.

(37). a. Spill as transitive

b. Spill as unaccusative



In (37a), both verbs discharge their agent role to the NP *s/he* as the NP is the doer or the causer of the two actions. Crucially, in (37b), the verb *spill* does not discharge any agent role, as *s/he* is not the causer of the event of the wine spilling.

The Chinese SVCPs in this section differ from those in Section 2.1.1 of this chapter, in that the V2s in this section are intransitive verbs and have only one theta-role to assign. When V1 and V2 are both transitive verbs as the examples illustrated in the earlier section, they assign theme roles to their shared objects and agent roles to their shared subjects. In contrast, as (34) and (36) show, when V1 is a transitive verb and V2 is an intransitive verb they each assign a theme role to the NP between them, but V2 can not assign an agent role to the subject of V1. V2's inability to assign an agent role to the subject of V1 and its ability to assign a theme role to the object of

the first verb is determined by the lexical properties of V2 and is a requirement of Baker's theory which says that V1 and V2 must have a shared theme. As noted in this section before, the unaccusative intransitive verbs in Chinese SVCs meet this requirement.

### 2.3.2 V2 unergative

Unlike unaccusatives, unergative intransitive verbs do not have the ability to assign a  $\theta$ -role to the objects of V1. This is reflected in the ungrammaticality of the following sentences.

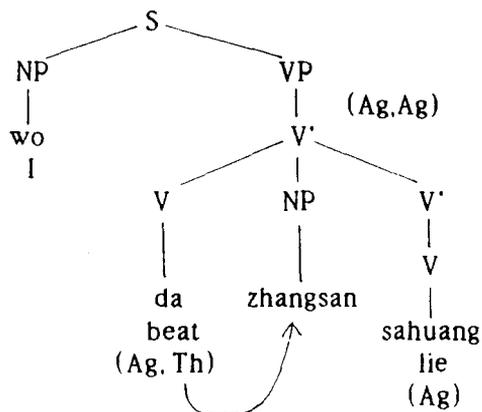
(38). \* wo da zhangsan sahuang

I beat Zhangsan lie

'I beat Zhangsan for his telling falsehood.'

*Lie* in (38) is an unergative. The tree structure of (38) can be illustrated as the following.

(39). \*



In this structure, V2 *lie*, being an unergative verb and having only an agent role to discharge, fails to assign a theme role to the the shared NP *zhangsan*. As noted in Baker (1989), the Projection Principle requires that both heads in an SVC assign theme roles to the shared NP. As the requirement is

not satisfied in (39), the sentence is ungrammatical. The unacceptability of the sentence suggests that when V1 is a transitive verb, an unergative intransitive verb is not suitable to occur in the V2 position of the Chinese SVCP.

However, it seems that some unergative verbs in Chinese can be found in the V2 position of certain V1 NP V2 patterns, just as unaccusative intransitive verbs can.

(40). a. yisheng quan wo tangxia  
doctor advise I lie down  
'The doctor advised me to lie down.'

b. ta jiao wo kuaidian likai  
s/he urge I soon leave  
'S/He urged me to leave at once.'

(41). a. laoshi quan wo buyao dajia  
teacher advise I do not fight  
'The teacher advised me not to fight.'

b. mama jiao wo zaodian sheijiao  
mother urge I earlier sleep  
'My mother asked me to go to bed early.'

The underlined Vs in (40) are unaccusative intransitive verbs and those in (41) unergative intransitive verbs. These examples appear to show that unaccusative intransitive verbs and unergative intransitive verbs can occur in the same structural position.

Yet, by looking carefully, we can see that the structure of (40) and (41) is different from that of an SVCP. The difference lies mainly in the function

of V1. In an SVCP sentence, V1 has only an NP complement. If V2 is omitted, the sentence is still complete.

(1). zhangsan yang zhu mai

Zhangsan raise pig sell

'Zhangsan raises pigs and sells pigs.'

(34). zhangsan zuo le jian yifu hsiao san-cun

Zhangsan make LE MW coat small three-inch

'Zhangsan made a coat which is three inches short.'

V2 omitted

(1)'. zhangsan yang zhu

Zhangsan raise pig

'Zhangsan raises pigs.'

(34)'. zhangsan zuo le jian yifu

Zhangsan make LE MW coat

'Zhangsan made a coat.'

(1) is an SVCP. In (1)', where the V2 (*sell*) of (1) is omitted, the sentence is still acceptable. This suggests that the verb *yang* 'raise' only requires one complement (i.e. *zhu* 'pig'). The verb *sell* is not a complement of V1; it is the second head of an SVCP.

In contrast, if the V2s in (40) and (41) are deleted without any context the sentences are not acceptable.

(40). a. yisheng quan wo tangxia

doctor advise I lie down

'The doctor advises me to lie down.'

(41). b. mama cuei wo zaodian shueijiao

mother urge I earlier sleep

My mother urged me to go to bed earlier.'

V2 omitted

(40a)' ? yisheng quan wo ...<sup>1</sup>

doctor advise I

'The doctor advised me...'

(41b)' ? mama cuei wo...

mother urge I

'My mother urged me...'

The two sentences in (40a)' and (41b)' are not complete. Questions that immediately arise will be:

(40a)'' yisheng quan ni zuo shenme?

doctor advise you do what

'What did the doctor advise you to do?'

(41b)'' mama cuei ni gan shenme?

mother urge you do what?

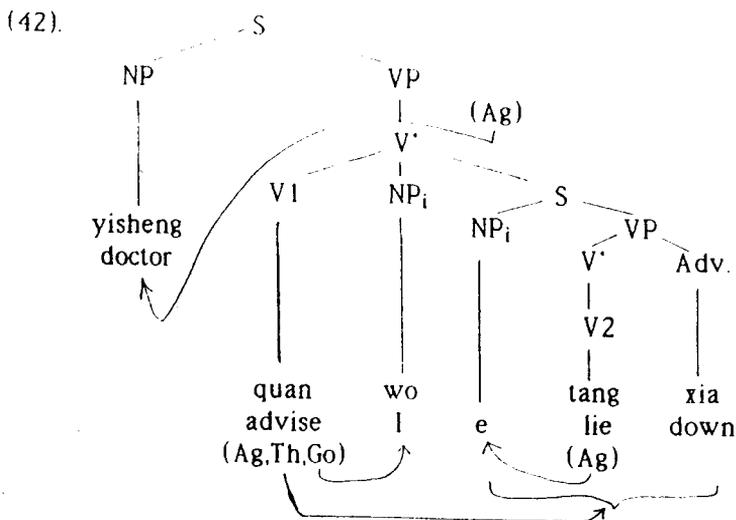
'What did Mum urge you to do?'

This suggests that the V1s in these sentences are different from the V1s in the Chinese SVCs. Though (40) and (41) contain the sequence V1 NP V2, they are not true SVCs. The two verbs in SVCs are joint heads of a V construction while in the structure of (40) and (41), V2 is a constituent of the lower S which is a complement of V1 (refer to (42) below for (40)). In other words, V1 in (40) or (41) is subcategorized as having two complements: a NP and a S, while in an SVC, V1 is not allowed to have more than one complement, as shown before. In fact, (40) and (41) are pivotal

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<sup>1</sup> ? in front of a sentence means that it is 'marginal' - i.e. of doubtful well-formedness, hence unidiomatic and unnatural.

sentences, (Chao 1968:124-125). The tree structure of (40) is illustrated in (42).



Given this structure, it is clear that *advise* is a verb which requires two internal arguments: one is the theme, the other is the goal. If the theme is missing without context, the sentence would sound incomplete.

Thus, one conclusion can be reached in this section: only unaccusative intransitive verbs can occur in the V2 position of the Chinese SVCs when V1 is a transitive verb. This is exactly what Baker's theory predicts.

## 2.4 V1 as intransitive verb

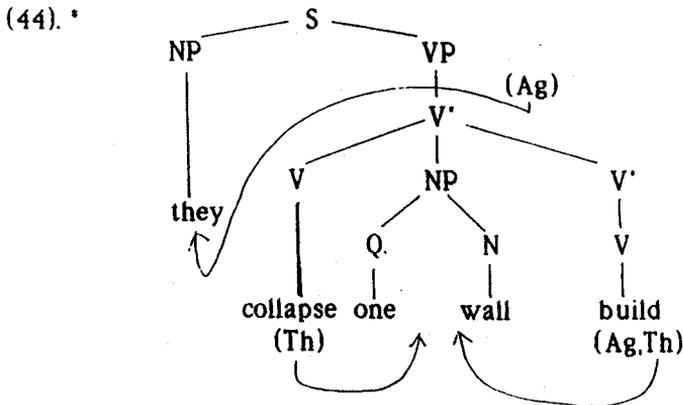
### 2.4.1 V1 as unaccusative

As shown in Section 2.3.1 of this chapter, an unaccusative verb assigns a theme role to its subject, which appears in the object position at d-structure. When the V1 position of an SVC is occupied by an unaccusative verb, the V2 should also be able to assign a theme role to that verb's internal argument. As already explained, verbs that are able to assign theme roles are either transitive or unaccusative.

However, when V1 is an unaccusative and V2 a transitive verb, the resulting structure is not acceptable.

- (43). \* tamen dao yi-du quang leiqi le  
 they fall one-MW wall build LE

In this sentence, *collapse* is an unaccusative verb and *build* is a transitive verb. The sentence's structure would be like the following:



As illustrated in (44), both *collapse* and *build* assign theme roles to the shared NP *one wall* and the external argument features percolate only from the verb *build*. The structure is consistent with the Projection Principle, the Theta Criterion and the principle of word order. But it does not meet the Case requirement. In Chinese a verb assigns Case as well as a theta-role rightward. However, the V2 *build* can not assign Case to the NP *one wall*, as it appears to the right of the NP. The verb *collapse* is in a position to assign Case to the NP, but as an unaccusative intransitive verb, it has no Case to assign. The NP in this structure thus can not get Case, in violation of the Case Filter. The sentence is hence ungrammatical.

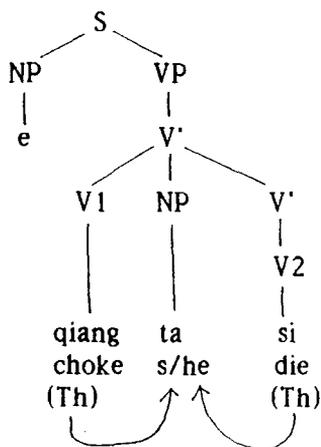
When both V1 and V2 are unaccusative in an SVCP, Case is not a problem.

(45). a. ta qiang si le  
 s/he choke die LE  
 'S/He choked and died.'

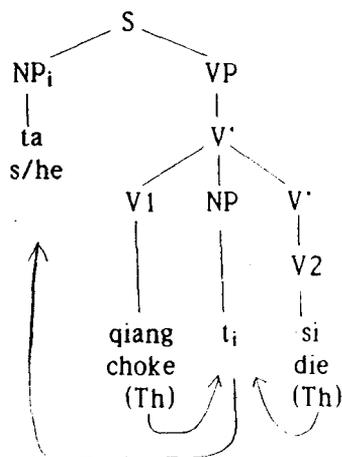
b. lian dung hung le  
 face freeze red LE  
 'The face becomes red because of cold.'

In the above examples, each SVCP is composed of two unaccusatives (the underlined words). The structure of (45a) is illustrated in (46).

(46). a. D-structure



b. S-structure



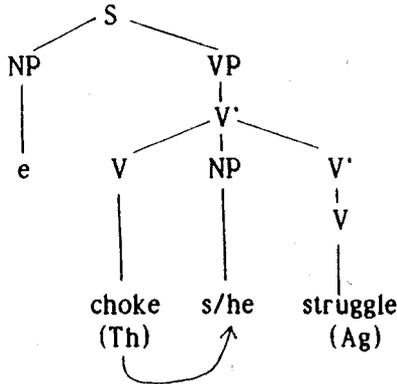
(46a) is the d-structure of *ta qiang si le* 'S/He choked then s/he died'. In accordance with the principle of word order, both *choke* and *die* can assign their theme role to the NP *s/he*. But if it remains in its d-structure position, the NP *s/he* cannot get Case, in violation of the Case Filter. In order to receive Case, the NP must move to a position which receives Case, is empty and does not receive an additional thematic role. The subject position is exactly the place that is needed. The shared object moves to the subject

position and receives nominative Case from the VP. This is what we see in (46b).

Finally, suppose the V2 were unergative. As shown in the following example, when V1 is unaccusative, the sentence is not grammatical.

(47). a. \* ta     qiang     zhengzha     le  
           s/he choke   struggle   LE

b. D-structure



Following Baker (1989), object sharing is obligatory in SVCs in that both Vs must theta-mark the intervening NP. In (47b), V1 *choke* assigns a theme role to the shared NP *s/he* but V2 *struggle*, cannot theta-mark *s/he* since the agent role must be assigned to an NP outside VP. The sentence is therefore ruled out.

In this chapter, we have investigated from various angles how Baker's theory accounts for the Chinese SVC. In the next chapter, we will look into the BA construction and the coordination pattern of [<sub>v</sub>' V' V']. I will claim that Baker's theory can be extended to account for BA construction and I will show how coordination differs from the SVCs which we have discussed in this chapter.

## THE APPLICATION OF BAKER'S THEORY

### (PART II)

#### 3.1 BA construction in Chinese

Baker's theory can not only account for the Chinese SVCP but also, in my opinion, be extended to the BA construction in Chinese. ( In this thesis, 'BA construction' refers to the most generally used and discussed BA pattern of Subject+BA+direct object+verb+others. There are also other types of less widely used BA patterns which will not be discussed in this thesis.)

To remind the reader of the BA construction, example (15a) from Chapter 2 is repeated here.

##### (1). Non-BA construction

- a. mao chi-le yu  
cat eat-LE fish

'The cat has eaten the fish.'

##### b. BA construction

- mao ba yu chi-le  
cat BA fish eat-LE

'The cat has eaten the fish.'

The BA construction is a very unique form in Chinese language. Helen T. Lin (1981:240) offers the following account for 'BA'.

This construction is also called the 'disposal' construction because of the use of the morpheme 'BA'. 'BA' may be used as a verb meaning 'to handle' or as a measure word for chairs. It can

also be used as a functive verb meaning 'to hold' or 'to guard': the sentence object, then, stands in front of the main verb so that the object of the sentence is the same as the object of the coverb....This construction is often used when the speaker wishes to emphasize a certain object.

As mentioned by Lin, BA is traditionally regarded as a 'coverb' in Chinese. Chu (1983:71) defines 'coverb' as a term used to designate a class of words with a function intermediate between verbs and prepositions.

### 3.1.1 The common properties of coverbs that BA has

In terms of syntactic behavior, BA (as well as other coverbs) is considered to be verbal, because it may occur in the V-not-V question pattern, which is an important property of verbs.

The V-not-V question is a structure in which the predicate (excluding any preverbal adverb) is repeated with a negative word between the identical parts. As noted by Chu (1983:184), the first verbal element must be repeated twice in such a question while the other parts of the predicate may be optionally deleted. In the following examples, the words in parentheses indicates the optional deletion of the element(s) enclosed. (Only examples of verbs and BA are presented)

(2). a. ni chi (fan) mie chi fan ?

you eat (meal) not eat meal

'Have you had your meal?'

b. zhangsan kan (dianying) bu kan dianying ?

Zhangsan see (movie) not see movie

'Is Zhangsan going to see the movie or not?'

c. mao ba (yu chi le) mie ba yu chi le ?

cat BA (fish eat LE) not BA fish eat LE

'Has the cat eaten the fish?'

d. ni ba (shu huan wo) bu ba shu huan wo ?  
you BA (book return I ) not BA book return I

'Will you return my book or not?'

(2a) and (b) contain two verbs in the V-not-V question form while (c-d) contain BA in the V-not-V form. In this V-not-V question test, BA behaves like a verb.

On the other hand, BA and other coverbs cannot be regarded as pure verbs. A pure verb in Chinese can function as a predicate in a sentence independently.

(3). a. shuie hua le  
snow melt LE

'The snow has melted.'

b. wo chi fan le  
I eat meal LE

'I have eaten my meal.'

BA and other coverbs, however, can not appear in a sentence as a main verb.

(4). \* mao ba yu  
cat BA fish

Because BA as well as other coverbs cannot appear with an object independently, some Chinese linguists (Chu:1983, Li and Thompson:1981, etc.) think that those elements have some properties of a preposition, though they admit that in Chinese there is no category corresponding precisely to the English preposition.

### 3.1.2 The difference between BA and other coverbs

BA phrases are different from other coverbs in that the NP after BA is the theme of the verb while the NP after other coverbs is an oblique which is considered by Chinese grammarians (Li and Thompson:1981) to be 'adverbial'. To make things clear, let's compare the BA phrase (BA and its theme) and two other coverb phrases in the following sentences. (Notice that *go* in (5a) and *come* in (5b) function as particles of purpose. As such, they occur at the end of the sentence with neutral tone.)

- (1).     mao ba yu chi le  
       cat BA fish eat LE

'The cat eat the fish.'

- (5). a. wo li mama sung xin qu  
       I for Mother sent letter go

'I am going to send a letter for my mother.'

- b. wo cong beijing mai hui yi-liang qiche lai  
       I from Beijing buy back one-MW car come

'I bought a car from Beijing.'

In the above underlined phrases, all the NPs are objects of the coverbs, but their thematic roles are different. The NP *fish* in (1) is the theme of the verb *eat*, while the NP *Mother* in (5a) is the beneficiary of the verb *send* and the NP *Beijing* in (5b) is the source of the compound verb *buy back*. Furthermore, the oblique coverb phrases in (5a) and (b) can be omitted from the sentences while BA with its object in (1) can not be deleted without a context.

- (6). a. \* mao chi le  
       cat eat LE

- b. wo sung xin qu  
 I send letter go  
 'I am going to send a letter.'
- c. wo mai huei yi-liang qiche  
 I buy back one-MW car  
 'I bought a car.'

The sentence with the omitted BA and its object in (6a) is ungrammatical without a context while sentences with the omission of other coverbs and their objects in (b-c) are grammatical. This suggests that BA behaves differently from other coverbs. It seems that BA and the NP following it do not function as a modifier, which, as the following English example shows, does not affect the grammaticality of sentences if it is omitted.

- (7). a. He reads the Bible for his aunt at night.  
 b. The adverbials in (a) are omitted  
 He reads the Bible.

Another interesting difference between BA and other coverbs can be found in the 'after-thought supplement', which refers to sentence fragments that are incidentally added to a sentence after its completion and thus appear in post-sentential position. Following are coverb phrases functioning as 'after-thought supplement.'

- (8). a. wo sung xin qu----- ti mama  
 I send letter go for mother  
 'I am going to send a letter---for my mother.'
- b. wo mai huei yi-liang qiche---- cong beijing  
 I buy back one-MW car from Beijing  
 'I bought a car---from Beijing.'

The part before the dots is what a speaker originally says. Then, perhaps to make the information more concrete, he adds some details. In the above examples, the after-thought supplements are both coverb phrases and the sentences are acceptable. If, however, BA appears in the same situation, the sentence will be unacceptable.

(9). BA and its object in (1) function as after-thought supplement

\* mao chi le----- ba yu  
cat eat LE BA fish

Still another difference between BA and other coverbs is that BA does not allow the theme of the main verb to follow the verb.

(10). a. mao chi-le yu  
cat eat-LE fish

'The cat has eaten the fish.'

b. Complement can not follow the verb in a BA construction

\* mao ba yu chi-le yu  
cat BA fish eat-LE fish

c. Complement can follow the verb in a sentence with coverb other than BA

mao zai di shong chi yu  
cat at floor on eat fish

'The cat is eating fish on the floor.'

Chinese is a SVO language. Thus, the order of *Cat eat fish* (i.e. with the theme *fish* following the verb *eat*) in non-BA construction is the normal sequence. However, with the presence of the BA in (10b), the sentence is not acceptable. In other words, the BA construction prohibits the theme from following the verb. On the contrary, when a coverb phrase other than BA is

inserted between the subject and the verb phrase, the sentence is grammatical, as (10c) shows. Moreover, the ungrammaticality of (11) gives us further evidence that main verbs in sentences with other coverb phrases, if transitive, not only allow but demand that their objects follow them.

(11). a. \* mao zai di shong chi

cat at floor on eat

'The cat is eating on the floor.'

b. \* wo ti mama sung

I for mother send

c. \* wo cong beijing mai huei

I from Beijing buy back

The unacceptability of (11) follows from subcategorization. The verb *eat*, *send* and the compound verb *buy back* are subcategorized for a theme complement. When there is none, the sentences are unacceptable.

Based on the findings above, it is clear that BA manifests different behavior from common coverbs. But what is it? How do we explain the fact that no theme follows the main verb in BA construction and that the theme precedes the verb and follows BA instead?

### 5.1.3 BA, a defective verb

Although the BA construction is a much-discussed topic among Chinese linguists, a satisfactory explanation to the question has not yet come out. However, Travis (1987:127) made an advance in claiming that BA is in fact a theta-role assigner. This explains why BA can take a theme as its object. But she ignores the fact that the theta-role assignment properties of the main verb are not satisfied. For example, in the sentence *cat BA fish eat*, BA can assign a theme role to the NP *fish* rightward as it is a theme

role assigner and the direction of theta-role assignment in Chinese is to the right. But *eat* can not discharge its theme role since it occurs to the right of *fish*. Thus, although *eat* is a dyadic verb and has two theta roles to assign (including an agent role to the NP *cat*), we don't know to what it assigns its theme role.

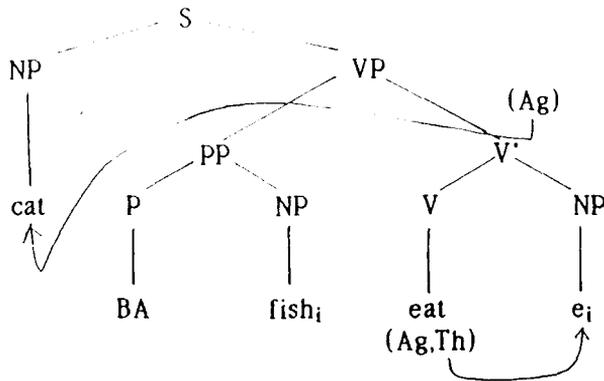
I would like to assume that BA is a verb. Yet it is not a pure verb, but a defective verb. This assumption is based on the properties of BA.

BA is claimed to be a verb on the basis of the following facts. First, BA reveals part of its verbal nature in the syntactic process outlined earlier in Section 3.1.1 (i.e. V-not-V pattern). Second, BA always has an NP as its object; that is to say, BA is an objective Case assigner. Third and most important, what distinguishes BA from other coverbs is that, as pointed out by Travis, BA is a theme role assigner. A theme in Chinese is always connected with a verb, the object of a transitive verb or the subject of an unaccusative verb.

However, from the point of view of X' theory, BA cannot be regarded as a pure verb. As discussed earlier, a BA phrase (i.e. BA+its theme) fails to stand by itself as an independent predicate in a sentence. As a matter of fact, BA can only project to the first V' level. It can never project to the VP level as other verbs do. It is in this sense that I claim BA is a defective verb.

In my opinion, BA should not be connected with the category of preposition. If so, the BA construction will be a violation of 'chain Case assignment' and 'local binding requirement'. Let's take (1) *cat BA fish eat LE* as our example.

(12).



In this example, the BA phrase is treated as a modifier, as are other coverbs appearing between subjects and main verbs. The NP *fish* moves out of its original position (i.e. the sister of *eat*) into the object position of BA, leaving behind, in the position out of which it moves, a 'trace' which is coindexed with the moved constituent (Radford 1981:194). The verb *eat* assigns a theme role to the trace of *fish* and BA assigns objective Case to *fish*. The verb *eat* assigns an agent role to the NP *cat* through VP and VP assigns a nominative case to the NP *cat*. Accordingly, the two referring NPs, *cat* and *fish* can get theta-roles. The structure conforms to the Theta-Criterion, but, it is a violation of the 'chain Case assignment' and the 'local binding requirement'.

### (13). Chain Case Assignment

Case can only appear on the head of a chain. (Chomsky 1986b:139).

According to Chomsky, a chain is the s-structure reflection of the 'history of movement' (1986b:95). For example, in (12), the chain consisting of the NP *fish* and the empty NP *e<sub>i</sub>* indicating the surface and deep structure positions of *fish*. The head of a chain for an NP is the surface structure position of the NP. As stated in (13), this is the only position in a chain to

which Case can be assigned. A chain with two Cases is as bad as having none at all.

In the tree structure of (12) above, the chain of the NP *fish* has two Case-marked positions: *fish* receives an objective Case from BA and the trace of *fish* from the verb *eat*. This is a violation of the chain Case assignment.

Another problem with (12) is that it violates the 'local binding requirement', outlined in (14).

(14). Local Binding Requirement (Adapted from Chomsky 1986b:181)

$\alpha$  locally binds  $\beta$ , if

$\alpha$  and  $\beta$  form a link of a chain, and  $\alpha$  c-commands and is co-indexed with  $\beta$ .

A link of a chain refers to a pair of successive elements in a chain. In (12), the chain (*fish* and *e*) is also a link of a chain. In accord with the 'local binding requirement', *fish* should be co-indexed with and c-command *e*. However, although the NP *fish* and the NP *e* in (12) are co-indexed, *fish* does not c-command *e* as one of its maximal projections (i.e. PP) does not dominate *e*. Thus, the 'local binding requirement' is violated, providing further evidence that BA should not be considered a preposition.

In summary, BA is a verb (A theme role assigner and an objective Case assigner). It is a defective verb (Being not able to project to VP).

### 3.1.4 The extension of Baker's theory to BA constructions

In my opinion, Baker's theory of SVCP provides a way of accounting for the BA construction which has some characteristics that connect it with SVCPs in Chinese. First, the BA construction (that is to say, the defective verb BA, the theme and the verb) must be regarded as one unit. None of them can

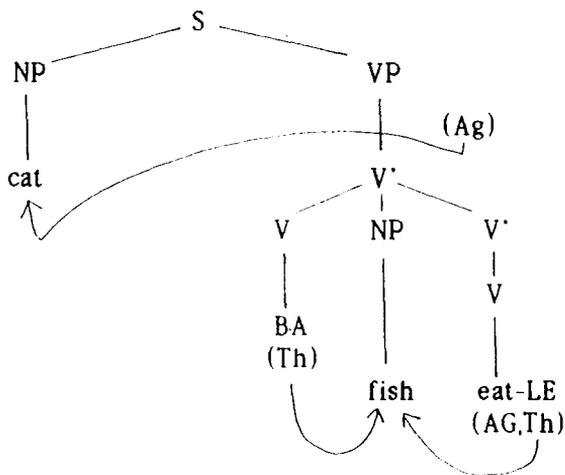
be separated from others. For instance, the predicate of the sentence *mao BA yu chi le* 'The cat ate the fish.' should be regarded as a whole unit. Neither head can be omitted.

- (15). a. \* mao ba yu  
           cat BA fish  
       b. \* mao chi le  
           cat eat LE

Second, as discussed in Section 3.1.2, BA prohibits a theme from following the verb. As a result, BA and the verb share the theme between them. The above characteristics of BA raise the possibility of employing Baker's theory in explaining BA construction. Thus, BA may occur in the V1 position of the Chinese SVCP as transitive verbs do since both BA and transitive verbs are theme role assigners.

Following Baker's theory, the sentence *the cat ate the fish* can be expressed by the following tree structure.

(16).



In this structure, the coverb BA assigns a theme-role and an objective case to the NP *fish* rightward. The main verb *eat*, projected to the V' level, assigns a theme role to the NP *fish* leftward. Since BA is a defective verb in the sense outlined above, it can only project to the first V'. As a result, it is not able to assign an agent role to a subject. Thus, only the verb *eat* assigns an agent role to the NP *cat* through the VP. The agent role assignment is consistent with the meaning of the sentence, as *eat* is the only action that *cat* does. Accordingly, the theta-role assignment properties of both BA and the pure verb are satisfied in this structure.

BA can only precede the main verb. Thus, sentences like (17) are impossible as true BA constructions.

(17). a. \*mao chi yu ba le

cat eat fish BA LE

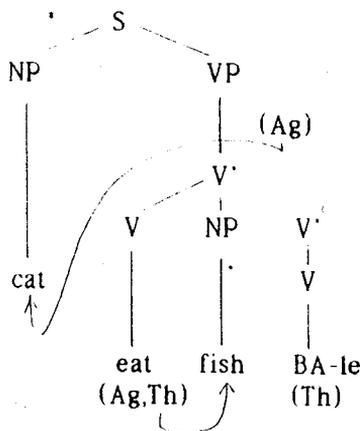
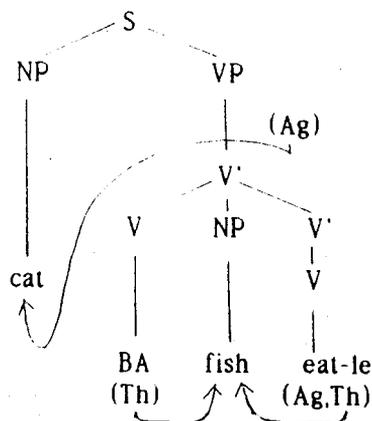
b. \*wo dapo huaping ba le

I broke vase BA LE

To explain why BA must always precede the main verb, let's compare the structure of (17a) and (16) which will be repeated below.

(16). BA precedes verb

(17a) Verb precedes BA



When BA precedes the verb *eat* as (16) shows, the sentence is acceptable while when BA and the verb exchange positions, the sentence becomes unacceptable, as (17a)' shows. This indicates that the elements in the BA construction have a fixed order, which results from the characteristics of BA that we discussed earlier.

(18). Characteristics of BA

- a. can assign objective Case to the NP following it
- b. can assign a theme role to the NP following it
- c. can only project to the first V' level together with its theme

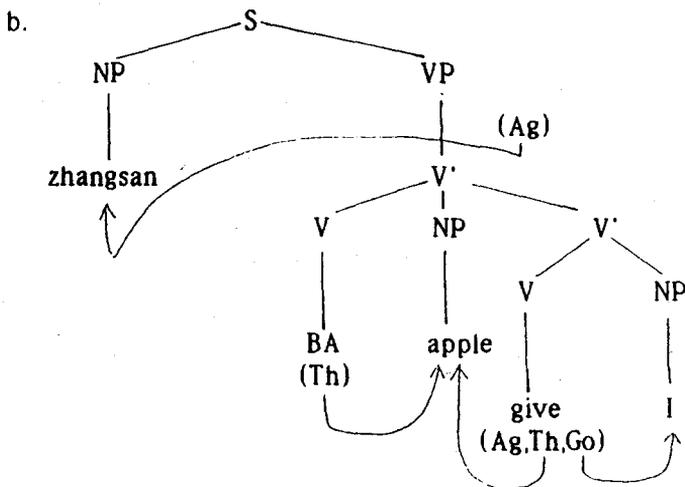
(18) reveals that BA functions as a defective verb. It is defective, because together with its theme, it can only project to the first V' level, which turns out to be both its maximal projection and its only projection. It is like a (transitive) verb, because within its projection, it discharges objective Case and a theme role to an NP rightward. Comparing (16) with (17a)', it is not difficult to see why (16) is acceptable while (17a)' is not acceptable. In (16), the projection of BA is the first V' (i.e. the higher V'), inside which BA assigns objective Case and a theme role to the NP */is/*. On the other hand, in (17a)' where the projection of BA is also the first V' above it (i.e. the lower V'), it cannot project to the higher V' which is beyond the first V' level. (17a)' is thus unacceptable.

Baker's theory offers a good account for why BA should precede the main verb. Since BA together with its theme only projects to the first V', it can only occur in the form of a bare verb (i.e. V<sup>0</sup>) in a sentence. In accordance with the principle of word order, a bare verb must appear to the left of its theme in an SVCP since the direction of theta-role assignment for a

bare verb in Chinese is rightward. BA has no other choice; it must stay in the position of V1. Thus, BA must always precede the main verb.

The fact that BA must always precede the main verb allows the analysis to be extended to the following example, in which the main verb is triadic.

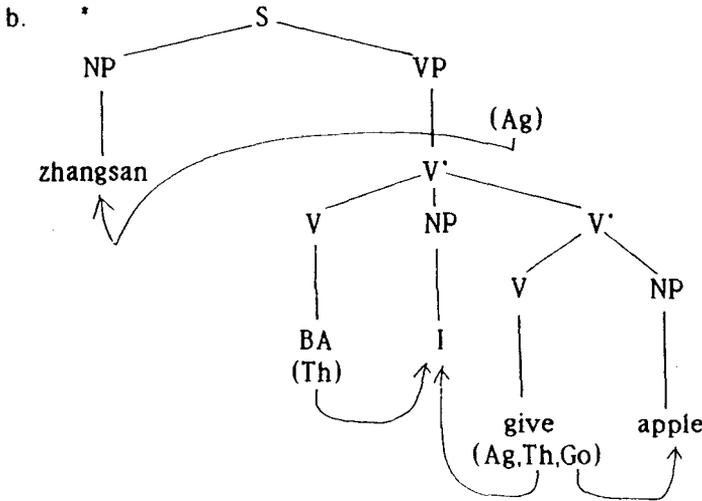
- (19). a. zhangsan ba yi-ge pingguo gei le wo  
 Zhangsan BA one-MW apple give LE I  
 (Zhangsan gave me an apple.)



*I* in this structure is not the shared argument; rather it is only the argument of the verb *give*. *Give* can also assign a theme role to *apple*, as the lower V' is the sister of *apple* and *apple* occurs to the left of *give*. For its part, BA theta-marks and Case marks the NP *apple* rightward. The agent role of the NP *zhangsan* is received from the verb *give* through the VP. The lexical properties of *give* and BA are satisfied and the three NPs in the sentence receive the appropriate Cases and theta roles.

As indicated in Section 2.2.2, BA only permits the theme of a verb to follow it. It does not allow the goal of a verb to appear after it. If the goal instead of the theme appears immediately after BA in (19), the sentence would not be acceptable.

- (20). a. \* zhangsan ba wo gei-le yi-ge pingguo  
 Zhangsan BA I give-LE one-MW apple  
 ' \*Zhangsan gave me to an apple.'



In this structure, the NP *I* receives theme roles from both BA and the verb *give* while the NP *apple* receives a goal role from the verb *give*. There is no violation of a syntactic principle, but the meaning of the sentence is not acceptable as it means 'Zhangsan gave me to an apple.'

In summary, the following characteristics of the BA construction shared with SVCs create the possibility of using Baker's theory to account for BA construction in Chinese: (i) BA and the main verb always share the same theme, thus BA, the theme and the verb compose of one whole unit; (ii)

BA does not allow the main verb to have the theme following it; (iii) the main verb in BA construction can be either dyadic or triadic; (iv) the order of BA and the main verb is not reversible.

### 3.2 Coordination and SVCP

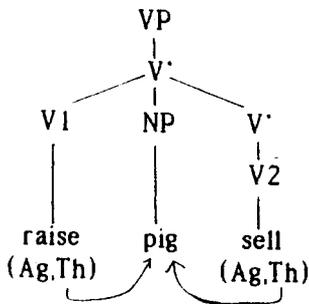
As noted in the last chapter, the salient characteristic of the SVCP is that a single VP can license more than one verb, creating the possibility of serial verb constructions. Following is an SVCP in which the VP has two heads: V1 *raise* and V2 *sell*

(21). a. zhangsan yang zhu mai

Zhangsan raise pig sell

'Zhangsan raises pigs and sells pigs.'

b.



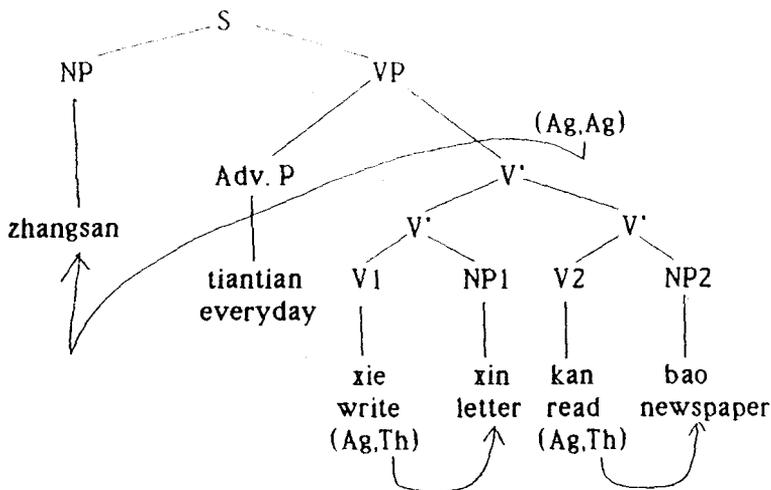
However, according to Baker(1989:519), coordinations can also have a double-headed V' structure. (22a), which involves V' coordination, is represented in the tree structure in (22b).

(22). a. zhangsan tiantian xie xin kan bao

Zhangsan everyday write letter read newspaper

'Zhangsan writes letters and reads newspapers everyday.'

b.



As shown in (22b), the two lower V's, i.e., *write letter* and *read newspaper*, have the same syntactic status. Each verb has its own theme, and both V1 and V2 can assign an agent role to the subject *zhangsan*. Thus, the theta role assignment properties of the two verbs are satisfied and the Projection Principle, Theta-Criterion and Case Filter are obeyed. Notice that V2 in (22b) is not able to theta-mark the NP1 *letter* (i.e. the object of V1) because NP1 is not the sister of V2 or any of its projections.

Although the VPs in both coordinations and SVCs license more than one head, they are structurally different. In an SVC, a higher V' immediately dominates both a V<sup>0</sup> and a lower V' as illustrated in (21b) while in a coordination, a higher V' immediately dominates two lower V's as shown in (22b). Second, in an SVC, the two verbs have a shared theme whereas in a coordination, the two verbs have a shared agent but not a shared theme. In other words, the asymmetry between the theme NP and the agent NP shows different patterns in these two constructions. In an

SVCP, the theme of V1 must be theta-marked by V2, but the agent need not be theta-marked by both verbs, as example (21a) in this chapter and (36a) in Chapter 2 show. These examples are repeated in (23).

(23). a. zhangsan yang zhu mai

Zhangsan raise pig sell

'Zhangsan raises pigs and sells pigs.'

b. tamen leiqi yi-du qiang dao le

they build one-MW wall collapse LE

'They built a wall and it has collapsed.'

(23a) is an SVCP with two dyadic verbs while (b) is an SVCP with a dyadic V1 plus an unaccusative V2. In (a) both the theme *zhu* and the agent *zhangsan* are theta-marked by the two verbs (*raise* and *sell*) while in (b) the theme *wall* is theta-marked by the two verbs (*build* and *collapse*), but the agent *they* is only theta-marked by the verb *build*. As stated by Baker, object sharing rather than subject sharing is obligatory for SVCPs.

In contrast, in a coordination, the theme of V1 must not be theta-marked by V2, but the agent must be theta-marked by both verbs. As mentioned in the last paragraph, *letter* in (22b) cannot be theta-marked by V2 *read* while *zhangsan* must receive an agent role from both V1 *write* and V2 *read*.

The difference in structure induces detectable differences between coordination and SVCPs. First of all, the two constructions feel different to native speakers. The coordination pattern tends to be perceived as a sequence of distinct events, whereas the SVCP is perceived as a single event. Furthermore, comma intonation may precede the V2 of a coordination, but not the V2 of an SVCP. (# marks an intonation break.)

(24). a. Coordination

zhangsan tiantian xie xin # kan bao

Zhangsan everyday write letter read newspaper

'Zhangsan writes letters and reads newspapers everyday.'

b. SVCP

\* zhangsan yang zhu # mai

Zhangsan raise pig sell

Moreover, as Baker points out, an overt conjunction can occur in a coordination not an SVCP.

(25). a. zhangsan tiantian bushi xie xin jiushi kan bao

Zhangsan everyday either write letter or read newspaper

'Zhangsan either writes letters or reads newspapers everyday.'

b. \* zhangsan bushi yang zhu jiushi mai

Zhangsan either raise pig or sell

Most important, coordinations are different from SVCPs with respect to various syntactic processes. Being a shared theme, the NP between the two verbs in an SVCP can be questioned while a theme in a coordination cannot.

(26). a. The theme of an SVCP is questioned

zhangsan yang shenme mai?

Zhangsan raise what sell

'What does Zhangsan raise and sell?'

b. The 1st theme of a coordination is questioned

\* zhangsan tiantian xie shenme kan bao?

Zhangsan everyday write what read newspaper

c. The second theme of a coordination is questioned

\* zhangsan tiantian xie xin kan shenme?

Zhangsan everyday write letter read what

Sentence (26a) shows that the theme can be questioned in an SVCP where the two verbs and their shared theme are considered as one constituent of a higher V'. On the other hand, a theme can not be questioned in a coordination. Questioning one of them is in violation of the Coordination Structure Constraint.

(27). Coordination Structure Constraint

(Adapted from van Riemsdijk & Williams 1986:20)

A conjunct of a coordinate structure cannot be questioned.

In the specific case of the NPs in coordinate verb categories, I would like revise (27) as (28).

(28). Coordination Structure Constraint

If one conjunct of a coordinate structure is questioned, all other conjuncts must also be questioned.

In fact, in parallel coordinate verb categories where both verbs have NP objects, the sentence is grammatical if all these NPs are questioned.

(29). zhangsan tiantian xie shenme kan shenme?

Zhangsan everyday write what read what

What does Zhangsan read and write everyday?

Another syntactic process which can be used to test the difference between an SVCP and a coordination is reversal. As stated in Chao(1968), two verbs in a coordination can be reversed to give a grammatical result.

(30). a. The reversal of the two verbs and their following element in (22a)

zhangsan tiantian kan bao xie xin

Zhangsan everyday read newspaper write letter

'Zhangsan reads newspapers and writes letter.'

On the contrary, when the two verbs in an SVCP are reversed, the resulting sentence in (30b) is ungrammatical.

(30). b. The reversal of the two verbs in (21a)

\* zhangsan mai zhu yang

Zhangsan sell pig raise

The third type of syntactic process that distinguishes a coordination from an SVCP is relativization. The object NP in an SVCP can be relativized.

(31). a. An SVCP with V2 as a dyadic verb

zhangsan yang zhu mai

Zhangsan raise pig sell

'Zhangsan raises pigs and sells pigs.'

b. The relativization of the theme in (a)

? zhangsan yang ta mai de nar zhong chu<sup>1</sup>

Zhangsan raise he sell DE that MW pig

'Zhangsan raises that kind of pig he sells.'

(32). a. An SVCP with V2 as a triadic verb

zhangsan chang mai shu sung ren

Zhangsan often buy book send person

'Zhangsan often buys books and sends them to others.'

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<sup>1</sup> Notice that a resumptive word // is inserted to replace the relativised NP

b. The relativization of the theme in (a)

zhangsan chang mai ta sung ren de nar ben shu  
Zhangsan often buy he send person DE that MW book  
'Zhangsan often buys that kind of book he sends to others.'

In contrast, an NP between the two verbs of a coordination definitely cannot be relativized.

(33). The relativization of the NP between the two verbs in (22a)

\* Zhangsan tiantian xie ta kan bao de nar feng xin  
Zhangsan everyday write he read newspaper DE that MW letter  
'\* The letter that Zhangsan writes and reads newspaper everyday.'

In this section, we have examined the structural differences between the SVCP and coordination. We have provided syntactic tests such as relativization, reversal and question-formation to show the difference between the two constructions. Based on these findings, it can be concluded, as Baker predicted, that coordination and SVCP coexist in serializing languages, yet are different constructions.

## CONCLUSION

The study has investigated the *serial verb constructions proper* (SVCPs) in Chinese. The SVCP, with two verbs sharing one theme, has a syntactic structure significantly different from that of all comparable constructions, including coordination, embedded clauses, pivotal construction, and so on.

The unusual syntactic structure receives a good explanation in Mark C. Baker's (1989) theory of SVCPs. Baker extends X' theory and produces a double-headed construction, creating both the possibility and the obligation of two verbs theta-marking the same internal argument, in accordance with the Projection Principle.

Within the framework of Baker's SVCP theory, various types of Chinese SVCPs have been investigated in this thesis, including the combination of two transitive verbs, a transitive verb and an intransitive, and two intransitives. The investigation demonstrates that when V1 is dyadic, V2 can be dyadic, triadic or unaccusative. A triadic verb is not allowed to appear in the V1 position and an unaccusative can appear in the V1 position only when V2 is also an unaccusative. Otherwise, the Theta-Criterion or the Case Filter will be violated.

The BA construction, a perennial topic in Chinese grammar, also receives an explanation in Baker's theory. BA, which I would like to consider as a defective verb, assigns an objective Case and a theme role to the NP following it, yet fails to project beyond the first V' level. Thus, BA always occurs in the pattern BA+Theme+Verb, which behaves as one whole unit. It

does not allow the theme to follow the verb, but requires the verb to share the theme with it. All these properties of BA follow from Baker's theory together with the assumption that BA is a defective verb in the sense outlined above.

Finally, in Chapter 3 of this thesis, a variety of syntactic tests (reversal, relativization, etc.) were used to provide convincing evidence that the SVCP in Chinese has a different structure from coordination.

An interesting fact that is discussed in Chapter 2 of this thesis is that the two verb heads in the Chinese SVCP are not reversible. In the following sentences, *a* is an SVCP while *b* is a sentence with reversed verb heads. Even though both heads are dyadic verbs and there is no pragmatic reason to rule out the reversed order, the (b) sentences are still unacceptable.

(1). a. wo jie shu kan

I borrow book read

I borrow books and read them.

b. The reversal of V1 and V2 in (a)

\* wo kan shu jie

I read book borrow

(2). a. wo mai shu zhong

I buy tree plant

I buy trees and plant them.

b. The reversal of V1 and V2 in (a)

\* wo zhong shu mai

I plant tree buy

(3). a. wo mai yang wei  
I buy goat feed  
'I buy a goat and feed it.'

b. The reversal of V1 and V2 in (a)

\* wo wei yang mai  
I feed goat buy

This fact is only superficially covered in this thesis and the underlying reason needs deeper investigation.

## BIBLIOGRAPHY

- Baker, Mark C. (1988). *Incorporation: A Theory of Grammatical Function Changing*. The University of Chicago Press: Chicago and London.
- (1989). 'Object Sharing and Projection in Serial Verb Constructions'. *Linguistic Inquiry*, 20, 513-553.
- Chao, yuen-ren (1948). *Mandarin Primer*. Harvard University Press: Cambridge.
- (1968). *A Grammar of Spoken Chinese*. University of California Press: Berkeley and Los Angeles.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Foris: Dordrecht.
- (1986a). *Barriers*. MIT Press: Cambridge.
- (1986b). *Knowledge of Language: Its Nature, Origins, and Use*. Praeger: New York.
- Chu, Chauncey C. (1983). *A Reference Grammar of Mandarin Chinese for English Speakers*. Peter Lang: New York.
- Goodall, Grant (1987). 'On Argument Structure and L-Marking with Mandarin Ba' in Joyce McDonough and Bernadette Plunkett, eds., *Proceedings of NELS 17 1986*. University of Massachusetts: Amherst.
- (1989). 'Evidence for an Asymmetry in Argument Structure' in 'Squibs and Discussion'. *Linguistic Inquiry*, 20, 669-674.

- Koopman, H. (1984). *The Syntax of Verbs: From Verb Movement in the Kru Languages to Universal Grammar*. Foris: Dordrecht.
- Henne, Henry & Ole Bjorn Rongen & Lars Jul Hansen (1977). *A Handbook on Chinese Language Structure*. Universitetsforlaget: Oslo-Bergen-Tromso.
- Huang, C.-T. J. (1982). *Logical Relations in Chinese and the Theory of Grammar*. PhD. dissertation. MIT: Cambridge.
- (1984). 'On the Distribution and Reference of Empty Pronouns'. *Linguistic Inquiry* 15, 531-574.
- Li, Charles N., and Sandra A. Thompson (1973). 'Serial Verb Constructions in Mandarin Chinese'. in Claudia Corum, T. Cedric Smith-Stark and Ann weiser, eds., *You Take the High Node and I'll Take the Low Node*. Chicago Linguistic Society: Chicago.
- (1978). 'An Exploration of Mandarin Chinese.' in Winfred P. Lehmann, eds., *Syntactic Typology*. University of Texas Press: Austin and London.
- (1981). *Mandarin Chinese: A Functional Reference Grammar*. University of California Press: Berkeley, Los Angeles, London.
- Lin, Helen T. (1981). *Essential Grammar For Modern Chinese*. Cheng & Tsui Company, Inc.: Boston.
- Li, Yafei (1990). 'On V-V Compounds in Chinese'. *Natural Language & Linguistic Theory*, 8, 177-207.
- Marantz, Alec (1984). *On the nature of Grammatical Relations*. The MIT Press: Cambridge.

- Perlmutter, D. and P. Postal (1984). 'The I-Advancement Exclusiveness Law.' in D. Perlmutter and C. Rosen, eds., *Studies in Relational Grammar 2*. University of Chicago Press: Chicago.
- Perlmutter, David M. & Scott Soames (1979). *Syntactic Argumentation and the Structure of English*. University of California Press: Berkeley.
- Radford, Andrew (1981). *Transformational Syntax*. Cambridge University Press: New York.
- Ross, Claudia (1984). 'Grammatical categories in Chinese'. *JCLTA*. 19, 1-22.
- Sells, Peter (1985). *Lectures on Contemporary Syntactic Theories* CSLI: Stanford.
- Travis, Lisa (1987). 'Parameters of phrase structure'. *McGill Working Papers in Linguistics* 4, 121-40.
- van Riemsdijk, Henk & Edwin Williams (1986). *Introduction to the Theory of Grammar*. The MIT Press: Cambridge.
- Wang, Yen-nung & Chiao, Pang-yung (1985). *A Collocational Dictionary of Common Chinese Verbs (with English Explanations)*. Julius Groos Verlag Heidelberg.
- Williams, E. (1984) 'Grammatical Relations'. *Linguistic Inquiry* 15, 639-673.

