

# The Headedness of Mandarin Chinese Serial Verb Constructions: A Corpus-Based Study

Jingxia Lin<sup>1</sup> Chu-Ren Huang<sup>1</sup> Huarui Zhang<sup>1,2</sup> Hongzhi Xu<sup>1</sup>

<sup>1</sup>The Hong Kong Polytechnic University; <sup>2</sup>Peking University  
{ctjlin; churen.huang}@polyu.edu.hk; hrzhang@pku.edu.cn; hongz.xu@gmail.com

## Abstract

Existing treebanks of Mandarin Chinese such as the Sinica Treebank, the Harbin Institute of Technology Treebank, and the Penn Chinese Treebank, parse Chinese serial verb constructions incorrectly or inconsistently in terms of headedness, i.e. which verb to be assigned with the label of syntactic and/or semantic “head”. Aspectual markers in serial verb constructions can help determine the head of these constructions (Li, 1991; among others). However, the majority of Chinese serial verb constructions do not have overt aspectual markers. Based on large-scale corpus studies, this work investigates the distribution of aspectual markers in Chinese serial verb constructions in order to explore which verb in the serial verbs is more likely to function as the head, and thus provides a reference for parsing serial verb constructions without overt aspectual markers. We find that contrary to previous studies such as Collins (1997), Law and Veenstra (1992) and Sebba (1987) that treat the first verb in a serial verb construction as the head, Chinese serial verb constructions more often have the second verb as the head. The results of this work can not only serve as a reference for automatic parsing of Chinese data, but also shed light on theoretical studies of the structure of serial verb constructions in Chinese and other serial verb languages.

## 1 Introduction

This section first introduces the kind of serial verb constructions (SVCs) under discussion; then, it shows the difficulties in identifying the head verb of an SVC, both in terms of theoretical linguistics and automatic parsing.

### 1.1 The SVCs of this study

“Serial verb construction” is not a unified notion in previous studies (Sebba, 1987; Lord, 1993; Durie, 1997; Aikhenvald, 2006; Li and Thompson, 1981; Paul, 2008; among many others). This paper focuses on SVCs in Mandarin Chinese, in particular, the type of SVCs in a narrower scope and is usually treated as typical SVCs by previous studies. Such SVCs display the following properties (cf. Li and Thompson, 1981; Paul, 2008; Muller and Lipenkova, 2009; Zhang, 2010; among others):<sup>1</sup>

- (i) An SVC consists of a sequence of VPs with no overt connective markers; these VPs express simultaneous or immediately consecutive actions that can be conceived as one event.
- (ii) The VPs share the same grammatical subject. For instance, (1a) is an SVC, but (1b) is not because the object of the first verb (V1) is the subject of the second verb (V2).
  - (1) a. *chuqu kai-men*  
exit open-door  
'go out to open the door'
  - b. *qing ta he-cha*  
invite him drink-tea  
'invite him to drink the tea'
- (iii) The VPs in an SVC can occur as the main VP in a clause. For instance, (2a) is an

<sup>1</sup> The majority of Chinese SVCs consist of two VPs. For convenience, this study only discusses SVCs of this type.

SVC, but (2b) is not, because *na* ‘hold’ and its object in (2a) can occur as the main VP in a clause, whereas *na* and its object in (2b) cannot occur alone and is treated as a PP.

- (2) a. *ta na-le shu lai wo-jia*  
 she hold-ASP book come my.home  
 ‘She took books and came to my home.’  
 b. *ta na nage chouwen xiao ta*  
 she hold that scandal laugh him  
 ‘She laughed at him with the scandal.’

- (iv) The relative order of the VPs in an SVC cannot be switched without a significant change of the meaning, e.g., *chuqu kai-men* ‘go out to open the door’ vs. *kai-men chuqu* ‘open the door to go out’; this distinguishes SVCs from coordinate structure that describes two independent and parallel events, e.g., *changge tiaowu* ‘sing songs and dance’, *tiaowu changge* ‘dance and sing songs’

## 1.2 The Problem of Identifying the Head Verb of Chinese SVCs

Identifying the head of an SVC in Chinese has been a difficult issue for linguists. Previous studies such as Collins (1997), Law & Veenstra (1992), Sebba (1987), Seuren (1991) argue that the first verb is usually the head of SVCs in serial verb languages. However, this is found not true for Chinese (Li, 1991; Law, 1996; Matthews, 2006; Paul, 2008; among others). For instance, Paul (2008) points out that either V1 or V2 can function as the head in a Chinese SVC. According to her, both V1 and V2 can be the head of the SVC in (3) depending on whether the SVC is understood as a purpose clause structure (3a) or an adjunct structure (3b), cf. Li and Thompson (1981).

- (3) *ta gui xialai qiu wo*  
 he kneel down beg me  
 a. He knelt down in order to beg me.  
 b. He begged me kneeling down.  
 (Paul, 2008: 382, (41-42))

However, Paul’s (2008) proposal does not help automatic parsing because the identification of the head heavily relies on larger context.

Muller and Lipenkova (2009), within the HPSG framework, analyze Chinese SVC as a structure with two parallel verbal daughters and do not mark any verb as the structural head, although they claim that the first verbal daughter is always a complete VP. Similarly, Yu et al. (2010) treat serial verbs as a type of coordinate structure and assign no head to any of the verbs. Such a representation, however, ignores the internal relationship between the (sub)events described by the serial VPs as well as the fact that the serial VPs in an SVC describe a single event. For instance, the SVC *kaiche liyou* drive-car travel ‘travel by driving a car’ describes an event of travelling in a manner of driving a car, but treating the two VPs in a parallel way indicates that there are two independent events, i.e. an event of driving and an event of travelling.

Other studies such as Li (1991) and Law (1996) propose that in a Chinese SVC, the verb suffixed with aspect markers is the head because the non-head verbs are usually bare verbs, cf. Sebba (1987). For instance, Li (1991) points out that *qie* ‘cut’ in (4a) and *na* ‘take’ in (4b) are the heads respectively in the two SVCs because these two verbs are suffixed with the perfective aspectual marker *le*.

- (4) a. *ta na dao qie-le rou*  
 he take knife cut-ASP meat  
 ‘He cut the meat with a knife.’  
 (Li, 1991:104 (11))  
 b. *ta na-le dao qie rou*  
 he take-ASP knife cut meat  
 ‘He took the knife to cut meat.’  
 (Li, 1991:112 (13a))

However, problems still exist because not all Chinese SVCs are overtly marked with aspectual markers. For instance, in the 436 SVCs that we collect from the Sinica Corpus, there are only 33 instances (7.5%) where the verb(s) is suffixed with aspectual markers.<sup>2</sup> Accordingly, the difficulty in

<sup>2</sup> The 436 SVCs are manually collected from 3,000 automatically extracted clauses with more than two verbs in the Sinica Corpus (Chen et al. 1996), which consists of about ten million POS-tagged words.

identifying the head causes troubles for automatic parsing of Chinese SVCs. The same SVC is sometimes found to be mistakenly or inconsistently analyzed by the Sinica Treebank<sup>3</sup>, the Harbin Institute of Technology (HIT) treebank<sup>4</sup>, and the Penn Chinese Treebank<sup>5</sup>. For example, the SVC in (5) describes an event of eating fruit by going to the kitchen (the perfective marker *le* is suffixed to V2 *chi* ‘eat’). However, as illustrated in Figure (1a) and Figure (1b), both the Sinica Treebank and the HIT Treebank mark the first verb *qu* ‘go’ as the head and indicate that the SVC describes an event of going to the kitchen with a result of eating fruit, whereas the latter suggests that the SVC

(5) *qu chufang chi-le shuiguo*  
 go kitchen eat-LE fruit  
 ‘eat the fruit by going to the kitchen’



Figure 1(a). The parsing of (5) by the Sinica Treebank

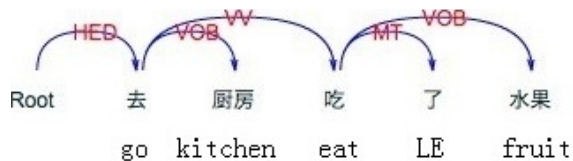


Figure 1(b). The parsing of (5) by the HIT Treebank

Also, the same SVC may be parsed differently by different treebanks. For instance, the SVC *mai-shu kan* buy-book read is treated as a headless coordinate structure by the Penn Chinese Treebank (Figure 2(a)), but a purpose clause with V1 as the head by the Sinica Treebank (Figure 2 (b)) and the HIT Treebank (Figure 2(c)).

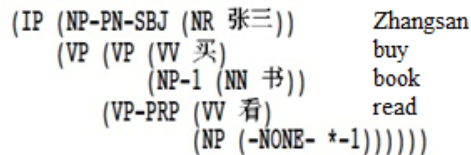


Figure 2(a) The parsing of *mai-shu kan* by the Penn Chinese Treebank (Xue and Xia, 2000: 114)

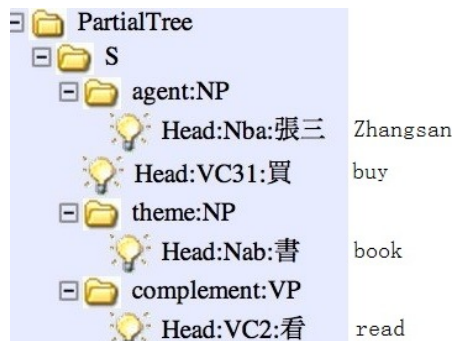


Figure 2(b) The parsing of *mai-shu kan* by the Sinica Treebank

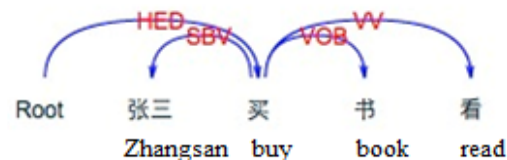


Figure 2(c) The parsing of *mai-shu kan* by the HIT Treebank

The incorrect or inconsistent parsing by these treebanks indicates that a better understanding of the headedness of Chinese SVCs is necessary. Based on the 10-million-word Sinica Corpus, this work investigates the distribution of aspectual markers in SVCs in order to find whether there is a systematic preference for either V1 or V2 to be marked as the head.<sup>6</sup> We find that in Chinese SVCs, V2 is much more often suffixed with aspectual markers that are indicators of head, whereas V1 is more often suffixed with aspectual markers that are indicators of non-head. In other words, the finding suggests that Chinese SVCs tend to have V2 as the head. Accordingly, for SVCs without overt aspectual markers, annotating V2 as the head will

<sup>6</sup> Other linguistic hints such as negators can help identify the head of SVCs (Sebba, 1987; Lin, 2004). For instance, Sebba (1987) argues that non-head verbs are not directly negated. Due to the scope of this study, we only investigate the distribution of aspectual markers, and leave the others for future.

<sup>3</sup> <http://turing.iis.sinica.edu.tw/treesearch>

<sup>4</sup> <http://ir.hit.edu.cn/demo/ltp/#>

<sup>5</sup> <http://www.cis.upenn.edu/~chinese/>

yield a higher accuracy rate than annotating V1 as the head (as by Sinica Treebank and HIT Treebank), or annotating V1 and V2 as coordinated verbs (as by Penn State Chinese Treebank).

In the following of this paper, we introduce our study in Section 2, and draw the conclusion in Section 3.

## 2 A Corpus-based Investigation of the Distribution of Aspectual Markers in Chinese SVCs

This section first introduces the possible distribution of Chinese aspectual markers in SVCs. Then, it introduces two corpus studies that examine the distribution of aspectual markers in SVCs of natural Chinese language; both studies show that it is V2 that is much more frequently marked as the head.

### 2.1 The Possible Distribution of Aspectual Markers in Chinese SVCs

In Modern Chinese, *le* ‘perfective’, *guo* ‘experiential’, and *zhe* ‘durative’ are among the most commonly used aspectual markers in Chinese. All three can be suffixed to V1, V2, or both verbs in an SVC. A few examples are given in (6)-(8), where the aspectual markers are suffixed to V1 in (a) sentences, V2 in (b) sentences, and both V1 and V2 in (c) sentences.

- (6) a. *ta dao-le tushuguan kan na-ben shu*  
 he arrive-LE library read that book  
 ‘He went to the library to read the book.’  
 b. *ta dao tushuguan kan-le na-ben shu*  
 he arrive library read-LE that book  
 ‘He read the book by going to the library.’  
 c. *ta dao-le tushuguan kan-le na-ben shu*  
 he arrive-LE library read-LE that book  
 ‘He went to the library and read the book.’
- (7) a. *ta qu-guo Xianggang liyou*  
 he go-GUO Hong.Kong travel  
 ‘He had the experience of going to Hong Kong to travel.’  
 b. *ta qu Xianggang liyou-guo*  
 he go Hong.Kong travel-GUO  
 ‘He went to Hong Kong and had the experience of travelling there.’  
 c. *ta qu-guo Xianggang liyou-guo*

he go-GUO Hong.Kong travel-GUO  
 ‘He had the experience of going to Hong Kong and travelling there.’

- (8) a. *ta pai-zhe-shou xiao*  
 he clap-ZHE-hand laugh  
 ‘He laughed, clapping his hands.’  
 b. *ta pai-shou xiao-zhe*  
 he clap-hand laugh-ZHE  
 ‘He clapped his hands, laughing.’  
 c. *ta pai-zhe-shou xiao-zhe*  
 he clap-ZHE-hand laugh-ZHE  
 ‘He is clapping his hands and laughing.’

The verb suffixed with the perfective marker *le* or the experiential marker *guo* is often treated as the head of a construction, both syntactically and semantically, as in (4) (Li, 1991). On the contrary, as for the verb that is suffixed with the durative marker *zhe* in an SVC, we argue that the VP containing the verb functions as an adverbial to modify the other VP (unless the verb in the other VP is also suffixed with *zhe*) (cf. Li, 1991). For instance, in *xiao-zhe guzhang* laugh-ZHE applaud ‘applaud with laughing’, *xiao-zhe* is understood as an adverbial describing an event of laughing that accompanies the event of applauding, i.e. the event described by the bare verb *guzhang* ‘applaud’. According to Gao (2006), in Modern Chinese, examples are found in which the adverbial marker *de* is overtly used after the VP with the aspectual marker *zhe*, as in (9); this further shows that a verb suffixed with the durative marker *zhe* functions as an adverbial rather than a syntactic or semantic head.

- (9) *wo hui weixiao-zhe-de gaosu ni*  
 I will smile-ZHE-MOD tell you  
 ‘I will tell you with a smile.’ (Baidu example)

Therefore, as for SVCs with overt aspectual markers, their heads can be identified by looking at the distribution of the aspectual markers in the SVCs. For instance, in (6a) and (7a), the first verbs are the head because they are the only verbs that are suffixed with *le/guo*, whereas in (6b) and (7b), the second verbs are the head because they are suffixed with *le/guo*; on the contrary, although V2 in (8a) is not suffixed with any markers, it should be treated as the head because V1 is suffixed with *zhe*, and in (8b), V1 is the head since V2 is

suffixed with *zhe*. In addition, for each (c) sentence in (6)-(8), both verbs are marked with the same aspectual markers, and thus there is no clear clue to identify the headedness. A comprehensive distribution of aspectual markers and the identification of headedness is presented in Table 1.

	Distribution of aspectual markers in SVCs
V1 = head	(a) V1- <i>le/guo</i> ... V2... (b) V1...V2- <i>zhe</i> ... (c) V1- <i>le/guo</i> ...V2- <i>zhe</i> ...
V1/V2 parallel	(a) V1- <i>le/guo</i> ...V2- <i>le/guo</i> ... (b) V1- <i>zhe</i> ...V2- <i>zhe</i> ...
V2 = head	(a) V1...V2- <i>le/guo</i> (b) V1- <i>zhe</i> ...V2 (c) V1- <i>zhe</i> ...V2- <i>le/guo</i> ...

Table 1. Identification of headedness in SVCs based on the distribution of aspectual markers.

The fact that both V1 and V2 are found with all three aspectual markers indicates that Chinese SVCs show both possibilities in terms of the position of their heads, in contrast to other languages such as Korean where all aspectual markers fall onto the final verb of a clause (Kim, 2010). However, we argue that despite the possibility of appearing in either V1 or V2 position of an SVC as in (6)-(8) and Table 1, Chinese aspectual markers do not have an even distribution in SVCs; but rather, *le* and *zhe*, which are indicators of headedness, are more frequently suffixed to V2, whereas the non-head marker *zhe* is more frequently found with V1. In other words, although Chinese SVCs can have either V1 or V2 as the head, it is more likely for V2 to be the head.

In the next section, we introduce two corpus studies to show that V2 is indeed much more frequently marked as the head in Chinese SVCs according to the distribution of aspectual markers.

## 2.2 A Corpus-based Investigation of Aspectual Markers in Chinese SVCs

We carried out two corpus studies to investigate the distribution of aspectual markers in Chinese SVCs; both studies support our claim that V2 is preferred to be the head. The data used is the Sinica Corpus (Chen et al.; 1996), which consists

of about ten million segmented and POS-tagged words.

### Corpus Study 1

In the first study, we searched in the whole Sinica Corpus for the distribution of aspectual markers (“ASP”) in the following three sequences: “V1-ASP1 + N1 + V2 + N2”, “V1-ASP1 + N1 + V2-ASP2 + N2”, “V1 + N1 + V2-ASP2 + N2”.<sup>7,8</sup> The retrieved data is then manually analyzed to exclude the sequences that are not SVCs.<sup>9</sup> The results are given in Table 2.

Table 2 shows that differences indeed exist for the suffixation of aspectual markers to the verbs in SVCs. The perfective marker *le* and the experiential marker *guo* tend to be suffixed to V2 in SVCs, whereas the durative marker *zhe* is more often suffixed to V1 position. Such distribution indicates that V2 much more frequently functions as the head: as summarized in Table 2, the frequency of V2 being the head (261 instances, 76.5%) is about four times higher than that of V1 being the head (66 instances, 16.2%), which thus is consistent with our claim.

<sup>7</sup> All SVCs examined in the first corpus study consist of verbs that are followed by nouns. The reason for choosing such sequences is that in Chinese, there are two kinds of *le*, one as an aspectual marker and the other as a sentence final particle, and if a verb (usually intransitive) is followed by *le* and occurs in a sentence final position, it is difficult to determine whether the *le* is an aspectual marker or a sentence final particle. It is beyond the scope of this study to manually check all instances of “V2+*le*” in the sentence final position for all verbs, so this study only investigates the SVCs where V2 is followed by a noun in order to guarantee that all instances of *le* are aspectual markers. However, the second corpus study introduced in Section 2.2.2 analyzes all kinds of SVCs because the nature of the data is suitable for manual check.

<sup>8</sup> The Sinica Corpus tags adjectives, cause marker (e.g., *rang* and *shi*), and copular as verbs. In this study, we do not treat verbal sequences with these words as SVCs. More specifically, we only searched for verbs with the following tags: VA, VB, VC, VAC, VCL, VD, VE, VF, and VG. For more information of the tagging, readers are referred to the technical report at <http://db1x.sinica.edu.tw/kiwi/mkiwi/98-04.pdf>.

<sup>9</sup> The search results retrieved a total of 1,638 instances, but our manual examination of the results found that only 579 instances (as in Table 2) are the SVCs under discussion.

	V1=head	V1/V2 parallel	V2=head
V1-ASP1 + N1 + V2 + N2	(a) ASP1 = <i>le</i> : 54 (b) ASP1 = <i>guo</i> : 4	NA	(a) ASP1 = <i>zhe</i> : 281
V1-ASP1 + N1 + V2- ASP2 + N2	(a) ASP1 = <i>le</i> ; ASP2 = <i>zhe</i> : 4	(a) ASP1= <i>le</i> ; ASP2 = <i>le</i> : 22 (b) ASP1= <i>zhe</i> ; ASP2 = <i>zhe</i> : 16 (c) ASP1 = <i>guo</i> , ASP2 = <i>guo</i> : 3 (d) ASP1 = <i>guo</i> , ASP2 = <i>le</i> : 1	(a) ASP1 = <i>zhe</i> ; ASP2 = <i>le</i> : 16
V1 + N1 + V2-ASP2 + N2	ASP2 = <i>zhe</i> : 32	NA	(a) ASP2 = <i>le</i> : 130 (b) ASP2 = <i>guo</i> : 16
SUM	94 (16.2%)	42 (7.3%)	443 (76.5%)

Table 2. Distribution of aspectual markers in “V1 + N1 + V2 + N2” SVCs

### Corpus Study 2

In this study, we first select nine verbs with high frequencies based on the 436 SVCs (see Footnote 2) found in the Sinica Corpus; then, we search for SVCs with these verbs and investigate the distribution of aspectual markers. The verbs are listed in (9).

(9) *dao* ‘arrive’, *dai* ‘bring’, *liyong* ‘use’, *shuo* ‘say’, *canjia* ‘attend’, *kan* ‘see’, *na* ‘hold’, *xiao* ‘laugh’, *mai* ‘buy’

According to the 436 SVCs, these nine verbs tend to occur in different position of SVCs: *dao* ‘arrive’, *dai* ‘bring’, and *liyong* ‘use’ are more often found in V1 position, *shuo* ‘say’, *canjia* ‘attend’, and *kan* ‘see’ more often occur in V2 positions, whereas *na* ‘hold’, *xiao* ‘laugh’, *mai* ‘buy’ are found to occur in V1 and V2 positions with equivalent frequency.

Nonetheless, this study examines the distribution of aspectual markers in two kinds of sequences for each verb, one with the verb in V1 position, and the other with the verb in V2 position. For instance, for the verb *xiao* ‘laugh’, we analyze both the SVCs with the sequence “*xiao* + ... + V2” and the sequence “V1 + ... + *xiao*”, where “...” stands for all kinds of elements that may appear in between the two verbs in an SVC. For each sequence, there are three possible distributions for the aspectual markers: for “*xiao* + ... + V2”, there are “*xiao*-ASP1 + ... + V2”, “*xiao* + ... + V2-ASP2”, and “*xiao*-ASP1 + ... + V2-ASP2”; whereas for “V1 + ... + *xiao*”, there are “V1-ASP1 + ... + *xiao*”, “V1-ASP1 + ... + *xiao*-ASP2”, and

“V1 + ... + *xiao*-ASP2”. The search results not only retrieve the frequency of each sequence, but also the whole clause where the sequence is found from the original texts, which thus enables manual check to exclude the instances that are not SVCs.<sup>10</sup>

Table 3 presents the frequency counts of headedness in SVCs of the nine verbs. It shows that among the nine verbs, only when the verb *mai* ‘buy’ occurs in V1 position and when the verb *dai* ‘bring’ occurs in V2 position do the SVCs have V1 more frequently marked as the head by the aspectual markers. On the contrary, the SVCs of all other verbs, be these verbs in V1 or V2 position, all have V2 functioning as the head.

Table 4 summarizes the distribution of aspectual markers in the SVCs found in this corpus study. The distribution is consistent with that in Corpus Study 1. For instance, *le* and *guo* that indicates headedness are much more often suffixed to V2 than to V1 (about five times). In addition, the table shows that there are only 1.7% of the SVCs where the serial verbs are marked in a parallel relation, i.e. the two verbs are suffixed with the same aspectual markers.

To summarize, both corpus studies provide quantitative support that Chinese SVCs tend to have V2 as the head, whereas the number of SVCs with V1 being the head, or V1 and V2 being of equal status is much smaller. Such a preference for V2 thus can serve as a reference for the parsing of headedness for SVCs without overt aspectual markers and yield a higher rate of accuracy than the current treebanks, i.e. the Sinica Treebank and

<sup>10</sup> The search results retrieved a total of 5,987 instances for the nine verbs. We then manually checked each instance and collected 2,154 instances that are the SVCs under the discussion of this paper (as in Table 3 and Table 4).

the HIT Treebank that often mark V1 as the head and the Penn Chinese Treebank that marks V1 and V2 as coordinated verbs.

### 3 Conclusion

This study pointed out the problem of identifying and parsing the head for Chinese SVCs. Based on corpus studies on the distribution of aspectual markers in Chinese SVCs, we found that it is V2 that is preferred to be the head in Chinese SVCs. The findings of this study are consistent with that

of Huang and Lin (2012): their corpus study suggests that in Chinese SVCs, V1 does not tend to function as the head because the VP that occurs earlier in a linear sequence very often carries information such as location, manner/instrument, comitative, and condition, which is usually represented by adjuncts in a language.

We expect that this study can serve as a reference for automatic parsing of Chinese data with a higher accuracy rate, and shed light on theoretical studies of the structure of SVCs in Chinese as well as other serial verb languages.

	Searched verb = V1			Searched verb = V2			Sum-diff	Avrg-diff
	V1=head	V1/V2 parallel	V2=head	V1=head	V1/V2 parallel	V2=head		
<i>xiao</i> 'laugh'	3	0	203	1	4	23	222	0.959
<i>dai</i> 'bring'	46	9	505	11	2	2	450	0.782
<i>shuo</i> 'say'	0	0	12	62	3	476	426	0.770
<i>canjia</i> 'attend'	1	0	1	3	0	16	13	0.619
<i>dao</i> 'arrive'	37	5	97	25	1	115	150	0.536
<i>na</i> 'hold'	33	0	114	4	0	8	85	0.535
<i>liyong</i> 'use'	5	0	14	0	0	0	9	0.474
<i>kan</i> 'see'	12	0	29	74	10	128	71	0.281
<i>mai</i> 'buy'	30	0	3	8	4	15	-20	-0.333

\*Sum-diff = Freq. (V2=head) – Freq. (V1=head)

Table 3. The distribution of aspectual markers in SVCs of nine Chinese verbs

	SVCs with ASP	Freq.	SUM
V1 = head	(a) V1- <i>le</i> ... V2...	241	355 (16.5%)
	(b) V1...V2- <i>zhe</i> ...	102	
	(c) V1- <i>guo</i> ...V2...	9	
	(d) V1- <i>le</i> ...V2- <i>zhe</i> ...	3	
V1/V2 Parallel	(a) V1- <i>zhe</i> ...V2- <i>zhe</i> ...	18	38 (1.7%)
	(b) V1- <i>le</i> ...V2- <i>le</i> ...	16	
	(c) V1- <i>guo</i> ...V2- <i>guo</i> ...	4	
V2= head	(a) V1- <i>zhe</i> ...V2...	1,499	1,761 (81.8%)
	(b) V1...V2- <i>le</i> ...	192	
	(c) V1- <i>zhe</i> ...V2- <i>le</i> ...	52	
	(d) V1...V2- <i>guo</i>	18	
	(e) V1- <i>zhe</i> ...V2- <i>guo</i> ...	2	
SUM			2,154

Table 4. Distribution of aspectual markers in SVCs of the nine verbs

### Acknowledgments

This work was supported by PolyU project 1-ZV8E.

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