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Serial Verb Constructions in Mandarin Chinese

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Abstract

Serial verb constructions (SVC) have been paid attention to by many researchers. The previous analyses have a problem of incomplete SVC data collected or classifications. This problem will lead to failure of predicting ungrammatical SVCs. This paper provides all possible combinations at the syntactic level. They are classified into temporal, location, causative and manner-and-instrument relationships. This paper argues that the order principle of verb phrases in SVC is a general constraint for all SVC data. The principle manages to predict ungrammatical SVC sentences.

Keywords: SVC, serial verb construction, the order principle, Mandarin

1. Introduction

The serial verb construction (SVC) is a syntactic structure which is composed of a sequence of verb phrases linked together. Inflectional languages, such as English, code syntactic units with morphological change, auxiliary words and word order. So English is treated as a non-serial language. However, non-inflectional languages knit units without morphological change because of lack of inflectional morphology. This gives rise to grammatical categories which are fuzzy in those languages, such as Mandarin Chinese. Tallerman (2014) argues that SVC is a cross-linguistic syntactic phenomenon, widely occurring in the world's languages, such as Chinese and some languages in Africa. Example (1) illustrates a SVC sentence from the Nupe language.

(1) Musa be la ebi. (Tallerman 2014:102)

Musa came took knife

'Musa came to take the knife.'

In (1), no overt connective marker exists between two verbs *be* and *la*. This is different from the English translation, where the particle *to* has to be used to connect two verbs. The two verbs share the same subject Musa in this example.

This paper will focus on SVC in Mandarin. SVC in Mandarin has been paid attention to by many linguistic researchers. However, no clear definition of SVC is widely accepted in previous studies (Tai 1985, Tao 2009, Zhang 2012). Some characteristics of SVC in Mandarin are even in conflict, such as sharing one object by a sequence of verb phrases.

The surface of SVC in Mandarin is made up of a sequence of verb phrases, expressed as NP + VP_1 + VP_2 + ... + VPn. Each VP represents an action, which can be called an event. So SVC is often treated as an overall single event including a sequence of subevents. One relationship between the subevents can be concurrent or consecutive temporally. The basic characteristics of SVC in Mandarin can be described as follows:

i. No overt connective marker exists between verb phrases in SVC.

ii. The grammatical subject is shared by all verb phrases.

iii. The order of verb phrases is strict. Sometimes the order change of verb phrases leads to ungrammaticality of a sentence. Most order change of SVC will result in semantic change. When two events are simultaneous, the order can sometimes be switched, and the meaning after order change can remain the same as before. In this case, two events are parallel events.

iv. No obvious phonology stop between verb phrases.

(2) Women xuan ta dang banzhang.
VP1 VP2
we vote him make monitor
'We voted him our monitor.'

Example (2) is not a SVC, because *xuan* and *dang* do not share the same subject. The object *ta* of the first verb is the subject of the second verb.

When word order is changed, the meaning of the whole sentence is uncertain. Light (1979) observed that locations of nouns and adverbs, standing before or after main verb in a sentence, have an impact on their meaning. This fact implies that word order carries some semantic functions in non-inflectional languages. In order to explain the change effect of word order in (iii), three SVC examples in Mandarin are presented in (3), (4) and (5), where each sentence has two verb phrases and has no overt connective marker between two verb phrases.

(3) a. Ta shangchuang shuijiao.
VP1 VP2
he go to bed sleep
'He went to bed.'

b.*Ta shuijiao shangchuang.
VP2 VP1
he sleep go to bed
'He slept and went to bed.'

(4) a. Zhang-san dao tushuguan na shu. (Tai 1985:51)
VP1 VP2
John go library get book
'John went to the library to get the book.'

b. Zhang-san na shu dao tushuguan.
VP2 VP1
John get book go library
'John took the book to the library.'

When the order of two verb phrases changes, the semantic meaning of the changed sentence could be ungrammatical in (3), different from the original in (4) or same as the original in (5). (3b) is not grammatical after VP_1 and VP_2 exchanges locations in (3a). The relationship of two phrases contains causal connection. When the positions of two phrases are changed, the broken relationship results in the ungrammatical sentence.

There are two verb phrases (*dao tushu guan* as VP_1 and *na shu* as VP_2) in (4a). The goal of (4a) is to get the book. By contrast, the goal of (4b) is to go to the library. The meanings are different when word order changes.

(5) a.Ta he cha du bao.
VP1 VP2
he drink tea read newspaper
'He drank tea while reading newspaper.'

b.Ta du bao he cha.
VP2 VP1
he read newspaper drink tea
'He read newspaper while drinking tea.'

There are also some verb phrases where the meanings are the same after verb phrase changes, such as (5a) and (5b). The two actions are simultaneous, because the subject did reading when he was drinking tea. The complicate order of verb phrases in SVC also show that SVC has undergone some constraints in semantic. This fuzzy problem cannot be addressed at the syntactic level.

It is still controversial whether verb phrases in SVC can share the same object. Example (6a) demonstrates this case sharing the same object, where the argument *cai* is attributed the theme role by *zhong* and *mai*.

(6) a.Ta zhong cai mai. (Muller and Lipenkova 2009: 239)
VP1 VP2
he plant vegetable sell
'He plants vegetables to sell them.'

b.Ta zhong cai mai cai.
VP1 VP2
he plant vegetable sell vegetable
'He plants vegetables and sells vegetables.'

However, when the second verb is followed by the same object directly, the meaning of (6b) is different from that of (6a). Example (6b) means that "he plants vegetables and sells vegetables". Two events are parallel in (6b). The meaning of (6a) is "He plants vegetables for selling". This paper argues that (6a) is not a SVC-construction.

Many previous researches try to provide a unified account for SVC in Mandarin. In this paper, related work of SVC in Mandarin is investigated, and existing problems are identified. The third section will collect SVC data and discuss them at the syntactic level and the semantic level. The fourth section will describe a general constraint for SVC in Mandarin Chinese. The last section is the conclusion.

2. Previous Studies On SVCs

2.1 Temporal Account

Tai (1985) presented a unified account for SVC in Mandarin, using the principle of temporal sequence (PTS), where the temporal order dominates two units. PTS was supposed to be a

constraint on word order based on the existing notion of temporal sequence between units. PTS argued that the order of two syntactic units is dominated by the temporal order of the state. The surface of verb phrases has to follow temporal order. if the two verbal events are parallel, the order can be switched.

However, the temporal order is not only one relationship between verb phrases, but also other relationships existing, such as causative and manner. What's more, it is difficult to determine temporal order for durative verbs, whose order cannot be changed. Although durative verbs are parallel, the order is strict.

2.2 HPSG Account

Muller and Lipenkova (2009) presented a HPSG analysis for SVC in Mandarin. The paper classified SVC into three categories including consecutive SVC, shared-obj-svc (SVC with shared objects) and unshared-obj-svc (SVC without shared objects). The second verb phrase has no overt object and share the object from the first verb phrase in shared-obj-svc, such as (6a). The paper followed a HPSG framework to account for shared-obj-svc and unshared-obj-svc. The HPSG account argued that the first verb phrase has a complete VP surface. SVC as a non-headed structure has two parallel verbal daughters. This HPSG account argued that the semantic interpretation depends on the aspect markers. The relationship of unshared-obj-svc is classified perfective, causative and manner-or-instrument.

However, some assumptions of this account are incorrect. For example, only the first verb phrase has a complete surface of verb phrase. VP_1 has some restrictions. The durative marker *zhe* can appear in both VP_1 and VP_2, instead of VP_1 mentioned in this account. The relation between two verb phrases is not always causative.

2.3 Tao (2009)'s Account

Tao (2009) presents a unified account, using a synchronic analysis of SVC in Mandarin. That paper argued that SVC falls into three general types: the canonical pattern (Type i), the pivotal pattern (Type ii), and the co-verb pattern (Type iii). Type i is a canonical surface which is made up of two verb phrases. Type ii is a conjoined pattern where the object of the first verb is used as the subject of the second verb. Type iii has a surface of a verb followed by directional complements.

Tao (2009) believed there is an evolution relationship between Type i and Type ii, because their surfaces can be the same sometimes. The surfaces are ambiguous, but they can be distinguished by pronunciation tones. The directional complement of Type iii can be treated as evolution of a verb. Based on these facts, Tao (2009) argued that three general types are SVC. The types undergo some evolution with the diachronic change. However, Type ii and Type iii are not SVC. The relationships only happen to a small group of SVC. It is difficult to understand SVC structure by this unified account.

2.4 Zhang (2012)'s Account

Zhang (2012) classified four categories according to the analysis of 118 "true" SVC data which comes from an online multilingual database typecraft. The four categories are vector

SVC, anchoring SVC, chaining SVC and aspectual SVC. The vector SVC is a main verb with directional verb. The anchoring SVC expresses purposive, manner or instrumental, causal, and so on. The chaining SVC has a sequence verb phrases with temporal relationship. The aspectual SVC contains aspect marker in either the first verb phrase or the second verb phrase. Zhang (2012) gave a semantic HPSG account for each SVC category. Though having 118 SVC data, it's still a question where the data contains all SVCs in Mandarin. The four categories can overlap each other. For example, the chaining SVC can also have an aspect marker.

3. Mandarin Data Collection

3.1 Syntactic Structure

Based on the survey result of related research regarding SVC in Mandarin, data collection has a major impact on the account for SVC. Sometimes the account based on incomplete data will lead to an incomplete conclusion, even incorrect conclusion. There are also problems confusing oral and written Mandarin SVC-constructions.

This paper follows the classification idea of Liu (2008). Liu (2008) collected SVC data from the novels of a Chinese famous novelist named as Lao she, whose novels are known for typical use in Mandarin. The data was collected according to all possible combinations of verb phrases so that the syntax combination of SVC data is complete.

The surface of one verb phrase can be classified into a single verb, a verb with an object, a verb with complement, a verb with an aspect marker and overlapping verbs. So the possible combination of binary SVC in Mandarin could be NP + V + VP, NP + V object + VP, NP + V complement + VP, NP + VV + VP, and NP + V aspect marker + VP. The verbal complement includes result, potential, manner, location/destination and degree (Yip and don 2006: 96), The aspect markers include *zhe*, *le*, *guo* and *zai* (Yip and don 2006: 56). The *ba* construction is used in example (21) and (25) (Yip and Don 2012:159). The Mandarin sentences of examples (7-29) come from Liu (2008).

Table 1. NP + V_1 + V_2

(7)	NP + V_1 + V_2	Ta dei qu mai. NP VP_1 VP_2 he must **go** **buy**	'He must go to buy.'
(8)	NP + V_1 + V_2 complement	Dajiu lai zuole yihui'er. NP VP_1 VP_2 uncle **come** **sit** for a while	'The uncle came and sat for a while.'
(9)	NP + V_1 + V_2 object	Wo guoqu la zhu mama de shou. NP VP_1 VP_2 I **go** there **hold** mother's hands	'I went there and held my mother's hands.'
(10)	NP + V_1 + V_2 V_2	Ni qu xie xie ba. NP VP_1 VP_2 you **go** **rest**	'You went for a rest.'

(11)	NP + V_1 + V_2 aspect marker	Ni qu xie-*zhe*. NP VP_1 VP_2 you **go** **rest**-*ASP*	'You go to be resting.'

Table 2. NP + V_1 object + V_2

(12)	NP + V_1 object + V_2	Tamen tiezhe malu bian er zou. NP VP_1 VP_2 they **to be along** road side **walk**	'They walked along the side of the road.'
(13)	NP + V_1 object + V_2 object	Ziji tao qian maile ji ge shaobing. NP VP_1 VP_2 I **spend** money **buy** several baked cake	'I bought several baked cakes with my own money.'
(14)	NP + V_1 object + V_2 complement	Ta la qi che zou chuqu. NP VP_1 VP_2 he **pull** cart **go** out	'He pulled his cart and went out.'
(15)	NP + V_1 object + V_2 V_2	Ta hui tou kanlekan. NP VP_1 VP_2 he **turn** head **look**	'He turned back and had a look.'
(16)	VP + V_1 object + V_2 aspect marker	Youde diaozhe yandai zuo-*zhe*. NP VP_1 VP_2 some **hold** a cigarette **sit**-*ASP*	'Some people holding a cigarette were sitting.'

Table 3. NP + V_1 complement + V_2

(17)	NP + V_1 complement + V_2	Xiangzi zhan zai che pang weixiao. NP VP_1 VP_2 Xiangzi **stand** at cart beside **smile**	'Xiangzi stood by the cart while smiling.'
(18)	NP + V_1 complement + V_2 object	Ta tang zai dishang mei chu sheng. NP VP_1 VP_2 she **lay** on ground not **make** a sound	'She said nothing lying on the ground.'
(19)	NP + V_1 complement + V_2 complement	Ta ganjin zhan qilai zou guoqu. NP VP_1 VP_2 he quickly **stand** up **walk** over	'He quickly stood up and walked over.'
(20)	NP + V_1 complement + V_2 V_2	Ni pao guoqu kan kan ba. NP VP_1 VP_2 you **run** there **look**	'You ran there and had a look.'
(21)	NP + V_1 complement + V_2 aspect marker	Ta ba rou fang zai bingxiang li dong-*zhe*. NP VP_1 VP_2 he BA meat **put** fridge **freeze**-*ASP*	'He put meat in the fridge to freeze.'

Table 4. NP + V_1 V_1+ V_2

(22)	NP + V_1 V_1+ V_2	Ni zhu zhu chi. NP VP_1 VP_2 you **cook** **eat**	'You ate them after cooking.'
(23)	NP + V_1 V_1+ V_2 object	Ta xiaoyixiao jieguole liwu. NP VP_1 VP_2 he **smile** **accept** gift	'He accepted the gift with a smile.'
(24)	NP + V_1 V_1+ V_2 complement	Ta xiaoyixiao zoule guolai. NP VP_1 VP_2 he **smile** **walk** here	'He went here with a smile.'
(25)	NP + V_1 V_1+ V_2 aspect marker	Ta ba zhuozi ca le ca gai-*zhe.* NP VP_1 VP_2 he BA table **wipe** **cover**-*ASP*	'He wiped the table and covered it.

Table 5. NP + V_1 aspect marker + V_2

(26)	NP + V_1 aspect marker + V_2	Ganche de xiao-*zhe* shuo. NP VP_1 VP_2 the one driving cart **smile**-*ASP* **talk**	'The one driving the cart was talking while smiling.'
(27)	NP + V_1 aspect marker + VP_2 complement	Xiangzi zhengzha-*zhe* zhan qilai. NP VP_1 VP_2 Xiangzi **struggle**-*ASP* **stand** up	'Xiangzi struggle to stand up.'
(28)	NP + V_1 aspect marker + V_2 object	Zhegeyuedegongqian, ni liu-*zhe* shoushi che ba. NP VP_1 VP_2 this month's wages, you **keep**-*ASP* **repair** cart	'This month's wages, you repaired your cart with it.'
(29)	NP + V_1 aspect marker + V_2 V_2	Ni tang-*zhe* xiuxi xiuxi. NP VP_1 VP_2 you **lie**-*ASP* **rest**	'You had a rest while lying.'

Based on the above classification, the syntactic surface can be expressed in Figure 1. The SVC phrase precedes all verb phrases. The first verb phrase could use V, V + NP, V + aspect marker or V + complement as a child node.

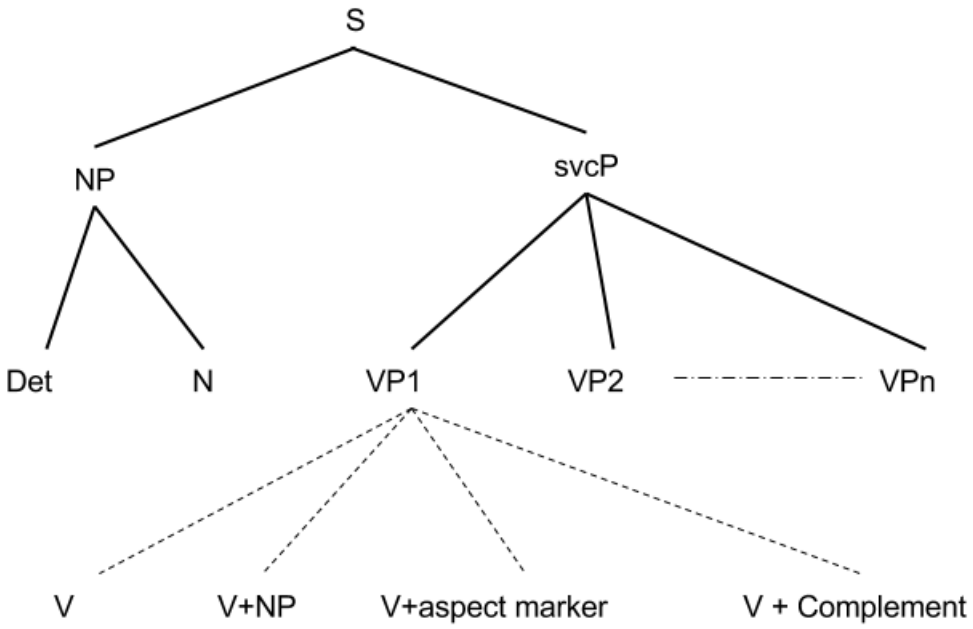

Figure 1. The Syntactic Structure of SVC in Mandarin

3.2 Semantic Relationship

The aspect markers transfer the semantic information in Mandarin. *Le* stands for the completion of an action. *Guo* indicates an action with past experience. *Zhe* means a durative state of an action. *Zai* denotes that an action is progressive.

As discussed in Tai (1985), the most frequent semantic relationship of SVC in Mandarin is temporal relationship. This type is called a canonical surface. But there are also other semantic relationships existing in SVC, such as (30).

(30)Niaoer tiezhe haimian feixiang.
NP VP_1 VP_2
bird **to be along** sea surface **fly**
'a bird flew along the surface of the sea.'

In (30), VP_1 (*tiezhe*) and VP_2 (*feixiang*) are parallel. However, their order cannot be switched. VP_1 expresses a durative state, and VP_2 happens inside the event denoted by the first phrase, which is the durative state. It is a logic relationship to knit VP_1 and VP_2 together instead of a temporal relationship. The temporal sequence is not enough to account for the order of (30). This also means that SVC cannot be classified well only according to the temporal relationship between verb phrases.

The semantic relationships can be classified into temporal relationship, non-temporal relationship. The non-temporal relationship includes manner-and-instrument, location relationship and causative relationship, described in Figure 2.

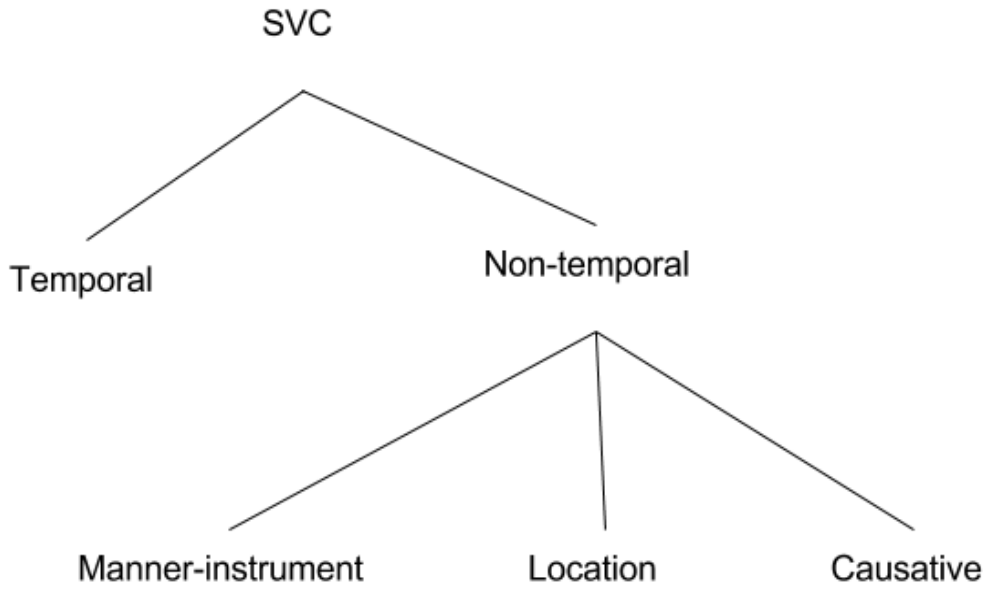

Figure 2. Semantic Relationship of SVC in Mandarin

3.2.1 Temporal relationship

The temporal relationship of SVC is a most common surface which is made up of a temporal sequence of verb phrases. These verb phrases can be considered as events. The relationship includes a consecutive temporal relationship and a parallel temporal relationship.

(31)Ta chi wan fan xizao qule.
VP$_1$ VP$_2$
he **eat**-PERF meal **bath** go
'He went to take a bath after a meal.'

VP$_1$ (*chi wan fan*) and VP$_2$ (*xizao qule*) are two independent actions, but they have a temporal relationship. VP$_2$ is performed only after VP$_1$ is done. In (5a), VP$_1$ (*he cha*) and VP$_2$ (*du bao*) are concurrent events.

3.2.2 Manner-and-instrument relationship

(32)Ta kai che zoule.
VP$_1$ VP$_2$
he **drive** car **go**
'He went by car.'

In (26), the aspect marker *zhe* stands for a progressive event, it means an durative action. The verb with *zhe* expresses a state of the subject. The semantic of example (26) transfers the information of being in a smiling state when the subject talked. In (32), VP$_1$ describes the subject uses a car as an instrument.

3.2.3 Location relationship

In (17), the surface of VP_1 is a verb with a preposition phrase. The semantic meaning is location or direction of the verb. VP_1 is a durative action, describing a static state. The action of the first verb lasts while the second verb happening. VP_1 as adverbial clauses of place expresses the location of VP_2.

3.2.4 Causative relationship

(33)Ta shengbing qu yiyuan le.
VP1 VP2
he **fall ill** **go** hospital
'He was sick and had gone to hospital.'

He went to hospital because of being sick. The sick state lasts during going to hospital. No temporal sequence exists between two verb phrases.

3.2.5 A special relationship

There is a SVC with a special surface. It can be put into the manner-and-instrument category. Example (34) shows this case. The surface in (34) uses two different verb phrases, where the first verb is a positive expression and the second verb is a negative expression. However, the two VPs transfer the same semantic meaning. They can be termed as one same event. So there is no temporal relationship between them. The first VP is usually durative. The second VP expresses an effect of emphasis and additional remarks.

(34) Ta zuo-*zhe* bu dong.
VP1 VP2
he **sit**-*ASP* not **move**
'He sat still.'

Table 6. relationship examples in SVC in Mandarin

Relationship	Examples
Temporal relationship	(3a), (5a-b), (6b), (7-15), (19-21), (22-25)
Location relationship	(4a), (17-18)
Causative relationship	(28)
Manner-and-instrument	(4b), (16), (26-27), (29)

4. Analysis

Existing accounts managed to address some problems of SVC in Mandarin Chinese. However, they failed to predict ungrammatical SVC sentences with order change between verb phrases.

This section describes a general constraint of SVC in Mandarin Chinese: the order principle of verb phrases which dominates the surface of SVC.

This principle sorts all verb phrases according to their ranks. The higher ranks precede the lower ranks. The rank depends on verb types, including durative verbs and punctual verbs. The rank of durative verbs is higher than that of punctual verbs. The rank between punctual verbs is ordered according to temporal relationship. The rank of punctual verbs is higher when their temporal is earlier. When both verb phrases are durative, the verb phrase expressing causative, location or manner-and-instrument has a high rank. In other words, location, causative or manner-and-instrument will locate at the first position in a SVC with location relationship, causative relationship or manner-and-instrument relationship respectively.

In SVC, the order can be switched only when the relationship is parallel temporal, such as (5a) and (5b), because their ranks are the same. The order principle can be used to predict the ungrammatical examples. When verb phrases fail to follow the order principle, SVC is ungrammatical.

But why is example (4b) still grammatical? The reason is that it's not a common expression for this meaning, although the surface is accepted in oral Mandarin. *Na shu* is ambiguous in oral Mandarin. It could be a durative verb or a punctual verb, depending on specific contexts. When *na shu* stands at the first position, it is a durative verb. An aspect marker *zhe* is usually used. By contrast, *na shu* is a punctual verb in (4a). The common expression is demonstrated in (35a) and (35b).

(35) a.Zhangsan ba shu na dao le tushuguan.

VP

John BA book **take to** library

'John took the book to the library.'

b. Zhangsan na-*zhe* shu dao le tushuguan.

VP_1 VP_2

John **take**-*ASP* book **reach** library

'John took the book to the library.'

c.*Zhangsan dao le tushuguan na-*zhe* shu.

VP_2 VP_1

John **reach** library **take**-*ASP* book

'John took the book to the library.'

In (35a), the particle *ba* is used, which means "to grasp" (Yip and Don 2012:159). (35a) is not a SVC. In (35b), the aspect marker *zhe* is used to express a progressing state, where the subject was always with the book until he reached the library. (35b) is a SVC with manner-and-instrument relationship. However, (35c) is ungrammatical, whose verb phrases are switched in (35b), because (35c) violates the order principle.

5. Conclusion

This paper summarizes the previous SVCs in Mandarin Chinese. Incomplete SVC data collected or classifications will fail to predict ungrammatical SVCs. This paper provides examples for all possible combinations at the syntactic level. The semantic relationships are classified into temporal, location, causative and manner-and-instrument relationships. This paper argues that the order principle of verb phrases in SVC is a general constraint for all SVC data. The principle can predict ungrammatical SVC sentences.

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