Excessive serial verb construction

A quasi-resultative serial verb construction in Mandarin Chinese

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This paper identifies a distinct serial verb construction in Mandarin Chinese: the Excessive serial verb construction. This construction exhibits formal similarity to the Resultative serial verb construction, since both of them involve adjacent unmarked verbs. Despite the similarity, the former construction differs from the latter most evidently in that it conveys an excessive meaning rather than a resultative meaning. This paper proposes that there is a syntactic difference between the two constructions. In contrast to the tight structure in the Resultative serial verb construction, which can be represented as S[vp V1 V2] *le*. The Excessive serial verb construction has a looser structure, which is structurally S[[vpV1] [vp V2-*le*]]. With respect to diagnostics of constituency, the two constructions behave in different ways. This paper further argues that correlating with a distinct structure, the Excessive serial verb construction requires obligatory topicalization of its undergoer argument, a phenomenon that is not observed in the Resultative serial verb construction. This study thus contributes to representing the interaction between the semantic properties – in particular, the function of *le* in the two constructions – and the syntactic properties.

Keywords: serial verb construction, excessive, nucleus, core

1. Introduction

Three types of verb sequence in Mandarin Chinese are found to consist of two adjacent unmarked verbs: the Resultative Serial Verb Construction (Resultative SVC hereafter), the Depictive Construction[1] and the Excessive Serial Verb Construction

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1. The Depictive construction, in contrast, does not express a result state, but rather, the depictive encodes a state or an "attribute" of a participant that holds as the main action occurs

(Excessive SVC hereafter). Despite their superficial similarities in surface form, they are different in both meaning and syntax. As this paper is mainly concerned with the predicate formation of the Resultative SVC and the Excessive SVC, an introduction to these two constructions is provided below before the detailed discussion.

The Resultative SVC, referred to as *Dongjie shi* in Chinese grammar (e.g. Jiang & Cao 2005: 305) or *Shicheng shi*, the "causative form [construction]" (Wang 1980: 403), consists of two adjacent verbs and expresses a causal relationship. The action denoted by the first verb (V1) in the SVC is the cause of the result that is denoted by the second verb (V2).[2] The Resultative serial verbs underlined in (1)–(4) are cited from Wang (1980: 403); the sentences themselves are mine.[3]

(1) *Nainai zhi da le maoyi, pang dian ye neng chuan.*
    grandma weave be.big PFV sweater be.fat a.little also can wear
    'Grandma has woven the sweater big, (so that even if) one puts on a little weight, it still fits.'

(2) *Caifeng fang kuan le kuyao, zheyang buzhiyu tai jin.*
    tailor loose be.wide PFV trousers waist this.way unlikely too be.tight
    'The tailor has loosened the waist of the trousers, so that it will not be too tight.'

(3) *Ayi xi ganjing le yifu, na qu shai le.*
    aunt wash be.clean PFV clothes, take go dry PFV
    'The aunt washed the clothes clean and took (them) to dry.'

(4) *Zhangsan da si le na tiao feng gou.*
    Zhangsan hit die PFV that CLF mad dog
    'Zhangsan hit the mad dog dead.'

(Halliday 1967: 63; Himmelmann & Schultze-Berndt 2005: 4). It is semantically and syntactically different from the Resultative SVC and the Excessive SVC (e.g. Zhang 2001), and it does not concern us in this paper.

2. Chinese word-class classification of adjectives has been a controversial topic. In this study, I treat the adjectives that can take an aspectual marker and function as the predicate in a simple clause as a subclass of intransitive verbs, as these behaviours indicate their verbal status. Consequently, adjectives such as *da* 'be big' and *ganjing* 'be clean', in the Resultative SVC and the Excessive SVC, are considered as the second serial verb.

3. The abbreviations used in the Chinese examples are: CLF: classifier, DM: discourse marker, GEN: genitive marker, LE: post-verbal *le* in the Excessive construction, NEG: negative marker, NMLZ: nominalizer, PASS: passive marker, PFV: perfective aspect marker, PRE: pre-transitive marker, Q: question marker, REL: relative marker.

In (1), the action of weaving caused the outcome that the sweater was big. In (2), the action of loosening the trousers waist resulted in it being wider. Similarly, in examples (3) and (4), the clothes being clean is the result of the aunt washing them, and the dog being dead is the result of *Zhangsan* hitting it.

The Resultative SVC can occur in either the order of SVVO or a topicalized OSVV order, according to the pragmatic needs during discourse. In (5), OSVV is shown as an alternative order for (3), whereby the object *yifu* 'clothes' is topicalized to the sentence-initial position.

(5)   *Yifu   ayi xi   ganjing le,   na   qu shai le.*
     clothes aunt wash be.clean PFV take go dry PFV
     'The clothes, the aunt washed (them) clean and took (them) to dry.'

A similarity in the constituent order OSVV is also demonstrated by another type of SVC, which, to a large extent resembles the Resultative SVC in meaning. A majority of the members of this type of SVC denote the final state of a participant after a preceding process/action. However, this final state is always conveyed as a deviation from a contextually determined standard or expectation of the speaker; hence, it is accompanied by a dissatisfactory attitude on the part of the speaker (Lu 1990; Li 1994; Wang 1996; Ma & Lu 1997; Ljungqvist 2007). We call this the *Excessive SVC* given its obvious meaning of excess, which is absent in the Resultative SVC. To illustrate, the Excessive serial verbs in (6)–(8) are quoted from Lu (1990: 1, 4) and Ma & Lu (1997: 18). The serial verbs are underlined.

(6)   *Zhe jian yifu   wo <u>mai gui</u>   le.*
     this CLF clothes I   buy be.expensive LE
     'This piece of clothing has been bought too expensively by me.'[4]

(7)   *(Tamen) kengr <u>wa qian</u>   le.*
     they   hole   dig be.shallow LE
     'The hole has been dug too shallow by them.'

(8)   *Yupian   ni   <u>qie hou</u>   le.*
     fish.slice you cut be.thick LE
     'The fish slices have been cut too thick by you.'

In fact, not only is the meaning of the Excessive SVC different from that of the Resultative SVC, the constituent order of topicalization is obligatory rather than optional, as in the Resultative SVC (Li 1994; Shen & Peng 2010; Zhang 2014). None of the above three examples can be used in the SVVO order, as shown in (9)–(11).

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4. The adverb *too* is adopted in the translation of the Excessive SVC to explicitly express the excess degree of a property. Passivity used in translation is only an attempt to approximate the sentences' meanings. It should not be taken as equal to the semantics of the Excessive expression.

(9) *Wo <u>mai gui</u>   le zhe jian yifu.
     I   buy be.expensive LE this CLF clothes

(10) *Tamen <u>wa qian</u>   le kengr.
     3SG   dig be.shallow LE ditch

(11) *Ni <u>qie hou</u>   le yupian.
     you cut be.thick LE fish.slice

In addition to the obligatory constituent order(s) in the Excessive SVC, another phenomenon is observed: some combinations of serial verbs may occur with either reading (i.e. the Resultative or the Excessive reading), while some may not. Compare (1) and (2) with (12) and (13), (3) and (4) with (14) and (15).

(12) *Maoyi nainai <u>zhi</u> <u>da</u>   le,   chuan   qilai bu*
     sweater grandma weave be.big LE wear rise.come NEG be.good looking
     haokan.
     'The sweater has been woven too big by grandma, and it does not look good on (me).'

(13) *Kuyao   caifeng <u>fang</u> <u>kuan</u>   le, wo mei name da   de yao.*
     waist of trousers tailor   loosen be.wide LE I   NEG that   be.big REL waist
     'The waist of the trousers has been made too loose by the tailor. I do not have such a big waist.'

(14) *Yifu   ayi <u>xi</u> <u>ganjing</u> le.*
     clothes aunt wash be.clean PFV
     * 'The clothes have been washed too clean by the aunt.'   (Excessive)
     'The clothes were washed clean by the aunt.'   (Resultative)

(15) *Na tiao feng gou Zhangsan <u>da</u> <u>si</u> le.*
     that CLF mad dog Zhangsan beat die PFV
     * 'The mad dog has been beaten too dead by Zhangsan.'   (Excessive)
     'The mad dog was beaten dead by Zhangsan.'   (Resultative)

As can be seen from the above examples, the serial verbs *zhi-da* 'weave-be.big' and *fang-kuan* 'loosen-be.wide' may occur in either the Resultative SVC, as shown in (1) and (2), or the Excessive SVC, as shown in (12) and (13). In contrast, the serial verbs of *xi-ganjing* 'wash-be.clean' and *da-si* 'beat-die' are rejected as an excessive reading, as shown in (14) and (15).

Studies have shown that the interpretation of excessiveness in the SVC is determined by several factors, such as the lexical semantics of V2, the function of the post-verbal *le*, the semantic entailments of both serial verbs and the contextual information (Li & Thompson 1989: 188–189; Lu 1990; Li 1999; Ljungqvist 2007: 211; Shen & Peng 2010; Fortuin 2013: 46–47; Zhang 2014). As will be discussed in §4.2,

some expressions that consist of a stative verb and a post-verbal *le* in Mandarin Chinese can express the excessive meaning, such as *da le* 'be too big' and *kuan le* 'be too wide', in addition to a change of status meaning, such as 'become big' and 'become wide', while others cannot. For example, *ganjing le* 'become clean' only denotes a change of status without expressing the excessiveness of a property, i.e. being too clean. These distinct behaviors of the stative verbs in having the excessive meaning in the V-*le* expression may have something to do with the gradability of these verbs (see Shen & Peng 2010: 4–5). For example, *si* 'die' is an achievement verb. It is telic and does not refer to any gradability. The expression *si le* 'become dead' can only denote a change of status. In addition to the semantics of V2, contextual information and the semantic entailments of both serial verbs should be taken into consideration as well. For example, the serial verbs *wa qian* 'dig be.shallow' in (7) denote a preceding action of digging, which presumably causes the hole to become deeper and deeper; however, the result denoted by V2 *qian* 'be shallow' indicates that the hole turns out to be (too) shallow, thus contrasting with the semantic entailment of V1. Detailed studies on the derivation of the excessive meaning in the SVC can be found in Shen & Peng (2010) and Lu (1990), and I do not repeat them here.

In this study, I examine the semantic and syntactic properties of the Excessive SVC further in a comparison with the Resultative SVC, given the observations already made on the two SVCs above. I argue that the Excessive SVC should not be treated as a subtype of the Resultative SVC, as not only do they differ from each other in semantics, they have distinct syntactic structures and are thus two different types of SVC. The analysis of two structurally distinct SVCs also sheds some light on the problem of obligatory topicalization of the undergoer argument, in that it is only observed in the Excessive SVC but not in the Resultative SVC.

This paper is structured as follows: In §1, I shall show that the two types of expressions (i.e. the Resultative SVC and the Excessive SVC) exhibit monoclausality with regard to two diagnostics. Section 2 introduces the difference of the argument-sharing pattern between the two SVCs. Section 3 discusses their difference in (a)telicity. Section 4 contains four subsections. In §4.1, I shall discuss the classification of SVCs that I follow in this study. In §4.2–§4.3, I shall show that the Excessive SVC behaves contrastively with the Resultative SVC with regard to two diagnostics of constituency. In §4.4, I shall discuss the phenomenon of the obligatory topicalization of the undergoer argument observed in the Excessive SVC. Section 5 concludes the paper.

2.   Monoclausality of the Excessive SVC

One of the defining characteristics of SVCs is monoclausality (Durie 1997: 289–290, Aikhenvald 2006: 4). Although monoclausality of the Resultative and Excessive expressions discussed in the introductory section may seem straightforward to the native speakers of Mandarin Chinese, a phenomenon has been noted in cross-linguistic studies of SVCs in that the same string of verbs can occur in an SVC or a bi-clausal structure, for example in Paamese (Crowley 2002: 83), White Hmong (Jarkey 2015: 246–247), Mandarin Chinese, and a variety of Mainland Southern Min (Fan 2016). Therefore, it is necessary to diagnose whether the verbs in question exist in the same clause or are distributed across different clauses when investigating the status of an SVC.

The diagnostics of independent temporal adverbial modification and independent or separate negation can be applied to distinguish SVCs from bi-clausal structures cross-linguistically. Studies have shown that SVCs demonstrate the Macro-Event Property (MEP, hereafter) proposed by Bohnemeyer et al. (2007) (Bisang 2009; Jarkey 2015), which requires that the temporal information of one sub-event is accessible to other sub-events denoted by the same expression (Bohnemeyer et al. 2007: 505). Modification by two distinct temporal adverbials naturally results in the absence of the MEP, and is only acceptable in bi-clausal structures. Consequently, the diagnostic of temporal adverbial modification can be adopted to establish the distinction between SVCs from bi-clausal structures (for more details on the application of this diagnostic, see Fan (2016: 55–59)). Moreover, it has been argued in several studies that since bi-clausal structures express two propositions in general, each clause can be independently or separately negated from the other clause(s); see for example, Lefebvre (1991: 43), Noonan & Bavin (1981: 64–65) and Noonan (1985: 77). A similar argument of separate negation in a bi-clausal structure can also be found in Paul (2008: 378). A detailed argument is provided in Fan (2016: 41–49). In the following, I shall show that both the action and the result state denoted by the two SVCs are within the same temporal setting, and that separate negation is not permitted in these SVCs as opposed to bi-clausal structures.

In subordinate and coordinate constructions, clauses can be modified by different temporal adverbials suggesting multiple clause boundaries. Example (16) contains embedded complement clauses, while example (17) is a coordinate sentence.

(16) *Lisi jintian wang le   zuotian   anpai   le   zhoumo   kan dianying.*
Lisi today forget PFV yesterday arrange PFV at.weekend see movie
'Today Lisi forgot that it was arranged yesterday that (we) will see a movie at the weekend.'

(17) *Wo zuotian   diao le   yu, jintian pa   le   shan.*
      I   yesterday fish PFV fish today   climb PFV hill
      'I fished yesterday, and climbed hills today.'

Unlike the above multi-clause structures, the Resultative SVC and the Excessive SVC allow modification by a temporal adverbial only once. With different temporal modifiers, expresssions in (18) and (19) are hardly acceptable.

(18) ^{??}*Ayi zuotian   xi   yifu,   jintian yifu   ganjing le.*[5]
      aunt yesterday wash clothes today   clothes be.clean PFV
      Intended: 'The aunt washed clothes yesterday. The clothes became clean today.'

(19) **Zhe qiang zuotian   qi   le, jintian ai   le.*
       this wall   yesterday build PFV today   be.low LE
      Intended: 'The wall was built yesterday. It became too low today.'

Application of pre-verbal negative particles *mei* 'not' or *bu* 'not' may also indicate the clause boundary. As shown in (20), the complement clauses and the main clause may accept negation independently without jeopardizing the grammaticality of the complex sentence. Similarly, each of the clausal conjuncts in the coordinate sentence (21) can be negated on its own.

(20) *Lisi mei wang zuotian   mei anpai   zhoumo bu   kan dianying.*[6]
      Lisi NEG forget yesterday NEG arrange weekend NEG see movie   [6]
      'Lisi did not forget that yesterday he did not arrange (such an event) that he will not see a movie on the weekend.'

(21) *Wo mei diaoyu, ye   mei pa   shan.*
      I   NEG fish   and NEG climb hill
      'I did not fish. Nor did I climb hills.'

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5. A reviewer points out that this sentence might be less natural if it is not ungrammatical. I agree with him/her. The resulting expression can not be interpreted as an SVC any more but a bi-clausal structure, provided that there is an appropriate scenario for such an interpretation. The resulting expression of a bi-clausal structure contains two clauses that have different subjects (i.e. *ayi* 'aunt' and *yifu* 'clothes') and denotes two separate events that happened at different times. Therefore, it still shows that an SVC does not accept modification by distinct temporal adverbials. Compared to (18), example (19) is unacceptable for me, or for my consultants of Mandarin Chinese.

6. A reviewer points out that the degree of acceptance of this sentence is low. I admit the low degree of naturalness of this constructed sentence. Nevertheless, I do not doubt its grammaticality.

In contrast, to negate V2 separately, in either the Resultative SVC or the Excessive SVC, is ungrammatical.[7] Only a single pre-V1 negative marker is permitted in these two SVCs; see the examples (22) and (23).

(22)   *Ayi   mei   xi   (*mei) ganjing yifu.*
      aunt NEG wash NEG   be.clean clothes
      'The aunt did not wash the clothes clean.'

(23)   *Zhe qiang mei qi   (*mei) ai.*
      this wall   NEG build NEG   be.short
      'This wall has not been built too short.'

In this section, I have shown that with respect to the diagnostics of independent modification by temporal adverbials and independent or separate negation, both the Resultative SVC and the Excessive SVC exhibit monoclausality. In the following sections, I shall show that despite the monoclausality, the two SVCs behave in different ways, semantically and syntactically.

3.   Argument structure

Despite the formal similarity (i.e. two adjacent verbs) and monoclausality, there is a fundamental difference regarding the argument-sharing pattern in the two types of SVC. In this section, I shall show that in the Excessive SVC, there must be one argument that is shared between the verbs, whereas in the Resultative SVC, it is not necessary for the serial verbs to share a particular argument.

    In the Excessive SVC, V1 can be either intransitive or transitive, while V2 is always intransitive. There must be one argument that is shared between the verbs. That is, either the object of V1 is identical with the subject of V2 when the individual verbs are used on their own, as in (24) and (25), or the subject of each verb is identical, as in (26). Example (26) is a truncated version of the original sentence in Lu (1990: 4).

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7. A reviewer asks if the negative potential construction in the form of V-*bu*-V in Mandarin Chinese is a counterexample to this argument. My answer is that the negative potential construction is not a case of independent negation of V2. To be more precise, independent negation means that each of the two verbs may have an independent polarity. Consequently, the verbs in the independent negation can be separately negated without affecting the polarity of each other. However, it is not acceptable to negate V1 separately from V2 in the expression of the potential construction *xi bu ganjing* '…cannot wash…clean' by saying **bu/mei xi bu ganjing* '(intended)… did not wash…was not clean'. Therefore, the negative potential construction is not considered as a case of the independent negation of V2.

(24) *Na   qiang lei   ai   le, hai dei   jia si   ceng zhuan.*
that wall   build be.low LE yet must add four CLF   brick
'The wall has been built too low. It must be added to with another four layers of bricks.'

(25) *Na gen zhuganr   ju chang le, hai dei   ju diao san   gongfen.*
that CLF bamboo pole saw be.long LE yet must saw be.off three centimetre
'That bamboo pole has been sawed too long. Three more centimetres must be sawed off it.'

(26) *Ni lai   zao   le,…, yongbuzhao   name zao   lai.*
you come be.early LE   be.not necessary that   be.early come
'You have come here too early. It is not necessary to come that early.'   (Lu 1990: 4)

In (24) and (25), V1s *lei* 'build' and *ju* 'saw' are transitive taking an unspecified subject and an object. In (26), V1 *lai* 'come' is an intransitive directional verb that takes a subject only.[8] V2, in all three examples, is intransitive, such as *ai* 'be low', *chang* 'be long' and *zao* 'be early'.

In contrast to the Excessive SVC, although argument sharing is sometimes observed in the Resultative SVC, such as in (3), (4) and (27) below, it is not always necessary, as is shown in (28).

(27) *Huaping shuai sui   le.*
vase   fall   be.in pieces PFV
'The vase fell and became in pieces.'

(28) *Ta ku shi   le   zhentou.*
3SG cry be.wet PFV pillow
'S/he cried so hard that the pillow got wet.'

In (28), both verbs are intransitive and they do not share any semantic argument. The subject *ta* 's/he' of V1 *ku* 'cry' is realized as the subject in the SVC, whereas the subject *zhentou* 'pillow' of V2 *shi* 'be wet' is realized as the object in the SVC.

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8. The directional verb *lai* 'come' is considered an intransitive verb. According to Hopper & Thompson (1980), a high degree of transitivity accompanies with the semantics in that the object of the verb is affected in the event or action denoted by the local expression. Syntactically, this affected argument is able to undergo passivization. In some expressions, there might be a locative argument that follows the directional verb. Basically, it cannot be passivized as it is not considered as affected in the event denoted by the active expression. Therefore, the locative argument should not be considered as the direct object of the verb. With regard to both the semantic and syntactic constraints, I do not consider the directional verb *lai* 'come' in this expression a transitive verb.

The argument sharing in the Excessive SVC is obligatory. In addition to the expressions of the Excessive SVC mentioned earlier, the obligatoriness of sharing an argument in this SVC can also be seen in that where the serial verbs do not share any arguments, such as in the verbs *ku-shi* 'cry-be.wet' in (28), the excessive meaning cannot be obtained.

(29)   *Zhentou ta   ku shi   le.*
      pillow   3SG cry be.wet LE
      * 'The pillow got too wet by him/her crying on it.'   (Excessive)
      The only interpretation: 'The pillow got wet by him/her crying on it.'
                                              (Resultative)

In the meantime, it is also noteworthy that the shared argument in the Excessive SVC is always topicalized before V1. This phenomenon is particularly observed in expressions (6)–(8); they cannot occur in the SVVO order, as shown in (9)–(11). That is, the object argument in these expressions cannot occur at the position after V2. In (26), the pronoun *ta* 's/he' is the subject of both verbs when they are used on their own, assumed to be a grammaticalized topic (Li & Thompson 1976: 484; Givón 2001: 196). I shall postpone discussion of this issue until §4.4, inasmuch as this phenomenon in the Excessive SVC correlates with its distinct syntactic structure.

4.   Unboundedness in the Excessive eventuality

Most of the studies on the Excessive SVC have claimed that this construction expresses an actual result of deviation from an expected result (*negative consequences* in the sense of Fortuin (2013: 35)). This is the reason why a number of studies categorize this construction as a semantic subtype of the Resultative SVC, such as Lu (1990), Li (1994), and Wang (1996). Given this assumed semantic similarity, one may also expect similar behaviors in the Excessive SVC with regard to semantic diagnostics, in particular the telic aspectual property that the canonical resultatives display consistently[9] (Tenny 1994; Levin & Rappaport Hovav 1994; Wechsler 2001). In this section, (a)telicity in the two SVCs is addressed. I shall show that despite the similarity in meaning and the formal resemblance, there is a non-trivial semantic difference between the two SVCs in Mandarin Chinese.

As an event's duration may vary from very short to long, two temporal adverbials *shi fenzhong nei* 'within ten minutes' and *like* 'immediately' are adopted to test the telicity of an event. In order to control for the variables of the surface structure in the comparison, the Resultative expressions all take a topicalized form, as is obligatory for the Excessive expressions.

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9. Also, see an argument in Goldberg & Jackendoff (2004: 542–543) that not all the resultative constructions in English are telic.

(30) *Yifu   Mama shi fenzhong nei/like   xi   ganjing le.*
       clothes mother ten minute   inside/immediately wash be.clean PFV
       'The clothes, mother washed (them) clean within ten minutes/immediately.'

(31) *Gou Lisi shi fenzhong nei/like   da   si le.*
       dog Lisi ten minutes inside/immediately beat die PFV
       'The dog, Lisi killed (it) within ten minutes/immediately.'

(32) **Wo zhe jian yifu   shi fenzhong nei/like   mai gui   le.*
       I   this CLF clothes ten minutes inside/immediately buy be.expensive LE

(33) **Kengr tamen shi fenzhong nei/like   wa qian   le.*
       hole   they   ten minutes inside/immediately dig be.shallow LE

In contrast to the grammatical resulting sentences of the Resultative SVC in (30) and (31), the Excessive expressions in (32) and (33) are unacceptable when they are used with the bounded temporal adverbials. The events of washing the clothes until they are free of stains in (30) and hitting the dog until it is dead in (31) contain an endpoint. The endpoint, however, is not identified in the Excessive expressions, as shown in (32) and (33). These examples, therefore, show that the Excessive SVC does not contain a bounded aspectual property in the manner of the Resultative SVC. This is similar to another proposal (Shen & Peng 2010) in which, however, such a diagnostic of (a)telicity was not conducted.

The unboundedness in the Excessive SVC has to do with the function of the post-verbal *le*. The fact that a stative verb followed by *le* may denote an Excessive meaning has been tapped in several studies (Li & Thompson 1989; Ljungqvist 2003: 115–119, 2007). For example, Li & Thompson (1989: 188–189) note that a stative verb followed by *le* can describe a process or a state. The processual reading is related to inchoativity. The stative reading is the excessive reading.

(34) *Chenshan xiao-le   (san cun)*
       shirt   small-LE three inch
      a. 'The shirt got smaller (i.e. shrank) by three inches.' (talking about a laundry mishap) (Process) [Inchoative]
      b. 'The shirt is (too) small by three inches.' (trying on clothes) (State) [Excessive]   (Li & Thompson 1989: 188–189)

Ljungqvist (2007: 199, 209) points out that in the Excessive reading, there are no boundaries in the situation; instead of a temporal boundary, the post-verbal *le* assigns an "attitudinal boundary" that demarcates the accepted norm and the excess. In the following section, I shall show that a stative verb and the post-verbal *le* form a constituent in the Excessive SVC as opposed to the Resultative SVC. Before doing so, I shall introduce the classification of SVCs on which I base my study.

5.   The Excessive SVC as a core SVC

5.1   Classification of SVCs in cross-linguistic studies

A widely adopted classification of syntactic subtypes of SVCs is *Nuclear vs. Core serializations*,[10] as proposed in the Role and Reference Grammar (RRG, henceforth) framework (Foley & Van Valin 1984; Van Valin & LaPolla 1997; Van Valin 2005). This distinction is proposed on the basis of the layered structure hypothesized in the RRG framework.[11] Nuclear SVCs are SVCs that form at the nuclear level, and core SVCs form at the core level; both are compatible with a monoclausal analysis. The classification of nuclear and core SVCs has been adopted in cross-linguistic studies of SVCs in Barai (Olson 1981; Foley & Olson 1985), Paamese (Crowley 2002), some other Oceanic languages (Early 1993; Bril 2007) and White Hmong (Jarkey 2015). A few studies of Mandarin SVCs also adopt such a classification, such as Hansell (1993), Chang (2007), Hwang (2008) and Fan (2016).

In my study, I abide by the notion that there is a distinction between nuclear and core SVCs. However, it should be noted that the distinction established between these two types of SVC is not found in the RRG framework exclusively. The syntactic differences established between the nuclear and core types of SVC are the criteria on which similar classifications of multi-verb constructions (MVC, hereafter) are established in studies in other frameworks. That is, the classification of nuclear and core serializations can be based on a more general consensus on the cross-linguistic classification of MVCs.[12] As suggested in Schultze-Berndt (2012: 205–206), the distinction established between the identified processes of

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10. The terms SVCs and serializations are used interchangeably in this study.

11. In the RRG, a clause consists of three layers: the nucleus, the core, and the clause. The nucleus takes the most internal layer in the clause, which commonly includes a verb. The core layer consists of the nucleus and core arguments. The outermost layer is the clause. This layer contains the core (the nucleus is inside a core) and the periphery, which usually encodes spatial-temporal information. An example labelled with clausal layers is provided in (1), with the initial letters of the names of layers appearing as the subscripted capital letters.

(1) $[_{CL} [_C I [_N$ ate $_N]$ noodles $_C] [_P$ at the restaurant $_P] _{CL}]$.

In (1), *ate* is the nucleus. The nucleus and its arguments form the core *I ate noodles*. The periphery *at the restaurant* provides the spatial information as to where the event took place, and thus is the modifier of the core.

12. While I assume such a nuclear-core distinction of SVCs in this study, I do not assume that nexus types (such as coordinate or co-subordinate) play a role in the general application of the two notions, namely, event fusion (or merger) and argument coindexation, adopted in my analysis of SVCs.

MVC formation in Butt's (1993, 1997) account (i.e. *Event Fusion* and *Argument Coindexation*) and in Baker & Harvey's (2010) account (i.e. *Merger* and *Fusion*) is comparable to the nuclear vs. core distinction in RRG. An equation of the classifications in the accounts by both Butt and Baker & Harvey can also be found in Nordlinger (2010: 247). An argument regarding the identification of similar processes of MVC formation can be seen in Rosen (1990), as well. Moreover, in Fan's (2016) study, which is based on a review of the representative classifications of MVCs and observations of the data of Mandarin Chinese and a variety of mainland Southern Min, it is also found that these existing classifications of MVCs correspond to the classification of nuclear and core serializations proposed in the RRG: via the processes of *Event Fusion* and *Merger,* or formation at the *nuclear* level, the MVC forms a tight structure, whereas the MVC that forms via the process of (*Argument*) *Coindexation* or at the *core* level has a looser syntactic structure.

The distinction between the two types of syntactic structure established in these classifications basically exists in two respects: the constituency and the argument structure[13] (Fan 2016: 84–116). In this study, I use the term *Nuclear SVC* to refer to the SVC that forms a tight structure via the process of *event fusion* or *merger*. I shall show that the serial verbs of this type fuse into an inseparable single unit[14] with respect to two diagnostics of constituency (§§4.2–3). Moreover, the nuclear SVC only has a single set of syntactic arguments on a par with a single verb (§2 and §4.4). I use the term *Core SVC* to refer to the SVC that forms a looser structure via the process of (*argument*) *coindexation*. Consequently, the core SVC behaves in a different way from the nuclear SVC with respect to the diagnostics of constituency (§§4.2–3). Furthermore, the core SVC has two separate syntactic argument structures that must be linked to each other via argument coindexation[15] (§2 and §4.4).

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13. In light of a number of studies that are not restricted to a particular approach, I also adopt the view that the argument structure of a predicate can be represented at two levels: the syntactic level and the semantic level (e.g. Butt 1993, 1997; Mohanan 1994, 1997; Goldberg 1995; Van Valin & LaPolla 1997; Schultze-Berndt 2000). For greater detail on the argument structure that I envisage in the study of SVCs, see Fan (2016: 32–33).

14. The nuclear SVC should be differentiated from the verb compounds in Mandarin Chinese. Such a stance has been taken in several studies of SVCs, such as Hansell (1993) and Chang (2007). As argued by Fan (2016: 95–97), the V-V compounds in Mandarin Chinese behave differently from the nuclear SVC with regard to lexical reduplication, a derivational process that can be applied to lexical items but not to syntactic constructions. For example, the compound *zhichi* 'support' can occur in *zhichi zhichi* 'support support'. However, the nuclear SVC *dasi* 'hit-die' cannot occur in **dasi dasi* 'lit. hit-die hit-die'.

15. Following Butt (1993, 1997) and Baker & Harvey (2010), by *argument coindexation*, I mean that for the linking purpose, the arguments that share the same reference in the two

5.2 Coordination of V2-*le*

Units may be coordinated at different levels, varying from the lexical word to the full sentence. Usually, only the constituents with comparable syntactic functions can be coordinated (Haspelmath 2007); this serves as a valid diagnostic for constituency.

    The structure in nuclear and core SVCs makes them behave contrastively with regard to the diagnostic of coordinating a verbal constituent within the SVC. This diagnostic has been adopted in the analysis of a type of MVC in Urdu by Butt (1993, 1997). However, it is a novel diagnostic when used to identify the status of the SVC, as it has not been applied in previous studies (see Fan (2016: 112–113)). In the following paragraphs, I shall show that, unlike the Resultative SVC that does not allow its V2(-*le*) to be coordinated separately from V1, the Excessive SVC patterns with other types of core SVC in Mandarin Chinese in allowing V2-*le* or V2O2 within a coordination, suggesting a looser structure in the Excessive SVC, despite the superficial contiguity of the two component verbs at the surface form.

    The two adjacent verbs in the Resultative SVC form a new complex nucleus such that any individual serial verb of it cannot participate in a coordinate structure independently from the other verb in the SVC. The Resultative SVC can only accept coordination of the whole nucleus predicate. Compare (35)a with (35)b.

(35) a. *Zhuangzi da shen   le, bingqie da yanshi le.*   (Resultative)
        stake   hit be.deep PFV and   hit be.solid PFV
        'The stake was driven deep and solid (into the ground).'
    b. *Zhuangzi da shen   le (*bingqie yanshi le).*   (Resultative)
        stake   hit be.deep PFV and   be.solid PFV

An example found in the CCL online corpus developed by Beijing University confirms this point. In (36), *da si* lit. 'shoot die or kill' is coordinated with *da shang* lit. 'shoot injure'. Even if the two coordinating expressions share the same V1 *da* 'shoot', it cannot be deleted in the second conjunct of coordination. As is shown in (37), to coordinate the V2s *si* 'die' and *shang* 'injure' in (36) is not acceptable. The V2 coordination or V2-*le* coordination based on this type of SVC is never found in the corpus.

(36) … *da   si da   shang qi bubing sanshi yu   ren.*
        shoot die shoot injure its infantry thirty more man
        '…killed and injured affecting more than thirty infantrymen.'

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separate argument structures must be coindexed such that only one argument is kept and realized in syntax.

(37) *... *da   si   (he) shang bubing sanshi yu   ren.*
        shoot die and injure infantry thirty more man
        Intended: '...killed or injured its infantry for more than thirty.'

As discussed in §3, a stative verb followed by *le* in Mandarin Chinese may contribute to the excessive meaning (Li & Thompson 1989: 188–189, Ljungqvist 2007: 211). Therefore, it is reasonable to assume that they form a constituent in the Excessive SVC. Indeed, the behavior of the Excessive SVC behaves in sharp contrast to that of the Resultative SVC with regard to the diagnostic of coordinating V2-*le* within the SVC, as shown in (38). The coordinated conjuncts are underlined.

(38) *Zhuangzi da <u>qian   le erqie song   le</u>.*   (Excessive)
       stake   hit be.shallow LE and be.loose LE
       'The stake has been driven (too) shallow and (too) loose.'

Another example from a Chinese question-answer website *Baidu Zhidao* confirms the validity of the V2-*le* coordination in the Excessive SVC. The communication content on the website *Baidu Zhidao* resembles the daily conversation between people in a speech community, and thus is a source of reliable data of conversational written Mandarin Chinese. A Q&A example from this website is provided in (39) and (40). The conjuncts in the coordination are underlined.

(39) Question:
       Qiang qi   <u>gao   le huozhe chang le</u> zenme bujiu?
       wall   build be.high LE or   be.long LE how   fix
       'How to fix the wall that is built too high or too long?'

(40) Answer:
       Jiang <u>gao   chu, chang   chu</u> de   bufen qiege diao bu jiu xing le   ma?
       PRE   be.high exit be.long exit NMLZ part   cut   be.off not just be.ok PFV Q
       'Just cut off the parts that are too high and too long (on the wall).'

In (39), the question itself contains a V2-*le* coordination in which the conjuncts are linked by the disjunctive coordinator *huozhe* 'or'. The first conjunct *gao le* 'be too high' preceding the connective word is coordinated with another constituent *chang le* 'be too long'. Although the coordination of V2-*le* in the answer (40) is less clear, as V2 is the grammaticalized directional verb *chu* 'exit' instead, it is evident that the person who answered the question simply took on the coordinate structure and developed his/her speech, hence the coordination of *gao chu* 'become high' and *chang chu* 'become long' in his/her answer. Indeed, replacing *chu* 'exit' with the post-verbal *le* does not cancel the grammaticality and the excessive meaning in (40), as can be seen in (41). The conjuncts are further relativized by *de*, and the larger unit *gao chu chang chu de bufen* 'the parts that are too high and/or too long' as a whole functions as the object of the sentence.

(41) *Jiang gao   le, chang   le de   bufen qiege diao bu jiu xing le   ma.*
     PRE be.high LE be.long LE NMLZ part   cut be.off not just be.ok PFV DM
     'Just cut off the parts that are too high and too long (on the wall).'

Similarly, the amenability of coordination of V2(O2) can also be seen in other
types of core SVC in Mandarin. Example (42) is taken from a Chinese blog, which
denotes a directed motion with a purpose. It is a core SVC (the action-purpose
SVC, as it is called in Hwang (2008: 109–111)). Example (43) is an Instrumental
SVC. Both expressions exemplify the grammaticality of coordinating V2O2 in
core SVCs. The coordinated conjuncts are underlined in (42) and (43).

(42) *Wanshang pa   shang ta jia   de fangding chengliang,   kan*
     at.night   climb ascend 3SG house GEN roof   rest.in shade watch
     xingxing.   (Directed Motion-Purpose)
     star
     'At night, we climbed up onto the roof of his house to rest in the shade and
     watch stars.'

(43) *Wo yong shaozi chi dongxi (haiyou) xiaochu yandai.*   (Instrumental)
     I   use spoon eat food and   erase eyebag
     'I ate food and erased eyebags with a spoon.'   (Fan 2016: 228)

5.3 Insertion of the adverb *tai* 'too'

The (in)ability to insert an intervening material may serve as a test to differenti-
ate the nuclear SVC from the core SVC. Since two component verbs have merged
into a single unit in the nuclear SVC, they do not allow anything to divide them.
Therefore, it is not allowed to insert intervening material between the serial verbs
of a nuclear SVC or an MVC that forms by fusing two predicative elements into a
single unit (e.g. Foley & Van Valin 1984: 191–192; Foley & Olson 1985: 39–40;
Butt 1993: 97–98; Peng & Chappell 2011: 134–136, 144).[16, 17] Contrastively, a
core SVC may accept intervening material between the verbs, correlating with its
looser structure.

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16. There is a similar argument in Aikhenvald (2006: 37) that no intervening material should go
in between the serial verbs in a "contiguous SVC". However, in the present study, I have shown
that contiguous serial verbs at the surface form may occur in different syntactic structures; for
example, the serial verbs *zhi da* 'weave be.big' can occur in the Resultative SVC or the Excessive
SVC. Consequently, the contiguity of the serial verbs is a necessary but not sufficient criterion
of a nuclear SVC. Therefore, I stick to the term *nuclear SVC* to refer to the verbal serialization in
which the contiguous verbs form an inseparable single predicate.

17. Peng & Chappell (2011: 135–136) mentioned that aspectual markers may go in between
some particular nuclear serial verbs in Jingpho as a result of grammaticalization.

It should be noted that, as mentioned in Fan (2016: 110), there are two requirements for selecting grammatical material as the intervening material in this diagnostic. One is maintenance of the original syntactic structure; the other is semantic consistency. That is, insertion of the intervening material should not result in a different syntactic structure from the original one, and the resulting expression that accepts the intervening material between the component verbs should maintain a very similar meaning to the meaning of the original expression, if they cannot be exactly the same.

As a reviewer points out, some serial verbs that occur in the Resultative SVC may also occur in the potential construction V-*de/bu*-V. Superficially, it seems that the Resultative SVC allows intervening material (i.e. the morphemes *de* or *bu*) to go between the verbs, and consequently seems to have a loose structure, as reflected in the potential construction. Nevertheless, there are three reasons that the (in)ability of serial verbs occurring in the potential construction should not be considered as a criterion to diagnose the status of an SVC. In other words, the morphemes *de* or *bu* in the potential construction should not be considered as intervening material.

First of all, as mentioned at the beginning of the section, the resulting construction in the test of inserting an intervening material should maintain its original structure and meaning. However, the potential construction is evidently different from the Resultative SVC in its semantics. For example, the interpretation of the potential expression *xi de/bu ganjing* '…can(not) wash clean…' is not resultative like *xi ganjing le* '…washed clean…'. Therefore, it violates the criterion of semantic consistency.

Secondly, there is no derivational relationship between the potential construction and the Resultative SVC. That is, the potential construction is not derived from the Resultative SVC by inserting an intermediate morpheme *de* or *bu* between the verbs; they are two distinct constructions. In fact, the potential construction formed via an independent pathway in an early historical period of Chinese. According to Wu (2002a, 2002b) amongst others, the affirmative potential construction (with *de* lit. 'obtain') has its origin in serial verbs that employed the verb *de* 'obtain' as its V2 to denote realization of a resultant state. It is the change of the context (presumably from denoting a realized event to denoting an unrealized situation) that causes the whole expression to switch from denoting an actual result caused by a preceding action (realized) to denoting a kind of modality (unrealized). Despite a different historical origin, the negative potential construction with the negative *bu* 'not' between two verbs has also undergone grammaticalization such that it functions as the negative counterpart of the affirmative potential construction (with *de* lit. 'obtain'). Furthermore, absence of such a derivational relationship between the two constructions can be perceived in the fact

that some serial verbs that can occur in the Resultative SVC are not able to occur in the potential construction; as an example, the Resultative serial verbs *xi zang* lit. 'wash be.dirty' cannot occur in the potential construction as **xi de/bu zang* 'can(not) wash…dirty' (Li 2009: 392).[18] Therefore, using a potential construction as the diagnostic violates the criterion of the maintenance of syntactic structures.

Thirdly, to consider the potential construction as a test of constituency gives rise to the question as to whether the (in)ability of a combination of verbs to occur in a particular construction should be considered as a criterion for distinguishing syntactic subtypes of SVCs (for a similar point, see Fan (2016: 106–108). It is in fact problematic to do so, as I have already discussed in the initial section of the paper, that the same string of verbs can occur in either the Resultative SVC or the Excessive SVC, such as *zhi da le* lit. 'woven big or woven too big' and *fang kuan le* lit. 'loosened wide or loosened too wide'. In addition to the two SVCs, the same two strings of verbs can also occur in the potential construction, for example, *zhi de/bu da* '…can(not) weave…big' and *fang de/bu kuan* '…can(not) loosen…wide'). If the potential construction is used as the test of constituency, one is only able to draw the conclusion that the aforementioned two pairs of serial verbs can only occur in one structure, which is problematic, given the observation of two different structures made in other sections.

In sum, the potential construction cannot be considered as a diagnostic in this section. In the following, I shall show that, in addition to the amenability of V2-*le* for coordination that was observed in the Excessive SVC, further evidence suggesting the existence of a distinct structure of the Excessive SVC is the possibility of inserting the adverb *tai* 'too' between the serial verbs. In contrast, insertion of the degree adverb *tai* 'too' between the serial verbs is not permitted in the Resultative SVC.

The adverb *tai* 'too' cannot occur between the verbs *zhi* 'weave' and *da* 'big' in the Resultative construction, as shown in (44). When this adverb is inserted in between the verbs in (45), which was previously ambiguous in meaning, only the Excessive SVC is preserved.

(44) **Nainai   zhi   tai da   le maoyi.*
        grandma weave too be.big LE sweater

(45) *Maoyi zhi   tai da   le.*
        sweater weave too be.big LE
        * 'The sweater was woven big.'   (Resultative)
        'The sweater has been woven too big.'   (Excessive)

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18. While the affirmative potential expression **xi de zang* 'can wash…dirty' is not acceptable, as Li (2007: 110–112) points out, the negative counterpart *xi bu zang* 'cannot wash…dirty' may be occasionally acceptable depending on the modality that it expresses.

In fact, not only does the occurrence of the degree adverb *tai* 'too' in the Excessive SVC make the excessive meaning overt, it also indicates the existence of the loose structure in the Excessive SVC.[19] In (44) and (45), V2 *da* 'be big' refers to a gradable property and accepts the modification by the intensifier *tai* 'too' on its own; for example, *tai da* 'too big'. Moreover, the same string of verbs *zhi da* 'weave be.big' has been shown to be able to occur in either the Resultative SVC or the Excessive SVC. However, when the degree adverb *tai* 'too' is inserted between the serial verbs, only the Excessive SVC is kept, as suggested by both the excessive meaning and the obligatory topicalization of the object. Therefore, insertion of the degree adverb *tai* 'too' correlates with the structure of the Excessive SVC in addition to its excessive meaning.

So far, the §§4.2–3 have shown that the structural tightness is only observed in the Resultative SVC but not in the Excessive SVC with regard to the two diagnostics of constituency, i.e. the coordination of V2(-*le*) within the SVC and insertion of the adverb *tai* 'too'. In the following section, I shall also show that, due to a different process of MVC formation (i.e. argument coindexation in §4.1), the Excessive SVC not only requires a shared argument, but also requires the shared argument to be always topicalized – a phenomenon that is not observed in the Resultative SVC (also see §2).

5.4 Obligatory topicalization of the undergoer argument in the Excessive SVC

As already discussed in the introductory section and §2, topicalization of the shared argument in the Excessive SVC is obligatory. Example (46) is a repeat of (7) for convenience in reading. The undergoer argument *kengr* 'hole' in the Excessive SVC cannot occur at the sentence-final position, as illustrated in (47); nor can it take the position between the two verbs, a place where it may belong at the semantic level of argument structure of the two component verbs, as shown in (48).

(46) *Tamen kengr wa qian   le.*
      they   hole   dig be.shallow LE
      'The hole, they have dug it too shallow.'

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19. A reviewer points out that the diagnostic of inserting the degree adverb *tai* 'too' in the SVC is only semantically motivated. However, I have mentioned at the beginning of this subsection, the diagnostic has been adopted in several cross-linguistic studies to test the constituency of a given multi-verb construction. Moreover, an adverb which is semantically more compatible with the mere resultative reading, such as *youdianr* 'a little' or *wanquan* 'completely' or *hao* 'very/ quite', cannot exist between the resultative serial verbs, despite the adverb's ability to modify V2 *da* 'be big' when V2 is used on its own. Therefore, this diagnostic tests both the semantic and syntactic compatibility between the inserted material and the tested expression.

(47) *Tamen wa qian   le kengr.
       they   dig be.shallow LE hole
       Intended: 'The hole, they have dug it too shallow.'

(48) *Tamen wa kengr qian   le
       they   dig hole be.shallow LE
       Intended: 'The hole, they have dug it too shallow.'

Thus far in the existing literature, Zhang (2014) has argued that it is the constructional meaning of "evaluation" that requires the profiling of the comment part (V2-*le*), which consequently requires topicalization of the undergoer argument in the Excessive SVC.[20] However, in light of my analysis of the structure of the core serialization in the Excessive SVC, this issue can be better accounted for in terms of the argument structure in the core SVC. Precisely speaking, topicalization of the undergoer argument is required in the Excessive SVC due to the requirement of linking two separate argument structures in the SVC (see §4.1). In other words, obligatory topicalization of the undergoer argument in the Excessive SVC is a "by-product" of the structure of this core serialization.

As I have discussed in §4.1, the term nuclear SVC refers to an MVC that forms via event fusion or merger. That is, despite the occurrence of two verbs in the expressions, they function on a par with a single verb. As suggested by Peng & Chappell (2011: 144) in a study of a Jingpho nuclear SVC, the flexible ordering of the nominal elements that occur to the left of the nucleus can be observed due to the formation of the nuclear serialization. Likewise, in the transitive Resultative SVC in Mandarin Chinese, the undergoer argument can be optionally topicalized as that of a transitive verb in a simple clause. For example, topicalization of the object *yifu* 'clothes' in (5) is optional, as it is repeated in (49). The behavior of this object with regard to optional topicalization parallels with the optional topicalization of the object of the transitive verb *xi* 'wash' in (51) that forms on the basis of the simple clause, as shown in (50).

(49) *Yifu   ayi xi   ganjing le, na   qu shai le.*
       clothes aunt wash be.clean PFV take go dry PFV
       'The clothes, the aunt washed (them) clean and took (them) away to dry.'

(50) *Ayi xi   le   yifu.*
       aunt wash PFV clothes
       'The aunt washed clothes.'

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20. I think the author might be suggesting that it is the predication of the undergoer argument in the expression that results in the occurrence of the obligatory topicalization.

(51) *Yifu   ayi   xi   le.*
      clothes aunt wash PFV
      'The clothes, the aunt washed (them).'

Unlike the nuclear SVC, since there are two separate argument structures in the core SVC and the other MVCs that form via the process of argument coindexation, they must be linked by coindexing the identical arguments in a monoclausal structure (§4.1). For example, most core SVCs form on the basis of subject argument fusion[21] in Mandarin Chinese (Fan 2016). In these types of core SVC, usually two transitive verbs are involved in a given expression of an SVC. When each component verb of the core SVC takes a distinct object, V2 does not coindex its undergoer argument with that of V1. Rather, the subject argument of V2 in these core SVCs coindexes with the subject argument of V1 so that the two cores are linked to one another in the monoclausal structure. Consequently, each object immediately follows its verb, but there is only one subject in the syntax. For example, V2s, such as *zhua* 'catch' in the Purposive SVC, as shown in (52), and *qie* 'cut' in the Instrumental SVC, as shown in (53), are transitive and take their own object argument, *tuzi* 'rabbit' and *rou* 'eat', respectively. These objects are different from those of the V1's: namely, *dong* 'hole' and *dao* 'knife'. In these two expressions of SVC, in order to link the two cores, the V2's subject argument *ta* 's/he' coindexes with the subject argument of the V1 in these two types of core SVC.

(52) *Ta wa dong zhua tuzi.*   (Purposive SVC)
      3SG dig hole catch rabbit
      'S/he digs a hole to catch a rabbit.'

(53) *Ta na   dao qie rou.*   (Instrumental SVC)
      3SG take knife cut meat
      'S/he cuts meat with a knife.'

Another example of linking separate argument structures in the core SVC is a subtype of the Purposive SVC, as shown in (54). In this expression, there are two transitive verbs as well. The expression does not involve obligatory topicalization of the undergoer argument *dongxi* 'food'. The non-occurrence of the object argument of V2 is due to its co-referentiality to O1, which undergoes anaphoric ellipsis under a temporal sequence constraint, as argued by Chang (1990) on the basis of

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21. V2 cannot realize its subject syntactic argument independently in an SVC in Mandarin Chinese. Realization of V2's subject independently in an expression gives rise to a bi-clausal structure instead of an SVC. For a detailed argument in this respect, see Fan (2016: 33–40). Similar arguments have been made in previous studies, such as the study of complex predicates in Urdu by Butt (1993, 1997) within the framework of the Lexical Functional Grammar and the study of serial verbs in White Hmong by Jarkey (2015: 140–142) within the RRG framework.

Huang (1989, 1991). In this case, the subject in the argument structure of V1 is coindexed with the subject in the argument structure of V2; the object in the argument structure of V1 is coindexed with the object in the argument structure of V2 (Fan 2016: 274–286).

(54)   *Ta   mai dongxi chi.*   (Purposive SVC)
       3SG buy food   eat
       'S/he buys food to eat.'

Unlike these core types of SVC, it can be seen that the two argument structures of the Excessive SVC are different: there is a functional difference associated with the shared argument (i.e. the undergoer argument) in the argument structure of the two cores. In the Excessive SVC, V1 is transitive whereas V2 is intransitive. There is a recognizable undergoer argument in the event denoted by the Excessive SVC. In the first core of the Excessive SVC, the undergoer argument is the object argument of the activity V1 in the argument structure. For example, the undergoer argument *kengr* 'hole' in (46) is the object argument of V1 *wa* 'dig', which is the nucleus predicate in the first core. In the second core, the undergoer argument functions as the subject argument (and the only argument) of the stative V2-*le* in the argument structure. The argument *kengr* 'hole' is the subject argument of the V2-*le*, i.e. *qian-le* 'be too shallow', the nucleus predicate in the second core.

    With two structurally different cores, to coindex the identical arguments in their separate argument structures must be conducted in a different way from the one observed in the other core types of SVC discussed previously. The fixed position of the undergoer argument in the Excessive SVC must be jointly determined by the two structurally different cores. This can be seen in two respects. First, although the undergoer argument functions as the object argument in the argument structure of the first core, it is simultaneously the subject argument in the argument structure of the second core. Consequently, this undergoer argument cannot be placed after V2-*le* in the Excessive SVC, as shown in (47). Secondly, as I have shown in (48), the position between the two serial verbs in the Excessive SVC is not available for the undergoer argument that simultaneously functions as the object of the first core and the subject of the second core. Therefore, the only way to make the reference of the undergoer argument simultaneously accessible for the two structurally different cores appears to be topicalizing it to a position before V1. By doing so, the two cores (or their argument structures) in the Excessive SVC are linked via argument coindexation (i.e. coindexing two identical arguments and realizing only one of them in the syntax).

    In sum, obligatory topicalization of the undergoer argument in the Excessive SVC is due to two reasons. The first one is the general requirement of linking separate argument structures in the core SVC. The second reason is the functional

difference of the undergoer argument in the two cores of the SVC and the lack of a position between the serial verbs to keep the undergoer argument such that it can maintain the different functions in the cores without changing the monoclausality of the SVC.

6.   Conclusion

In this paper, I have argued that, despite superficial similarities, the Excessive SVC forms a distinct type of SVC that should not be considered as a subtype of the Resultative SVC, as was claimed in traditional studies. In addition to their semantic difference (i.e. meaning and (a)telicity), the two SVCs differ from each other syntactically. I adopt two diagnostics of constituency to show that the Excessive SVC has a relatively looser syntactic structure than the Resultative SVC: the former allows independent coordination of its V2-*le* from V1 and the insertion of intervening material (i.e. the degree adverb *tai* 'too') between the serial verbs, whereas the latter does not. Moreover, I have argued that due to its distinct structure of a core SVC, the Excessive SVC requires a particular argument to be shared and its undergoer argument to always be topicalized before V1 such that the reference of it can be simultaneously accessed by two structurally different cores in the SVC. Forming in a different way, however, the Resultative SVC does not impose such a constraint on its undergoer argument.

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