The Nature and Structure of Reflexive Verb Constructions

YANG Yongzhong

Yunnan University of Finance and Economics, China

wmyoung@sina.com

Abstract

Based on a summary of the features of reflexive verb constructions (ReVCs), this paper proposes that the internal structure of reflexive verb constructions is [$_{VP}$ Spec[$_{V'}$ V R]]. Whether it occurs overtly or covertly, the reflexive constituent is base-generated in the position of the complement of V. Its occurrence in other positions results from movement of the reflexive constituent. Due to the existence of the covert pronoun, the whole reflexive verb constructions cannot assign accusative case to other constituents. Therefore, reflexive verb constructions cannot be followed by an object. The reflexive pronoun introduces reflexive interpretation, as a consequence of which the verb is characterized by reflexivity. A reflexive verb construction operates in the syntax as a complete syntactic object and hence occupies a syntactic position. The whole reflexive verb construction can function as the object in the specifier position of VP and move to the position of the light verb to function as the predicate, followed by a tense or aspect marker.

Keywords: reflexive verb constructions, reflexives, unaccusativity

Povzetek

Na podlagi pregleda strukturnih značilnosti povratnih glagolov (ReVC) članek predlaga [$_{VP}$ Spec[$_{V'}$ V R]] kot notranjo strukturo povratnih glagolskih zvez. Ne glede na to, ali se pojavlja odkrito ali prikrito, je povratni člen bazno generiran v položaju glagolskega dopolnila. Njegovo pojavljanje na drugih mestih je rezultat premika povratnega člena. Zaradi obstoja prikritega zaimka celotne povratne glagolske zveze ne morejo dodeliti tožilnika drugim členom in posledično povratni glagolski zvezi ne more slediti predmet. Povratni zaimek uvaja povratno interpretacijo, zaradi česar je glagol označen kot povraten. Povratna glagolska zveza v skladnji deluje kot popoln skladenjski predmet in zato zavzema skladenjski položaj. Celotna povratna glagolska zveza lahko deluje kot predmet v položaju določilnika glagolske zveze in se premakne v položaj lahkega glagola, da deluje kot povedek, ki mu sledi označevalec časa ali glagolskega vida.

Ključne besede: povratne glagolske zveze, povratni zaimek, netožilniškost

1   Introduction

Reflexive verb constructions (ReVCs) are phenomena that occur cross-linguistically in a number of the world's languages; they occur most frequently in European and Asian languages. They have been extensively discussed in the literature on European and Chinese linguistics. Since the 1970s more and more research has been conducted into ReVCs with regard to reflexive pronouns' features, binding conditions, semantic interpretation, conditions on argument blocking, change of syntactic structure, syntactic-semantic variation, interrelation between reflexive choices and tense and focus, relevance between case markers and the agent, the effects of syntactic alternatives and frequency types on the acquisition of reflexive verb constructions, verbs' constraints on reflexive pronouns' anaphora as well as the cause of bare reflexive pronouns' long-distance anaphora. (Prado, 1975; Naro, 1976; Levine, 1993; Déchaine & Manfredi, 1994; Tsujimura & Takako, 1999; Rivero & Sheppard, 2003; Labelle, 2008; Fehrmann et al., 2010, 2014；Schäfer, 2012; Kishida & Sato, 2012; Wood, 2014; Hendriks et al., 2015; Xu, 2016; Paykin & Peteghem, 2017; Jin, 2003; Zhu, 2009; Zhang, 2010; Tian, 2016) In general, the research on ReVCs is precise in the method and varied in the angle but remains descriptive. However, there are still some outstanding problems, regarding the types of reflexive verbs, the range of semantic notions that can be expressed by these verbs, and the positions of verbs and reflexives as complements. Specifically, the problems lie in the following respects: the internal structure of ReVCs, the arrangement of the verbs and their objects, the reason why the reflexive constituent always precedes the verb with respect to linear structure and the syntactic hierarchy with no regard to linguistic typology, constraints that the constituents are subject to, the generation mechanism of ReVCs, the underlying structure which licenses the covert reflexive constituent, and the reason for the missing arguments.

The goal of this paper is to provide a unified account of word order and constituency of ReVCs in the framework of generative grammar. By comparing ReVCs in various languages, a conclusion of universal significance will be reached based on the facts of languages and linguistic types.

The paper is organized as follows. Section 2 presents a criticism of some relevant explanations concerning the reflexive and ReVCs. Section 3 focuses on the main features of ReVCs. Section 4 addresses the internal structure of

ReVCs. Section 5 addresses the syntactic computation of ReVCs and section 6 is the conclusion.

2   Some relevant explanations and their problems

Since there are too many previous analyses of reflexives and ReVCs, it is impossible to cover all of them in this paper. Therefore, I will only discuss some previous studies that are relevant to motivate my own analysis of reflexives and ReVCs in Chinese, with a focus on those performed in the framework of generative grammar. Among them, Zhu (2009) sparked off an intense debate on the syntactic status of reflexives and ReVCs in the circle of Chinese linguistics.

    According to Zhu (2009), the syntactic structure of ReVCs is the same as that of intransitive verb constructions, as shown in (1).

(1) [$_{IP}$ Spec[$_{I'}$ I[$_{VP}$ Spec[$_{V'}$ V]]]]

Following, the Chinese ReVC *Wo xizao* can be analyzed as (2).

(2) a. 我　洗澡
　　 wo　xizao
　　 1SG　bath[1]
　　 'I bath.'

　 b. [$_{IP}$ Spec[$_{I'}$ I[$_{VP}$ Wo[$_{V'}$ xizao]]]]

    Given order typology, Chinese is a head-initial language. Hence the prefix must govern the subsequent root. If morphology is taken into consideration, then, the prefix (i.e. reflexive pronoun) is subject instead of object. In this case, the syntactic structure of the Chinese ReVC *Ta zisha* should be analyzed as (3).

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[1] Abbreviations used in this article are as listed at the end of the paper.

(3) a. 他　　　　　自杀
　　　 ta　　　　　zisha
　　　 3SG-MASC self-kill
　　　 'He kills himself.'
　 b. [$_{IP}$ Ta[$_{I'}$ I[$_{VP}$ zisha]]]

There are, however, problems with the above approach. First, it is ad hoc and is only true for the Chinese ReVCs. It is not applicable to the ReVCs in English, German, Haitian, French, Spanish, Russian, Portuguese, Polish, or Japanese. If the reflexive pronoun *zi* is considered to be the subject of the ReVC, then what is the relation of the personal pronoun *ta* to the reflexive pronoun *zi*? Cross-linguistically, the reflexive pronouns in German ReVCs either bear an accusative marker or a dative marker. They cannot bear a nominative marker. In the same vein, the reflexive pronouns in English, German, Haitian, French, Spanish, Russian, Portuguese, Polish, and Japanese ReVCs all bear accusative markers. This proves that the reflexive pronoun in ReVCs functions as the object of the verb. It is the theme of the verb instead of the subject that triggers the action or behavior of the verb, hence it is not a subject. Obviously, the theoretical attempt to analyze the reflexive pronoun as a subject cannot reveal the internal structure of ReVCs in Chinese. Neither can it account for ReVCs in German, Haitian, French, Spanish, Russian, Portuguese, Polish, or Japanese.

Second, the approach cannot account for the process of generation of ReVCs, the base-generation position of the reflexive pronoun and the way it enters into the syntactic surface, not for its syntactic properties. It is generally assumed that Chinese is a SVO language. The object follows the verb. In this case, the reflexive pronoun should be base-generated in the position behind the verb V. If it precedes V, it must be the result of a movement. If this is the case, then, the following questions must be answered. How does the reflexive pronoun move from the position following V to the position preceding V? What is the motivation of such a movement? The reflexive pronouns in English, German, Haitian, French, Spanish, Russian, Portuguese, Polish, and Japanese function as the object of V. With respect to surface structure, some of them precede V, whereas others follow it.

How do we account for the ReVCs in various languages in a unified theoretical framework and draw a convincing conclusion? This issue is certainly worth researching.

3   The main features of ReVCs

In this section, I attempt to develop a new approach to ReVCs by discussing their main features.

3.1   The co-index between the subject and the object of ReVCs

The constituents that precede and follow the verb of ReVCs have the same reference. To put it differently, they refer to the same person or thing. The constituent that precedes the verb is a trigger of action or behavior, whereas the constituent that follows the verb is a bearer of action or behavior. The action that the verb represents acts on the subject per se. The reflexive pronoun serves the function of the object of the verb. It always co-occurs with the verb. A ReVC is composed of a reflexive pronoun and a verb.

(4) Du   trocknest   dich   ab. German
    2SG-NOM dry-PRES-2SG self-ACC SVP
    'You dry yourself / your body.'
    (Wang, 2001, p. 17)

(5) Jak benyen [kòl]   de fwa   pa   jou. Haitian
    Jak bath   body-3SG two times each day
    'Jak washes himself / bathes twice a day.'
    (Déchaine & Manfredi, 1994)

3.2   Covertness and overtness of reflexive pronouns

Reflexive pronouns can occur overtly or covertly. They can occur in the form of a clitic which is adjoined to the verb. If they occur overtly, they must precede the verb. They, together with the verb, form a ReVC, as illustrated below.

(6) a. 自嘲   Chinese
   zichao
   self-deride
   'deride oneself; mock oneself; laugh at oneself'

   b. 自爱
    zi'ai
    self-love
    'love oneself'

   c. 自怜
    zilian
    self-pity
    'pity oneself'

(7) a. sich abzeichnen   German
    self-copy
    'become apparent / something reveals itself'

   b. sich auskennen
    self-recognize
    'know one's way around'

   c. sich entsinnen
    self-recall
    'remind (oneself)'

   d. sich gedulden
    self-tolerate
    'restrain oneself and wait'

When reflexive pronouns occur covertly, they can be considered to be part of ReVCs. To put it differently, in such cases, both the reflexive pronoun and the verb have been incorporated to be syntactic object. Therefore, if there is only one word in a ReVC, it must have implicit reflexive meaning, as shown in Chinese ReVCs *xizao* (bath) and *chuanyi* (dress), English ReVCs *bath*

and *dress*, and German ReVCs *baden* (bath) and *kleiden* (dress).[2] Reflexive pronouns can also be adjoined to the verb. They can occur in the form of a prefix or suffix, such as the French prefix *se*, Spanish prefix *se-*, Japanese prefix *zi-*, Polish suffix *-si*, Portuguese suffix *-se*, and Russian suffix *-sja* (cf. Prado, 1975; Naro, 1976; Levine, 1993; Tsujimura & Takako, 1999; Rivero & Sheppard, 2003; Zhu, 2009).

3.3   Occurrence or non-occurrence of the object of ReVCs

Under normal circumstances, whether ReVCs are composed of a single verb or a reflexive pronoun and a reflexive verb, they display intransitive features. Thus, ReVCs cannot be followed by an object, as shown in the above examples *zichao*, *xizao*, and *chuanyi*. Specifically, the ReVC *zichao* comprises a reflexive pronoun *zi* and a transitive verb *chao*. However, as a whole, it is characterized by intransitivity and cannot be followed by an object. As for the verbs *xizao* and *chuanyi*, they are intransitive intrinsically, and therefore, they cannot be followed by an object. Sometimes, however, ReVCs display

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[2] The verbs of this type express the event of reflexivity concerning lexical semantics. They denote the act which acts on the body of the agentive subject, viz. the agentive subject per se. They are characterized by reflexivity because they entail a covert reflexive pronoun. The covert reflexive pronoun is a default patient which refers to the agentive subject. However, they can introduce an object that is not the agentive subject per se by means of syntactic forms. In view of Chinese, the object can be introduced by means of the prepositions *gei*, *wei*, or *ti*, as illustrated in (i). As for English, there is no need to resort to grammatical devices. In effect, the English reflexive verbs can be followed by a patient object directly, as illustrated in (ii). It follows that the verbs, such as Chinese *xizao* (bathe) and *chuanyi* (dress), English *bath* and *dress*, and German *baden* (bathe) and *kleiden* (dress), are characterized by reflexivity when they occur as intransitive. In contrast, they are characterized by non-reflexivity when they occur as transitive. It follows that they are reflexive in the lexicon.

(i) a. 我　给/为　孩子　洗澡。
      wo　gei/wei haizi　xizao
      1SG for/for　child　bathe
      'I bathe my child.'
   b. 我　给/为　父亲　挠痒。
      1SG for/for　father scratch
      'I scratch my father.'

(ii) a. I shaved him.
   b. She bathed her children.

transitivity. The reflexive pronoun stresses that the action is triggered by the actor per se instead of being triggered by other external forces, as illustrated below.

(8) a. 自诩   Chinese
zixu
self-boast
'to boast oneself'

b. 自卑
zibei
self-blame
'to blame oneself'

c. 自筹
zichou
self-raise
'to raise (funds) by oneself'

d. 自建
zijian
self-construct
'to construct by oneself'

(9) a. 自爆する   Japanese
jibaku suru
self-explode-SUF
'self-explode'
(Tsujimura & Takako, 1999)

b. 自認する
jinin suru
self-recognize-SUF
'self-recognize'
(Tsujimura & Takako, 1999)

The ReVCs in the above data show that the action is triggered by the subject thoughit does not act on the subject per se. The reflexive pronoun

does not denote the theme of the action of the verb but rather the manner of its action or behavior. . Furthermore, the reflexive verb can be assumed to have undergone the process of ergativization, in which the verb's property shifts from transitivity to intransitivity. After ergativization takes place, the accusative case which can be assigned by the verb has been absorbed and as such loses its capability to assign accusative case to the object which functions as the internal argument. In a strict sense, the term intransitivity means that the verb loses its capability to assign the accusative case. The verb in ReVCs, due to ergativization, cannot assign the accusative case to its original object. Hence it cannot be followed by an object. It follows that the reflexive verb is characterized by intransitivity when it is extracted from the lexicon. The reflexive verb is derived from its corresponding transitive verb, during which it undergoes a word-building rule, which absorbs the accusative case of the logical object. The reflexive verb projects all the arguments to the syntactic level. Moreover, in the whole process of derivation, no change happens to the argument structure of the reflexive verb. The reflexive verb carriesthe property of transitiveness, which is obtained by means of absorbing the accusative case and subject θ-role. It is transitive in the lexicon, and has an internal argument. The internal argument of the reflexive verb occupies the external argument position but it is not the agent of the action or behavior made by the reflexive verb. This differs from unaccusatives. The reflexive verb is morphologically intransitive though it is semantically transitive. As a result, its categorial features differ from those of transitives and intransitives. The external argument of the reflexive verb is suppressed and hence becomes covert. Semantically, the action or behavior denoted by the reflexive verb has a certain degree of affectedness intensity. To put it differently, to what degree the action or behavior affects the patient or causes it to change, depends on the degree of reflexivization of the verb. It is the postverbal depictive modifier that causes the event to become stativized. The behavior of the reflexive verb is directly related to the agentive subject per se, which shows their strong connectivity (Yang, 2021a).

3.4   ReVCs functioning as a complete syntactic object

A ReVC is a complete syntactic object composed of a reflexive pronoun and a verb, which are inseparable. When a negative occurs in a sentence, the ReVC must be negated as a whole. To put it differently, the negative either precedes or follows the ReVC and cannot occur between the reflexive

pronoun and the verb. Neither the pronoun nor the verb can be negated alone. Take the Chinese negative *mei*, for example. It can only occur in front of the ReVC rather than intervene between the reflexive pronoun and the verb. In the same vein, the French negatives *ne* and *pas* can only occur in front of or after the ReVC, never inside it. If such constituents as the object or the adverbial occur in a sentence, they cannot occur between the reflexive pronoun and the verb, either. Instead, they can only follow the ReVC, as illustrated below.

(10) a. 我　没　自我批评。　Chinese
　　　　wo　mei　ziwo piping
　　　　1SG NEG self-criticize
　　　　'I don't self-criticize.'

　　 b.* 我　自我 没　批评。
　　　　wo　ziwo mei　piping
　　　　1SG self　NEG Criticize

(11) a. Je　ne　me lève　pas. French
　　　　1SG NEG self get-up NEG
　　　　'I don't get up.'
　　　　(Zhu, 2009)

　　 b. Tu　ne　te　lève　pas.
　　　　2SG NEG self get-up NEG
　　　　'You don't get up.'
　　　　(Zhu, 2009)

　　 c. Il　ne　se　lève　pas.
　　　　3SG NEG self get-up NEG
　　　　'He doesn't get up.'
　　　　(Zhu, 2009)

(12) a. Ich　　　Ziehe　　　mir　　　den　　Anzug an. German
　　　　1SG-NOM dress-PRES-1SG self-1SG-DAT DEF-ACC suit-SG SVP
　　　　'I put on my suit.'
　　　　(Wang, 2001, p. 22)

b. Er   Erkundigt   sich   bei mir   nach   dem
   3SG-NOM ask-PRES-3SG self-ACC at   I-1SG-DAT about DEF-DAT
   Personalburo.
   personnel-department
   'He asks me about the personnel department.'
   ([Wang, 2001](), p. 21)

c. Er   Hat   sich   einen   guten   Film angesehen.
   3SG-NOM AUX-PRES-3SG self-DAT IND-ACC good-ACC film watch-PERF
   'He watched a good film.'
   ([Wang, 2001](), p. 21)

4   The structure of ReVCs

Along with the line of the above argumentation, I argue that a ReVC is composed of two constituents, a reflexive pronoun and a verb. The reflexive pronoun can occur overtly or covertly and can be adjoined to the verb as a clitic. This suggests that even if the ReVC is composed of a single verb, it entails a reflexive pronoun. What matters is that the reflexive pronoun does not occur overtly. Moreover, a reflexive affix is also a form of the reflexive pronoun adjoined to the verb. Therefore, I argue that the basic structure of the ReVC is similar to the structure in (13).

(13) $[_{VP}\ Spec[_{V'}\ V\ R]]$

If the ReVC is composed of a single verb, then, the reflexive pronoun or the reflexive affix is a default form. To put it differently, the reflexive pronoun or the reflexive affix has been incorporated together with the verb V to become a part of the V structure. In this way, the semantics of V has already included the semantics of the reflexive pronoun or the reflexive affix, as illustrated below.

(14) a.[_{VP} Spec[_{V'} xizao]]

                 bath

    b.[_{VP} Spec[_{V'} xi   ziji]]

                 wash self

                 wash oneself

As the data in (14) shows, *xizao* is tantamount to *xi ziji*. To put it differently, *xizao* is merely a contracted form of *xi ziji*. The reflexive pronoun *ziji* functions as the object of the verb *xi*. When the reflexive pronoun *ziji* is incorporated with the verb *xi* to become a syntactic object, the reflexive pronoun and the verb form an intransitive verb *xizao*. Hence *xizao* cannot be followed by an object. The reason lies in the fact that *xizao* is an intransitive verb entailing a reflexive pronoun which functions as its object. It follows that this is the reason why the ReVC composed of a single verb cannot be followed by an object or a reflexive pronoun. There are similar ReVCs in Chinese, such as *chuanyi* (dress), *tihuzi* (shave), *naoyang* (scratch), etc. They are identical to *xizao* with respect to structure. Furthermore, this approach can be applied to the ReVCs composed of a single verb in English, German, and Haitian. The ReVCs in the three languages have the same meaning, that of *to bathe*, which is tantamount to the Chinese ReVC *xizao*.

(15) a. [_{VP} Spec[_{V'} bathe]]   English

                 bathe

    b. [_{VP} Spec[_{V'} bathe   self]]

                 bathe   oneself

(16) a. [_{VP} Spec[_{V'} baden]]   German

                 bathe

    b. [_{VP} Spec[_{V'} baden   sich]]

                 bathe   Self

                 bathe   oneself

(17) a. [_{VP} Spec[_{V'} benyen]]   Haitian

                 bathe

    b. [_{VP} Spec[_{V'} benyen kòl]]

                 bathe   Self

                 bathe   oneself

As the data in (15)-(17) show, the ReVC which is composed of a single verb is semantically the same as the ReVC which is composed of a reflexive pronoun and a verb. The former can be assumed to be a contracted form of the latter. Therefore, it follows that *bathe* is tantamount to *bathe oneself*, *baden* is tantamount to *baden sich*, and *benyen* is tantamount to *benyen kòl*. The verbs in English, German, and Haitian are intransitive verbs intrinsically and hence they can be followed by an object. Once they are incorporated with the reflexive pronoun to become a syntactic object, they are transformed into intransitive verbs and hence they cannot be followed by an object. Moreover, they do not change with respect to their morphology. In effect, the Chinese verb *xi*, the English verb *bath*, the German verb *baden*, and the Haitian verb *benyen* are all transitive verbs. However, as ReVCs, they cannot be followed by an object. The reason lies in the fact that they have lost their capability to assign case to other constituents. Their incapability of case assignment is due to the fact that they entail an invisible reflexive pronoun which is their prototypical object. Since the verbs have assigned case to the invisible reflexive pronoun, they cannot assign cases to other constituents and hence they cannot be followed by an object. It follows that the ReVC composed of a single verb entails an invisible reflexive pronoun. It is due to the existence of the invisible reflexive pronoun that the whole construction cannot be followed by an object. The reflexive pronoun cannot only prevent the occurrence of the internal argument in syntax but also reduce the capability of accusative case assignment of the verb. Since the reflexive pronoun can eliminate the case features of the verb, it must be adjoined to the verb in the lexicon. It plays the role of absorbing case features of a verb instead of marking them as unaccusatives. This proves the lexical role of the reflexive pronoun, and the introduction of reflexive semantics causes the construction to be characterized by reflexivity.

As mentioned above, the reflexive marker can occur covertly or overtly, which results in different syntactic distributions. If it occurs covertly, it is base-generated in the position behind the verb and stays in situ. However, if it occurs overtly, it moves from its base-generation position to the position preceding the verb, as shown below.

(18) $[_{VP} R[_{V'} V t_R]]$

(19) a. 自尊

zizun

'self-respect'

b. [$_{VP}$ zi[$_{V'}$ zun t$_{zi}$]]

(20) a. 自我批评

ziwo piping

self-criticize / self-criticism

b. [$_{VP}$ ziwo[$_{V'}$ piping t$_{ziwo}$]]

The reflexive pronoun R, which is base-generated in the position of the complement of the verb V, moves to the specifier position of the VP to give rise to the configuration R-V. Such movement takes place for feature checking and consequently assigning case because lexical items in lexicon have no case features. This suggests that the reflexive pronoun moves only if it occurs overtly. Specifically, it A-moves to the specifier position of VP and restrains the uninterpretable features of V and its capability of case assignment. This is not only in conformity with the Principle of Leftward Word-building but also in accordance with the Principle of Leftward Merger. Specifically, merger starts from establishing the most basic structural relation. The intrinsic relations such as the argument structure of the verb and the relation of modification are embodied by means of a merger. Other relations are fullfilled by means of movement or remerger and matching. The categories that establish the morphological relation always occur in the form of pairs. (cf. Edmonds, 1976; Dai, 2002; 2003) In the derivation of the morphological structure, the reflexive marker is base-generated in the position of the complement of V. After the basic operations of a merger and movement take place, the reflexive marker moves leftward to the edge of the word to give rise to the surface structure. V assigns a theta-role and discharges its subcategorization features. It must be emphasized that the morphological relation is not the property of the representation produced by means of the morphological rules. Instead, it is the intrinsic property that is established by means of a merger and movement per se. Furthermore, movement of the reflexive marker takes place for the purpose of satisfying the need of the syntactic structure's entering into the morphological structure, viz. shifting the syntactic structure to the morphological structure. Insofar as O (i.e. object) moves to the specifier position preceding V, the configuration OV can be generated. Moreover, only a configuration of this

type can enter into the syntactic structure as a syntactic object and participate in the syntactic computation. If a sentence which takes the form of XVO or SVO transforms into a compound, it must occur in the form of OVX or OVS instead of the form of VOX or VOS. That is because a typical feature of the compound with an OV inversion takes a nominal modification instead of a verbal predication, which includes VO or VC configurations. Generation of OVX and OVS takes place for the purpose of satisfying the need for generation of modification nouns. In effect, not only the compounds in Chinese but also the compounds in English, German, French, and Spanish must transform the configurations SVO or XVO into the configurations OVS or OVX (Yang, 2006), as illustrated below.

(21) a. self-respect   English
　　 b. [$_{VP}$ self[$_{V'}$ respect t$_{self}$]]

(22) a. sich erholen   German
　　 self rest
　　 Rest
　　 b. [$_{VP}$ sich[$_{V'}$ erholen t$_{sich}$]]

(23) a. se quemó   Spanish
　　 self burn
　　 burn oneself / self-burn
　　 (Prado, 1975)
　　 b. [$_{VP}$ se[$_{V'}$ quemó t$_{se}$]]

(24) a. se regarder   French
　　 self watch
　　 watch oneself / look into the mirror
　　 b. [$_{VP}$ se[$_{V'}$ regarder t$_{se}$]]

The data in (21)-(24) show that the reflexive pronoun is a patient argument of the verb V. It is base-generated in the position of the complement of V and hence it is governed by V. When it moves to the specifier position of VP, it gives rise to the surface order R-V. Movement of the reflexive pronoun takes place for feature checking. It is noteworthy that reflexive pronouns in English and Spanish are adjoined to V as clitics and are characterized by dependence. In contrast, reflexive pronouns in German and French are not adjoined to V and are as such characterized by

independence. Differing from the theta-feature discharge of the lexical category, the head X of the functional category discharges the subcategorization feature to its specifier and complement by means of XP (Fukui, 2000). X determines the syntactic representation of YP and ZP and assigns the features of number or reference to YP and ZP, respectively (Yang, 2021b).

5   The syntactic computation of ReVCs

As a syntactic object, how does a ReVC participate in syntactic computation? What syntactic representations does it have? What syntactic constraints is it subject to? Based on a close investigation of the structures of ReVCs, it was found that ReVCs were generally characterized by nominal features. V has undergone the process of nominalization, in other words, verbs shifted to nouns, and syntactically, ReVCs function as objects of verbs, as illustrated below.

(25) a. 我们　　　开展　　　了　　　自我批评。
　　　 women　　Kaizhan　　le　　　ziwo piping
　　　 1PL　　　Organize　-PST　self-criticize
　　　 'We organized self-criticism.'

　　 b. [$_{vP}$ Women[$_{v'}$ kaizhanle[$_{VP}$ ziwo[$_{v'}$ piping t$_{ziwo}$]]]]

　　　 As shown in (25), the Chinese ReVC *ziwopiping* functions as the object of the verb *kaizhan*. The whole ReVC displays nominal features, which means that it has undergone the process of nominalization. As a consequence, it is tantamount to NP. The reason why it has undergone nominalization and is characterized by nominal features is that the reflexive pronoun has moved to the specifier position of VP to refer to an event. This implies that the reflexive pronoun has moved from its base-generation position to the specifier position of a VP. In this way, it restricts the connotation of V and causes V to become an event and forces a narrative conceptual structure to form. A narrative conceptual structure is also called a generalized framework of the event V. ReVCs can be considered the result of reference by means of the event framework of V in which the reflexive pronoun is extracted or given prominence and it is merged with V in accordance with a certain configuration to express a certain meaning and a referential object simultaneously. Furthermore, the event framework of V can denote the

relation of arguments, especially the relation of patients. (cf. Fu, 2004; Yang, 2006) If a sentence contains such constituents as modal verbs, the constituents occupy the position of a light verb v, as shown below.

(26) a. 我们　　　　应当　　　　开展　　　　自我批评。
　　　 women　　　Yingdang　　kaizhan　　ziwopiping
　　　 1PL　　　　should　　　organize　　self-criticism
　　　 'We should organize self-criticism.'

　　 b. [$_{vP}$ Women[$_{v'}$ yingdang[$_{VP}$ Spec[$_{v'}$ kaizhan[$_{VP}$ ziwo[$_{v'}$ piping t$_{piping}$]]]]]]

It is suggested that when such constituents as modal verbs occur in a sentence, the major verb phrase VP undergoes the process of gerundization. If no modal verbs occur in the sentence, gerundization of the major verb phrase VP does not take place. In this case, the VP can move to the position of the light verb v (Yang, 2014).

This approach is also applicable to the data in English and German. Let's take an English ReVC example *take a bath*, which carries the same meaning as *bathe*. The former is the result of gerundization of the latter. The verb *take* is used to describe the action or event denoted by *bathe*. The verb *take* is base-generated in the head position of the outer VP and it moves to the position of the light verb v to be merged with the aspect marker. The reflexive verb *bath* is base-generated in the head position of the inner VP. Triggered by nominalization, it first moves to the specifier position of the inner VP and later on to the specifier position of the outer VP to get the case assigned and its accusative features checked, as shown in (27).

(27) a. She takes a bath.

　　 b. [$_{vP}$ She[$_{v'}$ takes[$_{VP}$ a bath[$_{v'}$ t$_{take}$[$_{VP}$ t$_{a\ bath}$[$_{v'}$ t$_{bath}$]]]]]]

In the same vein, the German ReVC *nehmen ein Bad* is the same as *baden* with respect to semantics. The former results from gerundization of the latter. The verb *nehmen* is used to describe the action or event denoted by *baden*. The verb *nehmen* is base-generated in the head position of the outer VP and then it moves to the position of the light verb v to be merged with the aspect marker. The reflexive verb *baden* is base-generated in the head position of the inner VP. Triggered by nominalization, it first moves to the specifier position of the inner VP and then to the specifier position of the

outer VP, where it is assigned case and has its accusative features checked, as shown in (28).

(28) a. Sie   nimmt   ein   Bad.
      3SG-NOM-FEM   take-PRES-3SG   IND-ACC   bath
      'She takes a bath.'

   b. [$_{vP}$ Sie [$_{v`}$ nimmt[$_{VP}$ ein Bad[$_{v`}$ t$_{nehmen}$[$_{VP}$ t$_{ein\ Bad}$[$_{v`}$ t$_{Bad}$]]]]]]

If no light verb occurs in the syntactic structure, the ReVC can move upward to the position of the light verb v to be merged with the aspect marker which is base-generated, as shown below.

(29) a. She bathes.
   b. [$_{vP}$ She[$_{v`}$ bathes[$_{VP}$ Spec[$_{v`}$ t$_{bath}$[$_{VP}$ Spec[$_{v`}$ t$_{bath}$]]]]]]

(30) a. 她   自杀了。
      Ta   zisha le
      3SG-FEM   self-kill-PST
      'She killed herself.'

   b. [$_{vP}$ Ta[$_{v`}$ zishale[$_{VP}$ Spec[$_{v`}$ t$_{zisha}$[$_{VP}$ t$_{zi}$[$_{v`}$ t$_{sha}$ t$_{zi}$]]]]]]

As in examples (29) and (30), the movement of the reflexive verb takes place in more than one stage. It first moves to the intermediate position [V V`], and only then to the position of the light verb v. If the ReVC is composed of a reflexive pronoun and a verb, the reflexive pronoun and the verb are merged in the intermediate position [V V`]. Then they continue to move to the terminal position as syntactic objects. The reason for this analysis lies in the fact that as a complete syntactic object, the ReVC must be pied-piped. It participates in the syntactic computation as a whole. Therefore, the reflexive pronoun and the verb are merged in the position of the head of the outer VP to form a syntactic object and then participate in the syntactic computation. I argue that this analysis is applicable to the ReVCs in French, Spanish, Russian, Portuguese, and Polish, as illustrated below.

(31) a. Jacques   Se   regarde.   French

          Jacques   self   watch

          'Jacques looks at himself. / Jacques looks into the mirror.'
(Rivero & Sheppard, 2003)

    b. [$_{vP}$ Jacques[$_{v`}$ se regarde[$_{VP}$ Spec[$_{v`}$ t$_{se regard}$[$_{VP}$ t$_{se}$[$_{v`}$ t$_{regard}$ t$_{se}$]]]]]]

(32) a. Mathilde   se-quemó.   Spanish

          Mathilde   self-burn

          'Mathilde burns herself. / Mathilde self-burns.'
(Prado, 1975)

    b. [$_{vP}$ Mathilde[$_{v`}$ se-quemó[$_{VP}$ Spec[$_{v`}$ t$_{se-quemó}$[$_{VP}$ t$_{se}$[$_{v`}$ t $_{quemó}$ t$_{se}$]]]]]]

(33) a. Natasha   umlvat-sja   Russian

          Natasha   wash-self

          'Natasha washes herself. / Natasha takes a bath.'
(Levine, 1993)

    b. [$_{vP}$ Natasha[$_{v`}$ umlvat-sja[$_{VP}$ Spec[$_{v`}$ t$_{umlvat-sja}$[$_{VP}$ t$_{sja}$[$_{v`}$ t$_{umlvat}$ t$_{sja}$]]]]]]

(34) a. A   Mãe   lavou-se   Portuguese

          DEF   Mother   wash-self

          'Mother washes herself. / Mother takes a bath.'
(Naro, 1976)

    b. [$_{vP}$ A mãe[$_{v`}$ lavou-se[$_{VP}$ Spec[$_{v`}$ t$_{lavou-se}$ [$_{VP}$ t$_{se}$[$_{v`}$ t$_{lavou}$ t$_{se}$]]]]]]

(35) a. Te   samochody   prowadzą si   atwo   Polish

          these auto-PL-NOM   drive-3PL-self   easy

          'These cars drive well.'
(Rivero & Sheppard, 2003)

    b. [$_{vP}$ Te samochody[$_{v`}$ prowadzą si[$_{VP}$ si[$_{v`}$ t$_{prowadzą si}$[$_{VP}$ t$_{si}$[$_{v`}$ t$_{prowadzą}$ t$_{si}$]atwo]]]]]

It follows that when the overt reflexive pronoun enters into the morphological structure, it must move to the specifier position of VP to give rise to the configuration R-V. In contrast, when the covert reflexive pronoun enters into the morphological structure, it must stay in situ. Under the two circumstances, insofar as no light verb is present in the structure, the ReVC does not undergo the process of nominalization. The RMC can move to the position of the light verb v to check its relevant features. If a light verb v is present in the structure and takes the form of *take / have* (English light verb),

nehmen (German light verb), or *jinxing* (Chinese light verb), the ReVC undergoes the process of nominalization. As a consequence, VP transforms into NP or GP (i.e. gerund phrase). In this case, the reflexive verb does not move because there is neither reason for movement nor an empty syntactic position for it to fill in. The inflectional features in the structure are embodied by the light verb v and hence they are checked by it. The reflexive prefix and the reflexive suffix of the ReVC do not have any change with respect to person. Similarly, they do not change with person of the agentive subject. Only the overt reflexive pronoun changes with person. The ReVC occupies a syntactic position as a whole whether it is composed of a reflexive prefix and a covert reflexive pronoun, or it is composed of an overt reflexive pronoun and a verb. Moreover, they can move to the position of the light verb v. The verb is merged with the aspect marker which is base-generated in the position of the light verb v, as illustrated below.

(36) a. Die   Mutter wäscht sich.   German
   DEF-FEM-NOM mother-NOM wash-PRES-3SG self-ACC
   'Mother washes herself. / Mother bathes.'
   (Wang, 2001, p. 18)

 b. [$_{vP}$ Die Mutter[$_{v'}$ wäscht sich[$_{VP}$ Spec[$_{v'}$ t$_{waschen}$[$_{VP}$ t$_{sich}$[$_{v'}$ t$_{waschen}$ t$_{sich}$]]]]]]

(37) a. Die   Schwester wäscht sich die Haare.
   DEF-FEM-NOM sister-NOM wash-PRES-3SG self-DAT DEF-ACC hair-PL
   'The sister is washing her hair.'
   (Wang, 2001, p. 18)

 b. [$_{vP}$ Die Schwester[$_{v'}$ wäscht sich[$_{VP}$ die Haare[$_{v'}$ t$_{waschen}$[$_{VP}$ t$_{sich}$[$_{v'}$ t$_{waschen}$ t$_{sich}$]]]]]]

As (36) shows, the reflexive pronoun *sich* functions as the object to the verb *waschen* and hence the whole construction has lost its capability to assign case. Consequently, no object can occur in the construction. As far as (37) is concerned, the reflexive pronoun *sich* is not the object of the reflexive verb *waschen*. Instead, it is the verb's adverbial, denoting that the actor does something by himself or herself. In this case, the ReVC still has the capability to assign case. Therefore, the whole construction can be followed by the object *die Haare*. The reflexive pronoun and the reflexive verb occupy the light verb position, whereas the object *die Haare* occupies the specifier position of VP, viz. the object position. Based on the further observation of the above data, it is found that if the German reflexive pronoun *sich* denotes

reflexivity, i.e. the object of the action of the verb, then, it occurs in the accusative form, viz. the form of the object. In contrast, if the reflexive pronoun *sich* denotes emphasis, viz. the manner of the action of the verb, then, it occurs in the dative form. It follows that the ReVC which dominates the accusative reflexive pronoun is characterized by intransitivity and hence can be followed by no object, whereas the ReVC which dominates the dative reflexive pronoun is characterized by transitivity and hence it can be followed by an object. The reflexive pronoun *sich* is the object of the action of the verb. Rather, it is the object that the verb acts on directly. In this case, the property of the ReVC is transformed from transitivity into intransitivity because the verb has assigned case to the reflexive pronoun and hence it cannot assign case to other constituents anymore. In contrast, the dative reflexive pronoun *sich* is not acted on by the verb directly. Instead, it denotes the manner of the action or behavior of the verb. In this case, the transitivity of the verb is preserved. Hence it can still assign case to other constituents. The whole ReVC is not merely characterized by transitivity but also characterized by emphatic semantics. It seems that *sich*, which is both the dative and the accusative of the third person reflexive pronoun, does not change overtly with respect to morphology. However, *mich* which is the accusative of the first person reflexive pronoun, and *mir* which is the dative of the first person reflexive pronoun constitute a striking contrast, as illustrated below.

(38) a. Ich   wasche   mich.
       1SG-NOM   wash-PRES-1SG   self-ACC
       'I wash myself. / I bath.'
       (Wang, 2001, p. 22)
    b. [$_{vP}$ Ich[$_{v'}$ wasche mich[$_{VP}$ Spec[$_{v'}$ t$_{waschen}$[$_{VP}$ t$_{mich}$[$_{v'}$ t$_{waschen}$ t$_{mich}$]]]]]]

(39) a. Ich   wasche   mir   die   Hände.
       1SG-NOM   wash-PRES-1SG   self-DAT   DEF-ACC   hand-PL-ACC
       'I wash my hands.'
       (Wang, 2001, p. 22)
    b. [$_{vP}$ Ich[$_{v'}$ wasche mir[$_{VP}$ die Hände[$_{v'}$ t$_{waschen}$[$_{VP}$ t$_{mich}$[$_{v'}$ t$_{waschen}$ t$_{mich}$]]]]]]

As the data in (39) and (40) show, the reflexive pronoun must be licensed with structural case in syntactic structure, whereas the reflexive marker must be licensed with inherent case. According to Reuland and Everaert

([2000](#)), structural case is assigned under the agreement system, whereas inherent case is licensed under the government by a lexical projection. The reflexive marker bears no θ-features, including number and gender, while the reflexive pronoun bears θ-features, including number and gender. Since the reflexive pronoun is not a syntactic argument of the verb, it must move covertly to the position of the head of VP.

The discussion of the internal structure of ReVCs and the process of their syntactic computation suggests that the reflexive pronoun is base-generated in the position of the complement of V and ReVCs participate in the syntactic computation as a complete syntactic object. This analysis can provide a reasonable account of ReVCs in various languages. Nonetheless, a crucial issue persists that must be resolved: what syntactic constraints govern the distribution of reflexive elements, such as reflexive pronouns and affixes? I argue that their distribution is subject to linguistic typology. Reflexive pronouns and reflexive affixes in SOV languages need no case markers when they precede the verb. But when they follow the verb, they need case markers. In contrast, reflexive pronouns and reflexive affixes in SVO languages need case markers when they precede the verb, however, they need no case markers when they follow the verb. Therefore, SVO languages tend to choose pre-posed reflexive markers, whereas SOV languages tend to choose post-posed reflexive markers. It follows that pre-posed reflexive markers are in harmony with SVO languages while post-posed reflexive markers are in harmony with SOV languages.

6 Conclusion

ReVCs are a type of construction that is worthy of research. They are universally found in Chinese, English, German, Haitian, French, Spanish, Russian, Portuguese, Polish, and Japanese, which belong to different language families. How to account for the ReVCs in these languages in a unified theoretical framework and reach a convincing conclusion is an issue that is also worthy of research. Based on a summary of the features of ReVCs, the paper proposes that the internal structure of ReVCs is $[_{VP} \text{Spec}[_{v'} \text{V R}]]$. Whether it occurs overtly or covertly, the reflexive constituent is base-generated in the position of the complement of V. Its occurrence in other positions results from movement of the reflexive constituent. Though verbs in ReVCs are transitive, the whole ReVCs cannot assign accusative case to other constituents. The reason lies in the fact that the verb has assigned

case to the covert pronoun and hence it cannot assign case to other constituents. Therefore, ReVCs cannot be followed by an object. The reflexive pronoun introduces reflexive interpretation, as a consequence of which the verb is characterized by reflexivity. A ReVC operates in the syntax as a complete syntactic object and hence it occupies a syntactic position. The whole ReVC can function as the object in the specifier position of VP and move to the position of the light verb v to function as the predicate, followed by a tense or aspect marker.

Abbreviations

The abbreviations used in this article are as follows:

ACC	accusative
DAT	dative
DEF	definite article
FEM	feminine
IND	indefinite article
MASC	masculine
NEG	negative
NOM	nominative
PERF	perfective aspect
PL	plural
PRES	present tense
PST	past tense
R	reflexive constituent
SG	singular
SUF	suffix
SVP	separable verb prefix
1	first person
2	second person
3	third person

References

Dai, M. (2002). Generalized leftward merger hypothesis: Evidence from adjuncts. *Modern Foreign Languages*, 2, 120-141.

Dai, M. (2003). Generalized derivations in syntactic computations. *Foreign Language Teaching and Research*, 3, 170-178.

Déchaine, R.-M., & Manfredi, V. (1994). Binding domains in Haitian. *Natural Language and Linguistic Theory,* 12, 203-257.

Edmonds, J. (1976). *A Transformational Approach to English Syntax*. New York: Academic Press.

Fehrmann, D., Junghanns, U., & Lenertová, D. (2010). Two reflexive markers in Slavic. *Russian Linguistics*, 34, 203-238.

Fehrmann, D., Junghanns, U., & Lenertová, D. (2014). Slavic reflexive decausative. *Russian Linguistics*, 38, 287-313.

Fu, A. (2004). A quantitative survey of noun phrase constructions in Chinese. *Chinese Language*, 6, 505-520.

Fukui, N. (2000). Phrase structure. In M. Baltin & C. Collins (Eds.), *The Handbook of Contemporary Syntactic Theory* (pp. 374-406). Oxford: Blackwell Publishers Ltd.

Hendriks, P., Hoeks, J. C. J., & Spenader, J. (2015). Reflexive choice in Dutch and German. *Journal of Computational German* Linguistics, 17, 229-252.

Jin, Z. (2003). Verb restraint function to ziji long-distance binding. *Chinese Language Learning*, 4, 9-12.

Kishida, M., & Sato, Y. (2012). On the argument structure of *zi*-verbs in Japanese: Reply to Tsujimura and Aikawa. *Journal of East Asian Linguist*, 21, 197-218.

Labelle, M. 2008. The French reflexive and reciprocal *se*. *Natural Language and Linguistic Theory,* 26, 833-876.

Levine, J. S. (1993). Russian reflexive verbs. In search of unity in diversity by Nelleke Gerritsen. *The Slavic and East European Journal, 37*(4), 564-568.

Naro, A. J. (1976). The genesis of the reflexive impersonal in Portuguese: A study in syntactic change as a surface phenomenon. *Language, 52*(4), 779-810.

Paykin, K., & Peteghem, M. V. (2017). *Nam ne pisalos' i mečtalos'*: Alternating dative reflexive constructions revisited. *Russian Linguistics*, 41, 151-175.

Prado, M. (1975). The reflexive "se" in Spanish. *Hispania, 58*(2), 333-335.

Reuland, E., & Everaert, M. (2000). Deconstructing binding. In M. Baltin & C. Collins (Eds.), *The Handbook of Contemporary Syntactic Theory* (pp. 634-669). Oxford: Blackwell Publishers Ltd.

Rivero, M. L., & Sheppard, M. M. (2003). Indefinite reflexive clitics in Slavic: Polish and Slovenian. *Natural Language and Linguistic Theory, 21*(1), 89-155.

Schäfer, F. (2012). The passive of reflexive verbs and its implications for theories of binding and case. *Journal of Computational German Linguistics*, 15, 213-268.

Tian, X. (2016). Semantic feature and syntactic structure of reflexive verb in Russian. *Foreign Language Research in Northeast Asia*, 4, 42-49.

Tsujimura, N., & Takako, A. (1999). Two types of *zi*-verbs in Japanese. *The Journal of the Association of Teachers of Japanese, 33*(1), 26-43.

Wang, Z. (2001). *A Practical Grammar of Modern German*. Shanghai: Tongji University Press.

Wood, J. (2014). Reflexive *-st* verbs in Icelandic. *Natural Language and Linguistic Theory*, 32, 1387-1425.

Xu, C. (2016). Acquisition of English reflexive verb constructions: roles of syntactical indeterminacy and token frequency. *Chinese Journal of Applied Linguistics, 39*(3), 251-268.

Yang, Y. (2006). Generation of OV inversion. *Linguistic Sciences, 5*(3), 39-48.

Yang, Y. (2014). The syntactic status of de and the internal structure of de constructions in Chinese. *Language Research*, *50*(1), 121-157.

Yang, Y. (2021a). The argument structure of the middle construction and its derivation. *Linguistic Forum, 3*(2), 1-14.

Yang, Y. (2021b). The structure of classifier constructions and some related theoretical issues. *Macrolinguistics, 9*(2), 1-24.

Zhang, N. (2010). A study on the generalization of long-distance binding of single *ziji*. *Foreign Languages and Literature*, 6, 74-76.

Zhu, J. (2009). The typological significance of reflexive structure in Modern Chinese. *Chinese Linguistics*, 2, 72-81+96.