A Constraint-Based Analysis of the Objects of VO Verbal Compounds in Mandarin Chinese

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Abstract

VO verbal compounds (VOCs) have become a topical issue within studies on wordhood and the syntax-semantics interface. However, the issue can become more complicated when VOCs take an extra object. Some previous analyses have often run into problems mostly because they assign the wrong grammatical function to these objects in question. This paper provides a complex predicate analysis by adopting the ideas of Ahmed et al. (2012), combined with recent findings from Zhuang et al. (2013) on the status of the O in the VOC. The description and analysis especially focus on double object realization of VOCs in Mandarin Chinese and thus provide a generalized account of the representation of their argument relations within the LFG framework.

1. INTRODUCTION

VO verbal compounds are also known as separable verbs in Mandarin Chinese given that intervening items can be placed between the verb (V) and the object (O). There have been major questions about the issue of their wordhood in Chinese and other languages as VOCs do combine to form a 'word-like unit', but at the same time they exhibit some degree of separability between the two parts (Chao 1968, Li and Thompson 1981, C.T. Huang 1984, 1988, C.R. Huang 1990, O.-S. Her 1997, 1999, Tang 2000, Zhuang et al. 2013, Che 2014, among others). As a result, the lexical status of Chinese VOCs has long been disputed among linguists. In the following examples, we may consider *jian-mian* 'to meet' as a lexical word as in (1a), while in (1b), it can appear as a syntactic phrase.

(1) a. *women mingtian jian-mian.*
we tomorrow see face
'We'll meet tomorrow.'

b. *women jian-guo liang-ci mian.*
we see-PERF two-CL face
'We've met twice.'

VOCs are commonly treated as idioms in the sense that they have non-compositional meanings, i.e. we cannot put together the literal meaning of their individual parts. For example,

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(2) a. *chi-cu*
eat vinegar
'be jealous'

b. *chao-youyu*
fry squid
'dismiss'

c. *qiao-zhugang*
hit bamboo
'blackmail'

d. *kou-maozi*
put hat
'label'

Another interesting phenomenon involving VOCs is that whenever they take an extra object, this object cannot be placed after the VOC (Li 2009, Cai 2010 and Zhuang et al. 2013). It can appear in two forms: 1) a possessive object between the V and the O whereby it becomes the possessor of the O; 2) a PP construction before the verb, as shown in (3) and (4).

(3) a. *women mingtian jian Zhangsan de*[1] *mian.* (Possessive)
we tomorrow see Zhangsan DE face
'We'll meet Zhangsan tomorrow.'

b. *women mingtian he Zhangsan jian-mian.* (PP)
we tomorrow with Zhangsan see face
'We'll meet with Zhangsan tomorrow.'

(4) a. *chao Zhangsan de youyu* (Possessive)
fry Zhangsan DE squid
'fire Zhangsan'

b. *ba Zhangsan chao-youyu* (PP)
BA Zhangsan fry squid
'fire Zhangsan'

The introduction of an extra argument renders the components of VOCs structurally discontinuous and difficult to interpret as a unit, as shown in (3a) and (4a). Thus, this paper aims to deal with double object realization within a discontinuous VOC. In Section 2, we investigate the object status of the O in the VOC and the nature of VOCs as idiom chunks. Section 3 reviews existing approaches regarding the analysis of VOCs and their objects. In Section 4, we explore the grammatical function of the extra argument and consider possible solutions to represent argument relation within Chinese VOCs. Section 5 concludes the paper.

[1] The morpheme *de* is a typical possessive marker in Mandarin Chinese.

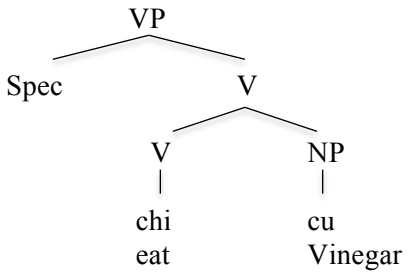
2. FORMAL TESTS

In this section, syntactic tests and arguments are provided to prove that the O is really an argument and that the VOC as a whole is an instance of an idiom chunk.

2.1 The object status of the O

Zhuang et al. (2013) present a similar insight with regard to the status of the O. Based on Her (1999), they suggest that the Os in VOCs are referential, although in a metaphorical way,[2] and this type of expression is called quasi-arguments according to Ouhalla (1999). The analysis of Zhuang et al. was conducted within GB by using θ-Criteria and Visibility Condition (Chomsky 1981). Even though it was examined in a different framework, the bottom line is that the Os in VOCs occupy a place properly governed by the Vs, as shown below in (5).

(5)



'be jealous of'

(Zhuang et al. 2013: 271)

For us, quasi-arguments seem like some fancy terminology, so we will simply prove that the O is really an argument that can be presented at f-structure in our analysis. It can be done by several syntactic tests. The main ones are topicalization, modification, passivization, and question formation. The object of the VOC *peng-dingzi* 'meet rejection' in (6) is preposed by topicalization to achieve the same effect of emphasis as a normal object in (7).

[2] Although the meaning of these VOCs is non-compositional, the original meaning of the O does seem to contribute metaphorically, for example, the sour taste of vinegar resembles the feeling of jealousy (*chi-cu* {eat-vinegar}'be jealous of') and bumping into a nail feels like receiving rejection (*peng-dingzi* {bump-nail}'meet rejection'). These make perfect sense in Chinese culture. However, it is complicated when it comes to the origin of idioms, which is beyond the scope of our current study.

(6) *dingzi ta peng duo le.*
nail s/he bump many PERF
'S/he suffered a lot of rejections.'

(7) *pingguo ta xihuan chi.*
apple s/he like eat
'S/he likes eating apples.'

As observed by Her (1999), the O in a VOC can be modified in numerous ways as an object. The modifiers are not only confined to quantitative words in (1b), but also adjective, temporal, determiner phrases and etc.

(8) *ta zhuan chi nen doufu*
s/he only eat tender tofu
'S/he flirts with the young ones only.'

(9) *zuotian de doufu hai mei chi gou ma?*
yesterday DE tofu still not eat enough Q
'Didn't you flirt enough yesterday?'

(10) *ta peng-le zhe dingzi.*
s/he bump-PERF this nail
'S/he suffered this rejection.'

Passive constructions are marked by *bei* in Mandarin Chinese and *bei* phrases occur preverbally. As suggested in Dalrymple (2001:48), passivization is one of the most widely available tests for direct-objecthood.

(11) a. *ta chi jin le shishang de doufu.*
s/he eat to the greatest extent PERF world DE tofu
'S/he has been flirting everywhere.'

b. *shishang de doufu bei ta chi jin le.*
world DE tofu BEI s/he eat to the greatest extent PERF
'S/he has been flirting everywhere.'

Mandarin Chinese is known as a typical *wh-in-situ* language. The object status of the O is also shown in the process of question formation. The context for the following sentences is two employees who are joking about their boss after s/he just fired another employee in succession.

(12) A: *ni cai laoban zui xihuan chao shenme?*
you guess boss most like fire what
'What do you think the boss likes firing most?'

B: *chao-youyu.*
fire squid
'To dismiss'

So far, it has been shown that the O can be topicalized, modified, passivized, and questioned properly. Meanwhile, there are other small tests to support our claim too, for instance, verb copying within a sentence in (13).

(13) *ta peng-dingzi peng-le bantian.*
s/he bump-nail bump-PERF half-day
'S/he has been facing rejections for quite a while.'

As shown above, it has been amply demonstrated that the O has the qualities of a syntactic object.

2.2 The VOCs as idiom chunks

A definitive feature of idiom chunks is their noncompositional semantics. According to Huang (1990), one syntactic environment to test idiom chunks is coordination which involves parallel constructions sharing a single grammatical relation to the remaining elements of the sentence. Many studies (Ackerman and Lesourd 1997, Mohanan 1997, Bodomo 1998, Bresnan and Mchombo 1995) have also used coordination as a test for unithood. In (14) two conjoined NPs are governed by the same verb, but one of the conjuncts has a literal reading, *chi pangxie* 'eat crabs'. The example illustrates that when *chi* takes a conjoined NP, the only possible reading is the literal 'to eat' reading. The data shows that the homophonous verbs of the literal reading and the idiom-chunk reading are instantiations of two different lexical predicates with different selectional restrictions and subcategorization frames.

(14) *Lisi chi pangxie gen cu*
Lisi eat crab AND vinegar
a. 'Lisi eats crabs and vinegar.'
b. *'Lisi eats crabs and is jealous.'

(Huang 1990: 269)

Wasow et al. (1983) classify English idioms, most of which are of the VO construction, into three groups: noncompositional idioms (*kick the bucket, saw log*), conventionalized metaphor (*take advantage of, spill the beans*), and compositional idioms (*pull strings*). We find it hard to understand the so-called compositional idioms. Admittedly, there is more transparency in this type than the other two. But the derived meaning of *pull strings* 'to use influence' does not correspond to the combination of its literal parts, either.

Based on our observation as well as previous studies, VOCs in Chinese usually belong to the first two groups. A close example we can think of as compositional is a VOC such as *chang-ge* {sing-song} 'sing'. However, as we can see, the meaning of the noun is basically incorporated into the verb already.

3. PREVIOUS ANALYSES

Within the framework of Lexical Functional Grammar (LFG), there are two previous works which especially address both lexical discontinuity and object realization of VOCs: C.R. Huang (1990) and O.-S. Her (1999).

3.1 Huang (1990)

Huang (1990) encapsulates the string [NP_1 DE NP_2] as the possessive-object NP construction (POBJ) and NP_2 forms a discontinuous construction with the matrix verb. The component *de* between NP_1 and NP_2 is optional. He regarded that the LFG framework has 'an edge in analyzing the POBJ construction because the distribution of this construction is closely related to the set of idiom chunks whose syntax and semantics have to be lexically marked' (Huang 1990:277). As pointed out by Nunberg et al. (1994: 510), 'positing a single underlying idiom which may be transformationally deformed is claimed to be not only parsimonious, but unavoidable'. As a result, idioms could be best analyzed by direct generation of surface structures within a framework like LFG.[3] Huang's analysis is shown below.

(15) *Sanbai chi Yunniang de cu.*
Sanbai eat Yunniang DE vinegar
'Sanbai is jealous of Yunniang.'

C-structure rules

(16) a. S → NP VP
(↑ SUBJ) = ↓ ↑ = ↓
b. VP → V NP
↑ = ↓ ↑ = ↓
c. NP → (NP) (CL) N
(↑ OBL) = ↓ ↑ = ↓ ↑ = ↓

[3] For more discussions, see Nunberg et al. (1994).

Lexical entries

(17) a. *chi* V, (↑ VMORF) = CHI

b. *cu* N, (↑ PRED) = 'BE-JEALOUS< (SUBJ) (OBL) >'

(↑ VMORF) = *c* CHI

(↑ CL) = DE

F-structure

(18)

SUBJ	[PRED 'Sanbai']
OBL	[PRED 'Yunniang']
PRED	'BE-JEALOUS < (SUBJ) (OBL) >'
CL	DE
VMORF	CHI

As seen from (16b), Huang employed the functional head equation ↑ = ↓ on both the lexical head V *chi* 'to eat', and the NP *cu* 'vinegar'. The consequence is that the N in (17b) is assigned the PRED feature and the constraining equation ↑VMORF = c CHI ensures that the idiomatic reading of 'BE-JEALOU' must co-occur with the verb *chi*.

There is a fundamental problem with Huang's analysis. He treated the N as a co-head with the V of the VP instead of an argument of the V. However, it has been proved in Section 2.1 that the O in the VOCs possesses the qualities of a syntactic object. Another problem is associated with the treatment of NP_1 as an oblique object. Indeed, the realization of this object is worth further discussions. We will revisit the issue regarding NP_1 in Section 4.1.

3.2 Her (1997, 1999)

According to Her (1999), idioms have regular syntactic structures as represented by a-structure, f-structure and c-structure in LFG framework. The literal reading and the idiomatic interpretation are determined by syntactic constraints and motivations based on metaphors, metonymies, or mental images. The concept of motivation is used in the sense of Lakoff (1987: 488):

> The relationship between A and B is motivated just in case there is an independently existing link, L, such that A-L-B "fit together". L makes sense of the relationship between A and B.

With the help of an attribute IDIOM-LINK, Her (1997) specifies the syntactic constraints in the lexical entry of the idiom's lexical head, the verb. Take the VO idiom *chi-doufu* 'to flirt with' for example.

(19) Lexical entry of *chi*

chi, V
PRED 'EAT <ag-SUBJ th-OBJ)>'

IF [SUBJ HUMAN =$_c$ +
OBJ PRED =$_c$ '*doufu*'
[IF OBJ ADJS
THEN OBJ ADJS =$_c$ {[PRED '*ruan* (tender)']}]
[IF OBJ POSS
THEN OBJ POSS HUMAN =$_c$ +]]

THEN [IDIOM-LINK = *chi-doufu* (to flirt with)]

Noticeably, a number of syntactic constraints need to be met as listed below.

(20) a. The SUBJ has to be HUMAN as specified by the constraining equation, (↑ SUBJ HUMAN) =c +.

b. The PRED of the OBJ has to be 'doufu' as required by the constraining equation, (↑ OBJ PRED) =c *'doufu'*.

c. If the OBJ has an adjunctive element, the PRED of this adjunctive element has to be 'ruan' as dictated by the constraining equation, (↑ OBJ ADJ) =c PRED '*ruan*'. Note that the OBJ can go without any adjunctive element since it is an optional requirement specified by IF...THEN.

d. If the OBJ has a POSS function, this POSS must be HUMAN as specified by the constraining equation (↑ OBJ POSS HUMAN) =c +. Again, the OBJ does not necessarily have to contain a POSS function as can be seen from the IF...THEN.

As long as these syntactic constraints are all fulfilled, the attribute IDIOM-LINK triggers the idiom interpretation mechanism just described above, whereby the idiom interpretation is linked to the 'qualified' f-structure.

However, a sentence with a VOC may intend to express a literal meaning at the same time. For example,

(21) *Sanbai chi Yunniang de doufu.*
Sanbai eat Yunniang DE tofu
'Sanbai eats Yunniang's tofu.'

The sentence fulfills all the specifications in (20) and the idiom interpretation mechanism thus must be triggered, which is clearly not intended by (21). All in all, Her's analysis is not well-formed within the LFG formalism. And different from Huang (1990), Her did not regard NP_1 in [NP_1 DE NP_2] as an object but merely an adjunct of NP_2. We will discuss the status of NP_1 in the following section soon.

4. THE PRESENT PROPOSAL

For convenience of analysis, we are following Huang (1990) by using NP_1 to refer to the extra argument that renders the components of VOCs structurally discontinuous. The original O in the VOC is termed NP_2. In Section 2.1, it has been shown that NP_2 is a grammatical object. Now we will continue to explore the grammatical function of NP_1 and its relation to NP_2.

4.1 The grammatical function of NP_1

First of all, the argument position of NP_1 is shown by the fact that it can be questioned.

(22) *lanban chao shui de youyu?*
boss fry who DE squid
'Who has the boss fired?'

At first sight, NP_1, reflecting its structural position, is easily mistaken for a usual possessor of NP_2 especially in the presence of a possessive marker *de*, although *de* is optional. However, the relation between NP_1 and NP_2 is clearly more than that of a usual possessor and possessee, as noticed by Huang (1990: 271).

(23) *wo jian-le ta de mian.*
I see-PERF s/he DE face
'I met him.'

(24) *wo jian-le zhuozi de mian.*
I see-PERF table DE face
a. * 'I met the table.'
b. 'I saw the surface of the table.'

These sentences show the relationship between the argument NP_1 and the predicate governing it. In (23), *jian-mian* {see-face} 'meet' assumes the idiom-chunk meaning. However, the literal meaning of *mian* 'face' is the only available interpretation as in (24b) because the idiom chunk imposes selectional restrictions on NP_1 and requires it to be a human object, thus the ungrammaticality of (24a), where *zhuozi* 'table' is an inanimate noun. The fact that the idiom chunk *jian-mian* 'to meet' imposes selectional restrictions on NP_1 indicates that NP_1 is an argument of the idiom chunk since predicates can impose selectional restrictions only on their arguments.

Then, passivization provides a further test to support NP_1's status as an argument. Obviously, the object status of NP_1, *yunniang*, is supported by the fact that it can be readily passivized as in (25b), since the most crucial fact is that in all known cases of passive sentences marked by *bei*, the subjects are also grammatical objects of their active counterparts in Mandarin Chinese.

(25) a. *Sanbai chi Yunniang doufu.*
Sanbai eat Yunniang tofu
'Sanbai has been flirting with Yunniang.'

b. *Yunniang bei Sanbai chi-doufu.*
Yunniang BEI Sanbai eat-tofu
'Yunniang has been flirted with by Sanbai.'

Interestingly, Huang (1990) suggests that NP_1 is an oblique object of the discontinuous VOC by comparing it to corresponding sentences with NP_1 occurring in a preverbal PP.

(26) a. *wo jian-le Zhangsan (de) mian.*
I see-PERF Zhangsan face
'I met Zhangsan.'

b. *wo gen zhangsan jian-mian.*
I with Zhangsan see-face
'I met Zhangsan'.

According to Huang, since (26a) and (26b) are synonymous, the grammatical function of NP_1 in (26a) should correspond to an oblique object in (26b) too. We find it very questionable. Similarly, we can compare it to 'double object' constructions in English.

(27) a. Mary gave John a watch.
b. Mary gave a watch to John.

Following Huang's logic, we should assign the oblique object to *John* both in (27a) and (27b). However, it would be obviously wrong. As we all know, *John* in (27a) should be the direct object (OBJ) with *watch* being the second object (OBJ_θ) and *John* in (27b) is a real oblique object (OBL) marked by the preposition *to*. With (26a), it is more sensible to argue that *Zhangsan* is a direct object too. As a matter of fact, it turns out to be true. In a canonical Chinese double object construction, the position for *Yunniang* in (25a) and *Zhangsan* in (26a) is reserved for the direct object, as shown in (28).

(28) *Zhangsan gei-le Xiaoli yi-ben shu.*
Zhangsan give-PERF Xiaoli one-CL book
'Zhangsan gave Xiaoli one book.'

As further pointed out by (Dalrymple 2001:46), 'if a Recipient appears as a full NP in a double object construction, it is the sole candidate for passivization; the second object is excluded'. This can be perfectly instantiated by the grammaticality of (25b) and the ungrammaticality of (29).

(29) **doufu bei Sanbai chi Yunniang*.
tofu BEI Sanbai eat Yunniang

In return, it also provides a good explanation why NP_2 can be passivized in a transitive VOC as in (11) but not in a ditransitive VOC as in (25a). The reason is that in ditransitive VOCs, the grammatical relation between NP_1 and NP_2 is similar to that of a direct object and a second object. However, it is not exactly the same as a double object construction [V NP_1 NP_2] given the fact that V…NP_2 forms an idiom chunk.

4.2 Bodomo et al. (2017)

Having elucidated the nature of NP_1 and NP_2, we now consider an analysis that can represent the realization of these objects involving discontinuous VOCs. The very first possible solution arises from Bodomo et al. (2017). In that paper, we provided a lexicalized analysis for the transitive VOCs. For example,

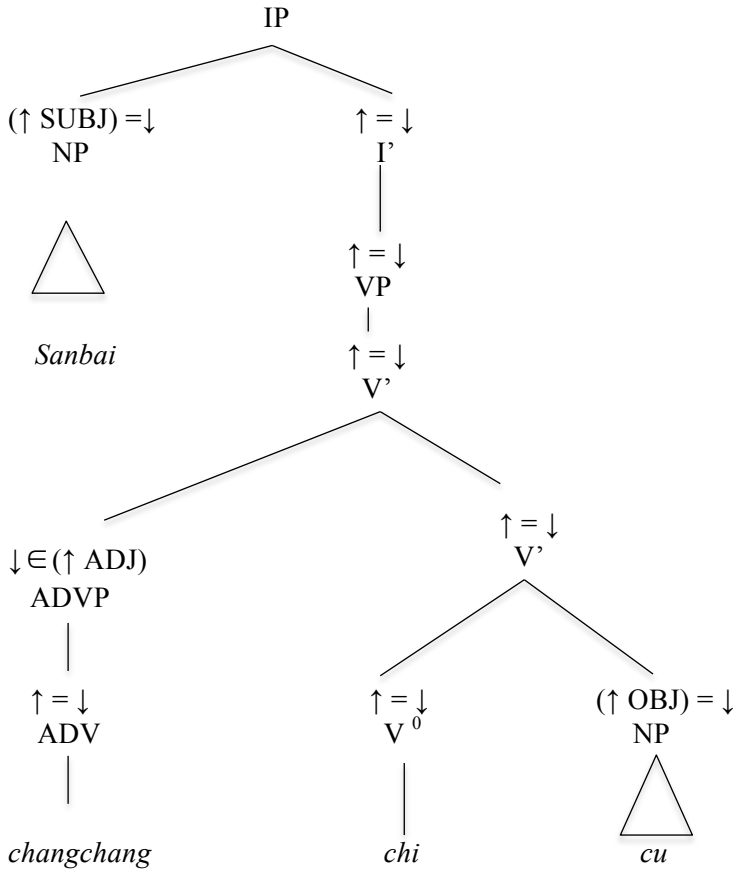
(30) *Sanbai changchang chi cu.*
Sanbai often eat vinegar
'Sanbai often gets jealous.'

Lexical entries

(31) (a) *chi* V (↑ PRED) = 'BE-JEALOUS<(↑ SUBJ)>(↑ OBJ)'
(↑ OBJ FORM) =*c* CU
(b) *cu* N (↑ FORM) = CU
(c) *sanbai* D (↑ NUM) = SG
(↑ PERS) = 3
(↑ PRED) = 'Sanbai'
(d) *changchang* ADV (↑ PRED) = 'changchang'

C-structure

(32)



We employed Bresnan's (1982) classical treatment of idiom chunks, namely, the use of semantically empty 'form'-bearing homophones with appropriate selectional restrictions. The verb *chi* 'eat' explicitly requires its

object to be *cu* 'vinegar' when it is associated with a specific meaning. The feature FORM represents a meaningless element like *cu* 'vinegar' as in the VOC *chi-cu* 'be jealous of'. Thus the O is given no PRED and placed outside the angled-brackets to show that the verb *chi* 'eat' has a non-thematic argument, as shown in (31a).

Although our analysis may apply to most of Chinese transitive VOCs, it runs into a major difficulty: the modifiability of the Os. Their status as a non-thematic object is purely motivated at the semantic level. If we assume them to be totally meaningless, how could they sometimes be modified (though not as freely as a normal object due to their idiomatic meaning) when we consider an example like (33) (also see (8) - (11))?

(33) *ta* *changchang* *chi* *gan* *cu.*
s/he always eat dry vinegar
'S/he always gets jealous to an absurd extent.

Bresnan (1982) also seems to provide a solution to our case of ditransitive VOCs. Take the idiom *keep tabs on* for example (Bresnan 1982: 46).

(34) The FBI kept tabs on John.

Thematic structure: keep-tabs-on < ag th >
| |
FBI John
Subcategorization: < S OBL > OBJ FORM TABS

This treatment was formulated within the so-called classic, i.e. pre-LMT, model of LFG and it was bound to run into difficulty within mapping theory as there is simply no way to derive the required lexical form, <S OBL> OBJ FORM TABS, and link the OBL to a theme argument.

As discussed above, we might need a different solution to continue our endeavor with ditransitive Chinese VOCs.

4.3 The reanalysis

In the literature, there are other works that have investigated similar constructions such as Lakoff (1987), Fillmore (1988), Butt (2003, 2010, 2014), Kay and Fillmore (1999), Butt et al. (2003), Kaplan and Zaenen (2003), Asudeh et al. (2008), Ahmed (2011), Megerdoomian (2012), Arnold (2015) and Findlay (2017).[4] Among them, Ahmed et al. (2012) present a best

[4] Findlay's TAG-LFG approach may work well with some cases of Chinese VOCs in which NP_2 can be treated as a direct object. However, problems occur when NP_1 takes over the function of direct object from NP_2 in a ditransitive VOC.

solution to us in terms of argument relation between the two objects. They provided the analysis of complex predicates (CPs) in the context of dependency bank development, but they kept it general enough to be applied across languages. Complex predicates can be defined as predicates which are composed of more than one grammatical element (either morphemes or words), each of which contributes a non-trivial part of the information of the complex predicate (Alsina et al. 1997). Within the framework of LFG, the pioneer work has been done by Butt (1995, 1998), Alsina (1993, 1996), Frank (1996), Bodomo (1996, 1997), Mohanan (1995), and Kaplan and Wedekind (1993).

Chinese VOCs exhibit the features of complex predicates in several ways. First of all, they are composed of two elements: the verbal and the nominal element. Second, the idiomatic meaning is derived from the combination as a whole. Third, although the VOCs as idiom chunks together impose selectional restrictions on an extra argument as discussed earlier, the special semantics within [NP_1 de NP_2] as a possessor and possessee still holds. In this sense, the relationship between NP_1 and NP_2 is closer than that of V and NP_1. In other words, we can say that NP_2 contributes NP_1 as an argument.

Following Ahmed et al. (2012), we adopt a complex predicate analysis to Chinese VOCs. The insight is especially borrowed from their treatment of N-V complex predicates in Hindi/Urdu.

(35) nAdiyah nE kahAnI yAd k-I
Nadya.F.Sg Erg story.F.Sg.Nom memory.F.Sg.Nom do-Perf.F.Sg
'Nadya remembered a/the story.'

In (35), there are altogether three arguments provided by the verb *kar* 'do': the doer, the action done, and the thing remembered. One argument *yAd* 'memory' contributes one further argument *kahAnI* 'story'. As the performed action, *memory* is encoded as an argument of the verb as part of the complex predication which is referred to as top-level PRED. The idea is demonstrated below when applied to Chinese ditransitive VOCs.

(36) *Sanbai changchang chi Yunniang (de) doufu.*
Sanbai often eat Yunniang DE tofu
'Sanbai often flirts with Yunniang.'

F-structure

(37)

$$\begin{bmatrix} \text{PRED} & \text{`}chi\text{ <SUBJ, `}doufu\text{ <OBJ>'>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`Sanbai'} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`Yunniang'} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{ADJ} & \{ [\ \text{PRED} \quad \text{`}changchang\text{'}\ ] \} \end{bmatrix}$$

There are three major advantages with this analysis. First, it helps us recognize both objects' status as an argument. As demonstrated earlier, only one argument is realized in the previous analyses of Chinese VOCs within the LFG framework. Second, it captures the internal structure of VOCs when NP_2 is encoded as an argument of the verb as part of the complex predication. Third, NP_1 is assigned the right grammatical function, which provides a perfect explanation why it is NP_1 (not NP_2) that can be passivized.

5. CONCLUSION

In this paper, we have solved the puzzle on the nature of two objects within the discontinuous VOC. Some interesting phenomena are presented. Both objects are amply demonstrated as a real argument through a series of syntactic tests in our analysis. Some previous analyses have often run into problems mostly because they assign the wrong grammatical function to these objects in question. For example, Huang (1990) fails to recognize NP_2's status as an argument and mistakes NP_1 for an oblique object. Furthermore, We have provided a complex predicate analysis by adopting the ideas of Ahmed et al. (2012). In current analysis, NP_2 contributes one further argument, namely, NP_1. As part of the VOC, NP_2 is then encoded as an argument of the verb to form the complex predication.

Following Ahmed et al. (2012), we have provided a reasonable account for argument relation within Chinese VOCs. The remaining issue is semantics. The direction for future research may rely on a lexical semantic approach to represent the underlying representation and derive the idiomatic meaning.

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