

PREDICATE CONTROL IN THE MANDARIN *JIANYU* CONSTRUCTION

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1. INTRODUCTION

The sentence structure $NP_1 + V_1 + NP_2 + V_2$ is a common form in many languages, including English and Mandarin. English examples are given in (1)a-b (Perlmutter & Soames, 1979). The Mandarin *Jianyu* construction has the form given in (2).

- (1)a. I expected Tom to go.
b. I forced Tom to go.
- (2) Wo rang ni likai.
I let you leave
I asked you to leave.

The different grammatical properties of predicate verb (V_1) in (1)a and (1)b were discussed in Carnie (2002) and Perlmutter & Soames (1979): V_1 *expect* in (1)a is a raising verb, whereas V_1 *force* in (1)b is a control verb. In this paper, we discuss V_1 in the Mandarin *Jianyu* construction and propose that V_1 is an object control verb (also see Xue & McFetridge, 1998).

Issues from section 2 to section 5 are organized as follows: section 2 introduces *Jianyu* and the *Jianyu* construction. Section 3 reviews several types of verbs that occur in the position of V_1 and focuses on one type: causative verbs. Section 4 analyzes V_1 in the framework of HPSG. Two criteria will be examined to find out whether V_1 in the *Jianyu* construction is an object control verb. Section 5 summarizes the results.

2. THE *JIANYU* CONSTRUCTION IN MANDARIN

As an original Mandarin term, *Jianyu* does not have an equivalent word in English. The morpheme *yu* refers to grammatical relations, as in *zhuayu* (subject), *binyu* (object), *zhuangyu* (adverbial), et cetera. *Jian*, which is originally a verb, means “to play two different roles”. Put together, “*jianyu*” means a word (phrase) playing two different roles in a sentence. In the Mandarin *Jianyu* construction, $NP_1 + V_1 + NP_2 + V_2$, NP_2 plays double role, for it connects two verbs adjacent to it: V_1 and V_2 . Since SVO is the basic sentence structure in Mandarin, it suggests that the two roles of NP_2 (*Jianyu*) are the object of V_1 and the subject of V_2 . Hence, the *Jianyu* construction can be described as the structure $NP_1 + V_1 + NP_2 + V_2$ in which a noun (or noun phrase) functions as the object of the verb preceding it and the subject of the verb following it. Another example of the *Jianyu* construction is shown in (3):

- (3) Ta de hua shi wo shengqi.
He poss-particle words make I get angry
His words made me angry.

In this sentence, NP_1 is *ta de hua* (his words), V_1 is *shi* (make), NP_2 (*jianyu*) is *wo* (I), V_2 is *shengqi* (get angry). *Wo* is the object of the causative verb *shi* (we will discuss it later) and also the subject of another verb, *shengqi*. In the next section, we switch our attention to V_1 . We first briefly review four types of verbs that appear in the V_1 position. And then we focus on one type of V_1 , the causative verb, and discuss three different groups of causative verbs.

3. TYPES OF V₁

In Wu (1990), V₁ is categorized into four types according to its lexical meanings:

Type 1 (T₁) ----- causative verbs (*rang* (to make), *quan* (to persuade), *bi* (to force)...);

Type 2 (T₂) ----- vocative verbs (*jiao* (to call), *chenghu* (to address)...);

Type 3 (T₃) ----- verbs showing feelings (*xihuan* (to like), *zhuhe* (to congratulate),
ganji (to be grateful)...);

Type 4 (T₄) ----- verbs referring to existence or possession (*you* (there be, to have...)).

Due to the limits of space, this paper only discusses type 1: causative verbs.

3.1 Causative verbs

Xing (1995) proposes that most Mandarin causative sentences, in the form of NP₁ + causative verb + NP₂ + V₂, are *Jianyu* constructions. She also points out that the causative verbs in this structure (called the “causative *Jianyu* construction”) have three arguments: NP₁, NP₂, and V₂. NP₁ is the causer or agent, NP₂ is the causee or patient, and V₂ is the result caused by V₁. Sentence (3), given above and repeated here, is a typical causative *Jianyu* construction:

- (3) Ta de hua rang wo shengqi.
He poss-particle words make I get angry
His words made me angry.

Ta de hua (his words) is the causer, *rang* (to make) is a causative verb, *wo* (I) is the causee, and the result which *rang* causes is V₂ (*shengqi*, I got angry). Alsina (1992) proposes that a causative structure must contain a causer and a caused event. The relationship between the causer and the caused event is described as follows: “the causer (or agent) acts on an individual, the patient, to bring about an event, of which this individual is itself an argument” (p.521). According to this, the Mandarin causative *Jianyu* constructions can be interpreted as construction where NP₁ (causer, the agent) brings about (V₁) a caused event (the result VP₂) to NP₂ (causee, the patient). In other words, the causative verb V₁ connects three arguments: NP₁, NP₂ and VP₂.

The most common causative verbs in Mandarin are *rang*, *jiao*², and *shi*, which amount to English *to make* or *to let*. Causativity is the only meaning of these three verbs. The above sentence (3) is a *rang* example, while sentences (4) and (5) are examples of *jiao* and *shi*.

- (4) Laoshi jiao women kan heiban.
Teacher let we look blackboard
The teacher asked us to look at the blackboard.
- (5) Ta de hua shi wo xiang ku.
He poss-particle words make I want cry
His words almost made me want to cry.

A number of other causative verbs not only mean causativity but also contain some specific meanings. Verbs in this group include *quan* (persuade), *bi* (force), *cui* (urge), *jinzhi* (forbid), *pai* (assign), *qingqiu* (beg), *mingling* (demand), *guwu* (motivate), and *yunxu* (allow). Take *quan* and *bi* for instance. *Quan* means “to make (someone) willing to do something by reasoning, arguing, repeatedly asking, etc.”, and *bi* means “to make (an unwilling person or animal) do something” (Longman, 1987). Examples are given in (6) and (7):

² This *jiao* is different from the *jiao* as vocative verb.

- (6) *Wo quan Lisi canjia julebu.*
I persuade Lisi join club
I persuaded Lisi to join the club.
- (7) *Zhangsan bi Lisi qu xuexiao.* (Xue & McFetridge, 1998)
Zhangsan force Lisi go school
Zhangsan forced Lisi to go to school.

Causative verbs in the third group attribute two thematic roles to NP₁: NP₁ is not only the agent (causer) of V₁ but also the agent of the caused event V₂. These verbs include *song* (to take sb.), *dai* (to bring sb.), *chan/fu* (to hold one's arm), and *pei* (to accompany). Example sentences are given in (8)-(10):

- (8) *Wo song Lisi hui jia.*
I take Lisi return home
I took Lisi to return home.
- (9) *Wo chan ni shang lou.*
I hold.your.arm you up stairs
I helped you go upstairs.
- (10) *Ta dai women qu xuexiao.*
He take we go school
He took us to school.

In sentence (8), *wo* (NP₁) is not only the agent of *song* (V₁) but also the agent of *hui* (V₂, to return). In other words, *wo* and *Lisi* (NP₂) both returned to *Lisi's* home. In sentence (9), two people (*wo* and *ni*) went upstairs. In sentence (10), both *ta* (NP₁) and *women* (NP₂) went to school. However, in these sentences, the status of NP₁ and NP₂ are different: as a helper, NP₁'s status is secondary to NP₂.

Therefore, causative verbs can be divided into three groups based on two criteria: (1) whether causativity is the only meaning, and (2) whether NP₂ is the only agent of V₂. In the next section, we propose that the causative verbs in the Mandarin *Jianyu* construction are object control verbs, through a Head-Driven Phrase Structure Grammar (HPSG) analysis.

4. ANALYSIS OF V₁

As mentioned in section 1, V₁ (to expect) in sentence (1)a is an object raising verb, while in sentence (1)b it (to force) becomes an object control verb (also see Sag et al., 2003). Our question is whether V₁ in the Mandarin *Jianyu* construction is an object raising verb or an object control verb. As mentioned earlier, only the causative predicate verb is discussed in this paper, due to space limits.

Two criteria for the assessment are based on Sag et al. (2003). The first one is whether the verb takes a non-referential noun as an argument. If yes, it is an object-raising verb; if not, it is an object-control verb. The second criterion is whether the passive structure is well-formed, and, if it is well-formed, whether the passive form is synonymous to its active counterpart. If yes, it is an object-raising verb; if not, it is an object-control verb.

4.1 Non-referential nouns in Mandarin

There are two different opinions on the definition of non-referential nouns in Mandarin. Lin (1997) proposes that the Mandarin non-referential noun "*ta*", like the non-referential noun "it" in English, bears no value and zero reference. The HPSG description of non-referential noun is [MODE none] and [INDEX none]. The example is given in (11):

- (11) he ta liang bei pijiu
 drink it two glass-CLASSIFIER beer
 drink two glasses of beer

Non-referential “ta” occurs between a verb and its object. Although it appears in the object position, the noun following it is the real object. In most cases, the real object is preceded by a numeral word and a classifier. See another example in sentence (12):

- (12) qing ta yi bai ge pengyou
 treat (a dinner) it one hundred CLASSIFIER friend
 treat one hundred friends a dinner

Hsin (2002) argues that the value of a non-referential noun is not “none” but “indefinite”, like “ren” in sentence (13):

- (13) You ren zhidao le.
 there.be people know ASP
 Some people knew.

In this paper, we follow the first position, taking [INDEX none] as the primary characteristic for Mandarin non-referential nouns. Therefore, “ta” in (11) and (12) is a non-referential noun; “ren” in (13) is an ordinary noun.

4.2 Passive form “Bei” structure in Mandarin

Mandarin uses the “Bei-structure” as one of its most common passive structures (also see Xue & McFetridge (1998) & M. Li (1985)). A transformation from an active form to its passive form is shown in (14)a and b:

- (14)a. Gege ma le ta.
 Elder-brother scold ASP he
 His elder brother scolded him.
- b. Ta bei gege ma le.
 He BEI elder-brother scold ASP
 He was scolded by his elder brother.

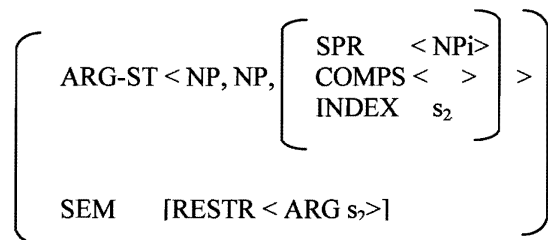
4.3 Lexical entries of orv and ocr

In the following sections, 4.4, 4.5 and 4.6, we use the aforementioned two criteria to assess the three groups of causative verbs in order to find out whether they are object-raising verbs or object-control verbs in the Mandarin *Jianyu* construction in the framework of HPSG. The HPSG lexical descriptions of object-raising-verbs (orv) and object-control-verbs (ocr) are given in (16) and (17) (Sag et. al, 2003, p378):

- (16) *object-raising-verb-lxm (orv-lxm)*

$$\left[\begin{array}{l} \text{ARG-ST} < \text{NP}, \boxed{1}, \left[\begin{array}{l} \text{SPR} < \boxed{1} > \\ \text{COMPS} < > \\ \text{INDEX} \quad s_2 \end{array} \right] > \\ \text{SEM} \quad [\text{RESTR} < \text{ARG} \quad s_2 >] \end{array} \right]$$

(17) *object-control-verb-lxm (ocv-lxm)*



Descriptions in (16) and (17) show that object-raising verbs (orv) and object-control verbs (ocr) have three arguments. An object-raising verb can take a referential or a non-referential noun as its second argument. An object-control verb, however, only takes a referential noun as the second argument. Besides this, an object-raising verb only gives semantic roles to the first NP argument. An object-control verb, however, gives both NP arguments semantic roles.

4.4 V_1 in *rang* group

As pointed out in section 3.1, causative verbs in the *rang* group only bear causative meaning and do not have any other specific lexical meanings. See sentence (3) (repeated here as (15)).

(15) Ta de hua rang wo shengqi.
 He poss-particle words make I get angry
 His words made me angry.

In this sentence, the predicate verb *rang* takes the non-animate noun phrase *ta de hua* as subject and the pronoun *wo* as object and gives them two thematic roles: causer and causee, respectively. The causative verb *rang* has three arguments: *ta de hua*, *wo*, and *shengqi*. The third argument also receives its thematic role, caused event, from the causative verb. The second argument is a referential noun, *wo*. Next we examine whether the referential noun *wo* can be replaced by the non-referential noun “*ta*”.

As discussed in 4.1, the only environment for non-referential “*ta*” is between a verb and its object; in most cases the object is preceded by a numeral word and a classifier in a row. Therefore, in the *Jianyu* construction, non-referential “*ta*” appears in the position of *Jianyu*. This is to say; the real object of the causative verb becomes the third argument and refers to the result of the caused event. However, this is not true in Mandarin.

- (18)a. *Wo rang⁴ ta liang bei piju
 I let it two glass-CLASSIFIER beer
- b. *Tamen shi ta yi bai ge pengyou
 They let it one hundred CLASSIFIER friend
- c. *Zhangsan jiao ta wu ge xuesheng
 Zhangsan let it five CLASSIFIER student

If we add a verb argument to the above sentences, they turn into well-formed causative constructions.

(19)a'. Wo rang ta liang bei piju sa zai di shang.
 I let it two glass-CLASSIFIER beer spill at ground on
 I let two glasses of beer spill on the ground.

⁴ In (18), these three sentences are well formed in Mandarin if *rang*, *shi*, *jiao* are not causative verbs and not in the *jianyu* construction.

- b'. Tamen shi *ta* yi bai ge pengyou shengqi.
 They let it one hundred CLASSIFIER friend get angry
 They let one hundred friends get angry.
- c'. Zhangsan jiao *ta* wu ge xuesheng shengqi.
 Zhangsan let it five CLASSIFIER student angry
 Zhangsan let five students get angry.

However, in the above three sentences, (19) a'-c', the second argument of V₁ (NP₂ or *jianyu*) is not the non-referential noun "*ta*"⁵ but the real object, *piju*, *pengyou*, or *xuesheng*, in that the third argument is the added verb phrase. The real object of V₁ obtains an agent role from the added argument.

According to the above analysis, we found that the causative verb in the first group does not fit the first criterion since the non-referential noun itself cannot be the second argument.

The second criterion is whether the verb can be passivized in a well-formed structure. The active-passive pairs for sentences (3), (4) and (5) are given in (20)-(22).

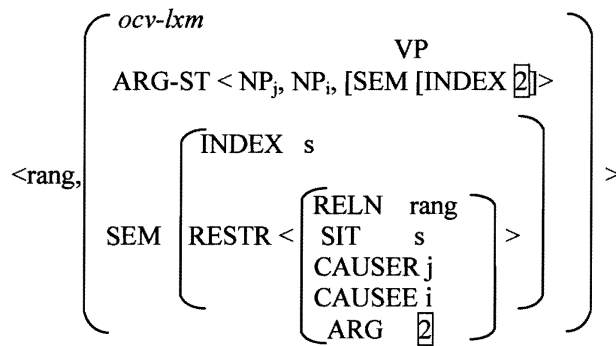
- (20)a. Ta de hua rang wo shengqi.
 He poss-particle words make I get angry
 His words made me angry.
- b. *Wo *bei* ta de hua rang shengqi.
 I BEI he poss-particle words make angry
- (21)a. Laoshi jiao women kan heiben.
 Teacher let we look blackboard
 The teacher asked us to look at the blackboard.
- b. *Women *bei* laoshi jiao kan heiban.
 We BEI teacher let see blackboard
- (22)a. Ta de hua shi wo xiang ku.
 He poss-particle words make I want cry
 His words made me want to cry.
- b. *Wo *bei* ta de hua shi xiang ku.
 I BEI he poss-particle words make want cry

None of the passive forms are accepted as grammatical sentences in Mandarin.

To sum up, the causative verbs *rang*, *jiao*, and *shi* are unlikely to be called object-raising verbs in the Mandarin *Jianyu* construction, in that they fit neither of the criteria. According to what was said earlier, they are object-control verbs. The lexical entry of *rang* is drawn in (23).

⁵ At least the second argument can not be the non-referential noun itself if we reckon the combination of non-referential noun and the real object to be the second argument.

(23)



4.5 V₁ in *quan* group

Since there are a number of causative verbs in this group, we choose *quan* (to persuade), and *bi* (to force) to discuss. Unlike the *rang* group, the non-referential noun “*ta*” can follow all the verbs in this group:

- (24)a. Wo *quan* ta yi bai ju hua.
 I persuade it one hundred sentence-CLASSIFIER words
 I persuaded (sb.) with one hundred words.
- b. Lisi *bi* ta shi ci.
 Lisi force it ten time-CLASSIFIER
 Lisi forced ten times.

Nevertheless, we cannot turn (24)a-b into a *Jianyu* construction. Unlike the causative verbs in the *rang* group, verbs in this group do not allow another VP to be added as the caused event. Therefore, it is unlikely to give further discussion on whether causative verbs in the *quan* group fit the first criterion.

In order to find out whether causative V₁ in the *quan* group meets the second criterion, sentences (6) and (7) (repeated here as (25) and (26)) are transformed into passive forms, as given in (25)b and (26)b:

- (25)a. Wo *quan* Lisi canjia le julebu.
 I persuade Lisi join ASP club
 I persuaded Lisi to join the club.
- b. ? Lisi *bei* wo *quan* canjia le julebu.
 Lisi BEI I persuade join ASP club
- (26)a. Zhangsan *bi* Lisi qu xuexiao. (Xue & McFetridge, 1998)
 Zhangsan force Lisi go school
 Zhangsan forced Lisi to go to school.
- b. Lisi *bei* Zhangsan *bi* qu xuexiao.
 Lisi BEI Zhangsan force go school
 Lisi was forced by Zhangsan to go to school.

The passive form in (26)b is a well-formed sentence and also analogous to (26)a. Another verb *jinzhi* (to prohibit) in this group also shows a well-formed and analogous passive form:

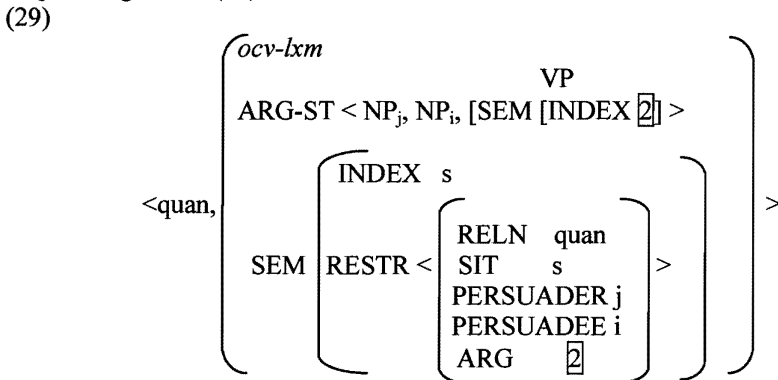
- (27)a. Xuexiao *jinzhi* women wangshang chu qu.
 School prohibit we night out go
 Our school prohibited us to go out at night.

- b. Women bei xuexiao jinzhi wangshang chuqu.
 We BEI school prohibit night out go
 We were prohibited to go out at night by the school.

So far, causative verbs in the *quan* group seem to offend the first criterion whereas fit the second criterion fairly well. However, this is similar to the English control verb “persuade”. It can be passivized in a well-formed sentence, like “I was persuaded to go”, which is also synonymous to its active form “Someone persuaded me to go”. The passivized “persuaded”, however, cannot appear in sentences like “*The project is persuaded to be done by Monday”. Therefore, it cannot be called a raising verb since it does not fit the second criterion. In Mandarin, with “*bi* (to force)” for example, the passive form in (28) is not grammatical.

- (28) *Zhe xiang gongcheng bei bi xingqiyi zhiqian wancheng
 This CLASSIFIER project BEI force Monday before finish
 The project is forced to be done by Monday.

To summarize, passivized causative verbs in the *quan* group are not allowed to appear in every passive form. Therefore causative verbs in this group cannot be assessed as object-raising verbs, in that they fit neither criterion. The causative verbs in this group are also object-control verbs. The lexical entry of *quan* is given in (29).



4.6 V₁ in *song* group

The last group of causative verb can take the non-referential noun “*ta*” and its real object in a row, as shown in (30) and (31).

- (30) Wo song ta shi ge ren.
 I take it ten CLASSIFIER person
 I took ten people (to somewhere).
- (31) Lisi dai ta ershi ge haizi.
 Lisi take it twenty CLASSIFIER child
 Lisi took twenty children (to somewhere).

Verb phrases referring to the caused event can also be added to the end of the above sentences as shown in (32) and (33).

- (32) Wo song ta shi ge ren qu gongyuan.
 I take it ten CLASSIFIER person go park
 I took ten people to the park.

- (33) Lisi dai ta ershi ge haizi shang lou.
 Lisi take it twenty CLASSIFIER child up stairs
 Lisi took twenty children to upstairs.

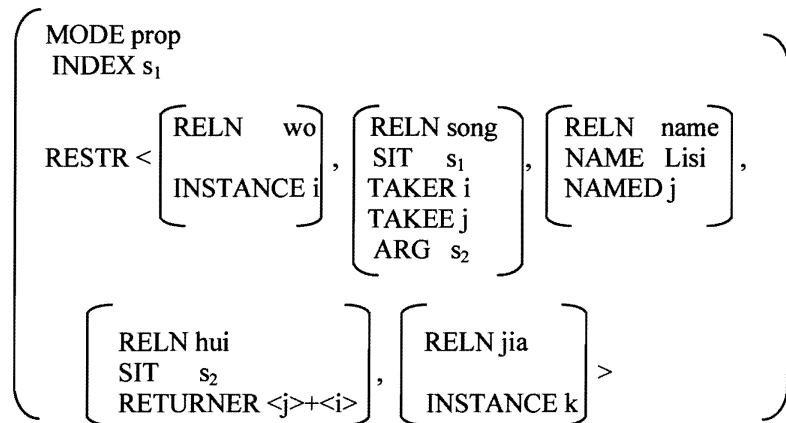
Discussion on this issue is similar to that in the first group. Once the caused event is added, the second argument of the causative verb is not the non-referential noun *ta* but the real object, the agent of the third argument. The causative verbs in the *song* group, therefore, do not fit criterion 1.

The passivization forms of the causative predicate are well-formed and synonymous to their active counterparts. Examples are given in (33) and (34).

- (33)a. Wo song Lisi hui jia.
 I take Lisi return home
 I took Lisi home.
- b. Lisi bei wo song hui jia.
 Lisi BEI I take return home
 Lisi was taken home by me.
- (35)a. Wo chan ni shang lou.
 I hold.your.arm you up stairs
 I helped you go upstairs.
- b. Ni bei wo chan shang lou.
 You BEI I hold.your.arm up stairs
 You were helped by me go upstairs.

To conclude, causative verbs in the *song* group have double performance. On one hand, they cannot take non-referential nouns as their arguments in the *Jianyu* construction; hence they are not raising verbs. On the other hand, they are not control verbs either, in that their passive forms are well-formed and analogous to their active counterparts. The semantic analysis for sentence (33)a is given in (36).

- (36) Wo song Lisi hui jia.



5. CONCLUSION

In this paper, the Mandarin *Jianyu* construction ($NP_1 + V_1 + NP_2 + V_2$) was investigated to find out whether predicate verb (V_1) is a raising verb or a control verb. Two criteria were adopted: one is whether the predicate verb takes a non-referential noun as its argument and the other is whether the passivized form is synonymous to its active counterpart. Three groups of causative predicate verbs were tested with the two criteria through an HPSG analysis. The results indicate that the non-referential *ta* in Mandarin has weak

grammatical functions in structure $NP_1 + V_1 + NP_2 + V_2$ because the predicate verb does not take it as its argument. This, to some extent, suggests that the predicate verb in the Mandarin *Jianyu* construction is not a raising verb. Verbs in the *rang* and *quan* groups proved this to be true since they do not fit the second criterion either. However, the second criterion was not offended by verbs in the *song* group (see 4.5). Nevertheless, this paper still proposes that causative verbs in the *song* group are control verb, in that *song* verbs give thematic roles not only to their first argument but also to other arguments, as shown in (36). Thematic restriction is another discrepancy between raising verbs and control verbs, as discussed in previous studies (Carnie, 2002). In all, as argued by Xue & McFetridge (1998) and further analyzed by this paper, predicate verbs in the Mandarin *Jianyu* construction are object control verbs.

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