V-*gei* Double Object Construction and Extra Argument in Mandarin

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Abstract

This paper examines the syntax of a morphologically complex double object construction in Mandarin, V-*gei* structure, and uses the results as the basis for a new account of a special phenomenon: sentences with an extra experiencer. Following Pylkkänen's (2002) work on applicative phrases, we argue that different interpretations of the indirection object in double object construction can be accounted for by the differences between high and low applicatives. We adopt Paul and Whitman's (2010) raising applicative hypothesis to account for double object construction, and argue that the indirect object moves to the specifier of low applicative projection to be licensed with the goal reading. Further, we argue that this indirect object may optionally raise to the high applicative phrase to obtain the benefactive thematic role. This helps to explain the phenomenon of indirect objects not always carrying a benefactive reading. We then propose that an argument may directly merge with the high applicative head as its specifier, resulting in sentences with an (unexpected) extra argument expressing either a benefactive or a malfactive reading. Lastly, the structural properties of both the high applicative projection and the low applicative projection will be discussed in relation to passivization and the causative *ba* construction in Mandarin.

1 Introduction

This paper proposes to extend the essential components of Pylkkänen's (2002) high and low applicative analysis to two phenomena in Mandarin: the V-*gei* 'V-*give*' double object construction, and a special type of sentence that carries extra arguments.

V-*gei* sentences (e.g., (1a)) are interesting because Mandarin has a set of bare ditransitive verbs that do not include the morpheme *gei* (e.g., *song* in (1b) vs. *xie-gei* in (1a)), but which nonetheless sometimes occur with the morpheme *gei* (e.g., (1c)). It is therefore worth asking what the semantic and structural functions of *gei* in sentences like (1) are.

(1) a. Tony xiě-gěi-le   Mǎlì yī-fēng-xìn.
       Tony write-give-Asp   Mali 1-CL-letter
       'Tony wrote Mali a letter.'
    b. Wǒ sòng-le   Mǎlì yī-gè   shǒubiǎo .
       1SG send-ASP Mali one-CL watch
       'I sent Mali a watch.'
    c. Wǒ song-gěi-le   Mǎlì yī-gè   shǒubiǎo.
       1SG send-give-ASP Mali one-CL watch
       'I sent Mali a watch.'

Just like their English counterparts, typical Mandarin verbs take two arguments if transitive (like *he* 'drink' in (2a)) and one if intransitive (like *ku* 'cry' in (2b)).

(2) a. Zhāngsān hē-le   sān-píng-jiǔ.
       Zhangsan drink-Asp   three-bottle-wine.
       'Zhangsan drank three bottles of wine.'
    b.Mǎlì kū-de   xīn fǎn.
       Mali cry-De   upset
       'Mali cried and felt upset.'

However, sometimes we see an extra argument in such sentences, e.g., the word *Lǐsì* of examples (3a) and (3b).

(3) a. Zhāngsān hē-le   Lǐsì sān-píng-jiǔ.
       Zhangsan drink-Asp Lisi three-bottle-wine.
       'Zhangsan drank Lisi's three bottles of wine.'
    b. Mǎlì   kū-de Lǐsì xīnfán.
       Mali   cry-De Lisi upset
       'Mali's crying made Lisi upset.'

In this paper, we will argue that the differences between sentences like (2) and (3) can be accounted for by a modified version of Pylkkänen's (2002) high applicative analysis; and that V-*gei* double object construction can be explained by extending Paul and Whitman's (2010) modification of Pylkkänen's low applicative projections to the Mandarin context. Specifically, in the spirit of Larson's (1988) VP shell hypothesis, and following Paul and Whitman's raising applicative analysis, we assume that *gei* in the V-*gei* construction is the head of a low applicative projection ($Appl_L$P). However, we depart from Pylkkänen's original proposal by arguing, like Paul and Whitman, that such an $Appl_L$ selects a VP and attracts the indirect object (IO) to its specifier. The lexical verb then undergoes head-movement to *gei*$_{Appl_L}$ to yield the V-*gei* complex.

We will then extend Pylkkänen's (2002) high applicative analysis to account for Mandarin's additional benefactive reading of IO in ditransitive constructions, and for the non-canonical extra arguments like those in (3). We will show how combining this high applicative projection with Paul and Whitman's (2010) raising applicative structure can account for a wider range of Chinese data than either of them by itself. Our proposal will be unlike Kuo's (2016) insofar as it eliminates empty movements and extra functional projections.

This paper is organized as follows. In section 2, we discuss the two competing accounts of low applicative phrases in Chinese, i.e., Paul and Whitman's (2010) raising applicative hypothesis, and Kuo's (2016) light applicative projection. In section 3, we present our proposal regarding V-*gei* double object construction and how it can explain sentences with an extra argument. We provide empirical support for the predictive value of the current proposal in section 4, and then briefly sum up our findings and their implications in section 5.

2 The V-*gei* Construction

2.1 Applicatives in Chinese Double Object Construction

A few studies have recently discussed the application of applicative projections in Mandarin for some syntactic phenomena. A high applicative phrase ($Appl_H$P) introduces a (benefactive)

argument above the VP (4): e.g., the Luganda example 'Katonga' in (5) (Pylkkänen 2002: 25).

(4) High Applicative
 [$_{vP}$ [$_{Appl_HP}$ NP$_{BENEFACITVE}$ [$_{Appl_H}$' $Appl_H$ [$_{vP}$ V NP]]]]

(5) Mukasa   ya-tambu-le-dde   Katonga.
    Mukasa   PAST-walk-APPL-PAST Katonga
    'Mukasa walked for Katonga.'

Unlike $Appl_H$P, a low applicative phrase ($Appl_L$P) merges under a VP (6) (Pylkkänen 2002: 24) and introduces a source/recipient argument (e.g., *him* in (7)), such that the event encoded by the VP denotes a transfer of possession.

(6) Low Applicative
 [$_{VP}$ V [$_{Appl_LP}$ NP$_{SOURCE/RECIPIENT}$ [$_{Appl_L}$' $Appl_L$ NP]]]

(7) I baked him a cake.

While (6) can account for the thematic relations in sentences with typical ditransitive verbs, Paul and Whitman (2010) point out that such a structure cannot be directly applied to Chinese V-*gei* double object construction, because the potential head-raising of $Appl_L$ to the verb would produce an ungrammatical *gei-V complex, e.g., *gei-song 'give-send' in (8). Therefore, they propose a raising applicative analysis, as in (9), where an applicative projection dominates a VP with a double object, and the goal argument raises to Spec,ApplP.
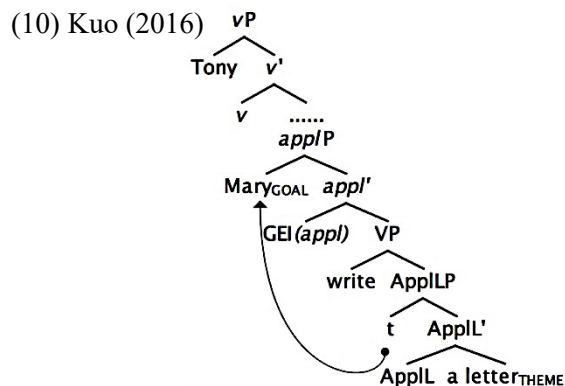
(8) * [$_{VP}$ *gei-song* [$_{Appl_LP}$ NP [$_{Appl_L}$' ~~*gei*$_{Appl_L}$~~ NP]]]

(9) Raising Applicative
[$_{APPLP}$ DP$_{Goal}$ [$_{APPL}$' Appl [$_{VP}$ ~~DP$_{Goal}$~~-[$_{v}$' V DP$_{Theme}$]]]]

Much like Paul and Whitman (2010), Kuo (2016) argues that the IO in sentences like (1) raises from the VP to a higher position above it. Following Citko (2011), Kuo further proposes a light applicative projection (applP) associated with low applicatives in Mandarin. As shown in (10), the low applicative accounts for the basic IO in the double object construction; but to derive the V-*gei* complex, and interpretation of *Mali* as being the recipient and/or the benefactive, both verb and IO move. However, Kuo's (2016:60) analysis requires an extended light applicative projection of the low

applicative projection, and that this extended light projection be separated by another lexical head verb which is not directly related to applP.

(10) Kuo (2016)

```
                      vP
                  ┌────┴────┐
                Tony       v'
                       ┌────┴────┐
                       v      ......
                            ┌────┴────┐
                          applP
                       ┌──────┴──────┐
                   Mary_GOAL       appl'
                              ┌──────┴──────┐
                          GEI(appl)        VP
                                      ┌─────┴─────┐
                                    write      ApplLP
                                            ┌────┴────┐
                                            t       ApplL'
                                               ┌─────┴─────┐
                                             ApplL   a letter_THEME
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Both the above accounts point out that the notion of a low applicative in V-*gei* sentences is supported by such sentences passing Pylkkänen's (2002) diagnostics for the low applicative projection. For example, since low applicatives express transfer of possession within an event, they are incompatible both with stative verbs (which by their nature cannot describe a transferring event) and intransitive verbs; and Mandarin's V-*gei* construction exhibits the same type of incompatibility (e.g., (11) and (12)), suggesting that a low applicative structure is involved in V-*gei* sentences. Importantly, as noted by Pylkkänen (2002), the high applicative – unlike the low one – are compatible with these types of verbs: a point we will return to in section 3.

(11)   Intransitive verb
  *Mǎlì   kū-gěi   Lǐsì.
  Mali   cry-give   Lisi
    'Lisi was upset by Mali's crying.'
(12)   Stative predicate
  *Zhāngsān   ná-gěi-zhe   Mǎlì   bāo.
  Zhangsan   hold-give-Asp Mali   bag
    'Zhangsan held the bag for Mali.'

Additionally, Kuo (2016) points out that not all double object constructions require the morpheme *gei*, and thus, some ditransitive sentences show variations, e.g., (13).

(13) Tony sòng(-gěi)-le Mǎlì   yī-gè-shǒu.biǎo.
    Tony send(-give)-Asp Mali 1-CL-watch
      'Tony gave Mali a watch.'

We agree with Kuo that sentences like (13) do not simply contain an optional *gei* 'give', and we will argue that two different structures are involved: that is, a simple ditransitive structure (with *song* 'send/give' alone) or a V-*gei* complex verb, especially if we observe the fact that some *gei* cannot be omitted from certain V-*gei* sentences, e.g., (13) vs. (14).

(14) a. Tony mǎi(-gěi)-le Mǎlì yī-gè-shǒu.biǎo.
        Tony buy-give-Asp Mali 1-CL-watch
        'Tony bought a watch to/for Mali.'
      b.*Tony mǎi-le   Mǎlì   yī-gè-shǒu.biǎo.
        Tony buy-Asp Mali 1-CL-watch
        'Tony bought a watch to Mali.'

Moreover, we suggest that, even without the functional light applicative projection proposed by Kuo (2016), bare ditransitive sentences like those with *song* 'give/send' in (13) and canonical transitive sentences like (15) can still be derived.

(15) Tony mǎi-le   yī-gè-shǒu.biǎo.
    Tony buy-Asp   1-CL-watch
      'Tony bought a watch.'

That is, following Paul and Whitman's (2010) analysis that *gei* is the head of a low applicative projection that selects a VP as its complement to express transfer of possession, we propose that sentences like (15), with a bare canonical transitive VP, do not have a low applicative projection, and cannot express a goal/recipient IO (e.g., (14b)).

2.2   IO-raising in V-*gei* Construction

Both the raising applicative and light applicative structures require an IO-raising mechanism. Kuo (2010) argues that Paul and Whitman (2010) failed to prove that the IO must be moved from the VP, and therefore that an alternative is needed.

According to Paul and Whitman, distributive quantifiers such like *meiren* 'each' occur to the right of the IO, as shown in (16).

(16) Lǐsì   sòng-gěi háizi-men měirén
    Lisi   send-give children-PL each
    yī-bǎi   kuài.
    100-CL   money
    'Lisi gave the children each 100 dollars.'

They argue that *meiren* adjoins to the VP, and the IO raises from Spec,VP to Spec,ApplP. There are three reasons for this derivation: first, that the order of the distributive quantifiers and the frequency adverb is fixed; so if *meiren* were inside the VP, (17b) would be acceptable.

(17) a. lǎoshī sòng-gěi   háizi-men
        teacher send-give   children-PL
        měirén sān-cì lǐwù.
        each   3-times gift
    'The teacher gave every child a gift three times.'
     b. *lǎoshī sòng-gěi   háizi-men
        teacher send-give   children-PL
         sān-cì   měirén lǐwù.
         3-times   each   gift
    'The teacher gave every child a gift three times.'

Second, *meiren* cannot form a constituent with a noun phrase (NP), so the sentences in (18), which have *meiren*-NP as the IO and direct object (DO), are both ungrammatical.

(18) a. *lǎoshī sòng-gěi [měirén háizi-men]
         Teacher send-give each   children-PL
         yī-jiàn   lǐwù
         1-CL   gift
    'The teacher gave the children each a gift.'
     b. *lǎoshī   mà-le   [háizi-men měisrén].
        teacher scold-Asp children-PL each
    '*The teacher scolded the children each.'

Third, when a different distributive quantifier, *yiren*, is added to the NP, the quantifier and the NP still do not form a constituent.

(19) *xiàozhǎng fen-gěi   [yīrén lǎoshī]
       principal allot-give each teacher
         shí-gè   xuéshēng
         10-CL   students
'The principal allotted ten students to each teacher.'

Instead, Kuo (2016) argues that there could be different ways to explain ungrammatical sentences like (18a): namely, that distributive quantifiers may not occur in a pre-nominal position but must be post-nominal, as shown in (20).

(20) a. háizi-men   měirén mǎi-le
        children-PL   each   buy-Asp
        yī-běn shū
        1-CL   book
    'The children each bought a book.'
     b.*měirén háizi-men   mǎi-le   yī-běn
       each   children-PL buy-Asp 1-CL
         shū.
         book
    'The children each bought a book.'

However, this view may not be tenable. That is, if quantifiers like *meiren* only occur after the NP, sentences like (18b) should be acceptable, contrary to the facts.

3   Our Proposal

3.1   New High and Low Applicative Analyses

Following Paul and Whitman's (2010) raising-applicative analysis, we propose that when the head of a low applicative is not overt, it produces sentences like (21).

(21) Tony sòng-le   Kaite yī-jiàn lǐwù.
     Tony send-Asp   Kaite 1-CL   gift
     'Tony gave a gift to Kaite.'

We also propose that when *gei* 'give' (the head of the low applicative) is overt, it yields sentences like (22).

(22) Tony sòng-gěi-le   Kaite yī-jiàn lǐwù.
     Tony send-give-Asp Kaite 1-CL   gift
     'Tony gave a gift to Kaite.'

IO in English double object construction can ambiguously have either a pure goal reading or an extra benefactive reading (23), and its Chinese counterparts (21-22) exhibit the same type of ambiguity: that is, the IO (e.g., *Kaite* in both (21) and (22)) can be a benefactive or just a goal.

(23) Tony baked Kaite a cake.
    a.   Tony bake a cake to Kaite (as goal).
    b.   Tony bake a cake for Kaite (as benefactive).

We propose that the low applicative introduces the goal/recipient argument in Chinese double object construction, denoting transfer of possession. However, when an IO carries a

benefactive reading, it is because that IO has raised to a high applicative projection inside of *v*P, as shown in the structure in (24). In other words, sentences whose IOs have goal readings involve a low applicative, while IOs with benefactive readings involve low-to-high applicative raising.

(24) Proposal: New High Applicative Analysis
[$_{vP}$*v* [$_{ApplHP}$ NP Appl$_H$ [$_{ApplLP}$ ~~NP~~ [$_{ApplL'}$ Appl$_L$ VP]]]]

This proposal can also explain the availability of passivization in double object construction. Looking again at the Chinese examples (21) and (22), only sentences like the former allow passivization of IO *Kaite* (25), while the V-*gei* sentences do not, e.g., (26).

(25) Kaite bèi Tony   sòng-le   yī-jiàn lǐwù.
     Kaite BEI Tony   send-Asp   1-CL gift
     'Kaite was sent a gift by Tony.'
(26) *Kaite bèi Tony   sòng-gěi-le   yī-jiàn lǐwù.
     Kaite BEI Tony   send-give-Asp 1-CL   gift
     'Kaite was sent a gift by Tony.'

   Given that passivization suppresses one internal argument inside a VP, our analysis predicts that sentences like (22) with V-*gei* structures in which the IO has already undergone raising to the spec,Appl$_H$P, outside of its base VP (e.g., (27)), the VP's internal lower copy cannot participate in the other syntactic operation.

(27) argument raising to Appl$_L$P
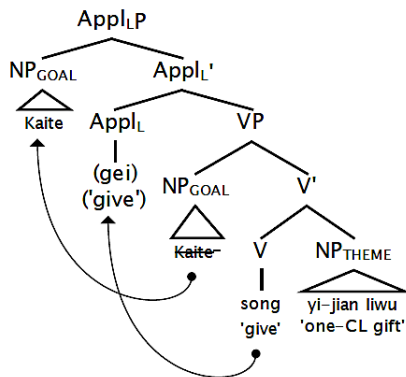
   Supposedly, if the IO always moves to Appl$_H$P, sentences like (25) should be ungrammatical. We accept that it is indeed the case, and that sentences like (25) must be grammatical for some other reason. We propose that, while the IO *Kaite* still remains in the VP of the ditransitive verb *song*

'give' (28a), when a passive *v* is merged, the IO inside the VP is not moved out (unlike in (27)), and this IO can therefore still be passivized later (e.g., (28b)), yielding sentences like (25).

(28) a. No A-movement type in ditransitive VP
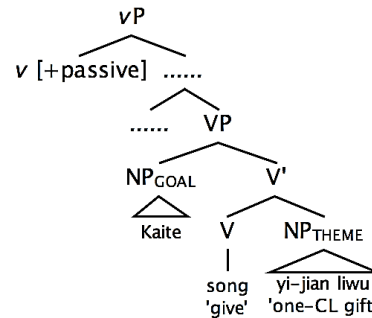
   b. Passivization of ditransitive VP of (28a)
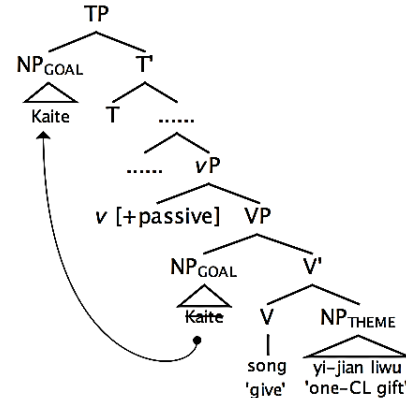
3.2   Application of New High Applicatives

Our proposed structure (24) can account for double object construction and sentences with extra arguments in a uniform way.
   It has been noticed that sometimes, transitive and intransitive sentences have an extra argument. The examples of this phenomenon from (3) are repeated below.

(3) a. Zhāngsān hē-le   Lǐsì sān-píng-jiǔ.
        Zhangsan drink-Asp Lisi   three-bottle-wine.
        'Zhangsan drank Lisi's three bottles of wine.'
     b. Mǎlì   kū-de   Lǐsì xīn-fán.
        Mali   cry-DE Lisi upset
        'Mali's crying made Lisi upset.'

   Similar phenomena have been discussed in Liu and Shi (2018). They proposed that such extra arguments directly merged with Appl project to express either a benefactive or malfactive role.

They claim that since such extra arguments are not subcategorized by the main verb, this type of arguments cannot form a causative *ba* sentence; Liu and Shi (2018) do not discuss the availability of passivization for this kind of sentences.

As we will show immediately below, we think the applicative analysis provided in Liu and Shi (2018) is tenable, but some of their interpretations of examples and their explanations to the applicative structure and other associated constructions seem to be oversimplified. We will present data showing that, contrary to the claim in Liu and Shi (2018), NPs that directly merge with high applicative projection (see (24)) and receive benefactive or malfactive role can participate in the later syntactic derivation such as passivization or to form a causative *ba* construction.

For examples like those in (3), we suggest that the extra argument *Lisi* in both sentences in (3) directly merges with the high applicative projection, and takes a specific thematic role: either benefactive or malfactive. As an extra argument introduced by the high applicative, this argument is indirectly related to the event described by the verb. Also, because it is not introduced by low applicative, this argument is not relevant to the concept of transfer of possession.

Accordingly, we predict that if an argument does not undergo a prior movement inside *v*P, it may undergo passivization (cf. (28)). This prediction is borne out in sentences with extra arguments. For instance, the extra argument *Lisi* in (3) that we proposed to be directly merged with the high applicative can be passivized, as in (29).

(29) a. Lǐsì   bèi   Zhāngsān   hē-le
       Lisi   BEI   Zhangsan   drink-Asp
    sān-píng-jiǔ.
    three-bottle-wine
    'He drank three bottles of wine on me.'
    b. Lǐsì bèi Mǎlì   kū-de   xīn-fán.
       Lisi BEI Mali   cry-DE upset
    'I was upset by Mali's crying.'

We also note that the same argument can occur in the *ba* construction, in a preverbal position.

(30) a.Zhāngsān   bǎ   Lǐsì   hē-le
      Zhangsan   BA   Lisi   drink-Asp
    sān-píng-jiǔ.
    three-bottle-wine

'Zhangsan drank three bottles of wine on Lisi. (He still complained that it's not enough.)'
    b. Mǎlì   bǎ   Lǐsì   kū-de   xīn-fán.
       Mali   BA   Lisi   cry-De upset
    'Mali's crying made Lisi upset.'

Interestingly, sentences like (1) with V(-*gei*) – which we previously said involved raising of a goal argument from Spec,VP to Spec,Appl$_L$P – do not allow the IO to occur in a *ba* construction.

(31) a.*Tony ba Mǎlì xiě-gěi-le   yī-fēng-xìn.
       Tony BA Mali write-give-Asp 1-CL-letter
    'Mali got to be given a letter by Tony.'
    b.* Tony ba Kaite sòng-le   yī-gè   lǐwù.
       Tony BA Kate send-ASP one-CL gift
    'Kate got to be sent a gift from Tony.'

The contrast between (30) and (31) reflects the structural differences between high (30) and low (31) applicatives. We argue that the grammatical differences between (30) and (31) can be explained derivationally: i.e., if an argument has already gone through movement, its lower copy at the original site cannot participate in other later derivation in the same phase domain (e.g., *v*P in this case).

Nonetheless, some apparent counter-examples have caught our attention. The sentences in (32) have transitive verbs (*da* 'hit' and *bo* 'peel') yet seem to take two internal arguments, *and* to allow the seeming IOs – i.e., *Lisi* in the (a) sentences and *juzi* 'orange' in the (b) sentences – to occur in the causative *ba* construction, as in (33).

(32) a. Zhāngsān dǎ-le   Lǐsì yī-gè   ěrguāng.
      Zhangsan hit-ASP Lisi one-CL slap
    'Zhangsan gave Lisi a slap on his face.'
    b. Zhāngsān bō-le   júzi   pí.
      Zhangsan peel-ASP orange   skin
    'Zhangsan peeled an orange.'
(33) a. Zhāngsān bǎ Lǐsì dǎ-le   yī-gè   ěrguāng.
      Zhangsan BA Lisi hit-ASP one-CL slap
    b. Zhāngsān bǎ   júzi   bō-le   pí.
      Zhangsan BA orange peel-ASP skin

Given what we propose, Appl$_L$P accounts for the goal IO, which assumes an operation involving raising of a canonical goal IO to Spec,Appl$_L$P; and this derivation should block later raising. So, how does syntax derive grammatical sentences like (33)?

We note that the types of internal arguments in sentences like (32-33) express inalienable possession, rather than a goal-theme relation. We thus argue that the seeming IOs *Lisi* and *juzi* are possessors of the DO, located inside of the nominal domain of DO (Hsu 2008, 2019), and were not introduced by Appl$_L$. Therefore, no raising to Spec,Appl$_L$P is involved, and such a possessor can further undergo raising from a nominal internal position to form a causative *ba* construction, resulting in sentences like (33).

We are grateful to a reviewer of an earlier version of this paper for pointing out that, in addition to inalienable possession, IOs expressing alienable possession (e.g., *Lisi* and *Zhangsan* in (34)) can also form causative *ba* sentences (e.g., (35)).

(34) a. Zhèngfǔ   chāi-le
        government   pull.down-Asp
     Lǐsì yī-tào fángzǐ.
     Lisi 1-CL house
     'The government pulled down a house of Lisi.'
   b. Lǐsi zhāi-diào-le   Zhāngsān   màozǐ.
      Lisi take off-Asp   Zhangsan   hat
      'Lisi took off Zhangsan's hat.'

(35) a. Zhèngfǔ   bǎ Lǐsì chāi-le
        government   BA Lisi pull.down-Asp
     yī-tào   fángzǐ.
     1-CL   house
     'The government pulled down a house of Lisi.'
   b. Lǐsì bǎ Zhāngsān zhāi-diào-le màozǐ.
      Lisi BA Zhangsan take-off-Asp hat
      'Lisi took off Zhangsan's hat.'

The same account can be applied to objects involved with kinship terms, such as in (36). If one accepts our proposal that a possessor can merged directly with high applicative from its nominal-internal position, and that from the high applicative position, it can undergo passivization (recall (29)). This prediction is borne out, as shown in (37).

(36)   a. Zhāngsān dǎ-le   Lǐsì   érzǐ.
          Zhangsan hit-Asp   Lisi   son
          'Zhangsan hit Lisi's son.'
     b. Tǔfěi dǎ-sǐ-le   Lǐsì bàbà.
        bandit beat-death-Asp Lisi   father
        'The bandits beat Lisi's father to death.'

(37)   a. Lǐsì bèi Zhāngsān   dǎ-le   érzǐ.
          Lisi BEI Zhangsan   hit-Asp son
          'Zhangsan hit Lisi's son.'
     b. Lǐsì bèi tǔfěi dǎ-sǐ-le   bàbà.
        Lisi BEI bandit beat-death-Asp   father
        'The bandits beat Lisi's father to death.'

Nonetheless, we note some semantic restriction of the verb *da* 'hit' when it comes to forming the causative *ba* construction. The causative *ba* versions of the sentences in (36) do not receive the same level of acceptance as the originals, as shown in (38).

(38)   a. *Zhāngsān bǎ Lǐsì   dǎ-le   érzǐ.
          Zhangsan BA Lisi   hit-Asp son
          'Zhangsan hit Lisi's son.'
     b. ?Tǔfěi bǎ Lǐsì dǎ-sǐ-le   bàbà.
        bandit BA Lisi beat-death-Asp   father
        'The bandits beat Lisi's father to death.'

We speculate that the difference between (38a) and (38b) is not due to derivational restriction, but rather to the semantics of the action verb *da* 'hit' which does not encode a result-state as required by the causative construction. Therefore, simply using the verb *da* 'hit' cannot form an acceptable causative sentence (e.g., (38a)); but the inclusion of a clear consequence to the hitting event, such as in (32a) and (38b), makes such *ba* sentences acceptable.

Before we move on, we would like to comment on some sentences' ambiguous readings. If one considers that *nawei shifu* 'that master' in (39) is the possessor of *bushao juezhao* 'many tricks', and predicts that *nawei shifu* should be able to form a causative *ba* construction, that prediction is not borne out, as shown in (40).

(39) Zhāngsān xué-le   nàwèi   shīfù
     Zhangsan learn-Asp   the   master
     bú shǎo   jué zhāo.
     many   tricks
     'Zhangsan learned many tricks from the master.'
(40)   *Zhāngsān bǎ nàwèi   shīfù xué-le
         Zhangsan BA the   master learn-A
     bú   shǎo   jué zhāo.
     not   few   tricks
     'Zhangsan learned many tricks from the master.' (Liu and Shi 2018)

We suggest, however, that this contradiction is only apparent. Due to the main verb *xue* 'learn' in (39), the interpretation of *nawei shifu* and *bushao juezhao* in (39) is not simply a possessive relation, but a source-theme relation in terms of the learning event. That is, the structure of (39), unlike the possessive sentences we discussed previously, should be seen as parallel to the ditransitive construction, in which the IO *nawei shifu* 'that master' raised to the low applicative projection as the source, and cannot further raise to form a causative *ba* sentence (recall (21) and (31b)).

4   Some Extension

In light of our analysis that an argument can be directly merged as the specifier of $Appl_HP$ to obtain an indirectly associated thematic role (either benefactive or malfactive), we predict that this syntactic derivation should be compatible not only with intransitive and transitive verbs (e.g., (3)), but also with typical double object VPs (e.g., (41)). That is, the current proposal predicts that the specifiers of $Appl_HP$ and $Appl_LP$ can be occupied by different NPs. Though such sentences may require specific contexts to be uttered, the prediction is borne out.

(41) Zhāngsān sòng-le   Lǐsì yī-jiàn lǐwù.
     Zhangsan send-Asp Lisi 1-CL   gift
     'Zhangsan gave a gift to Lisi.'

Let us consider a scenario in which Mali promises to do Zhangsan a favor on the condition that the he gives a gift (possibly a bribe) to Lisi. Zhangsan then does give Lisi a gift, but Mali does not help Zhangsan as promised. One could comment on this situation with a sentence like:

(42) Zhāngsān bái-gěi   Mǎlì   sòng-le
     Zhangsan in.vain-give Mali   send-Asp
         Lǐsì   yī-jiàn lǐwù.
         Lisi   1-CL   gift
     'Zhangsan gave a gift to Lisi for Mali but got nothing in return.'

In (42), Mali plays the benefactive role in this gift-giving event. The *gei* is the high applicative head to introduce *Mali* as a benefactive to be associated with the event described.

Since this argument is associated with the predicate through its direct merge at the high applicative, rather than from inside the low applicative or the VP, we predict that it can be passivized; and this prediction is borne out.

(43) ?Mǎlì   bèi   Zhāngsān   bái-gěi
      Mali   BEI   Zhangsan   bai-gei
         sòng-le   Lǐsì   yī-jiàn lǐwù.
         give-Asp   Lisi   1-CL   gift
     'Mali got benefit from Zhangsan's giving a gift to Lisi.'

5   Concluding Remarks

In this study, we examined the V-*gei* double object construction in Mandarin under the applicative framework. Following the insights of Paul and Whitman (2010) and Kuo (2016), we proposed a revised implementation of Pylkkänen's (2002) high and low applicatives. We went on to demonstrate that our proposal can account for the V-*gei* phenomenon and its associated structures (e.g., passivization and causative *ba* construction) in a simpler way, i.e., without relying on extra functional projections and empty movement of either the verb or the argument proposed in Kuo (2016).

We also tested how our proposal could account for some interesting sentence variances in Mandarin, and showed that an extra argument – either benefactive or malfactive – can be introduced by the high applicative on top of various types of verbal structures, including intransitive, transitive, and ditransitive ones. The restrictions of deriving the causative *ba* construction and passivization were also discussed with respect to sentences involving goal/source-theme relations and possessive relations, as well as sentences with extra arguments.

Our next step will be to extend our survey to additional phenomena involving various types of dislocation, to further test the validity of the current proposal and its explanatory power. However, due to limitations of space, we will do so via separate papers in the future.

Acknowledgments

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