Gei and the double object construction in Mandarin Chinese∗

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This paper proposes that in Mandarin double object construction (DOC), gei is an overt realization of Harley’s (2002) possessive PHAVE head:

\[
\begin{array}{l}
\text{\[vP \text{Agent \[v' \text{cause}/\emptyset \[\text{PP \text{Goal \[P' \text{P HAVE (gei) \[DP \text{Theme}]}]]}]}]}
\end{array}
\]

It raises to join the predicate to form the verb, no matter whether the predicate is null or not. This proposal gives a unified account of why gei sometimes acts as a verb and sometimes as a preposition. It also accounts for subtle semantic differences between the DOC and the dative construction when they have the same Goal and Theme arguments.

1 Introduction

In earlier work on the double object construction (DOC) in English, the DOC (1a) and the dative construction (1b) were proposed to be interchangeable and share the same meaning. Both structures take two internal arguments, and the two syntactic configurations are considered to share the same deep structure (Larson, 1988).

(1) The DOC and dative construction in English
a. John sent Mary a letter. DOC
b. John sent a letter to Mary. Dative construction

Similarly, Mandarin Chinese also has DOC-dative alternation. A large number of the DOCs involve a post-verbal gei, though not all of them do. This paper only focuses on cases involving gei, that is, the V-gei DOC construction.

The distribution of gei can be categorized into four types: it appears as a post-verbal component in the DOC (2a); it also acts as a preposition in the dative construction (2b). Moreover, gei can occur in the DOC even without the original verb in (2a), where gei appears as a verb instead (2c). Lastly, gei can also form passives by being a preposition (2d; not discussed in detail here).

(2) The distribution of gei in Mandarin Chinese
a. Guge na gei Lailai yi-ge ping-guo. Guge take PHAVE Lailai one-CL apple ‘Guge brings Lailai an apple.’
b. Guge na yi-ge ping-guo gei Lailai. Guge take one-CL apple to Lailai ‘Guge brings an apple to Lailai.’
c. Guge gei Lailai yi-ge ping-guo. Guge give Lailai one-CL apple ‘Guge gives Lailai an apple.’
d. Guge gei Lailai da le. Guge by Lailai hit PFV ‘Guge is hit by Lailai.’

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This paper proposes that *gei* in the DOC (2a and 2c) is an overt realization of Harley's (2002) possessive $P_{\text{HAVE}}$ head. As shown in (3a), *gei* is base-generated as a low P head and raises to join the predicate *na* to form the verb *na-gei*. Moreover, the predicate can be null (3b), and the raising remains (more discussion below). This proposal gives a unified account of why *gei* sometimes acts as a verb and sometimes as a preposition. It is also important to note that while *gei* can be an overt realization of $P_{\text{HAVE}}$, it can also be a plain preposition, in the dative construction like (2b). As shown in (3c), the verb *na* moves to Voice to realize the grammatical word order, and the plain P *gei* does not move. In this different configuration, *gei* is equivalent to English *to*, and does not share the properties $P_{\text{HAVE}}$ head in the DOC has.

(3)  

<table>
<thead>
<tr>
<th>a. The predicate is overt (example 2a)</th>
<th>b. The predicate is null (example 2c)</th>
<th>c. The dative construction (example 2b)</th>
</tr>
</thead>
</table>

```
(3a) VPP
   |   
P  |
   |
na DP P'
   |
   |
Lalai P DP
   |
   |
Phave (gei) yi-ge ping-guo

(3b) VPP
   |   
P  |
   |
∅ DP P
   |
   |
Lalai P DP
   |
   |
Phave (gei) yi-ge ping-guo

(3c) VoiceP
   |   
NP Voice
   |
   |
Guge Voice
   |
   |
VP
   |
   |
yi-ge ping-guo
   |
   |
V PP
   |
   |
na gei NP
   |
   |
Lalai
```
GEI AND THE DOUBLE OBJECT CONSTRUCTION IN MANDARIN CHINESE

For the rest of the paper, section 2 summarizes studies on the DOC; section 3 presents evidence for P\textsubscript{HAVE}; section 4 briefly discusses other analysis on Mandarin gei and section 5 concludes the paper.

2. Background

Larson (1988) proposes that in English, the DOC is derived from the dative construction via a passive-like operation (4). This approach is motivated by the Uniformity of Theta Assignment Hypothesis (UTAH, Baker 1988) that identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure. Since the two structures always appear to have the same meaning, the DOC and dative construction should share the same D-structure.

(4) a. John sent a letter to Mary.

\[
\begin{align*}
\text{VP} & \quad \text{SpecV'} \\
\text{V} & \quad e \\
\text{NP} & \quad \text{a letter} \\
\text{VP} & \quad \text{send} \\
\text{PP} & \quad \text{to Mary}
\end{align*}
\]

(Larson, 1988: 342)

b. John sent Mary a letter.

\[
\begin{align*}
\text{VP} & \quad \text{SpecV'} \\
\text{V} & \quad \text{send} \\
\text{NP} & \quad \text{Mary} \\
\text{V'} & \quad \text{a letter} \\
\text{NP} & \quad \text{e}
\end{align*}
\]

(Larson, 1988: 353)

The prediction made by Larson’s approach is that the two constructions are always interchangeable, and the theta roles born by the Goal and Theme arguments are the same in the two constructions. This generalization, however, is problematic when it comes to inanimate Goal arguments. Specifically, while in most cases the dative construction and the corresponding DOC are grammatical, it is illicit when the Goal is inanimate in the DOC. As shown in (5), when the goal is animate (i.e. Sue), both (5a) and (5b) are grammatical. However, in (6), where the goal is inanimate (i.e. Philadelphia), only (6a) is grammatical. Such asymmetry shows that the DOC does not allow inanimate goal arguments (Harley, 2002; citing Green, 1974; Oehrle, 1976). Moreover, there is a possession relation between the Goal and the Theme in the DOC, while in the dative construction the Goal is thematically a location (Harley, 2002). The following examples show that the thematic relations in the DOC are different than those in the dative.
construction, and hence the two constructions should be underlyingly different, rendering the transformation approach problematic.

(5)  
a. The editor sent the article to Sue.        Dative
b. The editor sent Sue the article.        DOC

(6)  
a. The editor sent the article to Philadelphia.  Dative
b. *The editor sent Philadelphia the article.  DOC

(5)

A later analysis by Pesetsky (1995) rejects Larson’s proposal that one form is derived from the other; instead, he proposes that the two forms are base-generated. As shown in (7), the difference lies in the specific P head give indirectly selects: in the dative construction, the P head is to, which theta-selects the Goal argument Mary, while in the DOC, the P head is an abstract G head and theta-selects the Theme a letter. The G head joins the V head via head movement.

(7)  
a. The dative construction

This analysis explains the different theta roles implied by the animacy asymmetry between the DOC and the dative construction. Moreover, it predicts that if the two constructions have the same Goal and Theme argument, they must have the same interpretation. This, however, is problematic. As shown in (8), although the two forms have the same arguments, there is a difference in the implicatures (Harley, 2002; citing Larson, 1988; Oehrle, 1976). Specifically, the students did learn some French in (8a) while they might not learn anything in (8b).

(8)  
a. John taught the students French.
b. John taught French to the students.

In a similar vein with Pesetsky (1995), Harley (2002) proposes a modified DOC construction by replacing the G head by a P_HAVE head. Besides the notational difference, the P_HAVE head is distinctive from the original G head in the sense that it carries possessive meaning, while the G head does not. As
shown in (9), the $P_{\text{HAVE}}$ head raises to the predicate to form the verb, and suggests a possession relation between the Goal and the Theme.

(9) John sent Mary a letter.

\[
\begin{array}{c}
\text{vP} \\
\downarrow \\
\text{v'} \\
\downarrow \\
\text{CAUSE DP} \\
\downarrow \\
\text{Mary} \\
\downarrow \\
P \\
\downarrow \\
\text{a letter}
\end{array}
\]

(Harley, 2002: 32)

The difference between Pesetsky (1995) and Harley (2002) is that Pesetsky attributes the distinction to theta-selection of the V head, while Harley explains it via the presence/absence of the possession relation. According to Harley’s approach, (6) is ungrammatical because Philadelphia is a location which is unable to possess, and hence is incompatible with $P_{\text{HAVE}}$. On the other hand, (6a) is grammatical because Sue is able to possess, which is compatible with $P_{\text{HAVE}}$. Again, the possession relation between the students and French reveals why (8a) has a stronger implication that students learned some French.

As for the structure of the dative construction, Harley & Miyagawa (to appear) adopt Bruening's (2010) analysis, which is shown below in (10). Since this paper is oriented on the DOC and only uses the dative construction as comparison, the reason for adopting Bruening's analysis is not discussed here. However, it is important to note that the dative construction has a distinct configuration, and gei is a plain preposition rather than a $P_{\text{HAVE}}$ head. This also indicates that gei in the dative construction does not have the possession meaning of the $P_{\text{HAVE}}$ head, and hence does not indicate any possession relation between the Goal and Theme.

(10) Maria gave the bottle to the baby.

\[
\begin{array}{c}
\text{VoiceP} \\
\downarrow \\
\text{NP} \\
\text{Maria} \\
\downarrow \\
\text{Voice'} \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{NP} \\
\text{the bottle} \\
\downarrow \\
\text{V'} \\
\text{give} \\
\downarrow \\
P \\
\downarrow \\
\text{to} \\
\downarrow \\
\text{NP} \\
\text{the baby}
\end{array}
\]

(Bruening, 2010: 521)

3. Evidence

Harley (2002) presents evidence for the difference between the DOC and the dative construction in English, and illustrates how the $P_{\text{HAVE}}$ head explains the difference. Mandarin, parallel English, also has the specific differences.
3.1 Animacy constraint

The previous section discusses the animacy problem in English. In Mandarin, the DOC does not take inanimate Goal arguments either. As shown in (11), when taking inanimate goal nong-chang 'farm', only the dative construction is allowed. However, when adding -zhu 'owner' after nong-chang, turning the Goal into an animate argument (12), the DOC becomes grammatical. Again, the explanation for English examples applies to Mandarin: the farm is not able to possess the fertilizer. It is more of a relation of location rather than possession, that is, the fertilizer is at the farm, but the farm does not actually owns the fertilizer. However, when turning the Goal into a person, the DOC construction becomes compatible with the P\text{HAVE} head.

(11)\ a. Ta song hua-fei gei nong-chang.  
\hspace{1cm} He send fertilizer to farm  
\hspace{1cm} 'He sent the fertilizer to the farm.'
\b. *Ta song gei nong-chang hua-fei.  
\hspace{1cm} He send P\text{HAVE} farm fertilizer  
\hspace{1cm} 'He sent to the farm the fertilizer.'

(12)\ a. Ta song hua-fei gei nong-chang-zhu.  
\hspace{1cm} He send fertilizer to farm-owner  
\hspace{1cm} 'He sent the fertilizer to the farm owner.'
\b. Ta song gei nong-chang-zhu hua-fei.  
\hspace{1cm} He send P\text{HAVE} farm-owner fertilizer  
\hspace{1cm} 'He sent to the farm owner the fertilizer.'

3.2 Idioms

In this section, an observation of idioms further reveals that one construction cannot be derived from the other via movement.

Idiom chunks can be a test for movement. For example, the passive and raising sentences in (13b) and (13c) illustrate that idioms – like the one in (13a) – retain their idiomatic reading after movement. This contrasts with the control example in (13d), which does not have an idiomatic reading.

(13)\ a. Idiom:  
\hspace{1cm} John let the cat out of the bag. ("let the secret to be known")  
b. Passive:  
\hspace{1cm} The cat was let out of the bag.
\c. Raising:  
\hspace{1cm} The cat seems to have been let out of the bag.
\d. Control:  
\hspace{1cm} *The cat wants to have been let out of the bag. \hspace{1cm} (Harley, 2002: 37)

Idioms in the dative construction may not necessarily keep idiomatic reading in the corresponding DOC. As shown in (14), only the dative construction is an idiom. If the DOC were transformed from the dative construction, it would be expected to keep the idiomatic reading. The fact that the DOC is no longer an idiom suggests that it is not derived from dative construction by movement.

(14)\ a. Felix threw Oscar to the wolves. ("Felix sacrificed Oscar.")  
b. *Felix threw the wolves Oscar. \hspace{1cm} (Harley, 2002: 36–37)
In Mandarin, the DOC and the dative construction may not both have idiomatic reading. Examples in (15) show that while the DOC is an idiom, the dative construction cannot be interpreted as an idiom for all speakers.\footnote{The judgment varies from speaker to speaker. Some find that (15b) does not have idiomatic reading, while a small amount of others find it still an idiom (in a more formal form).} The weakened idiomatic reading in (15b) suggests that the two structures in Mandarin must not have the same deep structure.

(15)  
a. Ta reng gei wo [DP yi-ge tang-shou-de shan-yu].  
He throw P\text{\textsc{have}} me one-CL hot sweet potato.  
‘He brought his trouble to me.’ (He threw me a hot sweet potato.)  
b. ??Ta reng [DP yi-ge tang-shou-de shan-yu] gei wo.  
He throw one-CL hot sweet potato to me.  
‘He threw a hot potato to me.’

3.3 Loss of Implication

Harley (2002) mentions that in some cases, even though the DOC-dative pair seems to have the same meaning, the DOC might have some specific implication that the dative one does not share. The examples in (16) shows one instance where (16a) implies that the baby is already born, while (16b) does not imply anything.

(16)  
\begin{itemize}
  \item a. Mary made her baby a sweater.  
  \item b. Mary made a sweater for her baby.  
\end{itemize}

(16) a. Mary made her baby a sweater.  
\hspace*{1cm} (Harley, 2002: 36)  
\item b. Mary made a sweater for her baby.  

The difference can also be explained by the semantics of the P\text{\textsc{have}}. The P\text{\textsc{have}} head requires the Goal argument to be able to posses, and is present only in the DOC, so the baby in the DOC has to be animate in order to possess the sweater. On the other hand, there is no P\text{\textsc{have}} in the dative construction, so one cannot tell from (16b) whether or not the baby is born.

Another example is shown in (17) below. The DOC (17a) implies that Mary was impregnated by John, while the dative construction (17b) implies that there exists a baby which was transferred from John to Mary. (17a) has the specific meaning because the P\text{\textsc{have}} in the DOC implies that Mary has the possession of baby, but it is not necessarily true in (17b) where there is no P\text{\textsc{have}}.

(17)  
\begin{itemize}
  \item a. John gave Mary a child.  
  \item b. John gave a child to Mary.  
\end{itemize}

(17) a. John gave Mary a child.  
\hspace*{1cm} (Harley, 2002: 40)  
\item b. John gave a child to Mary.  

Mandarin also has subtle semantic difference. In the DOC (18a) and dative construction (18b) pair below, while both mean the father passed a toy to his son, (18a) indicates that the son has already got the toy, and (18b) only conveys that the father has reached out to get the toy for the son, but one would not know if the son has got it yet. The difference between the two constructions is again due to P\text{\textsc{have}} in the DOC, which insinuates that the son possesses the toy, and hence he has to get it already in (18a).

(18)  
\begin{itemize}
  \item a. Ta na gei ta er-zi yi-ge wan-ju  
  \hspace*{1cm} He take P\text{\textsc{have}} his son one-CL toy  
  \hspace*{1cm} ‘He brings his son a toy.’  
  \item b. Ta na yi-ge wan-ju gei ta er-zi  
  \hspace*{1cm} He take one-CL toy to his son  
  \hspace*{1cm} ‘He brings a toy to his son.’  
\end{itemize}
3.4 Null predicate

Apart from the evidence from Harley (2002), treating Mandarin *gei* as the overt realization of the head has one more merit for explaining (2c), that is, cases where *gei* appears to be a verb rather than a preposition.

(19) a. Guge na *gei* Lailai yi-ge ping-guo.
   Guge take HAVE Lailai one-CL apple
   ‘Guge brings Lailai an apple.’

b. Guge ø *gei* Lailai yi-ge ping-guo.
   Guge ø HAVE Lailai one-CL apple
   ‘Guge gives Lailai an apple.’

One might treat *gei* as a verb given (19b), but it is still underlyingly a preposition, and is part of verb formation in the first place. What is special about this case is that the predicate is null, and the verb appears to be the same with the preposition *gei*. In the absence of the predicate, the meaning of the verb only reflects the semantics of the HAVE head *gei*, that is, *to give*. In fact, there is nothing different in (19b) from other cases: HAVE always raises up and join the predicate, and it does not matter whether or not the predicate is actually present.

4 Other analysis

There are other analysis accounting for *gei* in Mandarin DOC. A recent analysis by Paul & Whitman (2010) proposes a "raising applicative" structure. Specifically, they argue that *gei* has the property of low applicatives (Pylkkänen, 2002) but occupies the high applicative position in the DOC.

First, *gei* has the properties of low applicatives. According to Pylkkänen (2002), applicatives are unacceptable with intransitives (20); nor are they compatible with static predicate (21). The reason for (20b) and (21b) being ungrammatical is that applicative head introduces an argument and indicates a dynamic transfer of possession; it is impossible to transfer possession if there is only one object or that the verb is not dynamic.

(20) a. I danced for Kim.
   b. *I danced Kim.

(21) a. I watched the bag for Kim.
   b. *I watched Kim the bag. (Paul & Whitman, 2010: 266)

In Mandarin Chinese, *gei* also satisfies the above two properties. As shown in (22), it is incompatible with intransitive *xiaoxin*. (23b) shows that it is ungrammatical to use *gei* with a static verb.

(22) a. ni *gei* wo xiaoxin yidianr
   2SG for 1SG be.careful a.little
   Do me a favor of being a bit more careful.

b. *ni xiaoxin *gei* wo.
   2SG be.careful -gei 1SG

(23) a. wo *gei* Mali kan zhe bao ne, bu neng likai.
   1SG for Mali watch-DUR bag PRT NEG can leave
   I’m watching the bag for Mary, I cannot leave.

b. *wo kan -gei zhe Mali bao.
   1SG watch-DUR -gei DUR Mali bag (Paul & Whitman, 2010: 266)
Despite the nature of low applicatives of *gei*, Paul & Whitman (2010) hold that *gei* must occupy the position of the high applicative head. As shown in (24b), *gei* c-comands the VP; the verb *mai* is generated low and c-comands the Theme DP *yi-ge shou-biao*. The verb *mai* first raises to join the applicative head *gei*, and then moves up to join the Aspect head *le*, resulting in the correct word order *mai-gei-le* (Lin (2001) shows that head movement is always left-adjunction in Chinese).

Moreover, they reject that *gei* is a low applicative head because head movement yields ungrammatical word order. In particular, as shown in (24c), if *gei* is a low applicative head, it must raise up first to join the verb *mai*, and further moves up to join the Aspect head *le*, resulting in *gei-mai-le*, an ungrammatical word order.

(24)

(a) *wo mai-gei-le Mali yi-ge shou-biao.*
   1SG sell-gei-PERF Mali 1-CL watch
   I sold Mali a watch.

(b) 

(Continued on page 10)
This analysis is not desirable mainly because it adds complication to the original theory. The major function of applicative heads is to introduce new arguments (Pylkkänen, 2002), yet (24b) shows that the applicative head gei directly selects a VP but not a DP, and the "introduced" DP yi-ge shou-biao is lower in the configuration. One would doubt how a high applicative head would be able to raise a lower argument. This is not seen cross-linguistically either (Harley & Miyagawa, to appear). In this sense, it might make more sense to keep gei as a low applicative head and allow head-adjunction to be more flexible. Indeed, Harley & Miyagawa (to appear) also maintain that PHAVE is compatible with applicative head in English.

In addition to the "raising applicative" analysis, there are other studies on the nature of gei. A recent study by Lin & Huang (2015) argues that gei is always a verb. They examine the entire distribution of gei, not limited to the DOC, and hold that for all five uses (i.e. verbal use, post-object use, preverbal use, purposive use), gei remains a ditransitive verb, with different syntactic structures for each use. Huang & Ahrens (1999) argues that gei should be a verbal affix rather than a preposition. Her (2006) maintains that gei is the head of a VV compound. All the above approaches, while successful in making more generalized accounts for the distribution of gei, fail to explain the semantic contrast that the DOC has stronger implication of possession relation between the Goal and the Theme.

5 Conclusion

This paper discusses the DOC in Mandarin Chinese with a focus on V-gei structure. Following Harley (2002) and Harley & Miyagawa (to appear), Mandarin shares the same properties with English in terms of the semantic contrast between the DOC and the dative construction. Evidence from animacy contraints, idioms and implicatures suggests that while the PHAVE head is null in English, it is realized as gei in Mandarin V-gei DOC. Moreover, Mandarin differs from English in the sense that the predicate can be null, and the verb is realized as a plain transfer-of-position reading (i.e. to give).
References