Dative in *Hanxun* Mandarin

Haoze Li

1 Introduction

A comparative approach to studying natural language grammar has been shown to be valuable as it allows linguists to understand a grammatical phenomenon by drawing on evidence from multiple, often closely related, languages. In the framework of Generative Grammar, many classical studies are conducted in a comparative approach. Crucially, the solution to some puzzle observed in a language may be inspired by a related phenomenon in another language. This squib takes up dative constructions in a dialect of Mandarin, namely, *Hanxun* Mandarin, with a goal to shed light on the on-going debate on dative constructions in Standard Mandarin.

2 Dative marker *gei* in standard Mandarin

In Standard Mandarin, a dative construction involves a main verb introducing the agent and the theme, as well as a word *gei* introducing the goal, as schematized in (1) and exemplified in (2).

(1) $NP1_{agent} + V + NP2_{theme} + gei + NP3_{goal}$

(2)   Libai song-le   yi-ben shu   gei Dufu.
       Libai send-Asp one-Cl book GEI Dufu
       'Libai sent a book to Dufu.'

Gei in datives plays a similar role to English preposition *to*: it introduces the goal argument. It has been argued to be a preposition, along the line of the syntactic analysis of datives in English. Specifically, following Larson (1988), Zhou (2000) and Tang (2003) propose the syntactic structure as shown by Figure 1 for (2).

According to this analysis, *gei*, like English *to*, is a preposition. It has three justifications. First, the phrase consisting of *gei* and NP can occur in a pre-verbal position, which is a typical position of PP adjuncts in Standard Mandarin.

(3)   Libai **gei Dufu** song-le   yi-ben shu.
       Libai to   Dufu send-Asp one-Cl book
       'Libai sent a book to Dufu.'

(4)   **Gei Dufu**, Libai song-le   yi-ben shu.
       GEI Dufu   Libai send-Asp one-Cl book
       'Libai sent a book to Dufu.'

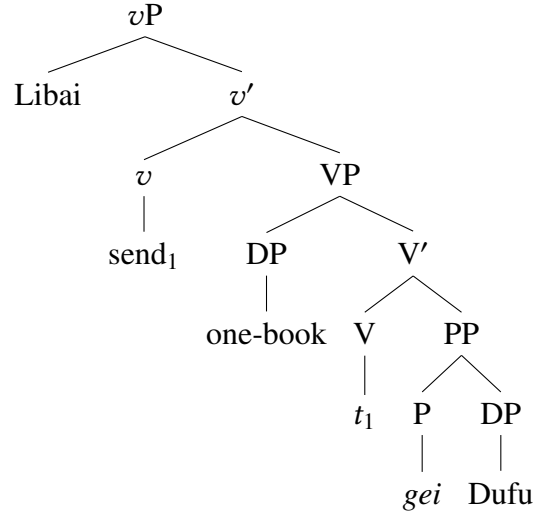Secondly, *gei* cannot serve as the main predicate, as shown in (5).

1

```
                              vP
                         ┌─────┴─────┐
                      Libai          v′
                                 ┌────┴────┐
                                 v         VP
                                 │      ┌───┴───┐
                              send₁    DP      V′
                                        │    ┌──┴──┐
                                   one-book  V    PP
                                             │  ┌──┴──┐
                                            t₁  P    DP
                                                │     │
                                               gei  Dufu
```

Figure 1: A syntactic analysis of Standard Mandarin dative construction

(5) *Libai gei Dufu.
       Libai GEI Dufu

Thirdly, *gei* cannot take a null complement. The ungrammaticality of (6) and (7) is due to the fact that Standard Mandarin does not allow preposition stranding.

(6) *Dufu₁, Libai song-le   yi-ben shu gei [e₁].
       Dufu   Libai send-Asp one-Cl book GEI
       'As for Dufu, Libai sent a book to him.'

(7) *Libai buguang song-le   yi-ben shu gei Dufu₁, ye   song-le   yi-zhi bi gei [e₁].
       Libai not.only send-Asp one-Cl book GEI Dufu   also send-Asp one-Cl pen GEI
       'Libai not only sent a book to Dufu, but also sent a pen to him.'

   However, the prepositional analysis misses some properties that have been observed in the traditional literature (Zhu 1979, 1982). These properties suggest that *gei* in datives be a verb. First, *gei* in datives can be suffixed by aspect particles, which typically only attaches to verbs.

(8) Libai song shu gei-le   Dufu.
     Libai send book GEI-Asp Dufu
     'Libai sent books to Dufu.'

Secondly, modal auxiliaries, which typically precede VP, may show up before *gei*, as shown in (9). It is impossible for modal auxiliaries to appear between V and PP in Figure 1.

(9) Libai song shu kending   hui gei Dufu.
     Libai send book necessarily will GEI Dufu
     'Libai sent books to someone and this person must be Dufu.'

Thirdly, *gei* can be used as a main verb in an inchoative sentence.

2

(10)　　Zhe-ben shu　gei-le　　Dufu.
　　　　 this-Cl　book GEI-Asp Dufu
　　　　 'This book was given to Dufu.'

Given the mixed evidence, the syntactic status of *gei* in Standard Mandarin is still an on-going debate. Zhu (1982) argues that *gei* is ambiguous between a preposition and a verb, while Tang (2003, 2011) analyze it as a preposition. In this squib, I will show that both the prepositional analysis and the verbal analysis may be correct—Mandarin has both the verb *gei* and the preposition *gei*. I come to this conclusion drawing on datives in *Hanxun* Mandarin, which is a variety of Mandarin spoken in central China, specifically in the Southeast of Shaanxi Province, as shown in the following map.

The syntax of *Hanxun* Mandarin is very similar to Standard Mandarin, but the datives in this dialect have an intriguing property:*gei* is realized twice, as *gei-gei*. I will argue that *gei-gei* consists of a verbal *gei* and a prepositional *gei*. The former is responsible for the verbal behaviors of the dative marker, while the latter is responsible for the prepositional behaviors. I further argue that in Mandarin, two *gei*'s merged into one due to haplology, but the syntactic properties associated with the verbal *gei* and the prepositional *gei* remain, giving rise to mixed syntactic properties.

3　Double dative marker in *Hanxun* **Mandarin**

In *Hanxun* Mandarin, the dative construction involves two dative markers. Prosodically, the first dative marker is more salient (i.e., it bears stress and tone) and the second one sounds like a suffix (i.e. it loses its original tone).

(11)　　Libai song-le　　yi-ben shu　**gei-gei**　Dufu.
　　　　 Libai send-Asp one-Cl book GEI-GEI Dufu
　　　　 'Libai sent a book to Dufu.'

The double *gei* marker shares the same syntactic properties with *gei* in standard Mandarin datives, with the exception that the phrase *gei-gei* NP cannot be moved to a pre-verbal position. In particular, (12) shows that *gei-gei* NP once fronted across the main verb, gives rise to ungrammaticality.

(12)   *Libai **gei-gei** Dufu song-le   yi-ben shu.
            Libai GEI-GEI Dufu send-Asp one-Cl book
            Intended 'Libai sent a book to Dufu.'   (**gei-gei* NP VP)

The following examples show that *gei-gei* has verbal properties, including the ability to take on aspect markers (13), the compatibility with a modal auxiliary (14), and the ability to function as a main predicate in an inchoative construction (15).

(13)   Libai song shu **gei-gei**-le   Dufu.
            Libai send book GEI-GEI-Asp Dufu
            'Libai sent books to Dufu.'   (*gei-gei* + aspectual particle)

(14)   Libai song shu   kending   hui **gei-gei** Dufu.
            Libai send book necessarily will GEI-GEI Dufu
            'Libai sent books to someone and this person must be Dufu.'   (modal + *gei-gei*)

(15)   Zhe-ben shu **gei-gei**-le   Dufu.
            this-Cl   book GEI-GEI-Asp Dufu
            'This book was given to Dufu.'   (inchoative)

The next set of examples show that *gei-gei* also exhibits prepositional properties, including the inability to sanction movement of the NP (16), and the inability to support NP anaphora (17), due to the hostility against preposition stranding.

(16)   *Dufu$_1$, Libai song-le   yi-ben shu **gei-gei** [e_1].
            Dufu   Libai send-Asp one-Cl book GEI-GEI
            Intended 'As for Dufu, Libai sent a book to him.'   (**gei-gei* [*e*])

(17)   *Libai buguang song-le   yi-ben shu **gei-gei** Dufu$_1$, ye   song-le   yi-zhi bi **gei-gei**
            Libai not.only send-Asp one-Cl book GEI-GEI Dufu   also send-Asp one-Cl pen GEI-GEI
            [e_1].

            'Libai not only sent a book to Dufu, but also sent a pen to him.'   (**gei-gei* [*e*])

4   Preposition Incorporation and silent *gei*

Based on the properties of *gei-gei* in *Hanxun* Mandarin, I propose that *gei-gei* is decomposed into two morphemes. The first *gei* is a verb, while the second *gei* is a preposition. *Gei-gei* is generated via Preposition Incorporation, i.e., P-to-V movement (Figure 2a and 2b). Since *gei-gei* consists of a verb and a preposition, it is not surprising that *gei-gei* has both verbal and prepositional properties.

    As a consequence, the datives in *Hanxun* Mandarin are serial verb constructions. According to Collins (1997), the main verb and the verb *gei* must share an argument. The argument sharing is mediated by the presence of a null pronoun. As illustrated in Figure 2a, the specifier of the VP projected by the verb *gei* is occupied by a null pronoun, which has the theme argument of the main
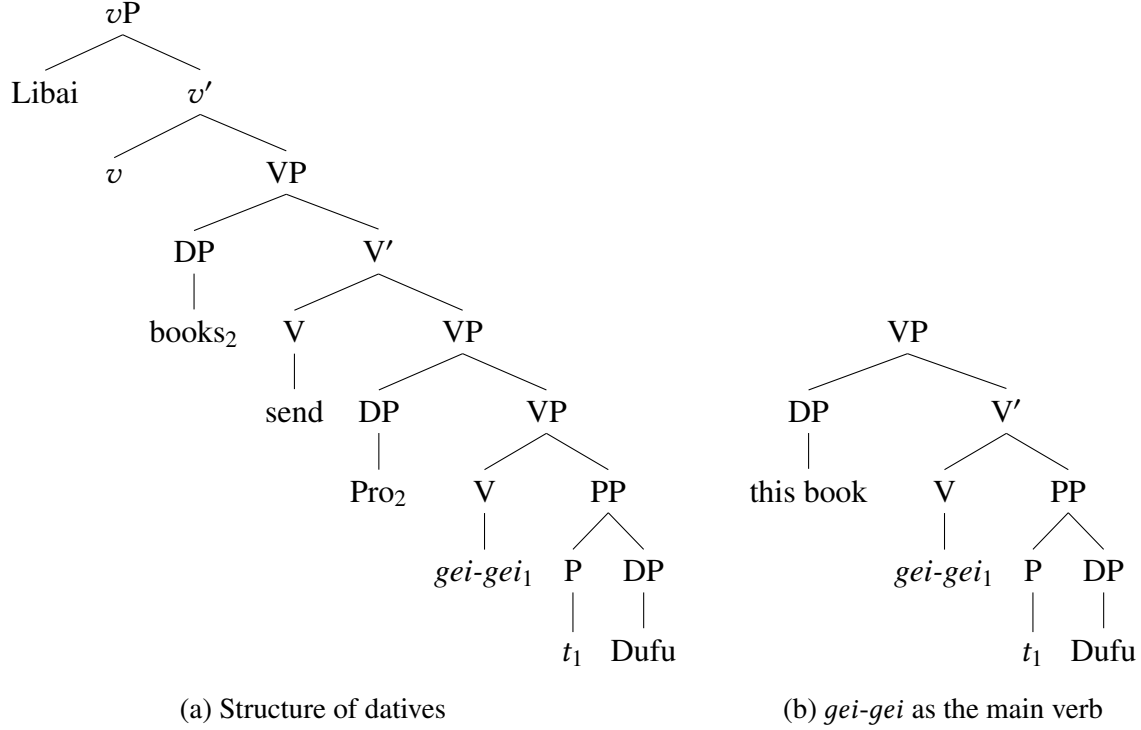
(a) Structure of datives (b) *gei-gei* as the main verb

Figure 2: *gei-gei* in *Hanxun* Mandarin

verb, i.e., *books*, as antecedent. Huang (1989) has argued that the null pronoun Pro in Mandarin is not the same as English PRO or Italian pro. The reference of Pro is resolved via Generalized Control Rule. Simply put, this rule requires Pro to be controlled if the local domain of Pro contains an assessable antecedent (a DP that c-commands Pro and is not a co-argument of Pro). In Figure 2a, Pro must be controlled in the VP projected by *send*, since the specifier of this VP, i.e., *books*, is an accessible antecedent.

Moreover, I propose that datives in Standard Mandarin has the same basic syntactic structure as datives in *Hanxun* Mandarin. However, the former contains a silent preposition GEI, as shown in (18). The silent preposition may be a result of Haplology, i.e., when two lexical items with the same phonological from are next to each other, one of them will be deleted. As a result, we observe that *gei* in datives of Standard Mandarin has both verbal and prepositional properties.

(18) $[_{v'\text{P}}$ Libai $[_{v'}$ *v* $[_{\text{VP}}$ send books $[_{\text{V}'}$ *gei*-GEI Dufu $]]]]$

Tang (2003) suggests that Haplology is subject to parametric variation among Chinese dialects. Therefore, *Hanxun* Mandarin may differ from Standard Mandarin in that the former does not allow Haplology, but the latter does.

The current analysis indicates that the preposition *gei* is not always silent in Standard Mandarin. If the preposition *gei* is not adjacent to the verb *gei*, it will be pronounced. Therefore, we can observe the overt preposition *gei* when PP precedes the main verb, as shown in the following structure.

(19)   Libai [PP *gei* Dufu] [VP sent books]

This is also supported by *Hanxun* Mandarin. As discussed in Section 3, *gei-gei* NP cannot occur before the main verb. The example is repeated in (20).

(20) *Libai **gei-gei** Dufu song-le   yi-ben shu.
       Libai GEI-GEI Dufu send-Asp one-Cl book
       Intended 'Libai sent a book to Dufu.'   (**gei-gei* NP VP)

It means that the VP projected by the verb *gei* cannot precede the main verb. The unacceptability of (20) may be because Pro within the *gei-gei* phrase can only be co-indexed with the agent argument *Libai*, instead of the theme argument, as visualized in (21). This leads to an incorrect interpretation.

(21) Libai$_1$ [$_{VP}$ Pro$_{1/*2}$ *gei-gei* Dufu] [$_{VP}$ sent books$_2$]

Hence, in Standard Mandarin, the preverbal *gei* phrase is PP, rather than VP.

Finally, let's turn to the cases in which aspectual particles are attached to *gei-gei*. The relevant example is repeated in (22).

(22) Libai song shu **gei-gei**-le   Dufu.
       Libai send book GEI-GEI-Asp Dufu
       'Libai sent books to Dufu.'   (*gei-gei* + aspectual particle)

Generally, in Mandarin serial verb constructions, only the main verbs can take aspectual particles. In other words, *gei-gei* in (22) becomes the main verb of the whole sentence. Consequently, the other verb cannot be attached to by any aspectual particle, as exemplified by the following example.

(23) *Libai song-le/guo shu **gei-gei**-le   Dufu.
       Libai send-Asp   book GEI-GEI-Asp Dufu
       Intended 'Libai sent books to Dufu.'

I propose that in (22) the VP projected by *send* is embedded in a verbal adjunct, as illustrated by Figure 3. In this paper, I assume that an aspectual particle projects an AspP and a verb, like *gei-gei* in Figure 3, undergoes head movement to combine with the aspectual particle. Since *send* is embedded in the *v*P adjunct, it cannot move to the head of AspP.
Additionally, Pro in the specifier of AspP can be co-indexed with the theme argument *books* in the *v*P adjunct. This is because there is no accessible antecedent for Pro in its local domain, i.e., AspP. Then, Generalized Control Rule allows Pro to not be controlled. As a result, Pro can find its antecedent in the context and *books* is the most salient one.

5 Conclusion

This paper compares datives in Standard Mandarin with the ones in *Hanxun* Mandarin. The latter has a dative marker *gei-gei*. I propose that *gei-gei* is decomposed into the verb *gei* and the preposition *gei*. The form *gei-gei* is generated in syntax via Preposition Incorporation. Moreover, I extend this analysis to Standard Mandarin. Specifically, datives in Standard Mandarin contains the verb *gei* and a silent preposition GEI. This analysis is compatible with Zhu's (1982) description that Mandarin not only has the preposition *gei* but also the verb *gei*. It also sheds light on the longstanding debate on the syntactic category of *gei* in datives.
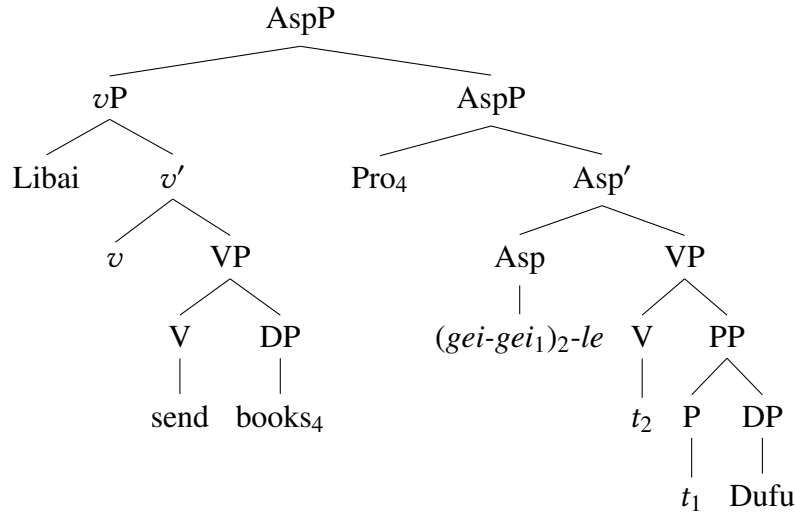
AspP
├── vP
│   ├── Libai
│   └── v′
│   ├── v
│   └── VP
│   ├── V — send
│   └── DP — books$_4$
└── AspP
    ├── Pro$_4$
    └── Asp′
        ├── Asp — (*gei-gei$_1$*)$_2$-*le*
        └── VP
            ├── V — t_2
            └── PP
                ├── P — t_1
                └── DP — Dufu

Figure 3: *gei-gei* attached by an aspectual particle

References

Collins, C. (1997). Argument sharing in serial verb constructions. *Linguistic Inquiry*, 28(3):461–497.

Huang, C.-T. J. (1989). PRO-drop in Chinese. In Jaeggli, O. and Safir, K. J., editors, *The Null Subject Parameter*, pages 185–214. Kluwer Academic Publishers, Dordrecht.

Larson, R. (1988). On the double object construction. *Linguistic Inquiry*, 19(3):335–392.

Tang, S.-W. (2003). *Hanyu Fangyan Yufa de Canshu Lilun [A Parametric Theory of Chinese Dialectal Grammar]*. Peking University Press, Beijing.

Tang, S.-W. (2011). A parametric approach to NP ellipsis in Mandarin and Cantonese. *Journal of East Asian Linguistics*, 20(2):107–115.

Zhou, C. (2000). Xiandai hanyu 'gei'-zi ju de shengcheng yufa yanjiu [chinese *Gei*-constructions in Generative Grammar. *Dangdai Yuyanxue [Contemporary Linguistics]*, (3).

Zhu, D. (1979). Yu dongci 'gei' xiangguan de jufa wenti [the syntactic issues of the verb *gei*]. *Fangyan [Dialects]*, (2).

Zhu, D. (1982). *Yufa Jiangyi [Lectures on Chinese Grammar]*. Commercial Press, Beijing.