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Justifying part-of-speech assignments for Mandarin *gei*

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Abstract

This paper justifies the different part-of-speech assignments for Mandarin *gei* in five of its different uses: verbal, preverbal, postverbal, postobject, and purposive, and challenges the unified verbal analysis of preverbal, postobject, and purposive *gei*. In spite of the grammaticality of postobject verb *gei* in a serial verb construction, the prepositional dative in Mandarin involves precisely the preposition *gei*, either in its postobject position or preverbally. The affixal analysis of postverbal *gei* is refuted, as *gei* is in fact the verb head in V-*gei* compounding. The analysis of *gei* as a complementizer in purposive clauses is endorsed. Finally, I discuss the generality of the analyses put forth and also provide more supporting evidence from historical developments.

1. Introduction

Some of the most controversial issues in Chinese syntax involve basic part-of-speech assignments, often for some of the most frequently occurring lexical items in the language. For example, are *ba* and *bei* case markers, prepositions, verbs, or something else all together (cf., Her, 1989; Ting, 1998; Sybesma, 1999; Bender, 2000)? Does Chinese have adjectives or should they simply be treated as subcategories of verbs; likewise, are there prepositions in the language or should they be viewed as verbs (cf., McCawley, 1992)?

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The list goes on. This paper deals with the controversies surrounding the part-of-speech assignments of multifunctional *gei* in Mandarin Chinese. One of the consequences of the issues of *gei* relates to dative alternations. While a common syntactic phenomenon cross-linguistically, dative alternations would be non-existent in Chinese if the postobject *gei* in (1) could only be a verb, just like the verb *gei* in (2), as initially proposed in Chao (1968) and later argued for in Huang and Mo (1992) and Huang and Ahrens (1999).

(1) Lisi xie-le   yi feng xin gei ta.[1]
     Lee write-ASP one CL letter GEI she
     'Lee wrote a letter to her.'

(2) Lisi gei-le   ta yi feng xin.
     Lee give-ASP she one CL letter
     'Lee gave her a letter.'

This paper will demonstrate that the postobject *gei* in (1) can be a verb as well as a preposition and that this *gei*-NP in fact also appears preverbally. In addition to the verbal *gei* and the prepositional *gei*, the verb *gei* as the head in the V-*gei* compounds and *gei* as a complementizer in the purposive clause are also argued for. These five different constructions are illustrated and named in (3a–e) and exemplified in (4a–e), respectively.

(3) Five constructions of *gei* in Mandarin
     a. verbal: [*gei* NP$_2$ NP$_1$]
     b. postobject: [V NP$_1$ *gei* NP$_2$]
     c. postverbal: [V-*gei* NP$_2$ NP$_1$]
     d. preverbal: [*gei* NP$_2$ V NP$_1$]
     e. purposive: [V NP *gei* NP VP]

(4) a. Lisi *gei*-le   ta yi feng xin.   (verbal)
         Lee give-ASP she one CL letter
         'Lee gave her a letter.'

     b. Lisi xie-le   yi feng xin *gei* ta.   (postobject)
         Lee write-ASP one CL letter GEI she
         'Lee gave a letter to her.'

     c. Lisi xie-*gei*-le   ta yi feng xin.   (postverbal)
         Lee give-GEI-ASP she one CL   letter
         'Lee wrote a letter to her.'

     d. Lisi *gei* ta xie-le   yi feng xin.   (preverbal)
         Lee GEI she write-ASP one CL   letter
         'Lee wrote a letter to her.'

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[1] The gloss 'GEI' is used where *gei*'s status is yet to be established. Once its status is established, more appropriate gloss, e.g., 'give', 'to', or 'for' will then be given.

e. Lisi na-chu-le   yi feng xin *gei* ta kan.   (purposive)
Lee take-out-ASP one CL   letter GEI she read
'Lee took out a letter for her to read.'

The rest of the paper is organized into seven sections. Section 2 first establishes the verbal status of *gei* in the double object construction of (3a) and also in a serial verb construction, which is one structural analysis of (3b). Section 3 argues that *gei* as a preposition must also be recognized in (3b) and demonstrates the advantages of this analysis. Section 4 then discusses the status of *gei* in the V-*gei* formation of (3c) and relates V-*gei* compounding with the account developed in section 3. Section 5 turns to the syntactic categories and functions of *gei* in (3d) and unifies its goal-marking prepositional function with that of the postobject prepositional *gei*. The construction of purposive *gei* in (3e) is described in section 6, and Ting and Chang's (2004) complementizer account is endorsed along with the serial verb account of Huang and Ahrens (1999). Implications of these part-of-speech assignments are further discussed in section 7. Section 8 offers some concluding remarks on the importance of simplicity in syntactic generalizations over lexical unity.

In an effort to maximize the applicability of the arguments and accounts offered in the paper, no particular syntactic framework is assumed. Only the general conceptions of parts-of-speech, constituent structures, and predicate argument structures that are common in most, if not all, generative syntactic theories are used. I will also refer to grammatical relations such as subject, object, and oblique, but without committing one way or the other whether they are primitive syntactic notions, as in Relational Grammar and the Lexical-Functional Grammar, or secondary notions derived from syntactic configurations, as in the transformational approach.

2. Verbal *gei* and the serial verb construction

It is a simple fact that *gei* in (3a) is a verb and it can thus appear wherever other similar verbs are allowed. Take for example what Li and Thompson (1981) call 'irrealis descriptive clauses', which they consider part of the serial verb construction (SVC) in Mandarin.

(5) Lisi zhuan qian   song/gei laopo liwu.
Lee earn   money give   wife gift
'Lee earns money to give his wife gifts.'

Note also that the secondary VP headed by *song* and *gei* may either be complete, as in (5), or leave a gap, as in (6), where the gap (indicated by *e*), the required theme object, is identified with the matrix object NP.

(6) Lisi zhuan qian$_i$ song/gei laopo e_i.
Lee earn   money give   wife
'Lee earns money to give his wife.'

The surface structure of (6) is exactly that of the postobject *gei* in (3b). Thus, the serial verb analysis of (3b), initially proposed in Chao (1968) and strongly endorsed more recently by Huang and Ahrens (1999) (hereafter, H&A), is a simple fact that hardly requires any argument. The real debate is whether *gei* can also be a preposition in the postobject position in (3b) as recognized by many Chinese grammarians, e.g., Teng (1975), Tang (1979), Li and Thompson (1981), Li (1990), Tang (1990), Zhang (1990), Her (1990, 1997, 1999), McCawley (1992), Cheng et al. (1999), Liu (2001), Ting and Chang (2004).

3. Postobject *gei* as a preposition

The crucial argument for postobject *gei* as a preposition must come from the argument structure of verbs that alternate between (3a) and (3b). Bear in mind that the verbs in (7a), the double object construction, are all inherently three-place predicates with the argument structure of $<ag\ go\ th>$.[2]

(7) a.   Lisi hui shang/jie/tigong   ta yi dong fangzi.
           Lee will award/loan/provide she one CL   house
           'Lee will award/loan/provide her a house.'

     b.   Lisi hui shang/jie/tigong   yi dong fangzi gei ta.
           Lee will shang/loan/provide one CL   house GEI she
     i.   'Lee will award/loan/provide a house to her.'
     ii.   'Lee will award/borrow/provide a house$_i$ to give e_i to her.'

Now also bear in mind that the *gei*-NP phrase in (7b) is a VP adjunct, not an argument, in a serial verb account (H&A, 1999:11, citing Tang, 1990 and Mo et al., 1991). Thus, if *gei* were a verb only, (7bii) would have been the only reading and the three-place predicates in (7a) would now all have to be recognized as two-place predicates in (7b). However, the identical semantic content in the *preferred* reading of (7bi) and (7a) indicates a common argument structure, which is exactly what the prepositional account of *gei* predicts. Thus, (7a) and (7bi) are dative alternations, a rather mundane syntactic phenomenon cross-linguistically.

Note that a prepositional *gei* imposes no extra burden on the grammar as a postobject PP is independently motivated in the language. In (8a), the postobject PP encodes the locative argument; similarly, in (8b) the postobject PP encodes the goal argument.

(8) a.   Lisi fang-le   yi ge diaoxiang zai xuexiao.
           Lee place-ASP one CL statue   at school
           'Lee placed a statue at the school.'

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[2] The following abbreviations are used: *ag* = *agent*, *th* = *theme*, and *go* = *goal*.

    b.   Lisi song-le   yi ge diaoxiang gei xuexiao.
            Lee give-ASP one CL statue   to   school
            'Lee gave a statue to the school.'

   The prepositional assignment of postobject *gei*, in generalizing the predicate
argument structures in (7a–b) as well as the postobject oblique PP argument functions in
(8a–b), simplifies the grammar. H&A however argue that postobject *gei*'s preposition-
like properties can be dismissed, since these properties are also consistent with the
verb *gei*. Let's reexamine these properties. First, prepositions do not allow aspect
makers.

(9)   a.   Lisi fang-le   yi ge diaoxiang zai(*le) xuexiao.
                Lee place-ASP one CL statue   at ASP   school
                'Lee placed a statue at the school.'

        b.   Lisi song-le   yi ge diaoxiang gei(*le)   xuexiao.
                Lee give-ASP one CL statue   GEI ASP   school
                'Lee gave a statue to the school.'

   However, citing Tang (1990) and Mo et al. (1991), H&A (1999:11) point out that in the
SVC analysis of (9b) only the matrix verb is allowed aspect markers, not the secondary VP
adjunct. Furthermore, given the fact that the ability to take aspect markers can only be used
to positively identify verbhood (e.g., McCawley, 1992:227; Tang, 1990), the inability of
postobject *gei* to take aspect markers is indeed no direct evidence for its prepositional
status. The next preposition-like property is nonetheless more promising: postobject *gei*
cannot be stranded, as in (10b). It is well-established that Chinese, unlike English, does not
allow preposition stranding, as shown in (10a).

(10)   a.   *Lisi fang-le   yi ge diaoxiang zai e_i de   xuexiao$_i$
                 Lee place-ASP one CL statue   at   COMP school
                'The school which Lee placed a statue at.'

        b.   *Lisi song-le   yi ge diaoxiang gei e_i de   xuexiao$_i$
                 Lee give-ASP one CL statue   GEI COMP school
                'The school which Lee gave a statue to.'

   However, citing Huang (1992), H&A (1999:11) argue that the fact that postobejct *gei*
cannot be stranded, as shown in (10b), is because double object verbs in Mandarin do not
allow indirect object gaps, as shown in (11). In a SVC analysis of (10b), the gap, again
indicated by *e*, would be exactly that of an indirect object.

(11)   a.   *Lisi, ta gei-le   yi ben shu.
                 Lisi she give-ASP one CL   book
                'Lee, she gave a book.'

b.   *Ta gei-le   yi ben shu de   ren
    she give-ASP one CL book COMP person
    'The person whom she gave a book.'

Nonetheless, whether Mandarin allows indirect object gaps is not entirely clear. Ting and Chang (2004), for example, disagree with the grammaticality judgment of (11) and claim that examples in (12), where *shu* 'book' is replaced by *hongbao* 'gift money', are acceptable. McCawley (1992:227), likewise, accepts indirect object gaps, shown in (13a–b).

(12)   a.   Lisi, ta gei-le   yi ge hongbao
            Lisi she give-ASP one CL gift-money
            'Lee, she gave a cash gift.'

        b.   Ta gei-le   yi ge hongbao de   ren
            she give-ASP one CL gift-money COMP person
            'The person whom she gave a cash gift'

(13)   a.   Wo fugei *e* $200 de   nei ge ren.
            I   pay $200 COMP that CL person
            'The person whom I paid $200.'

        b.   Nei ge ren,   wo fugei *e* $200.
            that CL person I   pay $200
            'That person, I paid $200.'

There is little significance in arguing about differences in grammaticality judgments, given that an adequate grammar must be able to accommodate such variations.[3] The important point is that the gap following the postobject *gei* in (10b) is entirely ruled out, while judgment varies regarding genuine indirect object gaps. This evidence thus favors the prepositional *gei*.

H&A's rejection of the prepositional *gei* is also based on the observation that prepositional objects cannot be controllers; for example, in (14a) (=H&A (23)) the controller of the adjunct VP *youni* 'greasy' cannot be the object in the preceding PP, *zhuo-shang* 'table-top'. Thus, the fact that in (14b) (=H&A (22a)) the VP adjunct is controlled by the (indirect) object of *gei* shows that *gei* cannot be a preposition.

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[3] My own judgment is that (11a–b), (12a–b), and (13a–b) are all ill-formed. I suspect that (12a–b) do not sound too bad to some speakers because of the lurking idiomatic reading of 'to bribe someone' that *gei someone hongbao* also has. Thus, the following sentence is quite good.

(i)   zhe zhong ren   zui nan   song hongbao.
    this kind   person most difficult give gift-money
    'Such a person is most difficult to bribe.'

(14)   a.   Ta fang-le yi ge wan$_i$ zai zhuo-shang, e_i hen youni
              she put-ASP one CL bowl at table-top   very greasy
              'S/he put a greasy bowl on the table; it (=the bowl) is greasy.'

        b.   Lisi song-le   yi ben shu   gei Zhangsan$_i$ e_i kan
              Lee give-ASP one CL book GEI John   read
              'Lee gave a book to John (for him) to read.'

Note, however, (14b) contains a purposive clause and thus involves the structure of (3e). I will come back to the purposive *gei* in section 6 and show that here it can in fact be a complementizer, and thus Zhangsan in (14b) is a genuine subject. To summarize the discussion so far, as a verb, *gei* can of course occur in a secondary VP in a SVC; however, available evidence also supports *gei* as a preposition in (3b). Thus, dative alternations do exist in Chinese, which are schematized in (15) and exemplified in (16). Refer to Her (1999) for more arguments. To maintain the clarity in terminology, I will now follow Sybesma (1999, chapter 4) and use the terms "double object construction" and "prepositional dative", respectively.[4]

(15)   a.   Prepositional dative: [V NP$_1$ [$_{PP}$ *gei* NP$_2$]]
        b.   Double   object: [V NP$_2$ NP$_1$]

(16)   a.   Lisi fen-le   yi-bai-wan gei wo.
              Lee share-ASP $1 million to I
              'Lee gave a share of $1 million to me.'

        b.   Lisi fen-le   wo yi-bai-wan.
              Lee share-ASP I $1 million
              'Lee gave me a share of $1 million.'

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[4] Sybesma (1999, chapter 4) also proposed the following small clause structural analyses.

(i)   Ta song [wo [Ø$_{you}$ yi-ben shu]]
        he give me   one-CL book

(ii)   Ta song [yi-ben shu [Ø$_{zou}$ [gei wo]]]
        he give one-CL book to me

Within a syntactic framework that allows empty categories and movement, these analyses seem reasonable. In (i), the empty verb *you* expressing possession may in fact be overt, to some speakers at least.

(iii)   %Ta gei-le   wo you liu-ben shu.
         he give-ASP me have six-CL book

However, for (ii), *chu* 'out' seems to be a much better candidate for the empty predicate than *zou* 'away', as the former does also appear overtly.

(iv)   Ta song-chu yi-ben shu gei wo.
        he give-out one-CL book to me

(v)   *Ta song-zou yi-ben shu gei wo.
         he give-away one-CL book to me

Refer to Her (1999) for a principled account of the linking of argument roles to grammatical functions in Mandarin dative alternations.

As pointed out in Her (1999), this dual account predicts ambiguity where the SVC and prepositional *gei* overlap in their surface structure, as shown in (17). In the SVC structure, the verb *jie* is a two-place predicate, requiring $<ag\ th>$ and meaning 'borrow', and the reading in (18b) obtains. The double object verb *jie*, however, has the argument structure of $<ag\ go\ th>$ and as such requires the prepositional reading of *gei* in (18a). Undoubtedly however, the argument reading of (18a) is much more prominent than the adjunct reading of (17b). Thus, the precise part-of-speech assignments for the postobject *gei* in (3b) are these: when required by a predicate of the argument structure $<ag\ go\ th>$ to mark the goal role, *gei* is a preposition; elsewhere it is a verb.

(17) a. [V NP$_1$ [$_{PP}$ *gei* NP$_2$]] (V's argument structure = $<x\ z\ y>$)
     b. [V NP$_{1i}$ [$_{VP}$ *gei* NP$_2$ e_i]] (V's argument structure = $<x\ y>$)

(18) Lisi jie-le   yi-qian-kuai gei   ta.
     Lee loan/borrow-ASP $1,000   to/give she
     a. 'Lee loaned $1,000 to her.'   (*gei*-NP = argument)
     b. 'Lee borrowed $1,000 to give to her.' (*gei*-NP = adjunct)

In the Chinese languages this ambiguity arises only where the 'give' verb and the goal-marking preposition are homonymous. In the Dongyang variety of Wu, for example, the distinction is quite clear, with the 'give' verb *fen* and the preposition *lie* (Liu, 2001); such evidence also provides indirect support for the postobject prepositional *gei* in Mandarin.

4. Postverbal *gei* and V-*gei* word formation

The majority of Chinese grammarians working within the generative paradigm treat V-*gei* in (3c) as a single lexical item, or a complex verb more precisely, derived morphologically or syntactically (cf., e.g., Tang, 1979; Li, 1990; Tang, 1990; McCawley, 1992; Her, 1999; Liu, 2001; among others).[5]

(19) a. Lisi gei-le   ta yi fen liwu.
         Lee give-ASP she one CL gift
         'Lee gave her a gift.'

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[5] There are exceptions. Sybesma (1999:103), for example, treats this postverbal *gei* as a preposition, which may be left empty.
(i)   Ta song [(gei) wo [Ø$_{you}$ yi-ben shu]]
       he give   to me one-CL book
This analysis complicates the grammar, as there is no other PP in Mandarin that may appear between the verb and its direct object.
(ii)   *Ta fang [(zai) xuexiao [Ø$_{you}$ yi-ge diaoxiang]]
       he place at   school   one-CL stature

    b.   Lisi ji-gei-le   ta yi fen liwu.
          Lee post-GEI-ASP she one CL gift
          'Lee posted her a gift.'

    c.   *Lisi ji-le   gei ta yi fen liwu.
           Lee post-ASP to she one CL gift
           'Lee posted a gift to her.'

The simple fact that the V-*gei* sequence cannot be separated, as in (19c) indicates its lexical integrity (cf., Huang, 1984),[6] and the fact that V-*gei* takes an aspect marker, as in (19b), positively identifies this unit as a single double object verb of the same argument structure as the verb *gei* in (19a). Thus, the only remaining controversy is the exact status of *gei* in V-*gei* word formation. Two competing theories are found. Huang (1993) and H&A insist that *gei* is a suffix, which assigns an additional goal role to the host V. Her (1999) argues that V-*gei* is best analyzed as an instance of VV compounding where *gei* as the head requires a V of the same argument structure, <*ag go th*>. The same compounding analysis is also hinted in McCawley (1992).[7]

4.1. The affixal analysis

H&A raise four arguments to support the affixal analysis initially proposed in Huang (1993): (1) *gei* selects the syntactic categories of its hosts, (2) a V-*gei* sequence cannot be intervened, (3) the V-*gei* combination shows semantic shift and idiosyncratic gaps, and (4) the affixation of *gei* is a lexical operation. However, none of these four properties is exclusive to an affixal *gei* and all four are also consistent with the compounding analysis, where the head verb *gei* naturally selects the class of verbs in V-*gei* compounding, a V-*gei* compound must preserve lexical integrity, VV compounding may or may not show semantic shift or idiosyncratic gaps, and compounding is certainly a lexical operation. In other words, there is no convincing argument for the affixal analysis. Refer to Her (1999) for a more detailed discussion on all these points.

On the other hand, H&A's affixal analysis fails to explain why certain transitive verbs, such as *kan* 'watch, read' and *pa* 'climb', and certain double object verbs, such as *gei* 'give'[8] and verbs of communication like *gaosu* 'tell', do not allow V-*gei* formation. In 4.2, a

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[6] Chung (2004), however, does not accept the majority of V-*gei*s in the construction of (3c) as compounds because she does not consider it inseparable. The reader is reminded that in the following sentence, where V and *gei* are separated by an aspect marker, the structure is that of the prepositional dative (3b), not the double object (3c).

(i)   Na ben shu, wo ganggang ji-le gei ta.
           That CL book I   just post-ASP to him
           'That book, I've just posted to him.'

[7] I follow the generally accepted definition that a compound is formed by two free morphemes. Chi (1985:38), for example, defines a compound in Chinese as a word that 'consists of at least two morphemes neither of which is affixal'.

[8] Dialectal variations do exist. For example, the *gei-gei* compound is allowed in some of the Jin dialects in Shanxi (Liu, 2001).

simple and exact generalization of the class of V in V-*gei* is reached within the compounding account.

4.2. The compounding analysis

The compounding account of V-*gei* offered in Her (1999) hinges on the prepositional dative construction established in section 3. The crucial observation is that any verb that allows the prepositional dative construction also allows the V-*gei* formation, and vice versa, as shown in (20), and that if a double object verb is banned in the prepositional dative construction, it is also banned in the V-*gei* formation, and vice versa, as shown in (21).

(20) a. Lisi song/jie/tigong   yi   dong fangzi gei ta.
          Lee give/loan/provide one CL   house   to she
          'Lee gave/loaned/provided a house to her.'

      b. Lisi song/jie/tigong-*gei*   ta yi dong fangzi.
          Lee give/loan/provide-give she one CL   house
          'Lee gave/loaned/provided a house to her.'

(21) a. *Lisi gei/gaosu/tongzhi yi ge xiaoxi gei ta.[9]
           Lee give/tell/inform   one CL news to she
           'Lee gave/told/informed a news to her.'

      b. *Lisi gei/gaosu/tongzhi-*gei* ta yi ge xiaoxi.
           Lee give/tell/provide-give she one CL news
           'Lee gave/told/informed her a news.'

The verb class in the prepositional dative construction thus coincides precisely with the verb class in V-*gei*, as (22) and (23) further demonstrate.

(22) a. Lisi ti/reng/tui/na/yao/zhua   yi ge qiu *gei* ta.
          Lee kick/toss/push/take/scoop/grab one CL ball to she
          'Lee kicked/tosses/pushed/took/scooped/grabbed a ball to her.'

      b. Lisi ti/reng/tui/na/yao/zhua-*gei*   ta yi ge qiu.
          Lee kick/toss/push/take/scoop/grab-give she one CL ball
          'Lee kicked/tosses/pushed/brought/scooped/grabbed her a ball.'

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[9] Dialectal variation again exists. According to Liu (2001), verb *gei* is allowed this structure in the Nanjing vernacular. That Mandarin *gei* does not allow the dative (21a) is however well-documented. Ting and Chang's (2004) claim that some Mandarin speakers do accept verb *gei* in (21a) perhaps indicates that a dialect-induced diffusion is happening in Mandarin.

(23)   a.   *Lisi zhan/kan/ai   yi ge qiu *gei* ta.
                Lee stand/watch/love one CL ball to she

        b.   *Lisi zhan/kan/ai-*gei* ta yi ge qiu.
                Lee stand/watch/love she one CL ball

The prepositional dative construction and double object construction, if viewed as subcategorization features, yield natural classes of verbs, as the following chart demonstrates.

(24)   Verb Classes in relation to Dative Alternations

Type	Prep. Dative	Double Obj.	Examples
1	+	–	*reng* 'toss', *ti* 'kick', etc.
2	+	+	s*ong* 'give', *tigong* 'provide', etc.
3	–	+	*gei* 'give', *gaosu* 'tell', etc.
4	–	–	*kan* 'watch', *pa* 'climb', etc.

Thus, the simple and exact generalization of V in V-*gei* is [+Prep. Dative]. Given the fact that all these verbs already subcategorize for goal (marked by the preposition *gei*), the affixal analysis, where the suffix *gei* would contribute a goal role to V, can obviously be rejected. In the compounding account, *gei*, which subcategorizes for $<ag\ go\ th>$, simply combines with a V of the same argument structure. V-*gei* is therefore an instance of the productive VV compounding in Chinese (cf., Li, 1990; Chung, 2004). The compounding account in Her (1999) can now be stated more specifically. An informal formulation is given in (25).

(25)   V-*gei* Compounding
        Given *gei*, which subcategorizes for α, α = $<ag_{NP}\ go_{NP}\ th_{NP}>$, and a V that
        subcategorizes for β, β = $<ag_{NP}\ go_{PP}\ th_{NP}>$, form a V-*gei* compound that
        subcategorizes for α.

The fact that syntactically V-*gei* compounds behave exactly like *gei*, not the V, indicates that *gei* is the head and projects its subcategorization restrictions. Thus, V-*gei* compounding converts a Type 1/2 verb of [+Prep. Dative] into a Type 3 verb of [−Prep Dative, +Double Obj.], which allows the double object construction only, which is exactly what *gei* is. Contrary to H&A's claim, there is no semantic shift in V, as its argument structure is wholly preserved. There are no idiosyncratic gaps either. H&A cited the near synonyms *pan* and *panchu* 'to judge, to sentence' as evidence of idiosyncratic gaps in V-*gei* formation. Why only *pan*, not *panchu*, allows V-*gei* now has a natural explanation: because only *pan* is a prepositional dative verb, *panchu* is not, as in (26).

(26)　a.　Faguan pan/panchu ta　fakuan yi-qian yuan.
　　　　　judge　sentence　she fine　$1,000
　　　　　'The judge gave her a $1,000 fine.'

　　　b.　Ta lihun　shi,　faguan pan(*chu)-le yi　dong fangzi gei ta..
　　　　　she divorce when judge　judge-ASP　one CL　house to　she
　　　　　'When she divorced, the judge's ruling gave her a house,..'

　　　c.　..danshi ba　haizi de　jianhuquan pan(*chu)-gei-le ta　qian-fu.
　　　　　but　　BA kid　DE custody　judge-give-ASP she ex-husband
　　　　　'..but gave her ex-husband the custody of the kids.'

A similar example is found between *gaosu* 'tell' and *zhuansu* (transfer-tell) 'pass on, relay'. Despite their identical argument structure, only the latter is allowed in the prepositional dative structure, and thus the V-*gei* compound, as shown in (27).

(27)　a.　Lisi hui *gaosu/zhuansu zhe ge xunxi　gei ta.
　　　　　Lee will tell/relay　　this CL message to　she
　　　　　'Lee will tell/relay the message to her.'

　　　b.　Lisi hui *gaosu/zhuansu-gei ta　zhe ge　xunxi.
　　　　　Lee will tell/relay-ASP　　she this CL message
　　　　　'Lee told/relayed the message to her.'

The most convincing evidence, and test, for the generalization made in the V-*gei* compounding rule comes from loan words and code-mixing, as shown in (28). Data such as this also indicates the productivity of V-*gei* compounding.

(28)　a.　Ta hui yimeier/DHL/Federal Express-gei ni　yi　fen wenjian.
　　　　　she will email/DHL/Federal　Express-give you one CL document
　　　　　'She will email/DHL/Federal Express you a document.'

　　　b.　*Ta hui destroy/kiss/consider yi　fen wenjian　gei ni.
　　　　　she will destroy/kiss/consider one CL document to　you

　　　c.　*Ta hui destroy/kiss/consider-gei ni　yi　fen wenjian.
　　　　　she will destroy/kiss/consider-give you one CL document

I will now conclude this section with a brief summary of the advantages of the compounding account of V-*gei* word formation. First of all, given *gei* as an independently-motivated double object verb and the prolific VV compounding in Chinese, this account imposes no extra burden on the grammar. Secondly, the account affords a precisely defined natural class of V in V-*gei* compounding and explains why certain double object verbs are not allowed in V-*gei* compounding. Thirdly, with *gei* as the verb head, a natural explanation is obtained as to why all V-*gei* compounds behave exactly like the verb *gei*. The

compounding analysis also accounts for the productivity in V-*gei* formation. This predictive power renders this account fully falsifiable.

5. Preverbal *gei* as a preposition

The issues related to the preverbal *gei* in (3d), or [*gei* NP$_2$ V NP$_1$] are even more complicated than those of the dual status of postobject *gei*, due to the multitude of functions *gei* serves in this particular syntactic position. We thus need to examine the data carefully and first peel away those functions that are not directly relevant to our discussion and isolate the core data that is relevant to our focus here. First of all, *gei* is a double object verb and as such can of course be the matrix verb in an SVC, as in (29).

(29)   a.   Lisi gei/jie/tigong   ta zhei bi qian   mai fangzi.
              Lee give/loan/provide she this CL money buy house
              'Lee gave/loaned/provided her this money to buy a house.'

        b.   Zhei bi qian$_i$ gei/jie/tigong   ta e_i mai fangzi.
              This CL money give/loan/provide she   buy house
              This money was given/loaned/provided her to buy a house.'

With *gei*'s direct object extracted in SVC, e.g., in passivization (as shown in (29b)), relativization, or topicalization, the surface structure may look exactly like that of (3d). This structure is unremarkable and should not be confused with other non-double object uses. Also, as shown in (30a), preverbal *gei* is used in a passive-like construction in ways somewhat parallel to *bei* (e.g., Xu, 1994).

(30)   a.   Lisi gei/bei   ta pian   le.
              Lee GEI/BEI she deceive ASP
              'Lee was deceived by her.'

        b.   Lisi bei ta gei pian   le.
              Lee BEI she GEI deceive ASP
              'Lee was deceived by her.'

The agentless *bei*/*gei* has been traditionally regarded as passive markers and *bei*/*gei*-NP as a prepositional phrase similar to the passive *by*-phrase in English. However, more recent accounts strongly support their status as verbs (e.g., Her, 1989, 1990; Ting, 1998). It is this particular (verbal) use of preverbal *gei* that H&A's single example relates to, which they cited to support the SVC account of preverbal *gei*. Notice that in (31a) (=H&A(27)) *gei* can be replaced with *bei*. H&A cite the different meanings of the goal-marking postobject *gei* in (31b) (=H&A(28)) and this *bei*-like preverbal *gei* as evidence for the SVC analysis of (31a).

(31)   a.   Zhangsan gei Lisi jie-le   yi-bai-kuai.
              John   GEI Lee borrow-ASP $100
              'John let Lee borrow $100.'

        b.   Zhangsan jie-le   yi-bai-kuai gei Lisi.
              John   loan-ASP $100   to Lee
              'John loaned $100 to Lee.'

Even though the verbal status of this passive-like *gei* in (31a) has been independently supported by recent accounts for *bei*, this certainly is not the same double object *gei*. According to the accounts in both Her (1990) and Ting (1998), *gei* in (31a) is the matrix verb and the embedded VP headed by *jie* 'borrow' is a propositional argument subcategorized for by the main verb. Thus, (31a) cannot be an SVC, where the secondary VP must be an adjunct. The fact that the embedded *jie* in (31a) takes an aspect marker is sufficient evidence to reject the SVC analysis. There will be no further discussion on the passive-like uses of *gei*, except acknowledging that they may well be connected, especially historically, to other uses of *gei*. See Zhang (2000) for more discussion on this. I agree, however, with H&A's position in recognizing the difference between the postobject prepositional *gei* in (31b) and the preverbal *gei* in (31a). I will come back to the issue why certain prepositional dative verbs, like *jie* 'borrow' in (31b), that allow a postverbal goal argument marked by *gei*, do not allow the same argument preverbally.

The most prevalent use of preverbal *gei* is no doubt that of a preposition marking the role of beneficiary or malficiary, as in (32a–b) and (32c), respectively (e.g., Li and Thompson, 1981).[10]

(32)   a.   Lisi (gei/wei ta) zhai-xia-le   yi   duo hua.
              Lee for   she pick-down-ASP one CL flower
              'Lee picked a flower (for her).'

        b.   Ta zhongyu (gei wo) guaiguai-de jie-le   Lisi yi-bai-wan.
              she finally   for I   obediently loan-ASP Lee $1 million
              'She finally loaned Lee $1 million (as I wished her to do).'

        c.   Wo bu xiangxin ta   gan (gei wo) si!
              I   not believe   she dare for I   die
              'I don't believe she dares to die (on me)!'

Note that this beneficiary PP occurs with all kinds of predicates: transitive in (32a), ditransitive (double object) in (32b), and intransitive in (32c). Furthermore, all the predicates in (32) are complete without the preverabl *gei* PP. Both facts indicate that this PP

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[10] The malficiary reading may be discoursally derived from a sarcastic use of the beneficiary-marking *gei* and thus not yet fully lexicalized. I will thus hereafter refer to this semantic role as beneficiary only.

is not selected by the verb and thus not an argument. Its adjunct status can be further confirmed by sentences in (33), where a postobject *gei* PP is present.

(33)   a.   Lisi (gei/wei wo) ji-le   yi fen wenjian gei laoshi.
              Lee for   I   post-ASP one CL document to teacher
              'Lee posted a document to the teacher (for me).'

        b.   Lisi (gei wo) chuan-le yi feng xin   gei Mali.
              Lee GEI I   pass-ASP one CL   letter to Mary
              'Lee passed a letter to Mary (for me)'

        c.   Ni jinggan (gei wo) xie   qingshu   gei na ge ren!
              you how-dare GEI I   write love-letter to that CL person
              'How dare you (go against me and) write love letters to that person!'

The postverbal *gei* PP in (33) marks the goal argument; thus, it should be amply clear that the preverbal beneficiary *gei* PP is not the same. However, some, though not all, of the prepositional dative verbs do allow the required goal argument to appear either postverbally or preverbally. Note the preverbal *gei* PPs in (34) are all ambiguous between the beneficiary reading and the goal reading,[11] though the difference may be subtle. Take (34c) for example, within the goal reading of *gei*, the person is the intended recipient the document; yet, under the beneficiary reading, the intended recipient is unspecified.

(34)   a.   Lisi gei   laoshi ji-le   yi fen wenjian.
              Lee to/for teacher post-ASP one CL document
              'Lee posted a document to/for the teacher.'

        b.   Lisi gei   Mali chuan-le yi feng xin.
              Lee to/for Mary pass-ASP one CL   letter
              'Lee passed a letter to/for Mary.'

        c.   Ni jinggan gei   na ge ren   xie   qingshu!
              you how-dare to/for that CL person write love-letter
              'How dare you to write love letters to/for that person!'

The available goal reading in (34) indicates that the preverbal *gei* PP can be an argument serving the exact same function as the postverbal *gei* PP. However, amongst prepositional dative verbs, some do not allow this PP to appear preverbally. The earlier example in (31b), repeated below as (35a), involving *jie* 'to loan, to borrow' is just such a case.[12]

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[11] For certain speakers perhaps even a third reading is also available, the reading of the passive-like *gei*. However, this reading is admittedly opaque, if acceptable at all.

[12] I will again ignore the reading due to the passive-like *gei*.

(35)   a.   Zhangsan jie-le   yi-bai-kuai gei Lisi.
                John   loan-ASP $100   to Lee
                'John loaned $100 to Lee.'

        b.   Zhangsan mai-le   yi   dong fangzi gei Lisi.
                John   sell-ASP one CL   house for Lee
                'John sold a house to Lee.'

        c.   Zhangsan huan-le   yi ben shu gei Lisi.
                John   return-ASP one CL book for Lee
                'John returned a book to Lee.'

(36)   a.   Zhangsan gei Lisi jie-le   yi-bai-kuai.
                John   for Lee borrow-ASP $100
                'John borrowed $100 for/*to Lee.'

        b.   Zhangsan gei Lisi mai-le yi   dong fangzi.
                John   for Lee sell-ASP one CL   house
                'John sold a house for/*to Lee.'

        c.   Zhangsan gei Lisi huan-le   yi ben shu.
                John   for Lee return-ASP one CL book
                'John returned a book for/*to Lee.'

The verbs in (35) are just like those in (34) in argument structure and subcategorize for a postverbal *gei* PP marking goal. However, unlike those in (34), the verbs here do not allow the goal argument to appear preverbally; hence all preverbal *gei* PPs in (36) allow only the adjunct beneficiary reading. Our immediate challenge is to identify the precise class of verbs that do allow the preverbal goal-marking *gei*. An interesting clue resides in the fact that all the verbs in (35) are like the verb *gei* and allow the double object construction, as in (37). In sharp contrast, none of the verbs in (34) is allowed the double object construction, as shown in (38).

(37)   a.   Zhangsan jie-le   Lisi yi-bai-kuai.
                John   loan-ASP Lee $100
                'John loaned $100 to Lee.'

        b.   Zhangsan mai-le   Lisi yi   dong house.
                John   sell-ASP Lee one CL   house
                'John sold Lee a house.'

        c.   Zhangsan huan-le   Lisi yi ben shu.
                John   return-ASP Lee one CL book
                'John returned Lee a book.'

(38)   a.   *Lisi ji-le   laoshi yi fen wenjian.
                 Lee post-ASP teacher one CL document
                'Lee mailed the teacher a document.'

    b.   *Lisi chuan-le Mali yi   feng xin.
            Lee pass-ASP Mary one CL   letter
            'Lee passed Mary a letter.'

    c.   *Ni jinggan xie na ge ren   qingshu!
            you how-dare write that CL person love-letter
            'How dare you write that person love letters!'

Thus, the generalization seems to be that [+Double Obj.] verbs do not allow the preverbal *gei* PP marking goal. This hypothesis is confirmed by the behavior of the verb *gei* and V-*gei* compounds, which allow the double object construction only.

(39)   a.   *Lisi gei ta gei-le   yi ben shu.
            Lee to she give-ASP one CL book
            'Lee gave a book to her.'

    b.   *Lisi gei laoshi ji-gei-le   yi fen wenjian.
            Lee to teacher post-give-ASP one CL document
            'Lee posted a document to the teacher.'

    c.   *Lisi gei Mali chuan-gei-le   yi   feng xin.
            Lee to Mary pass-give-ASP one CL   letter
            'Lee passed a letter to Mary.'

    d.   *Ni gei na ge ren   xie-gei-le   yi feng qingshu.
            you GEI that CL person write-give-ASP one CL   love-letter
            'You wrote a love letter to that person.'

Evidence from loan words and code-mixing also seems to support this observation. As shown in (40), a foreign word which does not allow the double object construction may appear with the preverbal *gei* PP marking goal.[13]

(40)   a.   *Ta yimeier/DHL/Federal Express-le   Lisi yi fen wenjian.
            She email/DHL/Federal   Express-ASP Lee one CL document
            'She email/DHL/Federal Express-ed Lee a document.'

    b.   Ta gei Lisi yimeier/DHL/Federal Express-le   yi fen wenjian.
            she to Lee email/DHL/Federal   Express-ASP one CL document
            'She email/DHL/Federal Express a document to Lee.'

Thus, two criteria are needed to specify the verbs that allow the preverbal goal-marking *gei*-NP: (1) they must allow the prepositional dative construction, and (2) they must not subcategorize for the double object construction. Based on the subcategorization features

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[13] There are again at least two readings in (40b). The beneficiary reading is ignored, along with the less likely, if not impossible, passive-like reading.

established in (24), the verb class here consists of precisely (Type 1) [+Prep. Dative, −Double Obj.] verbs.

A preverbal PP argument also does not complicate the grammar, for preverbal PP arguments are independently motivated for both locative as well as goal, as attested in (41a–b), respectively (e.g., Her, 1990).

(41)   a.   Lisi zai shoubi-shang ci-le   yi ge V zi.
               Lee at arm-top   tattoo-ASP one CL V character
               'Lee had the letter 'V' tattooed on his arm.'

        b.   Lisi yizhi   dui ta xiao.
               Lee continuously to   she smile
               'Lee kept smiling at her.'

The locative argument in (41a), like the preverbal goal argument, may also occur postverbally (see (8) and (14a)). On the other hand, verbs allowed in (41b), such as *xiao* 'smile', *ku* 'weep', *kangkai* 'generous', and *renci* 'kind', impose the more strict requirement that the goal PP be fulfilled preverbally.

6. The purposive *gei*

We now come to the structure listed as (3e), [V NP *gei* NP VP]. This is likely the thorniest among the five under discussion. Again, let us first identify all the possible scenarios, lest we be sidetracked by the irrelevant constructions down the road. First, let's set aside the structures in (42), where *gei*-NP obviously marks the goal and/or beneficiary in the embedded clause.

(42)   a.   Wo qiangpo Lisi gei   laoshi ji-le   yi fen wenjian.
               I   force   Lee to/for teacher post-ASP one CL document
               'I forced Lee to post a document to/for the teacher.'

        b.   Wo yaoqiu Lisi gei   Mali chuan-le yi feng xin.
               I   ask   Lee to/for Mary pass-ASP one CL   letter
               'I asked Lee to pass a letter to/for Mary.'

        c.   Wo jinzhi Lisi gei   na ge ren   xie qingshu.
               you forbid Lee to/for that CL person write love-letter
               'I forbid Lee to write love letters to/for that person.'

We shall ignore these preverbal functions of *gei* in this section. Next, let us examine the possibility of the verb *gei* as the head of the secondary predicate in a SVC analysis of (3e), the only analysis H&A advocate. Again, it is a simple and mundane fact that the verb *gei* can go anywhere other double object verbs are allowed, SVC included.

(43) a. Lisi na-chu-le   pijia   jie/gei   wo $50 mai zaocan.
          Lee take-out-ASP wallet loan/give I $50 buy breakfast
          'Lee took out his wallet to loan/give me $50 to buy breakfast.'

      b. Lisi mai-xia-le   yi dong fangzi jie/gei   ta zhu.
          Lee buy-down-ASP one CL   house loan/give she live
          'Lee bought a house to loan/give it to her to live in.'

      c. Lisi tigong tushuguan yi-qian ben shu jie/gei   xuesheng kan.
          Lee provide library   1,000 CL book loan/give student   read
          'Lee provided the library 1,000 books to loan/give them to the
            students to read.'

In (43), the matrix predicates are all complete with the required arguments present.
They are thus all of SVC with the double object verbs *jie* 'loan' and *gei* 'give' being the
heads of the secondary predicates. Whether the secondary predicates are in turn complete,
as in (43a), or incomplete with a direct object gap to be filled, as in (43b–c), is irrelevant.
Thus, H&A are thus correct insofar as SVC must be one of the analyses available for
(3e).

The *gei*-NP can also be a goal-marking PP in the structure of (3e). Note that the
examples in (44) are built on prepositional dative verbs, as in (44a), that are also double
object verbs, as in (44b); thus, prepositional *gei* in (44a) has been established, regardless of
the ensuing secondary predicate.

(44) a. Ta$_i$ song/jie/tigong-le   yi dong fangzi [$_{PP}$gei wo] e_i taohao wo.
          she give/loan/provide-ASP one CL house to   I   please   I
          'She gave/loaned/provided a house to me to please me.'

      b. Ta$_i$ song/jie/tigong-le   wo yi dong fangzi e_i taohao wo.
          she give/loan/provide-ASP I   one CL   house please   I
          'She gave/loaned/provided me a house to please me.'

H&A's objection to prepositional *gei* in the construction of (3e) is solely based on the
claim that a prepositional object cannot be a controller. Let us accept this claim for the time
being. First, note that in (44a) the controller is the matrix subject. Furthermore, as Ting and
Chang (2004) point out, the controller can also be the matrix object.

(45) a. Ta song/jie/tigong-le   yi dong fangzi$_i$ [$_{PP}$gei wo] e_i hen kuanchang.
          she give/loan/provide-ASP one CL   house   to   I   very spacious
          'She gave/loaned/provided a house to me; (it's) very spacious.'

      b. Ta song/jie/tigong-le   yi ge mishu$_i$ [$_{PP}$gei wo] e_i bangmang dazi.
          she give/loan/provide-ASP one CL secretary to   I   help   type
          'She gave/loaned/provided a secretary to me to help with typing.'

The PP status of *gei*-NP in both (44a) and (45a–b) should thus be self-evident, also that its object is not the controller. There are, however, cases where the object of *gei* does seem to be the controller of the secondary predicate.

(46)   Lisi song/jie/tigong   yi   dong fangzi [PPgei wo] zhu.
        Lee give/loan/provide one CL   house to   I   live
        'Lee gave/loaned/provided a house to me to live in.'

H&A insist that *gei* cannot be a preposition in this construction because its object controls the adjunct predicate and therefore *gei* must be a verb. They offer two lines of argument: first, Mandarin data show that the object of a verb can be a controller but not that of a preposition; second, Bresnan's (1982) universal theory on control asserts that only SUBJ and OBJ can be controllers, not OBJ2, nor OBL. In (46), *gei*-NP as a goal-marking PP indeed encodes an OBL (oblique) function. However, both lines of arguments are questionable. The sentence in (47) (=H&A (23)) is meant to show that while the object of the verb can be the controller, the object of the preposition *zai* cannot.

(47)   Ta fang-le yi ge wan$_i$ zai zhuo-shang$_j$, $e_{i/*j}$ hen youni
        she put-ASP one CL bowl at table-top   very   greasy
        'S/he put a bowl on the table; it (=the bowl) is greasy.'

Given the adjunct status of the secondary predicate, its controller, or antecedent, can in fact be discoursally determined. In (48a), for example, it is the matrix subject that controls the adjunct predicate, and in (48b) it is the object of the preposition *zai*. More interestingly, in (48c) the antecedent of the adjunct predicate's implicit subject is only part of the prepositional object, i.e., *tang* 'soup' and not the object in its entirety, *tang-li* 'soup-inside'.

(48)   a.   Ta$_i$ fang-le henduo qian   zai gupiao-li, e_i hen danxin
              she put-ASP lots   money   at stock-inside very   worried
              'S/he put a lot of money in stocks and was worried.'

        b.   Ta fang-le henduo xianbing   zai zongtongfu$_i$, e_i hen anquan
              she put-ASP lots   military-police at presidential-palace very   secure
              'S/he placed lots of military police at the presidential palace; it
              (=the presidential palace) is very secure.'

        c.   Ta fang-le henduo zuoliao$_j$ zai tang$_i$-li, e_i hen hao-he
              she put-ASP lots   ingredient at soup-inside very   good-drinking
              'S/he put lost of ingredients in the soup; it (=the soup) is nice to drink.'

The Mandarin data thus does not support a constraint barring prepositional objects from being controllers or antecedents. This misjudgment relates to a misunderstanding of Bresnan's (1982) universal theory on control, which poses that only SUBJ and OBJ, not OBJ2 nor OBL, can be *functional* controllers. Functional control involves the missing

subject of an open complement, in other words, a propositional argument. Adjunct clauses, on the other hand, involve *anaphoric* control, where oblique functions can indeed be controllers, as the examples from the world-wide web in (49a–g) attest.

(49)   a.   The reporter winked at me to play along.
        b.   Simon waved at me to shut up.
        c.   He pulled a chair over and nodded at me to sit down.
        d.   She wrote to me to come home from sea.
        e.   She signaled to me to meet her by the pool.
        f.   My relations wrote a letter to me to come and shew myself.
        g.   The lawyer sent a letter to me to come and sign the complaint.

    Thus, there is no reason, empirically or theoretically, to block the object of an argument PP, such as the goal PP of a prepositional dative verb, from being an anaphoric controller, or antecedent, of the implicit subject of an adjunct predicate.

    Next, let us examine the original account put forth in Ting and Chang (2004) which points out that *gei* can also be a complementizer in the structure (3e) when *gei*-NP is not a PP subcategorized for by the predicate, as shown in (50a–b).

(50)   a.   Wo chang-le yi   shou ge   [$_{CP}$ gei [$_{IP}$ ta ting]]
              I   sing-ASP one CL   song GEI   she listen-to
              'I sang a song for her to listen to.'

        b.   *Wo chang-le yi   shou ge [$_P$ gei] ta.
              I   sing-ASP one CL   song to   she
              'I sang a song to her.'

    The verb *chang* 'sing', like many other communication verbs, does not seem to allow a postverbal goal PP, as in (50b). This fact rules out the prepositional *gei* in (50a). Also, the verb *gei* is semantically incompatible, as shown in the anomalous (51a). And given the further data in (51b), where the implicit object of the final predicate is the entire matrix [Subject-Predicate], *gei* as a complementizer heading the purposive clause does seem promising.

(51)   a.   !Wo chang-le yi   shou ge [$_V$ gei] ta.[14]
               I   sing-ASP one CL   song give she
              '!I sang a song to give it (=the song) to her.'

        b.   Wo fei [$_{CP}$ gei [$_{IP}$ ni kan *e*]]
              I   fly GEI   you watch
              'I will fly, you just watch.'

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[14] None of the dozen or so native speakers consulted accepted this sentence. However, I note that similar sentences are found in the earlier texts of *The Dream of the Red Chamber* 紅樓夢. This development is compatible with the grammaticalization of *gei* in this construction.

Intransitive verbs such as that in (51b) automatically rule out the prepositional *gei*. If analyzed as a verb, as shown in (52), the implicit subject of *gei* would be identified with the matrix subject *wo* 'I', and the implicit subject of *kan* 'watch' controlled by *ni* 'you'. That much is clear. It is the implicit objects that run into difficulty. The antecedent of the missing object of *kan* is not *wo* 'I', because that would make the missing subject and object of *gei* the same entity, clearly a binding violation. The discourse antecedent of the object of *kan* 'watch' is in fact the entire event of *wo fei* 'I fly', which is semantically suitable for *kan* 'watch', as in (53a). However, the same proposition of *wo fei* 'I fly' is semantically incompatible to verb *gei*, as shown in (53b). The verbal analysis of *gei* in (52) is thus ruled out, where S and O indicate the implicit subject and object.

(52) Wo_i fei [S_i [$_v$gei] ni_j O_k S_j kan O_k]
      I   fly   give you   watch
      'I'll fly for you to watch.'

(53)   a.   Ni   kan   wo fei.
              you watch I   fly
              'You watch me fly.'

       b.   *Wo gei   ni   wo fei.
               I   give you I   fly

Ting and Chang (2004) also cite binding facts and prosodic features to support the complementizer analysis. This analysis does not complicate the grammar given the independently motivated complementizer of *shuo*, as in (54b), which likewise has arisen from the grammaticalization of the verb *shuo* 'say', as in (54a) (e.g., Hwang, 1998, 2000). Thus, *shuo* as a complementizer is similar to *that* in English and *gei* is like *for* in the *for..to* construction. However, unlike their English counterparts, Mandarin complementizers must stay behind the verb, as in (55).

(54)   a.   Wo shuo zhe ge didian   bucuo.
               I   say   this CL location not-bad
               'I say this location is not bad.'

       b.   Wo tongyi shuo   zhe ge didian   bucuo.
               I   agree   COMP this CL location not-bad
               'I agree that this location is not bad.'

(55)   a.   (??Shuo) zhe ge didian   bucuo, wo tongyi.
               COMP   this CL location not-bad I   agree
               'That this location is not bad, I agree.'

       b.   *Gei wo chi shengyupian, ta qu mao yu.
               for   I   eat sasimi   he go buy fish
               'For me to have sasimi to eat, he went to buy fish.'

7. Discussion

This paper sets out to account for the part-of-speech assignments for *gei* in the five syntactic contexts listed in (3), repeated as (56) below. After the discussions above, we are now able to adopt a more 'global' view and explore some of the implications of the accounts argued for.

(56)   a.   double object: [*gei* NP_2 NP_1]
       b.   prepositional dative: [V NP_1 *gei* NP_2]
       c.   V-*gei* compound: [V-*gei* NP_2 NP_1]
       d.   preverbal dative: [*gei* NP_2 V NP_1]
       e.   purposive *gei*:   [V NP *gei* NP VP]

In sections 2 and 3 I argued for the existence of dative alternations in Mandarin Chinese, where a verb may appear in the double object construction as well as the prepositional dative construction. *Gei* thus can be a verb and a preposition. Section 4 demonstrates that the V-*gei* word formation is an instance of VV compounding, where the verb *gei*, a [−Prep. Dative, +Double Obj.] verb selects a [+Prep. Dative] V. Other than its selection of V, *gei* is the head also because syntactically the resulting V-*gei* compound is, like *gei*, [−Prep. Dative, +Double Obj.]. Section 5 shows that while [+Prep. Dative] verbs subcategorize for a postobject *gei*-marked goal, only the more restricted [+Prep. Dative, −Double Obj.] subset allows this goal to appear preverbally. In the structure of purposive *gei*, discussed in section 6, *gei* can be analyzed as a complementizer. All of these generalizations are missed in H&A's unified SVC account.

For each part-of-speech assignment argued for, the important point is made that such an analysis is independently motivated and thus does not complicate the grammar. Given the well-established postverbal locative PPs, allowing postverbal goal PPs does not impose any extra burden on the grammar. On the contrary, the postobject PP position can now be generalized to all semantic roles that indicate the terminus point of the theme, under the view that all prepositions can be interpreted with locality features (cf. Starosta, 1985). The postobject goal PP in English, for example, behaves similarly to the postverbal locative PP, as in (57), and also allows locative inversion, as in (58); goal is thus interpreted as an abstract locative (Bresnan, 1989:291).

(57)   a.   The bus came to the village.
       b.   The bus was given to the village.

(58)   a.   To the village came the bus.
       b.   To the village was given the bus.

Though goal PPs are not allowed locative inversion in Chinese, evidence is available for a similar generalization. For example, like the English preposition *to*, the same preposition *dao* is used in several Gan dialects in the Chinese language family to mark both the locative

as well as goal (e.g., Liu, 2001). And a *zai*-marked PP locative argument, like a PP goal argument, can appear either postverbally or preverbally.

(59) a. Lisi xie-le   yi feng xin   zai zhi-shang.
          Lee write-ASP one CL   letter at   paper-top
          'Lee wrote a letter on the paper.'

     b. Lisi xie-le   yi feng xin gei Zhangsan.
          Lee write-ASP one CL   to   John
          'Lee wrote a letter to John.'

(60) a. Lisi zai zhi-shang xie-le   yi feng xin.
          Lee at   paper-top write-ASP one CL   letter
          'Lee wrote a letter on the paper.'

     b. Lisi gei Zhangsan xie-le   yi feng xin.
          Lee to   John   write-ASP one CL   letter
          'Lee wrote a letter to John.'

The analysis of dative alternations also brings Mandarin Chinese in line with the cross-linguistic observation that, between the double object construction and the prepositional dative construction, the former is the marked option. All double object verbs in Mandarin, except *gei*, are also prepositional dative verbs; the reverse is not true. According to Liu (2001), all Chinese languages and dialects have the prepositional dative construction, but not necessarily the double object construction. H&A's SVC analysis would thus render Mandarin Chinese a typological oddity.

The prepositional dative analysis of the postobject *gei* is also compatible with data from historical developments. H&A depict the following historical path, based on Peyraube (1986, 1991, 1999) and Chao-fen Sun (p.c.). The prepositional dative construction, along with the double object counterpart, is found as early as the 4th century B.C., with the preposition *yu2* 'to' marking goal. Then, between the 1st and the 10th century a group of double object verbs, 與 *yu3* 'to give' included, replaced the postobject preposition 於 *yu2* 'to'. The prepositional dative structure is thus transformed into a SVC. *Yu3* then became the only lexical item allowed in this position and its semantic content bleached to a generic transferring act. During the 15th century, modern *gei* replaced *yu3*. These stages are illustrated in (61) and I have added examples from the relevant periods.

(61)   Historical development of post-IO *gei*
       (a)   from 4c. B.C.: V IO *yu2* DO (於*yu2* 'to' = P)
              天生德於予 (from *The Analects* 論語)
              tian sheng de yu2 yu
              heaven endow virtue at me
              'Heaven has endowed virtues in me.'

(b)   1–10c.: V IO V$_2$ DO   (V$_2$ ≥ *yu3*與 'give')
       那可嫁女與之 (from *Shi Shuo Xin Yu* 世說新語)
       na ke jia nü yu3 zhi
       how can marry daughter give him
       'How can I have my daughter marry him?'

(c)   10–15c.: V IO *yu3* DO   (bleached *yu3*與 = V)
       沒一個出錢與他 (from *Water Margin* 水滸傳)
       mei yi ge chu qian yu ta
       no one CL offer money give him
       'Nobody offered him money'

(d)   after 15c.: V IO *gei* DO   (*gei* = V)
       我寫個欠銀子文契給你 (from *The Dream of the Red Chamber* 紅樓夢)
       wo xie ge qian yinzi wenqi gei ni.
       I write CL owe money contract give you
       'I will write an IOU and give it to you.'

(e)   Modern Mandarin: V IO *gei* DO   (*gei* = V or P?)
       我寫個借據給你
       wo xie ge jieju gei ni.
       I write CL IOU to you
       'I will write you an IOU.'

H&A's claim is thus that *gei* has remained constant as a verb in the last 600 years in this postobject position. Our account implies that while *gei* has remained active as a double object verb in the language, it has also grammaticalized into a goal-marking preposition in the postobject position. This grammaticalization is independently motivated by the preverbal prepositional *gei* and also comports with the fact nearly all prepositions in modern Chinese are grammaticalized from verbs. Note that this reanalysis produces a 'flatter' structure than the source SVC, which involves an embedded VP (cf. Huang, 1984). Furthermore, the grammaticalization of the double object verb of *give* into a preposition is well-attested not only in the Chinese languages (e.g., Zhang, 2000) but also cross-linguistically (e.g., Lord et al., 2002). Both the motive and the historical path are independently verified. The prepositional dative analysis thus complicates neither the synchronic grammar nor the diachronic grammar.

Regarding the V-*gei* formation, H&A's affixal analysis likewise complicates the grammar, given the fact that there is no independently motivated verbal suffix in the language. One might interpret the suffix as the goal-marking preposition *gei* and thus treat the V-*gei* formation as a V-P compound. However, in a comprehensive study of verb compounds in Mandarin, Chung (2004) has identified only a handful of compounds that may be attributed to a 'frozen' V-Prep structure, e.g., *zaihu* 'care about', *hehu* 'fit in with', and *chaohu* 'go beyond', where *hu* was a preposition in classical Chinese. Huang (1998:274) in fact goes as far as to claim that prepositions do not participate in word formation in Mandarin. On the other hand, it is well-established that Chinese has a prolific VV formation. V-*gei* as a VV compound can fall under the subcategory of

'specific + generic' coordinate compound verbs in Chung's (2004) classification scheme. She notes that in this specific type of compound verbs while the initial verb, V_1 and the final verb, V_2, are semantically closely related, V_1, e.g., *zhen* 'vibrate' or *gun* 'roll', is much more specific and narrows down the general semantic scope referred to by V_2., e.g., *dong* 'move'. Other examples of V_2 include *song* 'give', *yong* 'use', *qu* 'get', and *zuo* 'do'. The V-*gei* compounding under our analysis fits in this subcategory perfectly.

The compounding analysis also better comports with data from historical developments. The following historical path in (62) is also from H&A. The VV formation is found as early as the 3rd century, with the final V being a group of double object verbs, including *yu3* 'to give'. Later developments saw the bleached *yu3* become the only double object verb allowed and the V-*yu3* compounding thus emerged. During the 15th century, modern gei also replaced *yu3* in this VV compounding. Again, the developmental stages are illustrated with examples from the relevant eras.

(62)　　Historical development V-*gei* word formation

(a)　　3c.: V_1-V_2 IO DO ($V_2 \geq yu3$)
不賣與越人 (from *Zhan Guo Ce* 戰國策)
bu mai-yu　yue　ren
not sell-YU3 Yue nationals
'..not sell (it) to anyone from Yue.'

(b)　　3–15c.: V_1-*yu3* IO DO　　　　　　($yu3 = V$)
贈與宰彼 (from *Dunhuang Bianwen* 敦煌變文)
zeng-yu　Zai Bi
give-YU3 Zai Bi
'..gave (it) to Zai Bi.'

有許多金銀, 不送與俺 (from *Water Margin* 水滸傳)
..you xuduo jinyin, bu song-yu an
have much money not give-YU3 me
'(They) have a lot of money, but they won't give me any.'

(c)　　15c.: V_1-*gei* IO DO　　　　　($gei = V$)
分給了狄希陳十封銀子 (from *Xing Shi Yin Yuan* 醒世姻緣)
..fen-gei-le Di Xichen shi feng yinzi.
share-give-ASP Di Xichen ten share silver
'(He) gave Di Xichen ten shares of the money'

(d)　　Now: V_1-*gei* IO DO　　　($gei = V$, P, or Affix?)
我送給了你一本書
wo song-gei-le ni yi ben shu.
I give-give-ASP you one CL book
'I give you a book.'

H&A's claim thus suggests that verb *gei* has transformed into a suffix during this last 600 years. However, this claim is seriously weakened by the fact that verb *gei* has remained

fully functional in modern Chinese. As seen in (62c) and (62d), the two V-*gei* sequences from two different eras behave identically. There is no motivation for its reanalysis as a suffix, and no parallel process can be found in Mandarin. Assigning *gei* an affixal status thus only complicates the grammar. The simplest and the most sensible solution is indeed the status quo: *gei* has remained a (semantically bleached) double object verb in the V-*gei* word formation.

The one innovative use of *gei* I have endorsed is its recent development into a sentential complementizer. Ting and Chang's (2004) conjecture that the complementizer *gei* is the prepositional *gei* further grammaticalized, while reasonable and can be indirectly supported by the development of the *for* complementizer in English, direct diachronic evidence is scarce within the Chinese languages. That the *shuo* complementizer has developed out of the grammaticalized verb *shuo* 'say', while without controversy (cf., Hwang, 1998, 2000), does not provide a precedent. The analysis of *gei* as a complementizer is thus primarily based on synchronic syntactic argumentation and I concede that it is more speculative than the other part-of-speech assignments argued for. This may be attributed to the fact that the development of complimentizers such as *shuo* and *gei* is on-going.

8. Concluding remarks

This paper has studied the part-of-speech assignments for Mandarin *gei* in five different contexts: verbal, preverbal, postverbal, postobject, and purposive. Huang and Ahrens's (1999) unified serial verb construction of preverbal, postobject, and purposive *gei*, which renders the dative alternations non-existent in Mandarin, is critically examined. The accounts proposed here fully recognize the rightful place of the verb *gei* in a serial verb construction. However, prepositional *gei* PP, preverbal as well as postverbal, is well-motivated and simplifies the grammar. The suffix analysis of V-*gei* in Huang and Ahrens (1999) is refuted, as posing the verb *gei* to be the head in V-*gei* compounding offers the simplest solution and the most precise generalizations. The analysis of *gei* as a grammaticalized complementizer in purposive clauses in Ting and Chang (2004) is also endorsed, along with the verbal and prepositional analyses. In addition to argumentation based on synchronic facts, support from historical developments has also been sought.

Throughout our argumentation and discussion, it is clear that simplicity and generality in grammatical descriptions are far more important considerations than lexical unity. The diversified part-of-speech assignments of *gei* are hardly surprising, as the most frequently used lexical items are usually the most versatile and susceptible to variation and change. Given the nature of lexical idiosyncrasies and commonplace lexical polysemy, lexical unity, if not a myth, should never be gained at the expense of simple and precise grammatical generalizations.

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