An Analysis of Verb-*gei* 'Verb-give/to' Combination in Chinese[*]
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1. Introduction

In Chinese Double Object Construction (henceforth, DOC) two forms of the ditransitive verbs are observed that denote caused possession (henceforth, CPVs), as in (1a) and (1b).[1]

(1) a. Xiaowang song Xiaohong yi-jian liwu.
              send   one-CL present
    b. Xiaowang song-gei   Xiaohong yi-jian liwu.[2]
              send-GEI   one-CL present
        'Xiaowang sends Xiaohong a present.'

Specifically, in (1b) a character *gei* 'give/to' can optionally appear linearly after the main CPV *song* 'send' and before the indirect object *Xiaohong*. It is generally assumed that the semantics of *song* 'send' is essentially the same as that of *song-gei*. An obvious question, then, is that if the two forms of CPVs are semantically the same, why are there two forms in the first place? The aim of this paper is to provide an answer to this question and make a theory of verb-*gei* (henceforth, v-*gei*). Specifically, I propose that the realization of *gei* can be subsumed under a more general strategy in Chinese: further specification of the results denoted by verbs. In the case of CPVs like *song* 'send' in (1), for example, *gei*, whose meaning is an intrinsic part of the verbs (Zhu (1979:82)), is derived by separating and realizing the giving meaning from the verb.

This paper is organized as follows. In section 2, I make a preliminary discussion of *gei*. Section 3 is a discussion of CPVs which can be combined with *gei*, followed by three groups of verbs that cannot be followed by it.   In section 4 I focus on CPVs. First I clarify the semantic difference between the forms of bare verb and CPV-*gei*, and then make the proposal. Specifically, in Chinese the result meaning of verbs can be further specified by other elements. Section 5 is the detailed analysis of the data provided in section 3. Section 6 provides further evidence of the proposal. Specifically, in constructions including ballistic motion verbs and resultative constructions, the form of verb plus elements denoting some

    [1] In this paper the following abbreviations are used: CL=classifier, PREP=preposition, PERF=perfective, GEN=genitive.
    [2] *Gei* is glossed as a theoretically non-committal GEI to avoid unnecessary confusion.

result of the verb is also observable.　Finally section 7 makes a summary of this paper.

2.　Preliminary Discussions

　　　In this section, I first lay out the usage of *gei* as both verb in 2.1 (corresponding to *give*) and preposition (corresponding to *for* or *to*) in 2.2, and continue to argue for the wordhood of CPV-*gei* in 2.3.

　　　Let me begin the discussion by quoting Huang, Li and Li's (2009:26) comment on prepositions in Chinese:　"The class of prepositions is one of the most poorly defined categories in Chinese, due to the facts that the so-called prepositions in the language all have their historical origins as verbs, and that Chinese has no inflectional morphology to mark verbs."　I begin with *gei*'s categorical status as verb, followed by its status as preposition in accordance with its diachronic development.

2.1.　Gei *as a Verb*

　　　The basic usage of *gei* is to describe an event of giving.　This event involves three necessary participants: a causer/an agent syntactically realized as the subject, a recipient as the indirect object and a theme as the direct object that is given.　In (2a) the subject serves as agent, and that in (2b) is as causer.

(2)　a.　Xiaohong gei　Xiaowang yi-ben　shu.
　　　　　　　　　give　　　　　　one-CL book
　　　　　'Xiaohong gives Xiaowang a book.'
　　b.　ziran　zaihai　buduan　gei renlei　　jingshi.
　　　　　nature disaster continual give mankind warning
　　　　　'Natural disasters give mankind warnings continually.'

2.2.　Gei *as a Preposition*

　　　Let me quote Kimura's (2012:224) words regarding *gei*'s categorical status as a preposition:　"*Gei* as a giving verb gets several usages of function words by grammaticalization, and among them the closest to its original meaning is the usage as a preposition that marks the recipient (Translation is mine)."　He then gives the following example.

(3)　　　Xiaohong gei　　Xiaowang song-lai-le　　　yi-feng　xin.
　　　　　　　　　PREP　　　　　　send-come-PERF one-CL letter
　　　　　'Xiaohong sends Xiaowang a letter.'　　　　　　(Kimura (2012:225))

Furthermore, he suggests that *gei* can cooccur with verbs of making and getting, as is illustrated in (4a) and (4b) below.

(4) a. Xiaohong gei   Xiaowang da-le   yi-jian maoyi.
　　　　　　　PREP　　　　　hit-PERF one-CL sweater
　　　　　'Xiaohong knitted Xiaowang a sweater.'
　　 b. Xiaohong gei   Xiaowang mai-le   yi-jian maoyi.
　　　　　　　PREP　　　　　buy-PERF one-CL sweater
　　　　　'Xiaohong bought Xiaowang a sweater.'

(Kimura (2012:225))

Note that in both (3) and (4) the schema of linear order is as follows.

(5)　　　Subject + *gei* + indirect object + VP

　　　Regarding this word order, I would like to state that the categorical status of *gei* in (3) and (4) is not uncontroversial. Zhao (1968:297) claims that "if one transitive verb can often act as the first verb in serial verb constructions, then this transitive verb can be taken as a coverb (Translation is mine)." A serial verb construction is the construction in which two or more predicates share a single subject without conjunctions between them, as exemplified by the following examples.

(6) a. Laowang mei   tian qi   zixingche shang ban.
　　　　　　　　every day ride bicycle   go   work
　　　　　'Laowang goes to work by bicycle every day.'
　　 b. ta zhan qilai zou guoqu na   shu.
　　　　he stand up   walk over   take book
　　　　'He stands up, walks over and takes a book.'

In (6a) two predicates, *qi zixingche* 'ride a bicycle' and *shang ban* 'go to work' share the subject *Laowang*.　In (6b) there are three predicates, i.e. *zhan qilai* 'stand up,' *zou guoqu* 'walk over' and *na shu* 'take a book,' all performed by the subject agent *ta* 'he.'

　　　We know from the above examples that in serial verb constructions, the word order reflects the order of some natural development of the events denoted by the predicates.　Take (6a) for example.　To ride a bicycle is interpreted as a means to

go to work. It is a fact that adverbial adjuncts are positioned between the subject and the predicate in Chinese (cf. Travis (1984)), and as such this phrase occurs in this position. However, if one goes to work by bicycle, he must first take a bicycle. This is a basic characteristic of Chinese: in this language the morphological change of conjunctions of predicates is not employed as compared with European languages. But given that speakers will use different strategies in different languages to express similar meanings, in the case of serial verb constructions in Chinese the function of conjunctions are fulfilled by word ordering.

Now let us return to the claim by Zhao (1968), repeated in (7).

(7)   If a transitive verb can often act as the first verb in serial verb constructions, then this transitive verb can be taken as a coverb.

Specifically, *gei* is originally a verb, and can frequently act as the first predicate in serial verb constructions, as can be observed in (3) and (4). Therefore, it can be taken as a coverb.

Regarding this claim, I would like to argue that the schema in (5) should be differentiated from serial verb constructions. The reason is as follows. First, in a typical serial verb construction, the predicates denote independent events (although they may semantically form a bigger event: in (6a) to ride a bicycle is a means to go to work, and its function is to make the main predicate, i.e. to go to work, be semantically richer), while in (5) *gei* and the VP after it can only compose one single event. For instance, in (3) the first predicate *gei Xiaowang* is gibberish as *gei* is minimally a ditransitive verb and without specifying the theme argument the verb is by no means saturated. Second, in a serial verb construction the order of the predicates is uninterchangeable; recall that word ordering plays a crucial role in Chinese. In some cases of (5), however, the order is flexible. Observe the following data.

(8) a. Xiaohong gei   Xiaowang song-lai-le   yi-feng xin.   (= (3))
                 GEI   send-come-PERF one-CL letter
    b. Xiaohong song-lai-le   yi-feng xin gei Xiaowang.
                 send-come-PERF one-CL letter GEI
    c. * Xiaohong song-lai-le   gei   Xiaowang yi-feng xin.
                 send-come-PERF GEI   one-CL letter
    d. * Xiaohong song-gei   Xiaowang-lai-le   yi-feng xin.
                 send-GEI   come-PERF one-CL letter
    e. * Xiaohong song-lai-gei   Xiaowang-le   yi-feng xin.

send-come-GEI   -PERF one-CL letter

'Xiaohong sends Xiaowang a letter.'

(9) a.   Xiaowang gei   Xiaohong song yi-jian liwu.

              GEI   send one-CL present

      b.   Xiaowang song yi-jian liwu   gei   Xiaohong.

              send one-CL present GEI

      c.   Xiaowang song-gei Xiaohong yi-jian liwu.   (= (1b))

              send-GEI   one-CL present

        'Xiaowang sends Xiaohong a present.'

The difference between (8) and (9) lies in the main predicate: in (8) the main predicate is *song-lai* 'send-come', in which *lai* 'come' is supposed to be the result of *song* 'send,' whereas in (9) the main predicate is just the bare verb *song* 'send.' In (8) *gei Xiaowang* as a whole can optionally occur between the subject and the predicate ((8a)), or after the predicate ((8b)), but not within the predicate ((8c)-(8e)). By contrast, as the grammaticality in (9) shows, for the bare verb *song* 'send,' *gei Xiaohong* can occur at all these three positions. Therefore, the construction with the schema in (5) is different from the behaviors of serial verb constructions. I conclude that strictly speaking, the statement in (7) by Zhao (1968) is not correct. However, I do concur with him in the claim that *gei* is a coverb. To understand this point, let us refer to the following data taken from Kimura (2012).

(10)   Xiaohong gei   Xiaowang he-le   yi-bei   shui.

                GEI   drink-PERF one-CL water

        'Xiaohong helped Xiaowang drink a glass of water.' (Kimura (2012:226))

The sentence in (10) says that *Xiaohong* takes a glass of water to *Xiaowang* and makes it easy for him to drink. Here *gei* can be paraphrased as *help*, and its function is not only to mark the beneficiary *Xiaowang*, but also to describe the aiding action by *Xiaohong*. Therefore, *gei* in (10) is supposed to serve both as verb and preposition, i.e. coverb.

     Bearing all these facts in mind, I would like to suggest the following idea. It is well known that generally speaking, Chinese lacks morphological change in most of the grammatical operations. Observe the following data.

(11)   ta zui   le.

           he drunk PERF

           'He is drunk.'

The word *zui* 'drunk' is semantically close to an adjective describing a state of being drunk, but can be suffixed by the perfective *le*, which is typically added to a verb. However, unlike English, in which there is a copular verb to indicate that in *be drunk*, *drunk* is a predicate adjective and describes a state, Chinese lacks such a usage of the copular verb for predicate adjectives. Therefore, *zui*'s categorical status is not as obvious as *drunk* in English. This, if we adopt Sybesma's (1999:28) claim that "Chinese adjectives are dynamic in a sense that Romance/Germanic adjectives are not," which is to say that Chinese adjectives are close to verbs, can best describe Chinese adjectives' categorical status like the one shown in (11) as being between verbs and adjectives of Romance/Germanic adjectives.

Above is the discussion of the categorical ambiguity of a word between an adjective and a verb. I would like to suggest that this holds for verb/preposition ambiguity as well. One example is the categorical status of *gei* under discussion. Kimura (2012:228) concludes from the observation of data like that in (10) that "*gei* is not a complete preposition yet, but should be considered as a coverb with some functional usage (Translation is mine)." To put the discussions all together, in Chinese the categorical status per se is not crucial (Chinese lacks clear categorical markers); what is crucial is the semantic interpretation of words, and as such I will not exhaust the exact category of *gei*.

Let us move on to see yet another usage of *gei*. The v-*gei* data sharing the schema in (5) all share one characteristic in meaning: the theme is a concrete object. For example, in (1) it is a present, and the more complicated data in (4) seem to denote that the subject gives the recipient a result of an event. In (4a) the event is to knit a sweater, and in (4b) it is to buy a sweater. But after all there is a concrete theme given, i.e. a sweater. Meanwhile, just as the bare verb *give* can give a concrete theme, as a book in (2a), it can also give an abstract theme, as warnings in (2b), there is no reason for v-*gei* not to be able to do so. Observe the following data.

(12) a.   ma   gei ta kai men.
          mother GEI he open door
          '(Someone's) mother opens the door for him.'

     b.   Xiaohong gei Xiaowang shu   toufa.
                 GEI   comb hair
          'Xiaohong combs hair for Xiaowang.'

                                         (Kimura (2012:228))

In (12a) it is irrelevant whether the door is in the possession of *ta* 'him' or not after the mother opens it for him. Similarly, in (12b) the hair combed is a part of *Xiaowang* in the first place. To be strict, what the indirect object obtains is a kind of abstract service provided by the subject agent. In these cases the indirect objects, i.e. *ta* 'he' in (12a) and *Xiaowang* in (12b), is not related directly to the direct object, but is to an event. This relationship is exactly what Pylkkänen (2008) defines as a high applicative construction, taking the VPs denoting the event, i.e. *kai men* 'open the door' in (12a) and *shu toufa* 'comb hair' in (12b), as unergative verbs. By contrast, in the cases like (1b), the direct object is eventually in the possession of the indirect object. That is, the relationship is between the direct object and the indirect object, a relationship realized by a low applicative construction. These are two different constructions, and in this paper I will only treat the low applicative cases because I would like to focus on the cases where *gei* and the indirect object can occur flexibly, in particular, the cases including v-*gei*.[3]

There is another usage of *gei* that I will not deal with (*gei* on the interpretation of (13b)). Consider the ambiguity of the following example.

(13) wo gei ni mai shu.
      I   for you buy book
  a. 'I buy you a book.' or
  b. 'I buy a book for/instead of you.'

If (13) is interpreted as (13a), it is highly possible that the book will be in the possession of the indirect object *ni* 'you.' That is, on this interpretation, the example in (13) is a typical low applicative construction. By contrast, if it is used to express the interpretation in (13b), it is unknown whose possession the book is in finally. That is, on this interpretation, (13) exemplifies a high applicative construction realizing a relationship between the indirect object *ni* 'you' and an

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[3] This is to say that in a high applicative construction, *gei* and the indirect object cannot occur flexibly. Refer to the following data in contrast to (9).

(i) a. ma   gei ta kai men.
         mother GEI he open door
     b. * ma   kai men gei ta.
         mother open door GEI he
     c. * ma   kai gei ta men.
         mother open GEI he door
         '(Someone's) mother opens the door for him.'

event *mai shu* 'buy a book.' To better understand the nature of *gei* on (13b) interpretation, let me again quote the claim from Zhao (1968) that follows the one in (7).

(14)   For several coverbs of this group, if they can only act as the first verb in serial verb constructions, they are genuine prepositions (Translation is mine).

I would like to interpret this claim in two possible ways. The first one is the case where the word can only occur between the subject and the (main) predicate. An example is *cong* 'follow/from.'

(15) a. wo cong   Beijing lai.
         I   FROM   come
     b. * wo lai   cong   Beijing.
         I   come FROM
         'I come from Beijing.'

Like *gei*, *cong* 'from' is originally a verb denoting an event of following. Zhao takes (15a) as a serial verb construction, and as it can only occur before the first predicate ((15b)), it should be classified as a genuine preposition.

The second interpretation is that for a word that may bear several usages as different categories, if in one usage it can only occur at that position, it is a preposition. This is exactly the case of *gei* on the interpretation in (13b). Specifically, *gei ni* 'for/instead of you' cannot occur at any other positions on this interpretation. It is a pure adverbial PP, is base generated between the subject and the predicate, and will move nowhere.

Summarizing by far, I introduced the basic usages of the controversial *gei* from the perspective of its categorical status. Concretely, there are three *gei*s: a pure verb *gei* ((2)), a pure preposition *gei* ((13b)) and a coverb *gei* which includes a low applicative head usage ((1b)), a high applicative head usage ((12)) and a usage of a third type ((10)). In the sections to follow, I will focus on the low applicative head usage. But before that, I would like to first argue that v-*gei* is a verb, which will form an argument of my proposal.

2.3.   *V-*gei *as a Verb*

We have reviewed several usages of v-*gei* above, but it is not clear whether it serves as a verb or a verb phrase.   In this subsection I show evidence that supports its being a verb.   The evidence is concerning the interaction between v-*gei* and the perfective *le*, as illustrated below.

(16) a.   Xiaowang song-gei-le   Xiaohong yi-jian   liwu.
                   send-GEI-PERF   one-CL present
      b. * Xiaowang song-le-gei   Xiaohong yi-jian   liwu.
                   send-PERF-GEI   one-CL present
          'Xiaowang sends Xiaohong a present.'

The difference in grammaticality lies in the position of the perfective *le*:   it can only occur after v-*gei*.   As v-*le* corresponds to the form of past tense in English, I would like to assume that the two forms are identical.   Furthermore, according to Anderson (1982), the inflectional suffixation is a syntactic operation. Consequently, I would like to assume that v-*le* formation in Chinese is a syntactic operation.

Given this assumption, the ungrammaticality of (16b) falls into place if we adopt the Lexical Integrity Principle advocated by Lapointe (1980).

(17)   No syntactic rule can refer to elements of morphological structure.

(Lapointe (1980:8))

To apply (17) to the topic under discussion, we know that the formation of v-*le* cannot enter the verb boundary.   In (16b), however, *le* is in between *song* 'send' and *gei*, thus the ungrammaticality.   This in turn suggests that v-*gei* is a verb.

3.   Basic Issues

3.1.   *CPVs with the Form V-*gei

Needless to say, CPVs all involve the meaning of giving, and thus this group of verbs are necessarily ditransitive verbs.   In English some of the verbs belonging to this group are listed in (18) (cf. Gropen et al. (1989), Pinker (1989)).

(18)   give, pass, hand, sell, pay, trade, lend, loan, serve, feed, etc.

On the other hand, Zhu (1979) lists the following CPVs in Chinese which overlaps the English CPVs in (18).   I will show the relevant examples of the possibility of v-*gei* combination for these verbs one by one in (20) through (31).

(19) *gei* 'give,' *mai* 'sell,' *song* 'send,' *huan* 'repay,' *di* 'pass,' *pei* 'compensate,' *shang* 'award,' *shu* 'lose,' *jiao* 'teach,' *fu* 'pay,' *jie* 'lend,' *tuihuan* 'refund' (Zhu (1979:85))

(20) a. Xiaohong gei(-le)   Xiaowang yi-ben shu.
              give(-PERF)   one-CL book

   b. * Xiaohong gei-gei(-le)   Xiaowang yi-ben shu.[4]
              give-GEI(-PERF)   one-CL book
      'Xiaohong gave Xiaowang a book.'

(21) a. Lao nong   mai(-le)   Xiaowang san-gongjin juzi.
         old peasant sell(-PERF)   three-CL   orange

   b. Lao nong   mai-gei(-le)   Xiaowang three-gongjin orange.
       old peasant sell-GEI(-PERF)   three-CL   orange
       'An old peasant sold Xiaowang three kilograms of oranges.'

(22) a. Xiaowang song(-le)   Xiaohong yi-jian liwu.
              send(-PERF)   one-CL present

   b. Xiaowang song-gei(-le)   Xiaohong yi-jian liwu.
              send-GEI(-PERF)   one-CL present
      'Xiaowang sent Xiaohong a present.'

(23) a. Xiaohong huan(-le)   Xiaowang yibai-kuai   qian.
              repay(-PERF)   one hundred-CL money

   b. Xiaohong huan-gei(-le)   Xiaowang yibai-kuai   qian.
              repay-GEI(-PERF)   one hundred-CL money
      'Xiaohong repaid Xiaowang a hundred yuan.'

(24) a. Xiaohong di(-le)   Xiaowang yi-zhang zhijin.
              pass(-PERF)   one-CL tissue paper

   b. Xiaohong di-gei(-le)   Xiaowang yi-zhang zhijin.
              pass-GEI(-PERF)   one-CL tissue paper
      'Xiaohong passed Xiaowang a piece of tissue paper.'

(25) a. Xiaowang pei(-le)   Xiaohong yi-ben xin shu.
              compensate(-PERF)   one-CL new book

   b. Xiaowang pei-gei(-le)   Xiaohong yi-ben xin shu.
              compensate-GEI(-PERF)   one-CL new book
      'Xiaowang compensated Xiaohong by giving her a new book.'

(26) a. zhengfu   shang(-le)   aoyun guanjun   ju'e de   jiangjin.

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government award(-PERF) olympic gold medalist huge GEN bonus

b. zhengfu   shang-gei(-le)   aoyun guanjun   ju'e de
government award-GEI(-PERF) olympic gold medalist huge GEN
jiangjin.
bonus
'The government awarded the olympic gold medalists a huge bonus.'

(27) a.   Xiaowang shu(-le)   wo yi-pan qi.
              lose(-PERF) I   one-CL shogi

b.   Xiaowang shu-gei(-le)   wo yi-pan qi.
              lose-GEI(-PERF) I   one-CL shogi
'Xiaowang lost me a shogi.'

(28) a.   laoshi jiao(-le)   women henduo zuo ren   de   daoli.
teacher teach(-PERF) we   many   be person GEN reason

b.   laoshi jiao-gei(-le)   women henduo zuo ren   de   daoli.
teacher teach-GEI(-PERF) we   many   be person GEN reason
'The teacher taught us many reasons to be an upright person.'

(29) a.   keren   fu(-le)   dianyuan   wu meiyuan de   xiaofei.
customer pay(-PERF) shop assistant five dollar   GEN tip

b.   keren   fu-gei(-le)   dianyuan   wu meiyuan de   xiaofei.
customer pay-GEI(-PERF) shop assistant five dollar   GEN tip
'The customer paid the shop assistant a five dollar tip.'

(30) a.   Xiaohong jie(-le)   Xiaowang yi-ba   yusan.
              lend(-PERF)   one-CL umbrella

b.   Xiaohong jie-gei(-le)   Xiaowang yi-ba   yusan.
              lend-GEI(-PERF)   one-CL umbrella
'Xiaohong lent Xiaowang an umbrella.'

(31) a.   gongsi   tuihuan(-le)   guke   buliang shangpin de   huokuan.
company refund(-PERF) customer defective goods   GEN money

b.   gongsi   tuihuan-gei(-le)   guke   buliang shangpin de
company refund-GEI(-PERF) customer defective goods   GEN
huokuan.
money
'The company refunded the customer the money for the defective goods.'

In (21a), for example, if a peasant sells *Xiaowang* some oranges, the result is that the oranges must be in the possession of *Xiaowang*.   Similarly, in (22a), the result of *Xiaowang*'s sending a present to *Xiaohong* is *Xiaohong* gets the present.   In both cases, the realization of the events denoted by the verbs, *mai* 'sell' in (21a) and *song*

'send' in (22a), implies the realization of giving.   As Zhu (1979:87) claims (although in a different context), all CPVs can be realized as v-*gei*.   Here *gei* plus the recipient can be considered as a lexically inherent result of the verbs.

3.2.   *Verbs that Cannot be Followed by* Gei

In this subsection I list three groups of verbs that cannot be followed by *gei*. I will return to these verbs in section 5 after making the proposal in section 4.

The first group is verbs of touching, as shown in (32).

(32)   * Xiaowang mo-gei(-le)   Xiaohong yi-zhi   pangxie.
              touch-GEI(-PERF)   one-CL crab
       'Xiaowang caught Xiaohong a crab.'

The second group is verbs of making.   Observe the following data.

(33) a. * wo qi-gei   ta yi-bei   cha.
          I   make-GEI he one-CL tea
          'I make him a cup of tea.'
     b. * wo ke-gei   ta yi-kuai tuzhang.
          I   cut-GEI he one-CL seal
          'I cut a seal for him.'

(Zhu (1979:83))

The third group is vague.   What I can name the verbs of this group is just *some* unergative verbs.   As will be shown in 5.2, whether an unergative verb can be followed by *gei* or not is subject to pragmatic factors, especially when we consider a whole predicate as an unergative verb.   One example is illustrated in (34), in which the unergative verb is a bare verb *chang* 'sing.'

(34)   * wo chang-gei(-le)   ta.
          I   sing-GEI(-PERF) he
          'I sang for him.'

4.   Proposal

4.1.   *The Semantic Difference Between CPV and CPV-*gei

In this subsection I will clarify the difference in semantics between the bare CPV and CPV-*gei*.   Take *song* 'send' for example.   The data is repeated in (35).

(35) a.   Xiaowang song Xiaohong yi-jian liwu.   (= (1))
              send   one-CL present

    b.   Xiaowang song-gei   Xiaohong yi-jian liwu.
              send-GEI   one-CL present
      'Xiaowang sends Xiaohong a present.'

By intuition, if *gei*, whose meaning is an inherent part of CPVs, is explicit, the direct object, *liwu* 'present', is surely in the possession of the indirect object *Xiaohong* after the event denoted by the CPV *song* 'send.' This is corroborated by the contrast of grammaticality of the following minimal pair.

(36) a.   Xiaowang song Xiaohong yi-jian liwu,
              send   one-CL present
       keshi Xiaohong mei shoudao.
       but   not receive

    b. * Xiaowang song-gei   Xiaohong yi-jian liwu,
              send-GEI   one-CL present
       keshi Xiaohong mei shoudao.
       but   not receive
       Intended: 'Xiaowang sends a present to Xiaohong, but she didn't receive it.'

In the first part of (36b), we know that the present has been in the possession of *Xiaohong*, given the realization of *gei*. In the second part, however, there arises a contradiction, i.e. *Xiaohong* receives the present and she does not receive it. This is where the ungrammaticality comes from.

4.2. *Proposal*

    Bearing the conclusion made in 3.1 (i.e. *gei* plus the recipient can be considered as a lexically inherent result of the verbs) and the discussion in 4.1 in mind, I make the following proposal.

(37)   In Chinese the result meaning of verbs can be further specified by other elements.

In terms of the topic under discussion, the result meaning of CPVs is specified by *gei*. In this case, *gei*, the meaning of giving, is separated from the original meaning of the CPVs, and the result is restricted to the direct object's being possessed by the

indirect object.   For example, the meaning of *song* 'send' consists of two parts, the action of sending and the giving of the direct object theme to the indirect object recipient.   These two parts are simultaneous and indivisible.   By realizing the giving part with *gei*, we know that the result of sending is to make the theme in the possession of the recipient.   In what follows, let us consider the result specification of CPVs more carefully.

The denotation of CPV-*gei* can be reduced to a locational change in possession.   Take (1b), repeated as (38), for example.

(38)   Xiaowang song-gei   Xiaohong yi-jian liwu.   (= (1b))
                  send-GEI   one-CL present
        'Xiaowang sends Xiaohong a present.'

We know from (38) that there is an event of sending a present, with the result that the present is owned by *Xiaohong*.   Here the locational change in possession is from someone (not necessarily *Xiaowang*) to *Xiaohong*.   This kind of result seems different from the classical result describing a state of the direct object, as shown in the following example.

(39)   The joggers ran the pavement thin.   (Hoekstra (1988:115))

(39) denotes an event of running, and this results in the pavement being thin.   Here *thin* is the status of the pavement after the event of running.

In the literature, however, these two distinct results have been considered as members of a more comprehensive result family (cf. Goldberg (1995), Levin and Rappaport Hovav (1995), Goldberg and Jackendoff (2004), among others). Therefore, it is reasonable to think that *gei* denotes some kind of result, i.e. an abstract path of possession change, just like *John rolls the ball down the hill* in English, in which *down the hill* denotes a concrete path change.

Next, I would like to formalize this result of path change under the framework of scalar change advocated by Beavers (2011).   Specifically, *result* can be formalized as follows.

(40)   For all dynamic predicates φ, themes x, events e, states g, and scales s:
        $[[\varphi(x, s, e) \wedge result'(x, s, g, e)] \leftrightarrow$
        $[\varphi(x, s, e) \wedge SOURCE(s, \mathbf{b_c}, e) \wedge GOAL(s, g, e)]]$[5]

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[5] The subscript c is defined by Beavers as "a constant determined by context." $\mathbf{B_c}$ indicates

Applying (1a) and (1b), repeated as (41a) and (41b), to, say, the left hand side of (40), we get:

(41) a.   Xiaowang song Xiaohong yi-jian liwu.   (= (1))
                send   one-CL present
          $\exists e \exists s[song'(\mathbf{xiaowang}, s, \mathbf{liwu}, e) \wedge result'(\mathbf{liwu}, s, g, e)$

    b.   Xiaowang song-gei   Xiaohong yi-jian liwu.
                send-GEI   one-CL present
          $\exists e \exists s[song'(\mathbf{xiaowang}, s, \mathbf{liwu}, e) \wedge result'(\mathbf{liwu}, s, \mathbf{Xiaohong}, e)$
          'Xiaowang sends Xiaohong a present.'

Crucially, in (41a), where *gei* is not explicit, the result state of *liwu* 'present' is unspecified (the state *g* remains unknown).   By contrast, in (41b), where *gei* occurs after the CPV *song* 'send,' the result state is clear: the present is in the possession of *Xiaohong* (the state becomes the constant **Xiaohong**).

5.   Analysis
     In this section I make an analysis of the data in section 3.

5.1.   CPV-*gei* Data
     Take *song* 'send' for example.   As discussed in 4.2, the meaning of *song* 'send' involves two parts, i.e. the action of sending and the process of giving. However, there seems to be a hierarchy in meaning: if one does not first send something, giving will not obtain.   I assume that this semantic hierarchy is reflected linguistically: if we say *song* 'send,' we focus more on the action of sending, and only when we use *song*-*gei* 'send-GEI' do we highlight the result of sending.   This is illustrated by the following schema.

(42) a.   Bare CPVs: [**ACTION**, GIVING]
    b.   CPV-*gei*s: [ACTION, **GIVING**]

This can explain why if the form of v-*gei* is used, the indirect object must follow it.

(43) a. * Xiaowang song-gei   yi-jian liwu.

"a contextually determined state at the beginning of *e*."

send-GEI one-CL present
b.   Xiaowang song yi-jian liwu.
                send one-CL present
        Intended: 'Xiaowang sends a present.'

In (43a) *gei* is combined with *song* 'send', indicating that some result of the action of sending is highlighted.   The result is restricted to be that the direct object goes to someone's possession given the context of caused possession.   Thus an indirect object must appear after *gei* serving as the goal of the locational change.   By contrast, in (43b) the bare CPV *song* 'send' focuses more on the action of sending, thus a third party is not necessarily needed.   In this case, *song* 'send' is a transitive verb.   In the transitive usage, we can still imagine a possible result, as shown by the following example.

(44)   gongsi   anshi   song-dao-le   na-pi   huowu.
         company on time send-arrive-PERF that-CL goods
         'The company sent the goods (to some customer) on time.'

In the transitive usage, it is most reasonable to assume the result of sending as some state the goods are in.   In (44) this is presented by *dao* 'arrive/at.'

5.2.   Verbs that Cannot Be Followed by Gei

In 3.2 I listed three groups of verbs that cannot be followed by *gei*.   Let us see them one by one.   First, the example of *mo* 'touch' that belongs to verbs of touching is repeated in (45).

(45)   * Xiaowang mo-gei(-le)   Xiaohong yi-zhi   pangxie.   (= (32))
                 touch-GEI(-PERF)   one-CL crab
         'Xiaowang caught Xiaohong a crab.'

A lexical characteristic of verbs of touching is that there is no result component in the word meaning: if one touches something, the action is momentary and ends without any possible result (without contexts to make it possible).   Consequently, it is by no means compatible with a possession change result.

        The second group is verbs of making.   The *qi* 'make' example is repeated below.

(46)   * wo qi-gei   ta yi-bei   cha.   (= (33a))

      I   make-GEI he one-CL tea
      'I make him a cup of tea.'

I would like to assume that in the case of verbs of making, the focus is on the process of making itself, and has hardly any relationship with any third party. Therefore, it is difficult to employ *gei* to indicate any possession change result of the verb.

      Finally, let us consider the group of some unergative verbs. I claimed in 3.2 that whether an unergative verb can be followed by *gei* or not is subject to pragmatic factors, especially when we consider a whole predicate as an unergative verb. The *chang* 'sing' example is repeated as follows.

(47)   * wo chang-gei(-le)   ta.   (= (34))
        I   sing-GEI(-PERF) he
        'I sang for him.'

The combination of *chang-gei* 'sing-GEI' is impossible. The reason is similar to the above two groups: the meaning of singing is incompatible with any possession change result.

      Meanwhile, there are some unergative verbs that do cooccur with *gei*. Some examples are listed below.

(48) a.   ta xie-gei(-le)   xiaozhang yi-feng xin.
         he write-GEI(-PERF) headmaster one-CL letter
    b. * ta xie(-le)   xiaozhang yi-feng xin.
         he write(-PERF) headmaster one-CL letter
         'He wrote the headmaster a letter.'
(49) a.   ta liu-gei(-le)   Xiaowang yi-ge   zuowei.
         he keep-GEI(-PERF)   one-CL seat
    b. * ta liu(-le)   Xiaowang yi-ge   zuowei.
         he keep(-PERF)   one-CL seat
         'He kept a seat for Xiaowang.'
(50) a.   ta jian-gei(-le)   wo yi-kuai yu.
         he take-GEI(-PERF) I   one-CL fish
    b. * ta jian(-le)   wo yi-kuai yu.
         he take(-PERF) I   one-CL fish
         'He took me some fish with chopsticks.'
(51) a.   ta yao-gei(-le)   wo yi-shao jiangyou.

he spoon-GEI(-PERF) I　one-CL soy sauce

　　b. * ta yao(-le)　　　wo yi-shao jiangyou.

　　　he spoon(-PERF) I　one-CL soy sauce

　　　'He got me a spoonful of soy sauce.'

　　　　　　　　　　　　　　　　(Zhu (1979:82), with some modifications)

As to *xie* 'write' in (48), Zhu makes the following discussion: "*xie* 'write' denotes neither giving nor receiving. However, when it combines with *xin* 'letter,' it is most easy to presuppose a receiver of the letter. In that case, it bears the meaning of giving. Still, even if there is *xiexin* 'write a letter' in the context, it does not necessarily denote giving (Translation is mine)." The following example shows this point.

　(52)　　ta zou de　shihou xie-le　　　feng xin　gei　wo, rang wo

　　　　　he leave GEN time　write-PERF CL　letter GEI I　ask　I

　　　　　zhuanjiao-gei ni.

　　　　　hand-GEI　　you

　　　　　'When he was leaving, he wrote a letter to me, and asked me to hand it to

　　　　　you.　　　　　　　　　　　　　　　　　　　(Zhu (1979:85))

In this example, *xie le feng xin* 'wrote a letter' only means the action of writing a letter. Zhu concludes that "this reflects the indeterminacy of semantics: for CPVs, the semantics of giving is an intrinsic part of the verbs, for verbs like *xie* 'write,' however, it is not. Sometimes it appears, and sometimes it does not."

　　　This is true of the verbs in (49)-(51). If someone keeps a seat, it is easy to think of someone else for whom it is for. If someone takes some fish, it is not unnatural for us to ask to whom it is for. Likewise, if someone gets a spoonful of soy sauce, it is possible that he is doing it for someone else. Of course, for all these contexts, it is possible that one just does them for himself.

　　　To summarize, in some context when the whole predicate of a sentence are taken as an unergative verb, it is possible to add *gei* after the main verb. This is a pragmatic matter: it is possible to modify the context to make the main verb compatible with possession change result. The strategy is different; for CPVs, *gei* is a part separated from the verbs, while for some unergative verbs, it is added in accordance with context. However, the nature of *gei* is identical, i.e. it is the specified result of the verbs.

6.　Supporting Evidence

In this section, I add one more piece of evidence to support the proposal made in section 4: constructions involving ballistic motion verbs. I will take two typical ballistic motion verbs, i.e. *ti* 'kick' and *reng* 'throw', for example.

(53) a. Zhangsan ti-gei(-le)   Lisi yi-jiao hao   qiu.
            kick-GEI(-PERF)   one-CL good ball
    b. * Zhangsan ti(-le)   Lisi yi-jiao hao   qiu.
            kick(-PERF)   one-CL good ball
       'Zhangsan made Lisi a good pass.'

(54) a. Xiaohong reng-gei(-le)   Xiaowang yi-tiao maojin.
            throw-GEI(-PERF)   one-CL towel
    b. * Xiaohong reng(-le)   Xiaowang yi-tiao maojin.
            throw(-PERF)   one-CL towel
       'Xiaohong threw Xiaowang a towel.'

These examples indicate that without *gei*, *ti* 'kick' and *reng* 'throw' alone are not allowed in the DOC. Nor is *gei* semantically an inherent part of these verbs.[6] Suppose that someone kicks a ball. He may either make it fly to someone else or simply kick it vertically upward. Similarly, he may either throw a towel to another person or just throw it down. When the verb denotes an individual action, it is a transitive verb, denoting a relation between the subject and the object. When given a caused possession context, it is rather easy to imagine a scene in which a person kicks a ball or throws a towel to another person, the verbs are serving as CPVs, which is possible only when they combine with *gei* to form compound verbs. I would like to suggest that this is also a pragmatic matter. Of course, when they are used as transitive verbs, they can also be followed by a word denoting some result of the object, as illustrated below.

(55)   Zhangsan ti-huai-le   xin mai de   zuqiu.
            kick-broken-PERF new buy GEN football
       'Zhangsan kicked his newly bought football broken.'

(56) a. wo qi-sa-le   yi-bei   cha.
       I   make-splash-PERF one-CL tea
       'I made a cup of tea splashed.'
    b. wo ke-huai-le   yi-kuai tuzhang.
       I   cut-bad-PERF one-CL seal

---

[6] It seems that Zhu (1979:87) takes *gei* as a part of *reng* 'throw' and *ti* 'kick.' I do not agree with his consideration.

'I failed to cut a seal.'

Here I also repeat the data in (44) below.

(57)   gongsi   anshi   song-dao-le   na-pi   huowu.   (= (44))
company on time send-arrive-PERF that-CL goods
'The company sent the goods (to some customer) on time.'

The data in (55)-(57) suggest that further specification of the result denoted by verbs are not restricted to CPVs, some unergative verbs or ballistic motion verbs. Rather, it is widely observable in resultative constructions in Chinese. The form of the above data is identical: verb plus some result denoting element. The result is uncancellable. Take the ballistic motion verb *reng* 'throw' for example.

(58)   * Xiaohong reng-gei(-le)   Xiaowang yi-tiao maojin,
              throw-GEI(-PERF)   one-CL towel
      keshi ta mei jie-dao.
      But   he not get-DAO
      'Xiaohong threw Xiaowang a towel, but he didn't get it.'

7.   Summary

In this paper after giving an introduction of the word *gei*, I made a theory for v-*gei* combination in Chinese. Specifically, *gei* is a further specification of the result denoted by the verb. There are two ways of this combination. For CPVs, *gei* is originally a semantic part of the verbs, and somehow separates from them. For some unergative verbs, the strategy is a combination of the verbs and *gei* to form compound verbs. This proposal is further supported by constructions involving ballistic motion verbs and more generally, resultative constructions.

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