

THE CATEGORY OF *GEI* IN MANDARIN CHINESE AND GRAMMATICALIZATION*

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ABSTRACT

This article attempts to reach two purposes. The primary purpose is to show that *gei* must be analyzed as having different categories depending on the constructions in which it occurs. Therefore, neither the preposition account nor SVC account is entirely satisfactory. After the preposition and complementizer status of *gei* in certain constructions have been determined and recognized, the second purpose of this article is to suggest, in contrast to a typical formal approach, that a grammaticalization path may be involved to relate these different categories of *gei*. In this approach, the verbal category of *gei* is the genesis, later a preposition status is developed, and finally a complementizer status arises.

Keywords: grammaticalization, category of *gei*, dative construction, double object construction, serial verb construction

1. INTRODUCTION

The syntactic analysis of *gei* in Mandarin Chinese has attracted much attention in the field of generative grammar (see references below). It is often noted that *gei* introduces an indirect object in constructions parallel to ditransitive constructions in other languages such as English.

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- (1) a. Ta zuotian song gei Lisi yi-ben shu.
 he yesterday give give Lisi one-CL book
 ‘He gave Lisi a book yesterday.’
 b. Ta zuotian song yi-ben shu gei Lisi.
 he yesterday give one-CL book give Lisi
 ‘He gave a book to Lisi yesterday.’

Since *gei* in (1a) functions like the preposition *to* in English, it seems quite reasonable to treat it as a preposition and this analysis may be generalized to other constructions as well. We shall call this approach the preposition account.¹ On the other hand, given that *gei* may stand alone as the main predicate as in (2) and that Chinese independently allows serial verb constructions, it also appears quite plausible to analyze *gei* in (1a) as a verb. We shall call this approach the serial verb construction (SVC) account.²

- (2) Ta zuotian gei Lisi yi-ben shu.
 he yesterday give Lisi one-CL book
 ‘He gave Lisi a book yesterday.’

It is necessary to note that the occurrence of *gei* is not limited to constructions such as (1) and (2); it also occurs in other constructions such as (3a) and (3b).

- (3) a. Ta zuotian gei Lisi song yi-ben shu.
 he yesterday give Lisi send one-CL book
 ‘For Lisi, he gave a book yesterday.’
 b. Ta zuotian song yi-ben shu gei Lisi kan/ da fa shijian.
 he yesterday give one-CL book give Lisi read/ kill:time
 ‘He gave a book for John to read/to kill time yesterday.’

In (3a), the other possible interpretation for the *gei* phrase, in addition to being the goal, is as the benefactive of the giving event.³ In

¹ As examples, this approach to the *gei* after direct object is taken by Teng (1975), T. Tang (1979), Li and Thompson (1981), C.-C. Tang (1990) and Zhang (1990).

² For example, this is the approach to the *gei* after direct object taken by A. Li (1990) and Huang et al. (1999).

³ In fact, we think that the goal reading is derived from the benefactive reading (cf. C.-C. Tang (1990)).

(3b), there is a verb or a verb phrase following the indirect object introduced by *gei*. This optional verb phrase is treated as a purpose clause by C.-C. Tang (1990).

Given this distribution of *gei*, the purpose of this article is two-fold. The primary purpose is to show that *gei* must be analyzed as having different categories depending on the construction in which it occurs. Therefore, neither the preposition account nor SVC account is entirely satisfactory. More specifically, we will argue that the *gei* after the direct object (post-DO *gei*)⁴ in (1b) is a preposition but that it is a complementizer when immediately followed by a purposive verb phrase in some cases (see Section 3.3 for discussion).⁵ As for the pre-verbal *gei* in (3a) and the post-verbal *gei* in (1a), we will follow the general agreement in the literature that the former is a preposition (see A. Li (1990), C.-C. Tang (1990), Huang et al (1999), among others), while the latter forms a verbal complex with the preceding verb as the second component of a VV compound (see T. Tang (1979), C.-C. Tang (1990), A. Li (1990)) or as a lexical affix (see Huang et al. (1999)).

After the different categories of *gei* in different constructions have been determined and recognized, the secondary purpose of this article is to suggest, in contrast to a typical formal approach, that a grammaticalization path may be involved to relate these different categories of *gei*. That is, *gei* may have undergone a process of grammaticalization, which as defined by Heine and Kuteva (2002: 2), is “the development from lexical to grammatical forms and from grammatical to even more grammatical forms.” In this approach, the verbal category of *gei* is the genesis, later a preposition status is developed, and finally a complementizer status arises.

This article is structured as follows: in Section 2, we argue for the preposition status of the post-DO *gei*. Then in Section 3, we argue that when the *gei* NP sequence is followed by a purpose clause, *gei* may, and in some cases must, be generated as a complementizer of the purposive CP. To account for this diverse inventory of a categorization of *gei* category as verb, preposition and complementizer, we propose in Section 4 that *gei* has undergone a grammaticalization process, conforming to the

⁴ The labels such as preposition account, SVC account and the post-DO *gei* are adopted from Huang et al. (1999).

⁵ The purposive verb phrase here is simply a description of the fact. In Section 3, we will adopt the view that it is a CP as proposed by C.-C. Tang (1990) but not a VP as in Huang et al. (1999).

purported unidirectionality observed most notably by the functionalist researchers. In Section 5 we conclude this article by reinstating the main claims and raising an issue of interest for future studies.

2. THE POST-DO *GEI* AS A PREPOSITION

In this section, we argue that the post-DO *gei* is not a verb but rather behaves like a preposition. First of all, consider a crucial argument advanced by Huang et al. (1999) against *gei* as a preposition. Their reasoning can be paraphrased as follows.⁶ As shown by the contrast between (4) and (5), the null subject of the secondary predicate must be co-referential with the direct object in (4) but with the *gei*-NP in (5). They thus conclude that *gei* in (5) cannot be a preposition; if it were, the co-reference between its object *Zhangsan* and the null subject of *kan* in (5) would not be possible since a prepositional object cannot be such a controller as shown in (4).

- (4) Ta fang-le [yi-ge wan] [zai zhuo-shang], [PRO hen
s/he put-ASP one-CL bowl at table-top very
youni]
greasy
a. 'S/he put a greasy bowl on the table.'
b. '*S/he put a bowl on a greasy table.'

- (5) Lisi song-le [yi-ben shu] [gei Zhangsan] [PRO kan].
Lisi give-ASP one-CL book give Zhangsan read
'Lisi gave a book to Zhangsan to read.'

This argument as advanced by Huang et al. (1999), however, is not tenable. This contrast between (4) and (5) does not show that *gei* is not a preposition. Crucially, if we consider the post-DO *gei* in a construction

⁶ Huang et al. do not explicitly analyze the control relation as between the antecedent and the null subject PRO of the secondary predicate. They characterize the control relation as following a so-called "universal controller hierarchy". Thus in Chinese only the two highest grammatical functions, SUBJ and OBJ can be controllers. This is clearly not feasible when we consider the fact that the null subject of a purpose clause may be controlled by a prepositional object or an indirect object.

parallel to (4) with an AP instead of a verb phrase as the secondary predicate, we find that the controller of the null subject must be the direct object rather than the *gei*-NP. This is shown in (6).

- (6) Zhangsan song-le [yi-ge wawa] [gei Youyou], [PRO hen
Zhangsan send-ASP one-CL doll give Youyou, very
piaoliang]
beautiful
a. 'Zhangsan gave a beautiful doll to Youyou.'
b. *'Zhangsan gave a doll to the beautiful Youyou.'

The parallelism between control relations in (4) and (6) indicates that *gei* is indeed a preposition, not a verb. Although this shows that Huang et al's argument is questionable, one may wonder how the null subject of the secondary verb phrase is controlled by the *gei*-NP *Zhangsan* in (5) if *gei* is also a preposition in this construction. We think that constructions involving secondary VP and AP as in (5) and (6) respectively are different constructions as shown by the fact that the former do not require a pause before the secondary VP but the latter require one before the secondary AP.⁷ As a result, the former but not the latter allow a prepositional object to control the null subject. For our purposes here, what is relevant is the control facts concerning the secondary VP in (5), to which we will return in section 3.1.

We shall now turn to another piece of evidence that the post-DO *gei* does not behave like a verb but like a preposition. Notice that the second verb in a real SVC can be modified by an adverb but that a post-verbal PP allows such modification in only marginal cases. A natural position for the adverb is, in fact, before the main predicate. This is shown by the contrasts in (7) and (8a) below.

- (7)a. Zhangsan shang-ke toutoude dakeshui
Zhangsan up-class unnoticeably doze-off
'Zhangsan discretely dozed off while he was in class.'
b. Zhangsan gudong qunzhong wuqinde gongji jingcha
Zhangsan agitate crowd mercilessly attack police
'Zhangsan agitated the crowd to attack the police with no mercy.'

⁷ Note that a natural intonation break falls between such *gei* PP and a purposive verb phrase.

- (8) a. ??Zhangsan fang-le san-ben shu zhengzhengqiqide
 Zhangsan put-ASP three-CL book in-order
 zai zhuo-shang
 at table-top
 ‘Zhangsan put three books on the table in an ordered way.’
 b. Zhangsan zhengzhengqiaide fang-le san-ben shu
 Zhangsan in-order put-ASP three-CL book
 zai zhuo-shang
 at table-top
 ‘Zhangsan put three books on the table in an ordered way.’

Considering the adverbial modification of a post-DO *gei* sequence in (9), we find that the pattern is on a par with a post-verbal PP rather than with a VP. As shown in (9), adverbial modification may occur before the first verb *song* ‘send’ but not before *gei* ‘give’. This further supports our analysis that the post-DO *gei* is a preposition rather than a verb.

- (9) a. ??Zhangsan song-le yi-ben shu dafangde gei Lisi
 Zhangsan send-ASP one-CL book generously give Lisi
 ‘Zhangsan gave a book to Lisi generously.’
 b. Zhangsan dafangde song-le yi-ben shu gei Lisi
 Zhangsan generously send-ASP one-CL book give Lisi
 ‘Zhangsan gave a book to Lisi generously.’

There have been further arguments provided in the literature for the preposition account of the post-DO *gei*. For example, among other differences, Zhang (1990) points out that a real SVC allows the second V to be stranded, but the post-DO *gei* cannot be so stranded as shown by the contrast in (10)

- (10) a. Lisi_i, Zhangsan yao [na gunzi] [da t_i]
 Lisi Zhangsan want take stick hit
 ‘Lisi, Zhangsan wanted to take a stick to beat.’
 b. *Lisi_i, Zhangsan [song yi-ben shu] [gei t_i]
 Lisi Zhangsan send one-CL book give
 ‘Lisi, Zhangsan gave a book to.’

The ill-formedness of (10a) follows naturally if *gei* is analyzed as a

preposition because Chinese independently does not allow preposition stranding. Such data thus pose challenges for a SVC account since the direct object of a verb should be capable of undergoing topicalization. Huang et al. (1999) attempt to attribute the unacceptability of (10b) to the alleged fact that Chinese does not allow an indirect object to be empty as shown by the examples in (11), where a verbal *gei* is involved.

- (11) a. *Lisi, ta gei-le yi-ben shu (= their 20a, p. 12)
 Lisi s/he give-PERF one-CL book
 ‘Lisi, he gave him a book.’
 b. *Ta gei-le yi-ben shu de ren (=their 20b, p. 12)
 s/he give-PERF one-CL book DE person
 ‘the person to whom he gave a book’

This generalization as derived by the unacceptable examples in (11) is in fact dubious because they are not as awkward as claimed by Huang et al. This can be shown by the acceptable (12) with the lexical item *shu* ‘book’ changed to *hong bao* ‘lucky money’.

- (12) a. Lisi, ta gei-le yi-ge hong bao
 Lisi s/he give-ASP one-CL red envelope
 ‘Lisi, he gave lucky money.’
 b. Ta gei-le yi-ge hong bao de ren
 s/he give-ASP one-CL red envelope DE person
 ‘the person to whom he gave lucky money’

We thus dismiss Huang et al.’s (1999) account and take Zhang’s (1990) argument based on preposition stranding as valid for the claim that the post-DO *gei* is a preposition rather than a verb.⁸

Before leaving this section, we would like to briefly consider the question as to how the post-DO *gei* PP is licensed. We do not think that it is generated in the complement position of a secondary predicate phrase (PrP) with a PRO subject as claimed by C.-C.Tang (1990). In this

⁸ One of the anonymous reviewers brings to our attention that Sheng-li Feng successfully argues for a light verb analysis of prepositions. It is necessary to note that Feng’s (2003) analysis only discusses the pre-verbal PPs, which are not on a par with the post-DO *gei* NP sequence, with which we’re dealing here. Even in the pre-verbal position, Feng (p.c) notes that he does not exclude the possibility that there are true prepositional phrases.

approach, the PRO subject is controlled by the closest NP, namely the direct object, in accordance with some version of Rosenbaum's (1970) Minimal Distance Principle. If this approach is correct, the secondary predicate phrase hosting *gei*-NP should constitute a binding domain itself and examples such as (13a) are expected to be acceptable, with the matrix subject and the *gei*-NP in different binding domains.

- (13) a. *Lisi_i song-le yi-ben shu gei ta_i.
 Lisi send-ASP one-CL book give he
 'Lisi sent a book to himself.'
 b. Lisi_i song-le yi-ben shu gei taziji_i.
 Lisi send-ASP one-CL book give himself
 'Lisi sent a book to himself.'

This expectation, however, is not borne out. As shown by the contrast in (13), the *gei*-NP must be in the same binding domain as the matrix subject NP rather than in different binding domains as predicted by the secondary predication analysis. This fact shows that the post-DO *gei* NP sequence is a subcategorized PP in the clause. One problem then arises: given the optional occurrence of such PP's with some predicates as in (14)⁹ (see T. Tang (1979)), in what sense does it mean that such PP's are subcategorized if subcategorization standardly entails obligatory occurrence of an argument?

- (14) a. Wo xie-le yi-feng xin (gei ta).
 I write-ASP one-CL letter give he
 'I wrote a letter to him.'
 b. Wo ji/song-le yi-fen liwu (gei ta).
 I mail/send-ASP one-CL gift give he
 'I mailed/sent a gift to him.'

We propose that the predicate in the construction with a post-DO *gei* PP has, in fact, two subcategorization frames as shown in (15).

- (15) a. *xie*: verb; 1 2
 NP NP

⁹ Examples in (14b) are taken from T. Tang (1979, 199, 120).

- b. *xie*: verb; 1 2 3
 NP NP PP

The two frames in (15) differ in that *xie* ‘write’ subcategorizes an additional PP in (15b). In this approach, it is the predicate that licenses the occurrence of the post-DO *gei* NP sequence. We thus do not agree with the observation (cf. Zhu (1983), Paul (1987) cited from Huang et al. (1999)) that a direct object which is abstract and untransferable cannot occur with a post-DO *gei* PP. While it is true that some unacceptable sentences apparently have abstract direct objects as in (16), there are others whose direct objects are arguably abstract as in (17).

- (16) a. *Wo chang-le yi-shou ge gei ta.
 I sing-ASP one-CL song give he
 ‘I sang a song for him.’
 b. *Wo zuo-le yi-ge guilian gei ta.
 I make-ASP one-CL ghost-face give he
 ‘I made a face at him.’
- (17) a. Wo da-le yi-ge anhao/dianhua gei ta.
 I make-ASP one-CL signal/phone-call give he
 ‘I gave him a signal/call.’
 b. Wo dian-le yi-shou ge gei ta.
 I order-ASP one-CL song give he
 ‘I ordered a song for him.’

The minimal pair of (16b) and (17b) is especially revealing with the only difference being in the predicates involved, but their acceptability contrasts sharply. Admittedly, a precise characterization of the mechanism licensing the post-DO *gei* PP requires a close study of the lexical semantics of both the matrix verb and the direct object involved in this construction. At this moment, we do not have an insightful account to offer. For our purposes here, what is relevant is that such a post-verbal PP is indeed licensed in Chinese.

(18) a. [... V... [_{PP} *gei* NP] ... V...]
give
b. [... V... [_{CP} *gei* [_{IP} NP... V...]]
give

(19) a. [... song yi-ben shu [PP gei ta] [CP ... du ...]]
 send one-CL book give he read
 b. [... song yi-ben shu ... [CP gei [IP ta ... du ...]]
 send one-CL book give he read

(20) a. [... chang yi-shou ge ... [CP gei [IP ta ... ting ...]]
 sing one-CL song give he hear
 b. *[... chang yi-shou ge ... [PP gei ta] ... [CP ... ting ...]]
 sing one-CL song give he hear
 c. *[... chang yi-shou ge [VP gei [IP ta ... ting ...]]]
 sing one-CL song give he hear
 d. *[... chang yi-shou ge [CP PRO ... [VP [PP gei ta] ting ...]]]
 sing one-CL song give he hear

An analysis yielding a structure such as (19a) can be found in C.-C. Tang (1990), where the verb phrase following the post-DO *gei* NP is treated on a par with purpose clauses in English. Consider the Chinese examples with the partially relevant structures in (21).

- (21) a. Wo mai shu [_{PP} gei ta_i] [_{CP} PRO_i dafa shijian]
I buy book give he kill-time
'I bought (some) books for him to kill time.'
b. Wo mai shu_i [_{PP} gei ta_j] [_{CP} [_{Op}_i [_{IP} PRO_j du t_i]]]
I buy book give he read
'I bought (some) books for him to read.'

There are two points to note. First, as indicated, the verb phrase following the post-DO *gei*-NP sequence is hosted in an adjunct CP rather than VP as claimed by Huang et al. (1999). This is supported by the fact that a temporal adverbial licensed by Infl may occur with such verb phrases as in (22).

- (22) a. Wo mai shu gei ta mingtian dafa shijian.
I buy book give he tomorrow kill time
'I bought books for him to kill time tomorrow.'
b. Wo mai shu gei ta mingtian du.
I buy book give he tomorrow read
'I bought books for him to read tomorrow.'

Second, when the adjunct clause appears with a subject gap, the gap is filled by the PRO as in (21a). When there is an additional object gap in the clause, the gap is derived by a null operator movement as in (21b).

We shall now examine the control properties exhibited by purpose clauses in general and in Chinese. Following Hornstein's (2001) terminology, those that do not contain an A'-gap are referred to as control purposives while those that do are referred to as A'-purposives.¹⁰ Following the notation of Browning (1987), we may sometimes omit the null operator in order to simplify representations for aesthetic rather than theoretical reasons.

- (23) Control purposives:
John_i brought Mary_j to the party [PRO_{i/j} to impress Fred].
(24) A'-purposives:
They_j brought John_i along [PRO_j to talk to e_i].

¹⁰ Except for the example (23) taken from Hornstein (2001), all other examples are taken or adapted from Browning (1987).

Control purposives may involve subject or object control as indicated in (23).¹¹ When there is object control, the controller must be a direct object NP (Theme); there is no control by a prepositional object or by an indirect object, i.e., goal NP, as shown in (25) and (26) respectively.

- (25) a. *I pushed it over to John_i [PRO_i to use it on his hamburger].
 b. *We gave it to John_i [PRO_i to put it on his trophy shelf].
 c. *I left it with John_i [PRO_i to use it as he pleases].
 d. *We sent it rolling toward John_i [PRO_i to train his gun-sights on it].

- (26) *John told Mary_i a joke [PRO_i to repeat it to Bill].

As for control of the null subject in A'-purposives, in contrast to the case of control purposives, its antecedent may be a prepositional object or an indirect Goal object as shown in (27) and (28) respectively.

- (27) a. I pushed it_j over to John_i [PRO_i to use e_j on his hamburger].
 b. We gave it_j to John_i [PRO_i to put e_j on his trophy shelf].
 c. I left it_j with John_i [PRO_i to use e_j as he pleases].
 d. We sent it_j rolling toward John_i [PRO_i to train his gun-sights on e_i].

- (28) John told Mary_i a joke_j [PRO_i to repeat e_j to Bill].

We shall now turn to the control facts in purpose clauses following the post-DO *gei* PP in the structures as in (21), repeated here as in (29).

- (29).a. Wo mai shu [PP *gei ta_i*] [CP PRO_i dafa shijian]
 I buy book give he kill-time
 'I bought (some) books for him to kill time.'
 b. Wo mai shu_i [PP *gei ta_j*] [CP [Op_i [IP PRO_j du t_i]]]
 I buy book give he read
 I bought (some) books for him to read.

¹¹ Browning points out that the operative notion is actually agency and not structural subject since (i) is grammatical even without the *by*-phrase.

(i) The bridge was blown up (by the guerillas) to demonstrate the power of the resistance.

It is not surprising that A'-purposives in Chinese in (29b) may have the null subject controlled by a prepositional object such as those in English.¹² However, in the case of control purposives in Chinese in (29a), it is quite unexpected that a prepositional object may antecede the null subject in contrast to the ill-formed English examples in (25).

There is, however, independent evidence that the null subject in the control purposives in Chinese need not be controlled by a direct object (i.e., Theme) as its counterpart in English. This is shown by the fact that its antecedent may be a prepositional NP in (30a), following the general agreement that a pre-verbal *gei* NP is a PP (see introduction), or an indirect object (i.e., Goal) in (30b).

- (30) a. Wo [PP *gei ta_i*] mai shu [CP PRO_i dafa shijian].
 I give he buy book kill time
 'I bought (some) books for him to kill time.'
 b. Wo song ta_i henduo shu [CP PRO_i dafa shijian].
 I give he many book kill time
 'I gave him many books to kill time.'

We thus conclude that in contrast to English, the null subject of control purposives in Chinese may indeed be controlled by a non-Theme NP.¹³ As a result, the structure in (21) is legitimate as analyzed by C.-C. Tang (1990).¹⁴

¹² The expectation that another type of non-theme NP, namely the indirect object (Goal), may be such a controller is borne out:

- (i) Wo song ta henduo shu du.
 I give he many book read
 'I gave him many books to read.'

¹³ Another difference between purpose clauses in English and those in Chinese concerns the occurrence of the complementizer-subject sequence, namely *for-NP*, in the purpose clauses. As pointed out by Jones (1991) (cf. Browning (1987)), only subject control purposives allow such a sequence while object control purposives and A'-purposives do not. Based on this difference among the sub-types of purposives, Jones proposes that only subject control purposives are fully clausal while the others are VP's. As is to be shown in Section 3.1, the complementizer-subject sequence in Chinese purposives, namely the *gei-NP*, is not sensitive to the sub-types, if there are any, of purposives. With thanks to one of the reviewers for reminding us of the work of Jones (1991).

¹⁴ Although one of the reviewers suggests us to use the "linkers" *lai/qu* 'come/go' in

While agreeing that the *gei* NP sequence which immediately precedes the purpose clause verb may indeed be generated as a matrix PP, we will argue in Section 3.3 that such a structure cannot be generalized to all the instances of this construction. That is, in some cases, the *gei* NP sequence is actually a complementizer + subject, rather than a matrix PP. Before providing arguments for this claim, we will reject a causative verb analysis of the post-DO *gei* with an ensuing verb phrase. For ease of presentation, we shall refer to this construction as the purposive *gei* construction.

3.2 Against a causative verb analysis of the post-DO *gei* in the purposive construction

Analyses of the purposive *gei* construction along the line of treating *gei* as a causative verb are represented most typically by Li and Thompson (1981). According to them, the NP following such a *gei* is neither an indirect object nor a benefactive; the construction conveys a special meaning of ‘allow to V’. We take this to indicate that *gei* in this construction has a causative reading. One advantage of this analysis is to account for not only the purposive *gei* construction in (31a) but also the matrix causative *gei* in (31b) at the same time.

- (31) a. Ta chang-le yi-shou ge gei Lisi ting.
 he sing-ASP one-CL song give Lisi hear
 ‘He sang a song for Lisi to hear.’

disambiguating the *gei* constructions, we have some concern over the acceptability of (ib). According to him/her, such particles may occur before or after the *gei* NP with an ensuing VP as in (i).

- (i) a. Wo mai shu gei ta qu dafa shijian.
 I buy book give he go kill time
 ‘I bought a book for him to kill time.’
 b. Wo mai shu qu gei ta dafa shijian.
 I buy book go give he kill time
 ‘I bought a book for him to kill time.’

However, we were unable to find any instance of the sequence *qu-gei* in the Academia Sinica Balance Corpus. We were able to find some instances of it in the output of the search engine Google, those occurrences nevertheless being limited to matrix clauses.

- b. Qing ni gei wo kan na-ben shu.
Please you give I read that-CL book
'Please let me read that book.'

More concretely, the structure of (31a) and of (21) in this approach would be as in (32a) and (32b) respectively, as suggested by one of the reviewers.

- (32) a. Ta [_{VP} chang-le [yi-shou ge]_i [_{VP} gei [_S Op_i [Lisi ting t_i]]]
he sing-ASP one-CL song give Lisi hear
b. Wo [_{VP} mai [shu]_i [_{VP} gei [_S ta dafa shijin]]]
I buy book give he kill time

According to him/her, "... (5) is a sentence involving a complex predicate which further involves a causative verb with a meaning like that of *rang* 'let' (i.e., *gei*). Simply put, *gei* in (5) can be considered a causative light verb that takes a clausal complement." When we examine this alternative analysis closely, it is actually not clear how the complex predicate is licensed in this construction, given that a typical serial verb construction manifesting such complex predicates as illustrated in (33) (see Zhang (1990) and Y. Li (1991)) generally shows the property of object sharing, which is believed to be derived by some "deeper" mechanism, syntactic or cognitive (see e.g., Baker (1989), Y. Li (1991)). As a causative verb, *gei* does not take the preceding NP as its argument and certainly cannot share it with the first predicate.

- (33) Lisi na dao qie rou.
Lisi take knife cut meat
'Lisi took a knife to cut meat.'

This casts doubt on treating the purposive *gei* construction on a par with a typical serial verb construction. Even if we were to put aside this issue and assume that there is a way for *gei* to be placed in a serial verb relation with the first predicate in the purposive *gei* construction, there are two pieces of evidence showing that this *gei* cannot be analyzed as a causative verb. First, *gei* in this construction does not show any verbal property at all. For example, although the matrix causative *gei* may undergo A-not-A question formation in (34a), it is not clear why the alleged second predicate *gei* in the serial verb construction in (34b) can

not, especially when the second predicate in a true serial verb construction allows the A-not-A operation in (34c).

- (34) a. Ta gei-bu-gei ni chang yi-shou ge?
 he give-not-give you sing one-CL song
 ‘Did he sing a song for you?’
 b. ??Ta chang yi-shou ge gei-bu-gei ni ting?
 he sing one-CL song give-not-give you hear
 ‘Did he sing a song for you?’
 c. ta na dao qie-bu-qie rou?
 he take knife cut-not-cut meat
 ‘Did he take a knife to cut (some) meat?’

Furthermore, the VP headed by *gei* in the structure in (32) does not behave like a complement as the second VP in a true serial verb construction in (33). Counterparts of the serial verb construction such as (33) in other languages have been discussed extensively in the literature (see e.g., Baker (1989), Collins (1997)). While the specific analyses of this construction may differ non-trivially, one thing which they have in common is that when the first predicate is the matrix one, the second predicate is selected by it. In other words, the second VP is in complement rather than in adjunct relation with the first VP. In Chinese, this can be shown by the ability to extract out of the second VP.

- (35) Zhangsan yao [na gunzi] [da t] de nage ren
 Zhangsan want use stick hit DE that person
 ‘the person that Zhangsan wanted to use a stick to beat’

If the second VP is indeed headed by *gei* and selected by the first predicate in the purposive *gei* construction, it is not clear why such extraction is not allowed to take place as shown in (36). This fact supports our analysis that the ensuing verb phrase after the post-DO *gei* is hosted in an adjunct rather than in a complement phrase.

- (36) *Wo [_{VP} xiang-le henduo fangfa [_{VP} gei [_{IP} ta jiejie]]] de na-ge
 I think-ASP many method give he solve DE that-CL
 nanti
 problem
 ‘the problem which I came up with many ways for him to solve’

We thus conclude the complex predicate approach to the purposive *gei* construction, while interesting, does not hold. Nevertheless, one might still pursue the approach associated with the causative verb by analyzing *gei* as a causative verb hosted in an adjunct phrase as illustrated in (37).

- (37) Wo xiang-le henduo fangfa [_{CP} [_{IP} PRO [_{VP} *gei* [_{IP} ta jiejué nǎnti]]]]
 I think-ASP many method give he solve problem
 ‘I came up with many ways for him to solve the problems.’

While this structure with *ta* ‘he’ in the embedded subject position is compatible with the conclusion which we reached earlier that the *gei*-NP may be co-referential with the reflexive *ziji* (see the discussion in 3.3 below), there are two reasons against such a causative analysis.

First, as noted by Li and Thompson (1981), the causative *gei* often occurs with verbs like *ting* ‘hear’ and *kan* ‘see’. This is why the example in (38) carries the flavor of a dialect,¹⁵ although S. Tang (2003, 192) considers it acceptable. The exact nature of such a constraint lexical collocation is beyond the scope of this article. However, for our purposes here, the purposive *gei* construction need not be limited to verbs such as *ting* ‘hear’ and *kan* ‘read’ as shown by the many examples which we have previously noted. This consideration thus calls into question the causative *gei* analysis of this construction.¹⁶

¹⁵ One of the anonymous reviewers remarks that the following sentence contains a causative *gei* but that the verb is not limited to *ting* ‘hear’ or *kan* ‘read’.

- (i) Qǐng nǐ gei wǒ jìzhù/líkai/zhànzhào.
 please you give I remember/leave/stand:upright
 ‘Please remember it/leave/stand upright for my sake.’

We do not consider this is a case of causative *gei*. The person that is asked to remember, leave or stand upright is the grammatical subject rather than the NP immediately preceded by *gei*. We tentatively take this *gei* NP as a PP indicating a mallicative sense (cf. Chao (1968)).

¹⁶ This argument naturally applies to the complex predicate approach that also treats *gei* as a causative verb.

- (38) Wo gei ta likai.
 I give he leave
 'I made him leave.'

Secondly, since a matrix causative *gei* can be modified by adverbials such as *mingtian* 'tomorrow' or *zai gongsi* 'at the office' as in (39), if *gei* in the purposive construction is indeed a verbal predicate, it should be capable of being modified by the same set of adverbials. This prediction is not borne out as shown in (40a). Rather, the adverbials may occur after the *gei* NP sequence.¹⁷

- (39) Ta mingtian/zai gongsi gei wo kan yi-feng xin.
 he tomorrow/at company give I read one-CL letter
 'He will allow me to read a letter tomorrow/at the company.'
- (40) a. Wo xiang-le henduo fangfa (*mingtian/zai gongsi) gei ta
 I think-ASP many method tomorrow/at office give he
 jie jue nanti
 solve problem
 'I came up with many ways for him to solve the problems.'
- b. Wo xiang-le henduo fangfa gei ta (mingtian/zai gongsi)
 I think-ASP many method give he tomorrow/at office
 jie jue nanti
 solve problem
 'I came up with many ways for him to solve the problems.'

For these reasons, we conclude that a causative verb analysis of *gei* hosted in an adjunct phrase is also not tenable for the purposive *gei* construction.

3.3 The post-DO *gei* as a complementizer

The strongest argument for the post-DO *gei* serving as a complementizer comes from instances where a post-DO *gei* PP is not licensed in the matrix clause as shown by the contrast as in (41).

¹⁷ Note that the position of these adverbials is exactly as predicted by our CP analysis in Section 3.3.

- (41) a. Wo chang yi-shou ge gei ta ting.
 I sing one-CL song give he hear
 'I sang a song for him.'
 b. *Wo chang yi-shou ge gei ta.
 I sing one-CL song give he
 'I sang a song for him.'

Given that the *gei* NP sequence should not be part of the matrix clause as in (42a), there are two possible structures for (41a) as in (42b, c).¹⁸

- (42) a. [... chang yi-shou ge ... [PP gei ta] ... [CP ... ting ...]]
 sing one-CL song give he hear
 b. [... ... chang yi-shou ge [CP PRO ... [VP [PP gei ta] ting ...]]
 sing one-CL song give he hear
 c. [... chang yi-shou ge ... [CP gei [IP ta ... ting ...]]
 sing one-CL song give he hear

Support for the structure as in (42c) but not (42b) comes from the facts of binding based on reflexive *ziji* 'self'. The reflexive *ziji* 'self' is generally agreed to exhibit what is referred to as subject orientation (Huang and Liu (2001), among others, cf. Xu (1994)). That is, it is only bound by an NP in the grammatical subject position. This is why *ziji* in (43) can be bound by the subject *Zhangsan* but not by the prepositional object *Lisi*.

- (43) a. Zhangsan_i gei Lisi_j zai ziji_{i/*j} jiali jiang gushi.
 Zhangsan give Lisi at self home say story
 'Zhangsan_i told Lisi_j a story at his_i home.'
 b. Zhangsan_i gei Lisi_j jiang-le yi-ge ziji_{i/*j} xiaoshihou de gushi.
 Zhangsan give Lisi tell-ASP one-CL self childhood DE story
 'Zhangsan_i told Lisi_j a story about his_i childhood.'

Now we shall consider the fact that the NP following *gei* can bind the reflexive *ziji* in (44). If it were a prepositional object in the embedded clause, the binding relation with *ziji* 'self' would not be possible. By

¹⁸ Although C.-C. Tang (1990: 263) appears to consider that such constructions do not contain a Goal phrase but only a purpose clause, she does not provide a structural analysis of them.

contrast, the binding fact naturally follows from our analysis if *gei* is a complementizer and the NP following it is an embedded subject.

- (44) a. Zhangsan_i sheji-le yi-ge fangshi [*gei* tamen_j jiang ziji_j
 Zhangsan design-ASP one-CL method give they tell self
 xiaoshihou-de gushi]
 childhood-DE story
 ‘Zhangsan designed a way for them to tell their childhood stories.’
 b. *Zhangsan sheji-le yi-ge fangshi *gei* tamen.
 Zhangsan design-ASP one-CL method give they
 ‘Zhangsan designed a way for them.’

We thus conclude that in the purposive *gei* construction, when the *gei* NP is not licensed in the matrix clause, this sequence is a complementizer + subject as illustrated in (42c).

Now turning to the cases where the predicate can occur with a matrix post-DO *gei* PP, it is necessary to note that the facts of anaphor binding are compatible with a structure where the *gei* NP is generated in the matrix clause as presented in Section 3.1. That is, the reflexive *ziji* is co-referential with the prepositional object via the embedded null subject as in (45). As argued in Section 3.1, the null subject of a purpose clause in Chinese may be controlled by a prepositional object irrespective of the type of purposive clause involved.

- (45) Zhangsan mai-le henduo shu_i [_{PP} *gei* naxie haizi_j] [_{CP} PRO_j zai ziji_j
 Zhangsan buy-ASP many book give those child at self
 jiali du e_i]
 home read
 ‘Zhangsan bought many books for those children to read in their own homes.’

Such being the case, is there any evidence that the analysis of *gei* as a complementizer also applies to these constructions? While inconclusive, there does appear to be some suggestive evidence for such an analysis. In addition to possibly using the “linkers” *lai/qu* ‘come/go’ as mentioned in Note 14 to show that the *gei* NP in sentences with a matrix predicate such as *song* ‘send’ may be part of the purposive clause, it is necessary to note that the sentence in (46) can only be interpretable if the NP

immediately preceded by the second *gei* is the agent argument of the last verb.

- (46) (?) Wo song-le yi-ben shu gei Lisi gei ta xiaohai kan.
I give-ASP one-CL book give Lisi give he child read
'I gave a book to Lisi [for his child to read].'

The second *gei NP* sequence cannot be a goal argument because Chinese independently does not allow two post-verbal goal arguments as in (47).

- (47) *Wo song-le yi-ben shu gei Lisi gei ta xiaohai.
I give-ASP one-CL book give Lisi give he child
'I gave a book to Lisi to his child.'

These facts follow from our analysis that the second *gei NP* in (46) is in fact licensed as a complementizer + subject sequence rather than as a PP. If it were a PP, the second *gei NP* sequence would not be licensed.¹⁹ A similar situation holds in English as illustrated in (48).

- (48) a. ? For Mary, I bought it for John for his kids.
b. *For Mary, I bought it for John for the kids for their friends.
c. ? For Mary, I bought it for John for the kids for their friends to play with.

According to Browning (1987), English allows three but not four *for*

¹⁹ As for the slight unnaturalness of (46), we would like to suggest that the nature of it is due not to grammatical reasons but is related to haplology (Chen (1979), A. Li (1990)). Although most people may take (ia) as ungrammatical, according to Zhu (1979), some speakers do allow two *gei*'s to co-occur, as in (ib) when different lexical items are used.

- (i) a. *Ta gei shu gei wo.
he give book give me
'He gave a book to me.'
b. Zhangsan gei-le yi-ben shu gei Lisi.
Zhangsan give-ASP one-CL book to Lisi
'Zhangsan gave a book to Lisi.'

We thus suggest that (46) sounds awkward because two occurrences of the same morpheme are too close to each other.

NP's ((48a) vs (48c)). Thus, a complementizer analysis of *for* correctly predicts that we get four such sequences only when there is an ensuing purpose clause as in (48c), because now the third *for NP* is a complementizer + subject sequence.^{20 21}

4. THE PROCESS OF GRAMMATICALIZATION

So far, we have seen that *gei* must be analyzed as having different categories depending on the different constructions in which it occurs. It is an independent verb as in (2), a preposition introducing a post-DO matrix PP as in (1b) and a pre-verbal PP as in (3a), and is also a complementizer in certain purposive constructions as in (3b). We would like to suggest that this array of categories may be explained if we assume that *gei* has gone through a process of grammaticalization, starting as a verb and being re-categorized as a preposition and then as a complementizer.

The re-interpretation from verb to preposition is noted by Schachter (1974) and Hamel (1993). Likewise, the re-interpretation from preposition to complementizer is also seen in the development of a language like English, illustrated by *for* and *since*. According to Stockwell (1976), the earlier structure with *for* as a preposition such as in (49a) might have been actually re-analyzed as the one in (49b) by the 16th century, with *for* as a complementizer.

²⁰ The proposal that *gei* is a complementizer in certain purposive *gei* constructions arguably supports a head-initial direction of selection in Chinese. As argued by Simpson and Wu (2002), the sentence-final particles, including question particles, result from complement IP raising further up (cf. Kayne (1994)). Thus, in this approach, *gei* as a head-initial complementizer is a default instance. *Gei* may be treated on a par with the prepositional complementizer *for* in English, which introduces an infinitive clause. A possibly relevant contrast between *gei* and the sentence-final question particles such as *ne* and *ma* is that the former, but not the latter, assigns Case. With thanks to one of the anonymous reviewers for bringing the issue concerning these sentence-final question particles to our attention.

²¹ When we finished writing this section, we ran into two works, which also suggest that *gei* is possibly analyzed as a complementizer in the relevant constructions. They are C.-T. J. Huang (1982), citing C.-Y. Ning's suggestions and Paul (1988).

- (49) a. It is better [_{PP} for a synner_i] [_{CP} PRO_i to suffre trybulacyon]...
b. It is better [_{CP} for [_{IP} a synner to suffre trybulacyon]...

Following Stockwell (1976), Dubinsky and Williams (1995) also suggest that "... the re-analysis of *for* in preclausal position, from preposition to complementizer, opened the way for the temporal prepositions to follow. ..." (1995:129). They examine several cases of temporal prepositions in English and propose a re-categorization of temporal prepositions as complementizers.

Given these analyses, it is thus quite natural for us to consider that *gei* has undergone a similar process of grammaticalization, starting as a verb, then being re-categorized as a preposition and finally a complementizer.²² It is necessary to note that this proposed process of re-categorization conforms to *unidirectionality*, characteristic of grammaticalization as purported in the literature:

An intrinsic property of the process is that grammaticalization is unidirectional, that is, that it leads from a 'less grammatical' to a 'more grammatical' unit, but not vice-versa. (Heine, Claudi, and Hunnemeyer 1991: 4).

On the scale of grammaticality under the functionalist approach, a complementizer is indeed a more grammatical unit than a preposition, which in turn is more grammatical than a verb.

Under the generative approach to grammaticalization, on the other hand, this phenomenon is argued to result from a combination of movement and re-analysis within the functional structure projected above a lexical element (Simpson (1998), Wu (2000, 2002), cf. Roberts and Roussou (1999)). In this view, the grammaticalization of *gei* may proceed as follows: a verbal *gei* first raises to the preposition head dominating it and later on becomes re-interpreted as actually being base-generated in this higher position. The preposition *gei* then moves on to the functional Comp head dominating it, is fully reanalyzed as a Comp and is consequently base-generated in the Comp position. We leave open

²² In our opinion, grammaticalization of the prepositional and complementizer uses of *gei* have been carried through to completion. Thus, it is suggested that the forming or reanalysis of the complementizer use is not on-going but has been accomplished, and we also believe that the complementizer use is a later derivation. With thanks to one of the anonymous reviewers for urging us to clarify our view on this point.

other alternative formal analyses of grammaticalization facts. For our purposes, what is relevant is that the path we propose for a discussion of the grammaticalization of *gei* conforms exactly to what has been attested in other languages.

If this proposed grammaticalization account of the diverse categories of *gei* is correct, then it entails that the post-DO preposition *gei* and the purposive *gei* must have been verbs at an earlier stage of historical development. This is supported by Huang et al.'s (1999) study, citing Peyraube (1986) and C. F. Sun (p.c.), that in these two patterns the position of *gei* is occupied by the verb *yu*³. We consider this observation as indicating the verbal status of *gei* in history, but in contrast to Huang et al.'s conclusion, we do not think the post-DO *gei* remains a verb synchronically. As argued earlier, it does not behave like a verb but rather like a preposition and a complementizer synchronically.^{23 24}

²³ While in this paper we have only discussed the categories of *gei* in constructions in (1b), (2) and (3b), relating them by a path of grammaticalization, we do not reject the possibility that *gei* in other constructions may be also described in a similar way. See S. Huang (2004) for a functional approach that considers a wide range of uses of *gei*. In this connection, one of the anonymous reviewers is interested in knowing our opinion of *gei* in (i).

(i) Tian na! Jingran gei ta xia qi yu lai le.
heaven exclamanation-marker surprisingly give it down start rain come LE
'Oh God! It's surprisingly starting to rain.'

Such use of *gei* is also discussed in S. Huang (2004), who lists *gei-ta* as some kind of redundant expression indicating emphasis. In our opinion, this *gei-ta* sequence is a PP with *gei* possibly introducing an expletive object *ta*.

²⁴ One of the anonymous reviewers wonders whether there is evidence that shows that the proposed grammaticalization account relating these different categories of *gei* is superior to an alternative account that simply lists these categories as totally unrelated ones (but as homophones). As is well-known by researchers working in the field of grammaticalization, true supporting evidence of such a kind has to be drawn from diachronic corpus (see e.g., Hopper and Traugott (1993) and Roberts and Roussou (2003)). Although such diachronic research is beyond the scope of this article, we believe that the result of such research will confirm the predictions made under our account of the process of grammaticalization. That is, the verbal use of *gei* precedes the prepositional use of it, which in turn precedes the complementizer use.

5. CONCLUDING REMARKS

In brief, we have concentrated on identifying the category of the post-DO *gei* with an optional purpose clause. It may be properly licensed as heading a preposition phrase; otherwise, it is generated as a complementizer of the purposive CP. Considering the use of *gei* as an independent verb and as a preposition in other constructions, we then suggest that this diverse inventory of possible categories for *gei* follows from a process of grammaticalization which *gei* has undergone. It is worth noting that the analysis of the post-DO *gei* NP sequence as a PP makes it promising to consider a dative shift type movement which relates the double object construction (1a) and the dative construction (1b). If such a movement exists, one possibility as suggested by A. Li (1990) is that (1a) is transformed from (1b) and then P and V undergo reanalysis.²⁵ In cases where there is an absence of such a transformation, (1a) and (1b) are generated independently. Given that V-*gei* as in (1a) has been generally agreed to be a verbal complex, it appears that most researchers opt for the base-generation approach (e.g. A. Li (1990), C.-C. Tang (1990), Huang et al. (1999)) with the exception of Zhang (1990) for the transformational approach (cf. Teng (1975) and T. Tang (1979)). On the other hand, suppose the transformational approach is taken. The complex nature of V-*gei* need not be explained by assuming that P and V undergo reanalysis. Rather, we may assume that this V-*gei* complex results from P to V raising out of the derived PP, as indicated in (50), on a par with the type of incorporation as described by Baker (1988).

- (50) Ta song-gei_j [t_j Lisi]_i yi-ben shu t_i
he give-give Lisi one-CL book
'He gave Lisi a book.'

We leave to future studies the interesting issue as to whether the dative construction and the double object construction are transformationally related.

²⁵ But note that in Aoun and Li (1989), a different view is taken, namely that the double object construction is the underlying structure while the dative construction is derived from it.

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漢語『給』的語類及語法化

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本文探討兩個主要的議題。一是論證漢語的『給』字有許多不同語類，而在不同的句構中，『給』字呈現不同語類的特徵，因此將『給』字一概視為介詞或連動式第二動詞的分析無法解釋所有『給』字句的特徵。筆者認為在不同的句構中，『給』字應分析為動詞、介詞、或連詞(complementizer)。二是從形式語法的角度，討論『給』字的語法化現象。『給』字由最初的動詞，經歷語法化的過程，而逐漸發展出介詞和連詞的用法。