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Word Order Change in Mandarin Chinese from the Perspective of Syntactic Typology and Universals— A Case Study of the *Ba + Gei* Structure

Haiyong Liu

Wayne State University, USA

Abstract

In this paper, I first compare features in Mandarin that are related to head directionality with those listed in Greenberg (1966) and Dryer (1992) and examine the hypothesis by Tai (1973) and Li & Thompson (1974) that Mandarin is drifting from an SVO to an SOV language. Then, I study the under-studied *ba + gei* structure in Mandarin, which reflects the possibility of an emerging split case-marking system, i.e., Nominative-Accusative marking in the usually perfective *ba + gei* structure and zero-marking elsewhere. Data from Korean, Japanese, and Russian further supports the possible reanalysis in the creation of a case-marking system in the *ba + gei* structure, which is more of a feature of an SOV language.

Keywords: *ba*-structure, Chinese, word order, split case-marking, reanalysis

Haiyong Liu

Department of Classical and Modern Languages, Literatures, and Cultures

Wayne State University, Detroit, MI, USA

Phone: 313-577-9937; Email: an1884@wayne.edu

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1. Introduction

According to traditional grammar (Wang 1954, Chao 1968, Norman 1988, Ma 1991, Sun 2006 etc.), Mandarin Chinese¹ is an SVO² or head-initial language, as typified by (1):

- (1) Zhangsan chi pingguo.
Zhangsan eat apple
'Zhangsan eats apples.'

In a corpus study of both written and spoken texts, for example, Sun & Givón (1985) find that, on average, 90% of the syntactic objects follow the verb in Modern Mandarin.

Tai (1973) and Li & Thompson (1974), however, propose that Mandarin is drifting towards becoming an SOV or head-final language. Not restricted to the ordering of V and O, one of their arguments, for example, is the existence of the commonly used *ba*-structure that has a preverbal object: S + *ba* + O + V, as shown in (2):

- (2) Wo ba piao diu le.
I BA ticket lose Perf
'I lost my ticket.'

Gao (2008) also reports that head-final phrases are mainly found

¹ This paper discusses only Mandarin, which, very often, is referred to as Chinese. Further research is in order on how or whether the conclusion in this paper applies on other Chinese dialects, such as Cantonese, Wu, and Hakka etc.

² Some abbreviations used in this paper: Perf – perfective, Prog – progressive, Exp – experiential, Nom – nominative, Acc – accusative, Dat – dative, Erg – ergative, Abs – absolutive, Ins – instrumental, Y/N – yes-no question, S – subject, V – verb, O – object, VP – verb phrase, NP – noun phrase, PP – preposition phrase, SPEC – specifier.

in spoken Northern dialects, while head-initial structures remain mostly in written Chinese and Southern dialects.

Although there have not been too many works on Mandarin word-order change since the 70s (Dryer 2003), research on *ba*-structure has been prominent in Chinese linguistics for decades (Li & Thompson 1981; Sun & Givón 1985; A. Li 1990; Huang 1992; Sybesma 1992; Sun 1995, 1996; F. Liu 1997, 2007; Bender 2000; Huang et al. 2009 among many others). But there has been little literature on one very robust structure in spoken Mandarin nowadays, which I will call the *ba* + *gei* structure, as shown in (3):

- (3) Wo ba piao gei diu le.
 I BA ticket GEI lose Perf
 ‘I lost my ticket.’

What is interesting about (3) is that it is a blend of the *ba*-structure and the *gei*-structure, the former with active voice, as shown in (2), and the latter passive voice, as shown in (4) below:³

- (4) Piao gei (wo) diu le.
 ticket GEI I lose Perf
 ‘The ticket was lost (by me).’

In this paper, I argue that the juxtaposition of the active voice and the passive voice in (3) indicates the emergence of a Nom-Acc case-marking system in Mandarin, as part of the SVO-to-SOV word-order change suggested by Tai (1973) and Li & Thompson (1974). I relate the restriction on the distribution of Nom-Acc case marking to that of the split case-marking system as found in Hindi, Georgian, and Dyirbal etc., and argue that the

³ I will show in 3.2 the relationship between the more colloquial *gei*-passive and the more formal *bei*-passive.

categorical shift of case-assigners as a result of reanalysis is not uncommon in language change, as can be seen from Korean, Japanese, and Russian.

In 2, I introduce the SVO-to-SOV change hypothesis and compare Mandarin with Greenberg's (1966) word-order related universals. In 3, I discuss the *ba + gei* structure and present a literature review. In 4, I argue that an incipient case-marking system is emerging in Mandarin and 5 is the conclusion.

2. SVO versus SOV in Mandarin

2.1. Tai and Li & Thompson

Although the ordering of S, V, and O serves as the most important parameter for word order typology as suggested by Sun & Givón (1985), it should not be the single factor that determines the basic word order of a language. Many languages, for example, are not easy to be placed on a scale of word-order types (Comrie 1989). After studying some head-directionality-related features of Mandarin that are beyond VP level, Li & Thompson (1974) suggest that Mandarin is midway towards an SOV language from the current SVO status, or rather back to the SOV order of Archaic Chinese, a vestige of Proto-Sino-Tibetan (Yu 1981, Dryer 2003, D. Liu 2004). By the same token, Tai (1973) contends that SOV is the underlying word order of Mandarin. Their arguments include: (i) the V + PP pattern in Archaic Chinese has been replaced by PP + V, as shown by the contrasts in (5):

- (5) a. chu yu you gu
 emerge from dark valley
 'emerge from a dark valley'
 (Li & Thomspou 1974: 201) (Mencius, Archaic Chinese)

- b. Wo zai meiguo xuexi.
I in America study (Modern Chinese)
- c. *Wo xuexi zai meiguo.
I study in America
'I study in America.' (Modern Chinese)

(ii) The frequently used *ba*-structure employs an SOV order, which I will study in greater detail in 3.1. (iii) Passive voice has the S + *bei/gei* 'by' (+ Agent) + V structure, as shown in (6):

- (6) a. Zhangsan bei (Lisi) piping le.
Zhangsan by Lisi criticize Perf
'Zhangsan was criticized (by Lisi).'
- b. Zhangsan piping Lisi le.
Zhangsan criticize Lisi Perf
'Zhangsan criticized Lisi.'

(iv) Postpositions occur, as shown in (7):

- (7) Qiang shang guazhe yifu hua.
wall on hanging a picture
'On the wall, there hangs a picture.'

(v) Compound nouns, compound verbs, and verbal suffixes have become exceedingly common, which is a tendency towards agglutination, characteristic of SOV languages.

2.2. Mandarin against Greenberg's Word Order Universals

In his well-known article, Greenberg (1966) proposes 45

implicational word order universals and argues that if a language has some word order P, then it also has word order(s) Q; for example, his Universal 4 states “with overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional” (p. 79). Greenberg’s (1966) universals have been commonly used to explain word-order type and change in languages (cf. Hawkins 1979). As illustrated in the Appendix, I compare 24 head-position-related features in Mandarin against some parameters figuring in Greenberg’s (1966) universals. Not all these 24 parameters are centrally discussed by Greenberg, but they are more specifically applicable to Mandarin (cf. Comrie 1989). Actually, many of them are discussed in greater detail in Dryer (1992), based on the data from a total of 625 languages and from the perspective of head-dependent correlations. I do not discuss parameters that deal with properties that are not relevant to Mandarin, for example, gender distinctions, agreement, or VSO order etc.

Tai (1973), in the spirit of Greenberg (1966), Baker (1970), McCawley (1970), Bach (1971), and Sanders (1972), has discussed the following ordering relations in Mandarin to support his argument that the underlying word order in Chinese is SOV:

- 1) relative clause before the noun
- 2) adjective before the noun
- 3) genitive before the governing noun
- 4) adverbial before the main verb
- 5) adverb before adjective
- 6) proper noun before common noun
- 7) identical order for question and statement
- 8) final particle for yes-no questions
- 9) postpositional
- 10) standard before marker before adjective in comparative constructions

Based on Tai's (1973) findings, the Appendix offers a more comprehensive comparison between word-order parameters for head-initial and head-final languages and those of Mandarin. I give examples in the Appendix to illustrate the corresponding features.

The statistics shows that 17 (8 regarding NP, 3 VP, 1 adposition, 1 affixation, 1 negation, 2 question, 1 subordination), or the majority, of the 24 features of Mandarin examined are typical of head-final languages, and 9 (4 regarding VP, 1 adposition, 2 conjunction, 1 comparative, 1 subordination), or the minority, are typical of head-initial languages.

However, in terms of aspect-marking and adposition, i.e., feature 12 and feature 15, Mandarin shows properties that belong to both groups. Mandarin has both the pre-verbal progressive aspect marker *zai* and the post-verbal suffixical aspect markers *le*, *guo*, and *zhe* for perfective, experiential, and durative respectively. Also, both prepositions and postpositions exist in Mandarin (cf. Gao 2008).

The finding of 17 head-final versus 9 head-initial features in Mandarin supports the hypothesis that Mandarin is predominantly a head-final or SOV language. In fact, regarding the relative positions between the relative clause and the noun (feature 3), between the prepositional phrase and the verb (feature 14), and between the standard and the adjective in comparative structures (feature 18), Mandarin is the only supposedly VO language that shows OV properties out of a pool of 61 languages for feature 3, 60 languages for feature 14, and 32 languages for feature 18 respectively in Dryer (1992). Chappell, Ming & Peyraube (2007) contribute the perplexing head-ordering typology of Mandarin and other Sinitic languages to their contact with head-final Altaic languages in the North and Tibetan-Burman languages in the South (cf. Li & Thompson 1974, Gao 2008).

3. The *Ba* + *Gei* Structure

3.1. The *Ba*-Structure

As we have seen in 2.1, Tai (1973) and Li & Thompson (1974) hold that, with its unique word order and other idiosyncrasies, the *ba*-structure is crucial for the study of Mandarin word order typology and word-order change. In this section, I review some important properties and standard analyses of the properties regarding *ba*.

Prior to the Tang Dynasty (618-906), *ba* was a verb meaning ‘to take hold of’ (Li & Thompson 1974, Peyraube 1996), as shown in (8):

- (8) Yu qin ba tian zhi ruiling.
 Yu himself take heaven’s mandate
 ‘Yu himself took the mandate of heaven.’
 (Li & Thompson 1974: 202) (Mo Zi, 5th century)

In Modern Mandarin, according to Huang et al. (2009), *ba* has been grammaticalized as an accusative case marker (Huang 1992), or a preposition (A. Li 1990), or a coverb (Li & Thompson 1981), or an independent functional category (Zou 1993, Sybesma 1999), or a verb (Bender 2000), depending on the analysis. Nevertheless, the consensus among all these analyses is that *ba* assigns an accusative case to the noun that follows it, i.e., the *ba*-NP.

Wang (1954) calls *ba*-structure the disposal structure, which states the effect of the action expressed by the verb, *da* ‘to break’ in (9), has on the referent denoted by the *ba*-NP, *beizi* ‘cup’ in (9). Mei (1978) and Liu (1997) consider perfective aspect marking a necessary condition on the *ba*-structure, as shown by the contrast between (9) and (10).⁴

(9) Wo ba beizi da-po le.
 I BA cup hit-break Perf
 ‘I broke the cup.’

(10) *Wo ba beizi da-po.
 I BA cup hit-break
 ‘I break the cup.’

Szeto (1988) relates the use of perfective aspect in *ba*-structure to a broader requirement that *ba*-structure denote a temporally bounded event. To extend the description this way would account for the fact that telic V-V compounds occur in a *ba*-structure even when there is no perfective aspect marking. (11) and (12), for example, include a V-V compound *xie-cuo* ‘write-wrong’ or *xie-dui* ‘write-right’ but are marked with either the habitual aspect marker *changchang* ‘often’ (cf. H. Liu 2008) or a modal *yinggai* ‘should.’ This is consistent with Giorgi & Pianisi’s (1997) proposal that habitual aspect actually indicates a series of completed perfective activities over time. But we will see later in 3.3 that in *ba* + *gei* structure, perfective marking is required; the corresponding *ba* + *gei* structure of (11) and (12) are not allowed.

(11) Lisi changchang ba zhege zi xie-cuo.
 Lisi often BA this character write-wrong
 ‘Lisi often writes this character wrong.’

⁴ A reviewer uses the following example to show that *le* can be omitted in certain context in *ba*-structure:

Wo ba beizi dapo, *(jiu) qu mai xinde.
 I BA glass break then go buy new.one
 ‘I will get a new one, if I break the glass.’

I consider the first half of the sentence not a complete sentence; and in such a construction, *jiu* ‘then’ is obligatory.

- (12) Lisi yinggai ba zhege zi xie-dui.
Lisi should BA this character write-right
'Lisi should write this character right.'

From another angle, (13) and (14), in comparison with (11) and (12), show that if a *ba*-structure is marked with the habitual aspect or a modal verb, i.e., not with the perfective aspect, the verb must be a V-V compound:

- (13) *Lisi yinggai ba zhege zi xie.
Lisi should BA this character write
'Lisi should write this character.'

- (14) *Lisi changchang ba zhege zi xie.
Lisi often BA this character write
'Lisi often writes this character.'

Furthermore, (15) and (16) show that a *ba*-structure marked with progressive or experiential aspect is ungrammatical:

- (15) a. *Lisi zai ba zhege zi xie.
Lisi Prog BA this character write
'Lisi is writing this character.'

- b. *Lisi zai xie zhege zi.
Lisi Prog write this character
'Lisi is writing this character.'

- (16) a. *Lisi ba zhege zi xie guo.
Lisi BA this character write Exp
'Lisi once wrote this character.'

- b. Lisi xie guo zhege zi.
 Lisi write Exp this character
 ‘Lisi once wrote this character.’

Hopper & Thompson (1980) link *ba*'s perfectivity to its high transitivity (cf. Sun 1996, F. Liu 1999) that specifically deals with a temporally bounded event. They give the following parameters in (17) to measure the transitivity of a certain clause, which ranks *ba*-structure very high on the scale of transitivity, considering its argument valency of at least two, its choice of only volitional bound action verbs, and its object being entirely affected by the predicate:

(17) Parameters of transitivity

	High transitivity	Low transitivity
Participants	2 or more participants: A(gent) and O(bject)	1 participant
Kinesis	action	non-action
Aspect	telic	atelic
Punctuality	punctual	non-punctual
Volitionality	volitional	non-volitional
Affirmation	affirmative	negative
Mode	realis	irrealis
Agency	A high in potency	A low in potency
Affectedness of O	O totally affected	O not affected
Individuation of O	O highly individuated	O non-individuated

(17) explains why *ba*-structure is not compatible with stative verbs, which do not involve very strong transitivity for their experiencer subject, as shown in (18):

- (18) *Wo ba ta xihuan le.
 I BA he like Perf
 ‘I liked him.’

Another unique property of the *ba*-structure is that the *ba*-NP tends to be definite. Compare the NPs in (19) and (20): the former, not in a *ba*-structure, has an indefinite interpretation, while the latter, in a *ba*-structure, has a definite interpretation. Mandarin does not have articles as English does and *ba*-structure is a technique to force bare nouns to receive a definite interpretation (Li & Thompson 1981):

(19) Wo xie zi le.
I write character Perf
'I have written characters.'

(20) Wo ba zi xie le.
I BA character write Perf
'I have written these characters.'

Hopper & Thompson (1980) relate the definiteness of the *ba*-NP to the disposal nature of the *ba*-structure that emphasizes the affectedness of the object; according to them, a definite object is often viewed as more completely affected than an indefinite one.

Pragmatically F. Liu (2007) argues that the choice of the *ba*-structure mainly depends on two factors: when the *ba*-NP carries old information but is less topical than the sentential subject, and when the *ba*-NP carries new information and is heavy, i.e., being a complex noun phrase with a relative clause.⁵

⁵ Weight plays a role in word order variation (Quirk et al. 1972, Hawkins 1994); for example, constituents that are heavy tend to occur later in a sentence, whereas constituents that are light tend to occur earlier in a sentence. In English, as shown by the contrast between (ic) and (id), increasing the weight of the direct object *a book* with a relative clause allows it to have a better chance to appear at the end the sentence:

- (i) a. I gave John a book.
b. I gave a book to John.

Huang (1982) argues for *ba*-transformation, by which a post-verbal object is pre-posed. And *ba* is the preposition that makes such a pre-posing possible by assigning an accusative case to the object, i.e., the *ba*-NP. Similarly, A. Li (1990) treats *ba* as a base-generated case assigner, assigning an accusative case to the *ba*-NP,⁶ without going through NP-pre-posing. Zou (1993) contends that *ba* has its own projection, i.e., the *Ba*-P, which selects an aspect phrase or a V-V compound phrase.

In sum, I have shown that the SOV *ba*-structure prefers perfective aspect marking; it demonstrates high transitivity and requires a definite object, with *ba* assigning an accusative case to it.

-
- c. *I gave to John a book.
 d. ?I gave to John a book that no one had ever read.

In Mandarin, as shown by the contrast between (iia) and (iic), modifying the direct object *jiu* ‘wine’ with a relative clause puts it later in the sentence, even after the perfective marker or the Currently Relevant State (CRS) marker *le*:

- (ii) a. *?Wo he le jiu.
 I drink Perf wine
 ‘I drank wine.’
- b. Wo he jiu le.
 I drink wine CRS
 ‘I drank wine.’
- c. Wo he le ni song wo de na-ping jiu.
 I drink Perf/CRS you give I Nominalizer that-bottle wine
 ‘I drank the bottle of wine that you gave me.’

⁶ Similar to (19) and (20), it is not uncommon for a case-marker to be reanalyzed as a definite marker. Givón (1976) shows that in Spanish the dative morpheme *a* is reanalyzed as a marker of definiteness or animateness of the object.

3.2. The *Gei*-Structure

As demonstrated in (6), the passive *bei*-structure suggests possible ongoing word-order change in Mandarin as well. In colloquial speech, *bei* can very often be replaced by *gei* that is mostly used as a verb meaning ‘to give’ (Xu 1992), as shown in (21):

- (21) Ta gei le wo yiben shu.
 he give Perf I a book
 ‘He gave me a book.’

(22), (23), and (24) are examples for how *gei*-passive, i.e., S + *gei* + (Agent) + V is formed. After studying several spoken Mandarin corpora, Shi (2004) reports that in everyday speech, *gei* is actually more popularly used than *bei*:

- (22) Ta ba wo da le. (active voice)
 he BA I hit Perf
 ‘He hit me.’

- (23) Wo gei ta da le.
 I GEI he hit Perf
 ‘I was hit by him.’

- (24) Wo gei da le.
 I GEI hit Perf
 ‘I was hit.’

Typologically, Xu (1992) concludes that, very often, the lexical verb ‘to give’ in various Chinese dialects develops into a functional passive voice marker. In particular, Shi (2004) suggests that the functional passive marker use of the lexical verb *gei* ‘to

give’ is a result of grammaticalization that started in the 14th century, from a serial verb structure that has *gei* as VP1. In (25), for example, Shi proposes that *ni* ‘you’ was originally the agent of VP2 *qiaoqiao* ‘to take a look’ and *dongxi* ‘thing’ was the patient of VP2; i.e., S + VP1(*gei*) + NP1(Agent) + NP2(Patient) + VP2, the archetype of today’s passive voice: S + *gei* + Agent + VP2. Later on, with less reliance on context and other syntactic changes in Mandarin, especially the frequent loss of NP2 that results in: S + *gei* + Agent + VP2, as shown in (26), *gei* is one step closer to being today’s passive marker structurally.

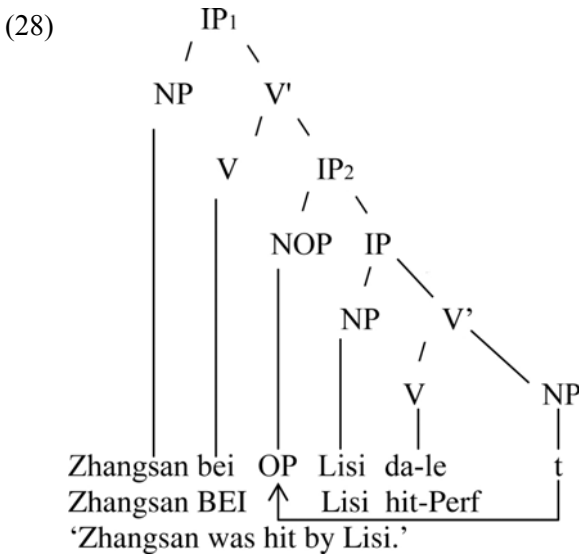
- (25) Wo gei ni yijian dongxi qiaoqiao.
 I give you a thing look
 ‘I (will) give you something to take a look.’ or ‘Let me show you something.’
 (*Dream of the Red Chamber*, 18th century)

- (26) Wo gei ni qiaoqiao.
 I give you look
 ‘I (will) give you to take a look.’ or ‘Let me show you.’

Shi (2004), as well as Wang (1954), Koopman (1984), A. Li (1990), Sun (1995), and Her (2005) identify *gei* and *bei* as prepositional passive voice markers that can also introduce the optional agent with an absolutive case, as shown in (4), on a par with the analysis of the *by*-phrase in English passive. Such a prepositional use of *gei* is similar to that in (27), a preposition that introduces the beneficiary bearing a dative case.

- (27) Wo gei ta da dianhua le.
 I GEI he make phone.call Perf
 ‘I called him.’

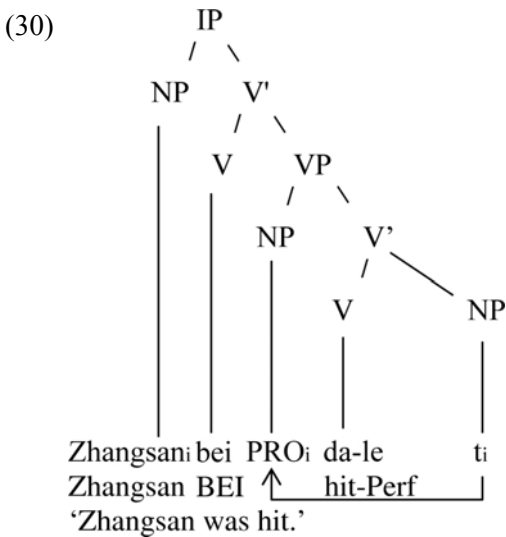
Other linguists such as Feng (1995), Ting (1998), Huang (1999), Tang (2001), and Huang et al. (2009), however, do not treat *gei* in the passive voice as a preposition; instead, it is a verb in the so-called long passive voice that includes the optional agent, *Lisi*, as in (28) or a semi auxiliary in a short passive that does not include the agent, as in (30). In (28), *bei* introduces a clausal complement *Lisi da-le* ‘Lisi hit’ whose null-operator (NOP) object moves to the left-periphery of IP₂ to separate *bei* and *Lisi*, two elements that cannot form a moveable constituent like other prepositional phrases like *gei ni* ‘to you’ in (29a) and (29b). The matrix subject *Zhangsan* is argued to be an experiencer.



- (29) a. Wo gei ni dadianhua.
 I to you call
 ‘I call you.’

- b. Wo dadianhua gei ni.
 I call to you
 'I call you.'

According to Huang et al. (2009), in (30), the short passive voice, *bei* is like a deontic modal that selects a VP *da-le* 'to hit' as its complement. The internal argument of *da-le*, a PRO that is controlled by *Zhangsan*, the experiencer subject, moves to [SPEC, VP], with a motivation similar to that of NP movement in English passive voice.



The reason why *bei* selects a VP in (30) but an IP in (28) is mainly out of the concern that only long passive allows sentential place adverbial, but not short passive, as shown by the contrast between (31) and (32).

(31) Zhangsan bei Lisi zai xuexiao pianzou le.
Zhangsan BEI Lisi at school abduct Perf
'Zhangsan was abducted by Lisi at school.'

(32) *Zhangsan bei zai xuexiao pianzou le.
Zhangsan BEI at school abduct Perf
'Zhangsan was abducted at school.'

In sum, in this section, I have introduced the case-assigning or small clause-introducing functions of *gei*, the passive voice marker in Mandarin. Whether *bei* is a preposition that assigns an absolutive case (Shi 2004 et al.) or a verb that introduces a sentential complement in long passive and a modal that selects a VP in short passive (Huang et al. 2009) is beyond the scope of this paper. I will show in 3.3, however, the existing analyses of passive voice cannot offer a satisfactory explanation when it comes to the *ba* + *gei* structure.

3.3. The Blending of the *Ba*- and *Gei*-Structures

As shown in (3), repeated below as (33), the *ba* + *gei* structure combines the active *ba*-structure and the short passive *gei*-structure:

(32) *Zhangsan bei zai xuexiao pianzou le.
Zhangsan BEI at school abduct Perf
'Zhangsan was abducted at school.'

(33) Wangwu ba Lisi gei da le.
Wangwu BA Lisi GEI hit Perf
'Wangwu hit Lisi.'

(33) consists of two segments from both the *ba*- and the *gei*-structures (the short passive): *Wangwu ba Lisi da* ‘Wangwu hit Lisi’ and *Lisi gei da le* ‘Lisi was hit’ respectively. The *ba* + *gei* structure has become so productive that some speakers even find it uncomfortable to drop *gei*.

Following the consensus that *ba* assigns an accusative case to the *ba*-NP in an isolate *ba*-structure like (2), either through NP movement (Huang 1982) or at its situ position (A. Li 1990), let’s first assume that *ba* does the same thing to *Lisi* in (33). Then the *gei* in (33) has either deleted the agent *Wangwu*, cf. Shi (2004) et al., or selects a VP *da le* ‘hit’ with a PRO in its specifier position, cf. Huang et al. (2009). Apparently, if we follow the agent-deletion or null-agent analysis, we have to explain why *Wangwu*, the deleted or null agent, reappears in the subject position. If we follow the VP complement-selection analysis, then the Case-Filter Theory will be violated, which mandates a one-to-one matching between case assigners and case assignees. *Lisi* receives two cases, one accusative from *ba*, and one nominative from the verb *gei*. An amalgam of the available analyses of the isolate *ba*- and *gei*-structures does not seem to solve the puzzles we face.

Shi (2004) briefly discusses the *ba* + *gei* structure like (34). He treats *gei* as a preposition followed by a deleted personal pronoun, i.e., a deleted dative. Indeed, in his examples, all the undeleted datives are personal pronouns, like (35):

(34) Wo ba ta gei zhifu le.
 I BA he GEI control Perf
 ‘I put him under control.’

(35) Wo ba reshui gei nimen duan le.
 I BA hot.water GEI you cut.off Perf
 ‘I have cut off the hot water for you.’

The personal pronoun *nimen* ‘you’ in (35) does have a dative interpretation, the whole PP with a beneficiary reading as can be seen from the English translation. But first, stranded prepositions are not allowed in Mandarin, unless the dropped object can be recovered from context, as shown by the contrast between (36a) and (36b):

- (36) a. *Wo gei dadianhua.
 I GEI call
 ‘I call.’
- b. Q: Ni gei ta dadianhua ma?
 you GEI he call Y/N
 ‘Do you call him?’
- A: Gei.
 ‘Yes.’

Second, (34), (33), and (3), supposedly all with the deleted beneficiary personal pronoun after *gei* as argued by Shi (2004), actually do not have a beneficiary reading. Accordingly, (34)-type *ba + gei* structure and (35)-type *ba + gei* structure are not related, and only the former is of interest to us.

In sum, the analysis of the *ba + gei* structure is not simply a combination of the analyses of *ba*-structure and *gei*-structure; instead, we need to treat it as a whole, a new independent structure.

4. An Incipient Case System

4.1. SOV plus Nominative-Accusative Marking

Relating the emergence of the *ba + gei* structure to the

SVO-to-SOV shift suggested by Tai (1973) and Li & Thompson (1974), I propose that the co-occurrence of *ba* and *gei* in one sentence indicate the emerging of an incipient Nom-Acc case-marking system in Mandarin. As Hawkins & Gillan (1988) and Trask (1996) hold, the presence of case marking is more of a feature of an SOV language. A search on The World Atlas of Language Structure (WALS) (Haspelmath et al. 2008) confirms such observation: overall 80.2% (73/91) of the studied SOV languages have case-marking and only 27.5% (19/69) of the studied SVO languages have case-marking.

In the *ba* + *gei* structure, repeated below as (37), there is no longer the optional agent that needs to have an absolutive case assigned by *gei* as in an isolate passive voice like (23). Neither is *gei* a full-fledged passive marker any more, since its co-occurrence with *ba* would result in semantic anomaly. I argue that *gei* now is reanalyzed as a suffix that marks an accusative case on Lisi, the patient. Consistent with Shi (2004), Wang (1954), Koopman (1984), A. Li (1990), Sun (1995), and Her (2005), *gei* is still a case-assigner, as in an isolate passive structure; but in (37), *gei* no longer assigns the absolutive case from left to right. As for *ba*, I suggest that it has shifted to assign a nominative case to *Wangwu*, also as a suffix based on the reanalysis. Such a new division of labor is similar to the case-marking scheme of an SOV language like Japanese and Korean, a point to which I return in 4.3:

- (37) Wangwu ba Lisi gei da le.
 Wangwu hit Lisi Gei hit Perf
 ‘Wangwu hit Lisi.’

Also, such an analysis is sympathetic with Sun’s (1996) high transitivity analysis of *ba*, which signifies the affectedness caused by the agent onto the patient, both now clearly marked with the

help of the suffixal Nom-Acc marking system.

How, then, do we explain that case-marking does not exist in other structures? This is related to the aspect-sensitive split case-marking system in languages like Hindi and Dyirbal that utilize the Nom-Acc system for non-perfective sentences and Ergative-Absolutive system for perfective sentences. For example, in Hindi, (38) is non-perfective and has zero-markings for nominative and accusative cases. But (39) is perfective and has ergative *-ne* marking on the subject and absolutive zero-marking on the object:

(38) Raam kittab nahii parhtaa.
 RamNom bookAcc not read.Imperf
 ‘Ram does not read a book.’ (Mahajan 2003: 220)

(39) Ramm-ne kitaab parhiii.
 Ramm-Erg bookAbs read
 ‘Ramm has read a book.’ (ibid.)

What happens in Mandarin is not exactly the same as the split-case marking system that usually involves ergative. But I have shown in 3.1 that *ba*-structure prefers perfective marking, unless having a telic V-V compound with an optional modal verb as in (11) and (12), revealing the connection between aspect and case-marking, when *ba* is treated as a case assigner (A. Li 1990, Huang 2009). Interestingly, once we have the blended *ba + gei* structure, the perfective marker *le* is required of all predicate types, not omissible any more, as can be seen in (40) and (41) that correspond to the isolate *ba*-structures, which can leave *le* out with a V-V compound, i.e., (11) and (12). In other words, the *ba + gei* structure relies more on perfective marking than the isolate *ba*-structure.

- (40) Lisi changchang ba zhege zi xie-cuo ?*(le).
 Lisi often BA this character write-wrong Perf
 ‘Lisi often writes this character incorrectly.’
- (41) Lisi yinggai ba zhege zi xie-dui ?*(le).
 Lisi should BA this character write-right Perf
 ‘Lisi should write this character correctly.’

I, therefore, argue that Mandarin employs a Nom-Acc marking system in the obligatorily perfective *ba* + *gei* structure. As Smet (2009) has noted about reanalysis, many instances of reanalysis take place on a small scale and affect initially only some isolated constructions. Nevertheless, when a sentence does not require the perfective aspect, zero morphology is at play for case-valuing. Once again, after Hindi, we see another split case marking system in Mandarin, and again, aspect, more specifically, perfective aspect is the divider.

4.2. *Gei* not an Emphatic Particle

An alternative solution might be treating *gei* as a particle for emphasis. The contrast with respect to punctuation between (42) and (43) shows that speakers do find that *ba* + *gei* structure sounds more emphatic than the isolate *ba*-structure, as if *gei* was used as an intensifier for intonation:

- (42) Wo ba piao diu le.
 I BA ticket lose Perf
 ‘I lost the ticket.’
- (43) Wo ba piao gei diu le!
 I BA ticket GEI lose Perf
 ‘I lost the ticket!’

But the problem is that it is very rare in Mandarin to find an intonation or speech act particle not sentence-finally, cf. item 21 in the Appendix (cf. Cheung 2009 for similar preference in Cantonese). This said, empirically, it is not a good idea to treat *gei*, which appears sentence-internally, as simply an intonation particle (Charles Li, personal communication). Such a usage of *gei* resembles the original interjectional use of the Japanese direct object marker *o*, which I will discuss in more detail in the following section.

4.3. Reanalysis of Case Markers

McWhorter (2008) and Sikorska (2008) argue that reanalysis, particularly in languages like Chinese, can be triggered by language contact. The *ba* + *gei* structure suggests that Chinese seems to be developing a case marking system similar to that of Japanese, Korean, or Hindi, some of the neighboring languages that Chinese has close contact with and might have influenced it in terms of word order and case-marking. For example, Japanese and Korean are SOV languages. *Ga* and *o* are nominative and accusative case markers respectively in Japanese:

- (44) *Watashi ga kono tochi o kau.*
 I Nom this land Acc buy
 ‘I will buy this land.’ (Shibatani 1996: 62)

Ga and *reul* are nominative and accusative case markers respectively in Korean:

- (45) *Nae ga sangja reul yeon da.*
 I Nom box Acc open Declarative
 ‘I open the box.’ (Sohn 1999: 293)

The similarity between (44), (45), and the *ba + gei* structure in (33) and (43) even allows us to do a word-for-word translation between Mandarin, Japanese, and Korean, which suggests that Mandarin *ba + gei* structure is becoming a case-marking mechanism through reanalysis, a path that Japanese and Korean have undergone.

First, Park & Lee (2006, 2009) argue that case markers have generally evolved from adverbs through grammaticalization, which in the beginning are either verbs or nouns. For example, modern Korean dative markers *-pwokwo* and *-tele* start as verbal bases, similar to *ba* ‘to hold’ and *gei* ‘to give.’ As shown in (47), in the 15th century, *-tele/tol(i)* is a fused form of the accusative case and the verb ‘to accompany,’ and *-pwokwo* can be traced back to the verb ‘to see’ in the 15th century, as shown in (48):

(46) Modern Korean (Park & Lee 2006: 257)

Ku-ka	na-tele/pwokwo	malhaess-ta.
he-Nom	I-Dat	said-Declarative

‘He talked to me.’

(47) 15th century *Nungemkyengenhay* (ibid.: 289)

Camwo-i	na-lol	tol(i)-ey	Kiphachen-	pwoy-
			ul	sowol.
mom-Nom	I-Acc	accompany-	Kiphachen-	show-
		Connective	Acc	Honorific

‘Mom will bring me and show (me) Kiphachen.’

(48) 15th century *Welinsekpwo* (ibid.: 290)

Hon	salom-ol	pwo-kwo	mwul-wotoy.
one	person-Acc	see-Complimentizer	ask-Connective

‘(Someone) saw one person and asked him.’

Second, according to Shibatani (1996), both the nominative case

marker *ga* and the accusative case marker *o* in Japanese come into being as a result of reanalysis. *Ga*, for example, was a genitive marker in Old Japanese, linking two NPs in subject position as shown in (49) or the complementizer in a relative clause as in (50); and then it underwent reanalysis and became nominative case marker in Modern Japanese:

(49) Wa ga sono ni ume no hana tiru.
 I Genitive garden Locative plum Genitive blossom fall
 ‘In my garden fall plum blossoms.’ (Shibatani 1996: 349)

(50) Wa ga misi ie
 I GA saw house
 ‘the house that I saw’ (ibid.: 350)

The accusative marker *o*, developed from an interjectional particle, was occasionally used to mark the direct object conveying the meaning of exclamation, lamentation, or wish in Old Japanese, as shown by the contrast between (51) and (52):

(51) . . . aretaru kyoo mireba kanasimo.
 ruined capital see sad
 ‘(my heart grows) sad when I see the ruined capital.’
 (ibid.: 340)

(52) . . . aretaru kyoo o mireba kanasiki.
 old capital O see sad
 ‘How sad it is to see the old capital.’ (ibid.: 340)

The above discussions of the Korean and Japanese data suggest the reanalysis of Mandarin case-markers *ba* and *gei*, formerly verbs, is not completely a wild card; the following is an example

from Russian to show the categorical shift of case assigners as a result of reanalysis (Madariaga 2008). For example, non-verbal predicates in Russian used to receive an accusative case as shown in (53):

- (53) Narekь Ćjudina vovodu.
 said ChudinAcc commanderAcc
 ‘He designated Chudin as the commander.’
 (Madariaga 2008: 253)

With the extension of legal texts in the 12th century, the initially innovative structure with an instrumental case on a non-verbal predicate like (54) became “fashionable,” although the instrumental predicate NP seems to receive two different theta-roles, one from a null P(reposition) that assigns the instrumental case and another inherently from Pred(icate)P. Such conflict was solved by new learners who received the affected primary language data by reanalyzing PredP as the sole case-valuing head with the null P head completely eliminated. (55) is a present-day example, where the instrumental case morphology has replaced the former accusative case morphology for a non-verbal predicate:

- (54) Postavi mja popmb arxepiskopь svjatyi Nifontь.
 put meAcc Priest.Ins archbishop saint Nifont
 ‘The archbishop St. Nifont designated me as their priest.’
 (ibid.: 253)

- (55) Taras byl kosmonavtom.
 TarasNom was astronautIns
 ‘Taras was an astronaut.’ (ibid.: 254)

Similarly to the blending of the active and passive voices in

Mandarin, Grahek (2008) has discussed the unique middle voice in Slovene that shares common properties with both active and passive voices but should be set apart from both, due to its interpretation, morphology, and the theta roles of the subject and the object. It is possible that the *ba + gei* structure started as a slip of the tongue: the speaker switched to the *gei*-passive in the middle of an utterance that intended to be an active *ba*-structure. But eventually the new generation reanalyzed and adapted into their primary language data the co-occurrence of *ba + gei*, a case of discontinuity of transmission in language acquisition (Lightfoot 1999, 2006).

5. Conclusions

I have compared the head-initial and head-final features of Mandarin Chinese (more details in the Appendix), and discussed the possible formation of Nom-Acc case-markings in *ba + gei* structure, another property shared by mainly SOV languages, as a result of reanalysis. Such a conclusion corroborates the hypothesis that Mandarin is on its way changing from an SVO language to an SOV language, as Tai (1973) and Li & Thompson (1974) have proposed. A system similar to split case-marking between Nom-Acc and zero-marking is emerging in Mandarin. Also seemingly radical categorical shift of case-assigners from verbs as a result of reanalysis is not uncommon, as supported by examples from Korean, Japanese, and Russian. I relate such word order change to language contact between Chinese and its neighboring head-final languages.

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Appendix

Table 1. Mandarin and Word-Order Universals

Features	Head-Initial Languages	Mandarin	Head-Final Languages	Mandarin
NP (8 in total) Mandarin: head-initial: 0 head-final: 8	1 Numerals and adjectives usually follow the common noun.		Demonstratives, numerals, and modifying adjectives usually precede the common noun.	√ na sange hao ren that 3 good person 'those 3 good people'
	2 Possessor NPs usually follow the possessed NP.		Possessor NPs usually precede the possessed NP.	√ wo de shu my book 'my book'
	3 Relative clauses are almost always post-nominal.		Relative clauses precede the noun head.	√ qu de ren go Nominalizer person 'the person who goes'
	4 Relative pronouns are rare.		True relative pronouns are never used; resumptive pronouns are almost never used if the restricting clause is pre-nominal.	√ (see 3 above)

Features	Head-Initial Languages	Mandarin	Head-Final Languages	Mandarin
VP (6 in total) Mandarin: head-initial: 4 head-final: 3	5	There are never co-relatives and internally headed clauses appear not to occur.	There might be co-relatives.	√ Shui lai shui hao. who come who good 'Whoever comes is good.'
	6	N/A	Family names usually precede given names.	√
	7	N/A	Number names between 11 and 19 usually have tens before units.	√
	8	N/A	Articles are non-existent.	√
	9	Sentential complements follow the head.	√ Wo rang ta zou. I let he go 'I let him go.'	Sentential objects of verbs of thinking and saying and embedded question clause commonly occur pre-verbally.
10	Sentential objects always follow the verb and are commonly finite.	√ Wo shuo ta zou le. I say he leave Perf 'I said/say that he (had) left.'	N/A	

Features	Head-Initial Languages	Mandarin	Head-Final Languages	Mandarin
11	Independent modals are regularly preverbal.	√ neng lai can come 'can come'	Modal suffixation	
12	Independent aspect markers are preverbal.	√ zai he Prog drink 'be drinking'	Aspect suffixation	√ he le/guo/zhe drink Perf/Exp/Durative 'have drunk/once drunk /drinking'
13	Manner adverbs follow the main verb.		Adverbs are usually preverbal.	√ zixide kan carefully read 'read carefully'
14	Prepositional phrases are postverbal.		Prepositional phrases are preverbal.	√ zai jia chi at home eat 'eat at home'
Adposition (1 in total) Mandarin : head-initial: 1 head-final: 1	Prepositions	√ zai jia li at home inside 'at home'	Postpositions	√ zai jia li at home inside 'at home'

Features	Head-Initial Languages	Mandarin	Head-Final Languages	Mandarin
Conjunction (2 in total) Mandarin: head-initial: 2 head-final: 0	16 N and N for conjoined NPs.	√ ni he wo you and I 'you and me'	Discontinuous conjunctions are usually post-nominal.	
	17 'S and S' for conjoined sentences. Overt S-level coordinate conjunctions may be less common than verb medial languages.	√ Ta hui erqie tebie hao. he can and very good 'He can and is very good at it.'	'S and S' or 'SS and' for conjoined sentences.	
Comparative (1 in total) Mandarin: head-initial: 1 head-final: 0	18 Comparative marker precedes the standard.	√ Wo bi ta gao. I BI he tall 'I am taller than him.'	Standard precedes the comparative marker.	
Affixation (1 in total) Mandarin: head-initial: 0 head-final: 1	19 There is more pre-fixation.		Suffixation is far more common than pre-fixation.	√ (cf. Li & Thompson 1974, 1981; Norman 1988; Diarmu 2007)
Negation (1 in total) Mandarin: head-initial: 0 head-final: 1	20 N/A		Independent preverbal negation	√ bu/mei/bie qu not go 'don't/didn't/Don't go!'

Features	Head-Initial Languages	Mandarin	Head-Final Languages	Mandarin
Questions (2 in total) Mandarin: head-initial: 0 head-final: 2	Question particles are usually sentence initial.		Speech act indicators are usually sentence-final.	✓ Ni lai ma? you come yes-no 'Do you come??'
22	Wh-questions are very commonly formed by fronting the question words.		There usually is no Wh-movement.	✓ Ni chi shenmo? you eat what 'What do you eat??'
Subordination (2 in total) Mandarin: head-initial: 2 head-final: 0	The verb in a subordinate S is commonly finite.	✓ Wo renwei ta mei lai. I think he not come 'I think he didn't come.'	subordinate S is commonly non-finite.	
24	Subordinate expressions invariably follow that to which they are subordinate.		Subordinate expressions invariably precede that to which they are subordinate.	✓ Ni lai ihou, zhao wo. you come after look-for me 'After you come, look for me.'