

A Tale of *BEI*, *JIAO*, *RANG*, and *GEI*: a comparison and analysis of passive markers in Mandarin Chinese

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Abstract

The canonical passive marker *bei* in Mandarin Chinese has drawn a great deal of interest and attention in the past decades, yet not so much attention has been paid onto three other alternatives to *bei*—*gei*, *jiao*, and *rang*. They are frequently used in colloquial northern dialects of Mandarin Chinese. The three words are interchangeable with *bei* in certain circumstances, yet are not allowed to replace *bei* in others. This paper focuses on comparing the properties and distributions of the three colloquial markers with the canonical *bei*. By presenting and analysing natural language data, this paper argues for the they are true passive markers like *bei*, but are also different from *bei* in terms of their distribution in Short Passives and preferences of verb types.

1 Introduction

Defined in terms of morphosyntactic characterizations, a passive clause is semantically transitive and possesses the following morphosyntactic properties (Payne 1997):

- 1 *The AGENT (or most AGENT-like participant) is either omitted or demoted to an oblique role.*
- 2 *The other core participant (the most PATIENT-like argument in a multi-argument clause, a.k.a. the P) possesses all properties of subjects relevant for the language as a whole.*
- 3 *The verb possesses any and all language-specific formal properties of intransitive verbs.*

From the aspect of discourse functions, on the other hand, a passive clause exists in contexts where the A (the most AGENT-like argument of a multi-argument clause) occupies a lower topicality than the P (Payne 1997). In addition, subject affectedness is recognized as a prototypical semantic property of passive clauses cross-linguistically (Shibatani 1985).

Passive clauses in Chinese, such as the typical one shown in (2), conform with the cross-linguistic characterizations mentioned above and possess the following structure in (1),

- (1) NP_{patient/theme/experiencer} + BEI + (NP_{agent}) + VP.

Though there is no morphological realization of the theta roles on surface, the theta roles of both NPs in (1) are indicated in the subscriptions for easier references. The theta roles and comparisons of the following passive sentence (2a) with its active counterpart suggest that the A is demoted or even can be eliminated, the P is promoted to a subject position, and the valence of the verb is decreased to one like an intransitive verb.

- (2) a. NP_{patient} NP_{agent} VP
[Zhangsan_i]bei [Lisi] [da-le]. (BEI Passive)
Zhangsan BEI Lisi hit-ASP¹
'Zhangsan was hit by Lisi.' (adapted from Huang 1999)
- b. NP_{agent} VP NP_{patient}
[Lisi] [da-le] [Zhangsan_i]. (Active)
Lisi hit-ASP Zhangsan
'Lisi hit Zhangsan.' (adapted from Huang 1999)

In addition, a functional word without concrete meanings—such as *bei* in (2a)—is required in Chinese passive sentences, following the sentence initial NP and preceding the second NP or the. Since *bei* is the most commonly used functional markers in Chinese passive sentences, sentences like the one in (2a) are also known as “*bei*-sentences”. The morpheme *bei* used to be an action verb with the meaning ‘receive’, while in modern Mandarin Chinese, it is almost fully grammaticalized, mainly serving as a functional marker in passive sentences and no longer maintaining its original meanings as a verb.

¹ Abbreviations in glossing: ASP=aspectual marker, SG=singular, CL=classifier, POSS=possessive, CAUS=causative marker, PASS=passive marker, GERUND=gerund, PST=past tense

In fact, *bei* is not the only word that can appear in this position. Three others—*jiao*, *rang*, and *gei*—can replace *bei* in the same location in sentence (2a) without changing the meaning of the sentence, as shown in (3). The three words, *gei*, *jiao*, and *rang*, are purely functional in passive sentences, but they are derived from and can still be used as action verbs, with the meanings ‘give’, ‘ask’, and ‘allow’ respectively.

- (3) NP_{patient} NP_{agent} VP
- a.[Zhangsan] **gei** [Lisi] [da-le].
 Zhangsan GEI Lisi hit-ASP
 ‘Zhangsan was hit by Lisi.’
- NP_{patient} NP_{agent} VP
- b.[Zhangsan] **jiao** [Lisi] [da-le].
 Zhangsan JIAO Lisi hit-ASP
 ‘Zhangsan was hit by Lisi.’
- NP_{patient} NP_{agent} VP
- c.[Zhangsan] **rang** [Lisi] [da-le].
 Zhangsan RANG Lisi hit-ASP
 ‘Zhangsan was hit by Lisi.’

Alternations among the four functional words, *bei*, *jiao*, *rang*, and *gei*, in passive sentences are not rare, especially in colloquial northern dialects of Mandarin Chinese (Hashimoto 1988). However, not all passive sentences allow each of the four to appear as the passive marker. In fact, as pointed out in Hashimoto (1988) and several other literatures (Xu 1994, and etc.), *gei*, *jiao*, and *rang* do show syntactic and typological differences from *bei*.

Questions then arise: Are sentences like those in (3) with the structure [NP_{Patient} + GEI/JIAO/RANG + NP_{Agent} + VP] true passive sentences, how are *gei*, *jiao*, and *rang* distributed in passive sentences, and what regulates their apparent differences from *bei*. What regulates the distribution of *gei*, *jiao*, and *rang* to be different from *bei*? In this paper, I first argue that these sentences are true passive by showing that they comply with the main characteristics of passive structures and also share properties with *bei*. I then discuss the differences in the distributions of *gei*, *jiao*, and *rang* from *bei* from two aspects—their occurrences in Agent-less passives (Short Passives) and their preferences of verb types. With the collected data, I argue for that only *bei*, but not *gei*, *jiao*, and *rang*, can function as passive markers in Agent-less passives and that *gei*, *jiao*, and *rang* are more natural to take verbs depicting negative or adversative events, while *bei* does not have such preference on the adversity of verbs. By incorporating similar patterns from other languages, I hope to not only account for the consistent patterns, but also shed lights on the understanding of *bei*-passives as well as passive sentences in general.

Section 2, with natural language data, will show that sentences in the structure [NP_{Patient} + GEI/JIAO/RANG + NP_{Agent} + VP] meet the definitions of passives in general and share several properties that *bei* has. Section 3 discusses the two most apparent and consistent differences found among the four functional markers, so as to derive a generalization of their distributions. Then in

section 4, typological evidences of patterns similar to those presented in section 3 will be considered, including natural data and analysis of passives in Vietnamese, Japanese, and Italian. Last but not least, section 5 concludes and points out several striking puzzles that still remain unsolved.

As a native speaker of a northern dialect of Mandarin Chinese, I generated most of the data used in this paper myself. Though currently I am in an English-speaking environment, I still have consistent input of Mandarin Chinese. Besides my own judgements of the grammaticality, I also include my consultant's judgements, who is a woman of age 40, Mandarin Chinese monolingual with proficient level of English, and currently living in a city in China with a northern dialect of Mandarin as the mainstream. She generally has less contacts with other languages and dialects than me, but all grammaticality judgements discussed here only represent personal intuitions and may not apply to other speakers of Mandarin with different language backgrounds. The question mark ‘?’ is used in front of data sentences that are not completely ungrammatical but might be unnatural to produce or comprehend. The pound sign ‘#’ denotes sentences syntactically grammatical but semantically ambiguous or with different meanings.

2 *JIAO*, *GEI*, and *RANG* as True Passive Markers

As briefly mentioned in the previous section, *gei*, *jiao*, and *rang* are interchangeable with *bei* in some circumstances yet distributes differently from *bei* in some others. Before further comparisons of the four words, it is necessary to first decide whether the sentences in the structure [NP_{Patient} + GEI/JIAO/RANG + NP_{Agent} + VP] should be truly regarded as passive sentences or they are just passive-like structures that express non-volitional meanings. Revisiting the definition of passives and testing several properties of the canonical passive structure—*bei*-sentences suggest that *gei*, *jiao*, and *rang* are, like *bei*, true passive markers.

2.1 Agent Demotion and Patient Promotion

According to the definition of passive clauses, two major functions of passive sentences are demoting the Agent to a less prominent position and promoting the Patient to a higher topicality. In sentences (3), for example, with the presence of *gei*, *jiao*, and *rang*, it is natural and intuitive to interpret the lower NP, *Lisi*, as the Agent of the hitting event, while the sentence-initial NP, *Zhangsan*, as the Patient (or Patient-like arguments) of the event. Even if the lower NP is an inanimate object or abstract notion and initial NP is animate, the pattern of a demoted Agent and a promoted Patient still holds, as shown in the following example sentence.

- (4) NP_{Patient} NP_{agent} VP
 a. [Zhangsan] *jiao/gei/rang* [mutou] [dang-zhu le].
 Zhangsan JIAO/GEI/RANG wood block-up ASP
 'Zhangsan was got in the way by (a piece of) wood.'

- NP_{Patient} NP_{agent} VP
 b. [Zhangsan] *bei* [mutou][dang-zhu le]
 Zhangsan BEI wood block-up ASP

‘Zhangsan was got in the way by (a piece of) wood.’

It is not always the case that the Patient is promoted and the Agent is demoted in sentences with the presence of *gei*, *jiao*, and *rang*, since the three words can also appear in active sentences as functional words, which will be discussed in more details later. The examples above, however, do show that it is possible for the three words to mark true passive sentences, as *bei* does.

Another primary characteristic of passive sentences is the subject affectedness (Shibatani 1985). The subject in a passive clause, which usually corresponds to the object of its active counterpart, is affected by the event. The sentences with the presence of *gei*, *jiao*, and *rang* in the structure of [NP_{Patient} + GEI/JIAO/RANG + NP_{Agent} + VP] exhibit this feature as well. Since the Patient (or Patient-like arguments) is in the position of the matrix subject and an internal argument of the root verb in the active counterpart, the action or event denoted by the rooted transitive verb must exert some effect on the subject NP. The subject, *Zhangsan*, in sentences (3) and (4), for example, is affected by the hitting and blocking events, undergoing the consequences of these actions.

Besides the compliances with the definition, structural features shared by *gei*, *jiao*, *rang* and the canonical passive marker *bei*, especially those special structures unique to passives in Chinese or East Asian languages, are also strong evidences to show that they are parallel. The next few subsections will show these structural similarities.

2.2 Long Passive and its Properties

The passives structure seen in the previous examples (2) and (3) is known as Long Passive, in which the Agent NP is present (Huang 1999; etc.). As shown in (2) and (3), *bei*, *jiao*, *rang*, and *gei* can all mark Long Passives. Moreover, *jiao*, *rang*, and *gei* also share four structural properties that have been found in passive sentences with *bei* in Huang (1999).

First, subject orientated adverbs, such as *guyi* ‘intentionally’, are allowed in *BEI*-passive structures. Sentence (5a) shows the presence of *guyi* ‘intentionally’ in a *BEI*-sentence, while sentences (5b-d) are the counterparts with *gei*, *jiao*, and *rang*.

- (5) a. Zhangsan guyi **bei** Lisi da-le.
Zhangsan intentionally BEI Lisi hit-ASP
'Zhangsan intentionally hit by Lisi.' (Huang 1999)
- b. #Zhangsan guyi **gei** Lisi da-le.
Zhangsan intentionally GEI Lisi hit-ASP
'Zhangsan was intentionally hit by Lisi.'
OR 'Zhangsan intentionally hit Lisi.'
- c. Zhangsan guyi **jiao** Lisi da-le.
Zhangsan intentionally JIAO Lisi hit-ASP
'Zhangsan was intentionally hit by Lisi.'
- d. Zhangsan guyi **rang** Lisi da-le.
Zhangsan intentionally RANG Lisi hit-ASP
'Zhangsan was intentionally hit by Lisi.'

The presence of the subject-orientated adverb *guyi* ‘intentionally’ in *bei*-passives suggests that *bei* behaves as a matrix verb, assigning Experiencer theta-role to its base-generated subject, *Zhangsan*. This is different from a point of view that regards *bei* as a preposition and the subject NP is moved to the sentence initial position from the object position of the root verb *da* ‘hit’ (Huang 1999). In sentences (5c) and (5d) with *jiao* and *rang* in place of *bei*, the Experiencer role of the subject NP *Zhangsan* is even more obvious: *Zhangsan* intentionally causes the hitting action to happen to him and he is the Experiencer of this event. According to the definition of passive clauses in section 1, these sentences here with subject-orientated adverbs can still be characterized as passive clauses, since the core participant except the Agent, though not necessarily a Patient, possesses the properties of a subject, while the true Agent of the hitting action is demoted to a lower topicality than the P (the most Patient-like argument). Similarly, in (5b), despite the ambiguity, when sentence is interpreted as passive, the subject NP is the Experiencer and the second NP *Lisi* is the demoted Agent of the hitting action. In fact, the ambiguity between active and passive readings comes from the usage of *gei* as a functional word in disposal constructions, which will be discussed in more details in a later section.

Second, the NP following the passive marker *bei* does not form a preposition constituent with *bei*, since they cannot move together across time phrases to any other position or to be preposed to a sentence-initial position as shown in (6), like preposition phrases do (Huang 1999).

- (6) a. Zhangsan zuotian ***bei*** Lisi da-le.
Zhangsan yesterday BEI Lisi hit-ASP
'Zhangsan was hit by Lisi yesterday.' (Huang 1999)
- b.*Zhangsan ***bei*** Lisi zuotian da-le.
Zhangsan BEI Lisi yesterday hit-ASP (Huang 1999)
- c.****Bei*** Lisi Zhangsan zuotian da-le.
BEI Lisi Zhangsan yesterday hit-ASP (Huang 1999)

Zuotian ‘yesterday’ is a temporal adverb. The ungrammaticality of (6b) and (6c) show that *bei* is not allowed to move around with the Agent NP *Lisi* and thus behaves differently from prepositions in Mandarin. A similar and consistent pattern is shown in the following minimal triplets with *gei*, *jiao*, and *rang* in place of *bei*.

- (7) a. Zhangsan zuotian ***gei/jiao/rang*** Lisi da-le
Zhangsan yesterday GEI/JIAO/RANG Lisi hit-ASP
'Zhangsan was hit by Lisi yesterday.'
- b. *Zhangsan ***gei/jiao/rang*** Lisi zuotian da-le.
Zhangsan GEI/JIAO/RANG Lisi yesterday hit-ASP
- c. ****gei/jiao/rang*** Lisi Zhangsan zuotian da-le.
GEI/JIAO/RANG Lisi Zhangsan yesterday hit-ASP

Therefore, *gei*, *jiao*, and *rang*, like *bei*, should have different syntactic status from prepositions.

Third, the reflexive *ziji* ‘self’ in *bei*-passive sentences can take either of the two NPs as its antecedent. It is widely acknowledged that the reflexive *ziji* ‘self’ in Chinese must take a subject as its antecedent, either in long distance or local, as shown in (8a). However, in *bei*-passive sentences like (8b), different from its behavior in (8a), the reflexive *ziji* ‘self’ can be co-indexed with either the initial NP *Zhangsan* or the second NP *Lisi* (Huang 1999).

- (8) a. Zhangsan gen Lisi taolun-le ziji de xiangfa.
 Zhangsan with Lisi discuss-LE self DE opinion
 ‘Zhangsan_i discussed with Lisi_j his_{i/j} own opinion.’ (Huang 1999)
- b. Zhangsan bei Lisi guan zai ziji de jiali.
 Zhangsan BEI Lisi lock at self DE home
 ‘Zhangsan_i was locked by Lisi_j in his_{i/j} own room.’ (Huang 1999)

The co-index of the reflexive with either of the two NPs in *bei*-passive sentences suggests that both NPs are external arguments—the initial NP is the external argument of *bei*, while the second NP is the external argument of the root verb and forms a proposition selected by *bei* together with the root verb. (Huang 1999). With *gei*, *jiao*, and *rang* in the same location as *bei*, a pattern similar to that in (8b) is shown below.

- (9) a. Zhangsan gei Lisi guan zai ziji de fangjian.
 Zhangsan GEI Lisi lock at self DE room
 ‘Zhangsan_i was locked by Lisi_j in his_{i/j} own room.’
- b. Zhangsan jiao Lisi guan zai ziji de fangjian.
 Zhangsan JIAO Lisi lock at self DE room
 ‘Zhangsan_i was locked by Lisi_j in his_{i/j} own room.’
- c. Zhangsan rang Lisi guan zai ziji de fangjian.
 Zhangsan RANG Lisi lock at self DE room
 ‘Zhangsan_i was locked by Lisi_j in his_{i/j} own room.’

Sentences in (9) indicate that the two NPs in passive sentences with *gei*, *jiao*, and *rang* are both external arguments, like those in *bei*-passive sentences. Therefore, similar to *bei*, *gei*, *jiao*, and *rang* also select propositions.

Fourth, resumptive pronouns are also allowed in *bei* passive sentences in certain circumstances. In general, the object position in passive sentences needs to be empty, without either pronouns or anaphora, as shown in the following English passive sentence and Chinese passive sentence.

- (10) a. John was hit (*him) by Bill.
- b. Zhangsan bei Lisi da-le (*ta).
 Zhangsan BEI Lisi hit-LE (*3SG.)
 ‘Zhangsan was hit by Lisi.’

However, in more complex sentences with more extra elements, it is acceptable for a pronoun to occur. This kind of pronoun is called resumptive pronoun and co-indexed with the subject (the P) of the passive sentences (Huang 1999). An example is given in (11).

- (11) Zhangsan_i bei Lisi da-le ta_i yi-xia.
 Zhangsan BEI Lisi hit-ASP 3SG. once

‘Zhangsan was hit once by Lisi.’ (Huang 1999)

Replacing *bei* with *gei*, *jiao*, and *rang* respectively results in the following sentences in (12), but according to my consultant’s judgements, they are either unnatural (12a), or less likely to be interpreted as passive sentences than causative sentences (12b and c) (personal communication). The possibility of the three functional words to be present in active sentences will be addressed in details later on.

- (12) a. ?Zhangsan **gei** Lisi da-le ta yi-xia.
Zhangsan GEI Lisi hit-ASP 3SG. once
(Intended) ‘Zhangsan was hit by Lisi once.’
- b. #Zhangsan **jiao** Lisi da-le ta yi-xia.
Zhangsan JIAO Lisi hit-ASP 3SG. once
'Zhangsan made Lisi to hit him (someone other than Lisi or Zhangsan) once.'
OR ‘Zhangsan was hit by Lisi once.’
- c. #Zhangsan **rang** Lisi da-le ta yi-xia.
Zhangsan RANG Lisi hit-LE 3SG. once
'Zhangsan made Lisi to hit him (someone other than Lisi or Zhangsan) once.'
OR ‘Zhangsan was hit by Lisi once.’

In fact, the presence of resumptive pronouns in *bei*-passives is very consistent, as shown by more examples below (Huang 1999).

- (13) a. Zhangsan **bei** Lisi huaiyi (ta) tou-le qian.
Zhangsan BEI Lisi suspect (3.SG) steal-ASP money
'Zhangsan was suspected (by Lisi) [he] to have stolen the money.' (Huang 1999)
- b. Zhangsan **bei** Lisi (ba ta) pian de tuantuanzhan.
Zhangsan BEI Lisi (BA 3.SG) cheat DE run-around
'Zhangsan was pushed around like a fool by Lisi.' (Huang 1999)

In both of the passive sentences (13a) and (13b), the optional third person singular pronoun *ta* occupies the otherwise empty object position of the root verb. With *gei*, *jiao*, and *rang* in the same position as *bei*, the following minimal pairs show similar patterns as those in (12).

- (14) a. ?Zhangsan **gei** Lisi huaiyi ta tou-le qian.
Zhangsan GEI Lisi suspect (3.SG) steal-ASP money
(intended) ‘Zhangsan_i was suspected (by Lisi) [he_i] to steal the money.’
- b. ?Zhangsan **gei** Lisi (ba ta) pian de tuantuanzhan.
Zhangsan GEI Lisi (BA 3.SG) cheat DE run-around
(intended) ‘Zhangsan was pushed around like a fool by Lisi,’
- (15) a. #Zhangsan **jiao/rang** Lisi huaiyi ta tou-le qian.
Zhangsan JIAO/RANG Lisi suspect (3.SG) steal-ASP money
'Zhangsan made Lisi suspect that he (someone else) have stolen the money.'
OR ‘Zhangsan_i was suspected (by Lisi) [he_i] to steal the money.’
- b. #Zhangsan **jiao/rang** Lisi (ba ta) pian de tuantuanzhan.
Zhangsan JIAO/RANG Lisi (BA 3.SG) cheat DE run-around
'Zhangsan made Lisi to push him (someone else) around like a fool.'
OR ‘Zhangsan was pushed around like a fool by Lisi.’

Changing *bei* with *gei* in the place, shown in (14), makes the sentences sound unnatural to me and my consultant as well, while with *jiao* and *rang* in the same location, as seen in (15), the two sentences are ambiguous and more natural to be interpreted as causative sentences, in which Zhangsan caused Lisi to do the actions of the root verbs (personal communication). When they are interpreted as passives, the third person singular pronoun *ta* is a resumptive pronoun, as in (13). Therefore, it is not entirely impossible for *gei*, *jiao*, and *rang* to behave like *bei* and take a resumptive pronoun.

The properties of passive sentences with *bei*, *jiao*, *rang*, and *gei* respectively are summarized in the following table:

	Subject Oriented Adverb	Different from Preposition	Co-reference of reflexive with both NPs	Resumptive pronouns
Bei	Yes	Yes	Yes	Yes
Jiao	Yes	Yes	Yes	#
Rang	Yes	Yes	Yes	#
Gei	#	Yes	Yes	?

Although there're a few ambiguities and unnaturalness, the four functional words share the four syntactic properties in general. As pointed out in Huang (1999), the four properties tested on *bei* support that in Long Passives, *bei* is not a preposition, but rather a matrix verb that selects a whole proposition, instead of just an NP, as its argument. Therefore, the similar pattern found in the passive sentences with the other three functional words indicates that they should have the same Grammatical Function as *bei* in Long Passives.

2.3 Indirect Passives

Indirect passive is rarely found in English, but very common in Chinese and some other East Asian languages. This type of passive sentences is called “indirect” because there’s no correspondence or mapping between the NP in the subject position of the passive sentences and the object argument of the root verb (Huang 1999). In canonical passive sentences like (2a), the object position of the root verb is generally empty or occupied by a resumptive pronoun in some circumstances, while in indirect passives, since the NP in the subject position is not the object argument of the root verb in the corresponding active sentences, the object position of the root verb is not empty but occupied by the real internal argument selected by the root verb. Sentence (16a) is a typical example of indirect passives, while (16b) is its active counterpart.

The active counterpart (16b) suggests that the object argument of the verb *daduan* ‘hit-break’ is actually *Zhangsan de yi-tiao tui* ‘one of Zhangsan’s legs’, instead of the NP *Zhangsan* in the subject position of (16a). Therefore, indirect passives like (16a) shows a missing correspondence between the NP in subject position of the passive sentence and object argument of the root verb. Furthermore, even though what Lisi broke is in fact not *Zhangsan* but rather his leg and the subject of (16a), *Zhangsan*, is not the Patient of the root verb, sentence (16a) still conforms with the definition of passive clauses mentioned at the beginning, since the subject NP is still a Patient-like argument, undergoing and being affected by the breaking event.

However, the subject NP, *Zhangsan*, in (16a) does correspond to a position other than the object argument of the root verb—it is the possessor of the object *yi-tiao tui* ‘one leg’ and there is a gap in the noun phrase *Zhangsan-de yi-tiao tui* ‘one of Zhangsan’s leg’ in the object position of the root verb. Sentences like (16a) are thus called “inclusive” indirect passives, different from the other type of indirect passives—“exclusive” or “adversative” passives, in which the subject NP in the passive sentence is not related to any position in the predicate (Huang 1999). Sentence (17a) below is an example of exclusive indirect passives, and (17b) is its active counterpart.

- (17) NP_{theme/experiencer} NP_{agent} VP

a. [wo] bei [ta] [zheme yi zuo], jiu shenme dou kan-bu-jian-le.
 I BEI 3SG thus one sit then everything all can-not-see-ASP.
 'As soon as I had him sitting this way [on me], I couldn't see anything at all.'
 (adapted from Huang 1999)

NP_{agent} VP NP_{theme/experiencer}

b. [ta] [zheme yi zuo], [wo] jiu shenme dou kan-bu-jian-le. (active counterpart)
 3SG thus one sit I then everything all can-not-see-ASP.
 'As soon as I had him sitting this way [on me], I couldn't see anything at all.'

Comparing the meanings of (17a) and (17b), it is clear that the subject NP *wō* 'I' does not have a corresponding gap in the VP *zheme yi zuo* 'sitting in this way'. Yet the subject NP is still the Experiencer of the event, undergoing and being affected by the event of another person sitting in this way.

Replacing *bei* in the two types of indirect passive sentences above with the other three markers respectively results in the sentences in (18) and (19).

I GEI/JIAO/RANG 3SG thus one sit then everything all can-not-see-ASP.
 ‘As soon as I had him sitting this way [on me], I couldn’t see anything at all.’

In (18), the use of *gei*, *jiao*, and *rang* causes ambiguities between passive and active readings, but the possibility of these sentences being interpreted as passives indicates the *gei*, *jiao*, and *rang* allow inclusive indirect passive structures as *bei* does. An apparent parallel between *bei* and the other three functional words is seen in the grammatical exclusive indirect passive sentence in (19). For a more convincing generalization, an additional set of inclusive and exclusive sentences is presented below and they conform with the pattern found in (18) and (19).

- (20) NP_{experiencer} NP_{agent} VP NP_{patient}
 a. [Zhangsan] bei [tufei] [dasi-le [bab]].
 Zhangsan BEI bandit kill-ASP. father
 ‘Zhangsan had his father killed by the bandits.’ (adapted from Huang 1999)

- NP_{experiencer} NP_{agent} VP NP_{patient}
 b. [Zhangsan] gei [tufei] [dasi-le [bab]].
 Zhangsan GEI bandit kill-ASP. father
 ‘Zhangsan had his father killed by the bandits.’

- NP_{experiencer} NP_{agent} VP NP_{patient}
 c.#[Zhangsan] jiao/rang [tufei] [da-si le [bab]].
 Zhangsan JIAO/RANG bandit kill-ASP. father
 ‘Zhangsan had his father killed by the bandits.’
 OR ‘Zhangsan made the bandits to kill his father.’

- (21) NP NP VP
 a. [wo] you bei [[ta] zi-mo-le].
 1SG again BEI 3SG self-touch-ASP
 ‘I again had him ‘self-draw’ [on me].’² (adapted from Huang 1999)

- NP NP VP
 b. [wo] you gei/jiao/rang [[ta] zi-mo le].
 1SG again GEI/JIAO/RANG 3SG self-touch-ASP
 ‘I again had him ‘self-draw’ [on me].’

Similar to (18) and (19), the two minimal pairs in (20) and (21) further support the possibility of both types of indirect passives with all of the four functional words.

2.4 Long-distance Passive

Another special characteristic of passive sentences in Chinese and East Asian languages is the “unbounded dependency” (Huang 1999). The type of passive sentences with this characteristic, such as the one in (22), is called “Long-distance Passive”.

- (22) NP_{patient} NP_{agent1} NP_{agent2}
 a. [Zhangsan] bei [Lisi] pai [jingcha] zhua-zou-le. (Long-distance Passive)
 Zhangsan BEI Lisi send police arrest-ASP.
 ‘Zhangsan was “sent-police-to-arrest” by Lisi. (= ‘Zhangsan underwent Lisi’s sending the police to arrest him.’) (adapted from Huang 1999)

² *Zimo* ‘self-draw’ is a terminology in Mahjong games. According to Huang, Li & Li (2009), it describes a situation “where one converts by drawing the last matching tile by oneself, rather than converting on an opponent’s discarded tile”.

- b. Lisi pai jingcha zhua-zou-le Zhangsan. (Active)
 Lisi send police arrest-ASP. Zhangsan
 'Zhangsan was "sent-police-to-arrest" by Lisi.'

The true Agent of the entire event in (22) is the second NP *Lisi*, though the subject NP *Zhangsan* is directly affected by the NP in long distance—the Agent of the subevent *zhua-zou* ‘arrest’. The object position of the first verb *pai* ‘send’ is occupied by an NP *jingcha* ‘police’, but the object of the embedded verb has a gap that corresponds to subject of the passive sentence. In other words, the correspondence is not local but rather in long distance, which explains why this type of passive sentences is called Long-distance Passives. With *gei*, *jiao*, or *rang* in the same location as *bei*, the passive sentence shown below in (23) is grammatical and natural.

- (23) NP_{patient} NP_{agent1} NP_{agent2}
 [Zhangsan] gei/jiao/rang [Lisi] pai [jingcha] zhua zou le.
 Zhangsan GEI/JIAO/RANG Lisi send police arrest-ASP.
 'Zhangsan was "sent-police-to-arrest" by Lisi.'

Therefore, the grammatical sentence in (23) supports that Long-distance Passives can have *gei*, *jiao*, and *rang* as functional markers as well, and the three functional words share the “unbounded dependency” property of *bei*.

To sum up, the similarities among the four functional words discussed in this section are included in the table below.

	Four properties	Indirect Passives	Long-distance Passives
BEI	Yes	Yes	Yes
JIAO	Yes (# in resumptive pronouns)	Yes (# in inclusive indirect passives)	Yes
RANG	Yes (# in resumptive pronouns)	Yes (# in inclusive indirect passives)	Yes
GEI	Yes (# in subject-orientated V and ? in resumptive pronouns)	Yes (# in inclusive indirect passives)	Yes

From the comparisons above, it is clear that sentences in the structure of *gei*, *jiao*, and *rang* replacing *bei* in the same location not only comply with the definition of passive sentences, but also share several structural features with *bei*-sentences, implying that sentences with *gei*, *jiao*, and *rang* can be true passive sentences. Furthermore, as the meanings of the sentences do not change with the alternations of the four functional words, they seem to be interchangeable in these sentences and have the same grammatical function—behaving more like a matrix verb than a preposition. However, if they are completely the same, then wouldn't it be inefficient to have four differently pronounced and written morphemes to express the same meaning? In fact, their syntactic and semantic differences are as well apparent. The next section presents the differences among the four functional words with natural language examples and tries to account for the variations.

3 Differences in *BEI*, *JIAO*, *RANG*, *GEI* in Passive Sentences

As observed by many (Hashimoto 1989 & etc.), passive sentences with *bei*, *jiao*, *rang*, and *gei* are distinctive in terms of syntactic structures; besides, the semantics of the root verbs also play an important role in regulating the occurrences of the four functional words in passive sentences. In this section, differences among the four functional words are explored and discussed in more depth.

3.1 Short Passives

The first and also the most obvious distinction between the four functional words is that only *bei*, but not *gei*³, *jiao* and *rang* can be in Agent-less passive sentences, which are known as Short Passives. According to the definition of passive sentences, the Agent (or the most-Agent like argument) of the root verb is eliminated or demoted. Either operations can happen in the canonical *bei*-passive sentences, as shown in the Long Passives above and (24a) below, while *gei*, *jiao*, and *rang* are not allowed to take Agent-less, short passives. The ungrammatical sentence (24b) below indicates the difference.

- (24) NP_{patient} VP
 a. [Zhangsan] **bei** [da-le]. (Short passive version of sentence 2b)
 Zhangsan BEI hit-ASP
 'Zhangsan was hit.'

- NP_{patient} VP
b. *[Zhangsan] **gei/jiao/rang** [da-le].
 Zhangsan GEI/JIAO/RANG hit-ASP
 (Intended) 'Zhangsan was hit.'

Another minimal pair in (25) further shows the consistent asymmetry in the distribution of *bei* and the other three functional words in Short Passives.

- (25) a. Zhangsan **bei** [tou-le qian].
 Zhangsan BEI steal- ASP money
 'Zhangsan's money was stolen.'

- NP_{patient} VP
d. *[Zhangsan] **gei/jiao/rang** [tou-le qian].
 Zhangsan GEI/JIAO/RANG steal-ASP money
 (Intended) 'Zhangsan's money was stolen.'

For a better understanding of this asymmetry, we start with examining the differences between Short and Long Passives in Mandarin.

³ *Gei* in some circumstances seems to be able to take Short Passives, which will be discussed more in section 3.1.2

3.1.1 Analyses of Short and Long Passives

Analyses of the derivation of passive sentences in Mandarin are still under debate; one of the mainstream analyses regards short passive sentences not as an Agent-deleted version of long passives, but rather a separate structure involving different movements (Huang 1999). The two different derivations of short and long passives as proposed in Huang (1999) are shown below in the trees⁴.

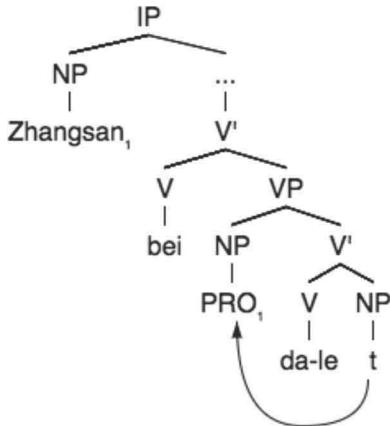


Figure 1 Short Passive

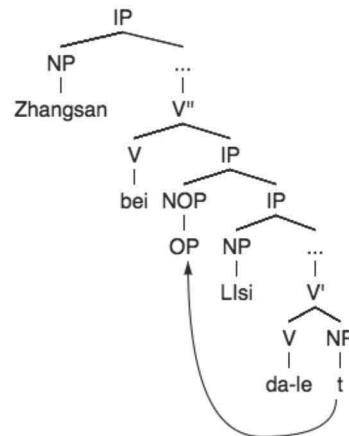


Figure 2 Long Passive

According to Huang (1999), a short passive sentence is derived from an A-movement of an empty category PRO controlled by the subject NP from the object position to the specifier of VP (figure 1), while the movement in a long passive is an A'-movement—the empty object moves as an operator to the specifier position of an IP, a clause-peripheral, non-argument position and then gets predicated by the subject NP (figure 2). The difference in movements are primarily due to the different categories selected by *bei*: in short passive sentences *bei* selects a VP as seen in figure 1, while in long passive sentences, *bei* selects a clausal category, IP, as its complement (Huang 1999).

That short passives and long passives are not derived in the same way is further supported by both chronological evidences and the lack of some properties of long passive sentences mentioned in the previous section. First, as pointed out by Wei (1994), short passives were used (ca. AD 200) much earlier than the long passive form. Besides, short passives only allow VP-adverbials, but not sentential adverbials as long passives do. A minimal pair in (26) indicates this variation.

- (26) a. Zhangsan **bei** (Lisi) momingqimiao de pian-zou-le.
 Zhangsan BEI Lisi confused DE abduct-ASP
 'Zhangsan was abducted in a state of confusion (by Lisi).' (Huang 1999)
- b. Zhangsan **bei** *(Lisi) zai xuehiao pian-zou-le.
 Zhangsan BEI Lisi at school abduct-ASP
 'Zhangsan was abducted at school *(by Lisi).' (Huang 1999)

⁴ NOP: null operator

The underlined phrase in (26a) is a VP-adverbial phrase, which is allowed in both short and long passives, while the underlined phrase in (26b), as a sentential-adverbial phrase, is only allowed when the Agent *Lisi* is present. Furthermore, as seen in (27) below, short passive sentences do not allow resumptive pronouns nor have the long-distance variation, which are both grammatical in long passives as shown in the previous section.

- (27) a. Zhangsan ***bei*** *(*Lisi*) *pai jingcha zhua-zou le.* (Long-distance)
 Zhangsan BEI Lisi send police arrest-ASP.
 ‘Zhangsan was “sent-police-to-arrest” *(by Lisi). (= ‘Zhangsan underwent Lisi’s sending the police to arrest him.’) (Huang 1999)
- b. Zhangsan ***bei*** *(*Lisi*) *da-le ta yi-xia.* (Resumptive pronoun)
 Zhangsan BEI Lisi hit-ASP 3SG once
 ‘Zhangsan was hit once *(by Lisi).’ (Huang 1999)

As clearly seen in (27), both the long-distance passive sentence (a) and the passive with a resumptive pronoun (b) require the presence of the Agent NP *Lisi*, suggesting that short passive sentences do not have the two properties possessed by long passives and thus should be a separate structure from the long passives.

The differences in movements and syntactic properties between Short and Long Passives account for the impossibility of short passives with *gei*, *jiao*, and *rang*. As shown in (24) and (25), *gei*, *jiao*, and *rang* cannot replace *bei* in the same location in short passives. Under the approach of treating short passives differently from long passives, *gei*, *jiao*, and *rang* should be paralleled with the *bei* in long passives rather than the *bei* in short passives. With the same grammatical function as *bei* in long passives, the three functional words select a full clausal category IP with an overt lexical subject and thus naturally occur in long passive sentences. Meanwhile, unlike the *bei* in short passives, they are unable to select a non-clausal category such as VP.

However, along the analysis assumed here, the occurrence of *gei* in some short passive sentences, such as the ones in (25), is still unexpected and unexplained. So, section 3.1.2 will further explore the types of verbs that allow *gei* to be in the place of *bei* in short passive sentences and seek for a generalization.

3.1.2 Special Cases with *Gei*

As mentioned above, *gei* is further distinctive from *jiao* and *rang* in that *gei* in some circumstances seems to allow Short Passives, as *bei* does. Examples of the interchangeability between *gei* and *bei* in Short Passive structure are presented below in (28).

- (28) NP_{patient} VP
 a. [Huaping] ***bei/gei/*jiao/*rang*** [cei 1e].
 Vase BEI/GEI/JIAO/RANG break ASP
 ‘The vase was broken into pieces.’
- NP_{patient} VP
 b. [fangzi] ***bei/gei/*jiao/*rang*** [hui le].
 house BEI/GEI/JIAO/RANG ruin ASP.

- 'The house was ruined.'

NP_{patient} VP

c. [mutou] bei/gei/*jiao/*rang [shao le].

wood BEI/GEI/JIAO/RANG burn ASP

'The wood was burned.'

Each sentence in (28) is grammatical with either *bei* or *gei*, and the sentence meaning stays unchanged, but *jiao* or *rang* are still not allowed in the same location.

A prominent characteristic shared by the three sentences above is that even without *gei* and *bei* being present, these sentences are grammatical and natural, as shown below in (29).

- (29) NP_{patient} VP

 - a. [Huaping] [cei le].
Vase break ASP
'The vase broke.'
 - b. [fangzi] [hui le].
house ruin ASP.
'The house was ruined.'
 - c. [senlin] [shao le].
forest burn ASP
'The forest burned.'

In fact, the verbs in sentences above are all unaccusative verbs in Chinese. According to Perlmutter (1978), unaccusative verbs are a type of intransitive verbs denoting involuntary or unwilling actions and having the internal argument (i.e. the object argument in deep structures) as the only argument. Unaccusative verbs share some syntactic and semantic characteristics in general, but the diagnoses of unaccusative verbs are still under debate and vary from language to language (Yang 1999).

Several syntactic diagnoses of unaccusative verbs in Chinese are discussed in Yang (1999), including existential sentences (Huang 1987), sentences about weather (Li 1991), alternations of verb forms between causative and intransitive (Gu 1995), and etc. Particularly, the alternation between causative and intransitive form is a useful diagnosis of unaccusative verbs, not only in Chinese, but also in many other languages. The three verbs in (29) pass this diagnosis. Sentences in (30) show such alternations of the verbs in (29).

- ‘The house was ruined.’
- NP_{Agent} VP NP_{Patient}
- b. [taifeng] [hui-le [fangzi]]. (causative)
 typhoon ruin-ASP house
 ‘Typhoon ruined the house.’
- NP_{Patient} VP
- c. [senlin] [shao le]. (intransitive)
 forest burn ASP
 ‘The forest burned.’
- NP_{Agent} VP NP_{Patient}
- c’. [da-huo] [shao-le [senlin]]. (causative)
 big-fire burn-ASP forest
 ‘The big fire burned the forest.’

The sentences (30a), (30b), and (30c) contain the verbs in their intransitive forms, while the (30a’), (30b’) and (30c’) contain the verbs’ causative forms. These verbs that have alternations between intransitive and causative forms satisfy the following semantic expression:

- (31) [[x DO-something] CAUSE [y BECOME STATE]] (Levin & Rappaport 1995)

The semantics of these verbs involve two parts—the causative part (CAUSE) and the change of state part (BEOME STATE). When both are present, the verbs are in their causative forms, as seen in the (30a’, b’, c’). When the causative part is absent, the verbs only contains the change of state meanings and thus are in their intransitive form. In this case, the only argument, *y* as seen in the expression in (31), is the internal argument and thus the intransitive verbs are unaccusative.

Several other verbs that can cause the change of state such as *chen* ‘sink’, *jian* ‘reduce’, *ronghua* ‘melt’, and also those that denote placements, such as *gua* ‘hang’ and *fang* ‘put’, exhibit alternations between causative and intransitive, and thus, are also unaccusative verbs in Chinese (Yang 1999). As expected, these verbs can follow either *bei* or *gei*, as shown in a few more examples below.

- (32) NP_{Patient} VP
- a. [chuan] [chen le].
 ship sink ASP
 ‘The ship sank.’
- NP_{Patient} VP
- a’. [chuan] bei/gei [chen le].
 ship BEI/GEI sink ASP
 ‘The ship was sunk.’
- NP_{Patient} VP
- b. [zhaopian] [gua zai le qiang shang].
 photo hang at ASP wall top
 ‘The photo was hung on the wall.’
- NP_{Patient} VP
- b’. [zhaopian] bei/gei [gua zai le qiang shang].
 photo BEI/GEI hang at ASP wall top
 ‘The photo was hung on the wall.’

Even though these verbs can be in sentences either with or without *gei* and *bei*, and the sentence-initial NP in the subject position is always the Patient (or Patient-like argument) of the verbs, the

presence and absence of *gei* in these sentences slightly affect the meanings of these sentences. Without *gei*, the sentences, like those in (30) and (32a & b), are just regular declarative, not expressing any additional emotion or feelings. On the contrary, sentences with the presence of *gei* emphasize more on the adversity of the events—the Patients of the events are affected by the events in an undesirable or unexpected way.

As these verbs have both causative and intransitive forms and the corresponding sentence meanings are not identical, a question on the status of sentences as those shown in (28) with the presentence of *gei* arises: are they true Short Passives or just unaccusative sentences with an additional word *gei* performing some other functions? Before answering the question, let's first look at *gei*'s occurrence with some other one-place predicates that do not have the above alternations.

3.1.3 “Intransitive Passives”?

According to the classification by Yang (1999), some predicates in Chinese that denote state can also denote a change of state, though they no longer maintain the alternations between causative and intransitive forms in Modern Chinese. Most of them are adjectives that can stand in predicates by themselves, such as *kong* ‘empty’, *hei* ‘black’, and *xiao* ‘small’. In fact, in Archaic Chinese, these adjectives were frequently used as causative verbs, similar to the deadjectivized verbs *widen* and *broaden* in English. Though only a small number of them in Modern Chinese keep this usage, the possibility of being used as causative verbs in Archaic Chinese suggests that these state adjectives contain the semantics of causing something to change states. Furthermore, the only argument of these predicates is correlated to the object of their causative counterparts in Archaic Chinese, implying that they can only take the internal argument, which is a primary characteristic of unaccusative verbs. Therefore, the state adjectives are classified as a type of unaccusative verbs in Chinese (Yang 1999).

More examples of this type of unaccusative verbs are shown in (33).

- (33) NP_{experiencer} VP
 a. Zhangsan bing le.
 Zhangsan ill ASP.
 ‘Zhangsan is ill.’

- NP_{experiencer} VP
 b. Zhangsan shang-zhe le.
 Zhangsan get-RESULT. ASP.
 ‘Zhangsan is hurt.’

- NP_{experiencer} VP
 c. Zhangsan xia le.
 Zhangsan blind-ASP
 ‘Zhangsan is blind.’

Different from the ones discussed in the previous sections, these unaccusative verbs do not have the alternation between transitive/causative and intransitive forms, only taking one argument for all the time. Therefore, it is unexpected that these verbs can be in passive sentences, since one of the characteristics of passive sentences is the detransitivization of the original transitive verbs.

Yet these verbs can still follow *gei* in the same structure as Short Passives. None of the other three functional words, *bei*, *jiao*, and *rang*, is allowed in this case, as seen below in a few examples in (34).

Though the English translation of sentences in (33) and (34) seem to be the same for each pair, their meanings are slightly different in Chinese. Similar to the distinction seen in the pairs of sentences with and without *gei* in the previous section, the difference in the meanings here also lies in the subject affectedness. The sentences with *gei* in (34) stress more on the adversative effect on the subject NP.

However, not all intransitive verbs can be in this structure with *gei* in the front. The following ungrammatical sentences show the impossibility of some intransitive verbs to be in the passive frame with *gei*.

- (35) a. **Zhangsan gei tiao le.*
 Zhangsan GEI jump ASP
 (Intended) 'Zhangsan (involuntarily) underwent jumping.'

b. **Zhangsan gei youyong le.*
 Zhangsan GEI swim ASP
 (Intended) 'Zhangsan (involuntarily) underwent swimming.'

The underlined verbs *tiao* ‘jump’ and *youyong* ‘swim’ are intransitive verbs, as shown below in the active sentences in (36).

- (36) NP_{Agent} VP
 a. [Zhangsan] [tiao (*ta) le].
 Zhangsan jump (*3SG.) ASP
 'Zhangsan has jumped (*him/her/it).'

NP_{Agent} VP
 b. [Zhangsan] [youyong (*ta) le].

Zhangsan swim (*3SG.) ASP
 ‘Zhangsan has swum (*him/her/it).’

In sentences in (36), the subject NP *Zhangsan* is the only argument that the verbs take, but in fact it is not the Patient of the verbs; instead, it is the Agent of the intransitive verbs. Furthermore, these intransitive verbs do not have causative forms at all. Therefore, these verbs as shown in (35) and (36) must not be unaccusative verbs in Chinese.

As shown by the two sets of data (34) and (35) in this section, *gei* can also occur with unaccusative verbs that only have intransitive forms, but no other intransitive verbs. In this circumstance, it is clear that even though the sentences in (34) seem to have the same structure as Short Passives—[NP_P + *gei* + VP] and satisfy the property of subject affectedness, they must not be passives, because as stated in the definition, passive sentences are semantically transitive and the verbs undergo a detransitivization from transitive verbs to verbs with characteristics of intransitive verbs. Then *gei* must be a functional word performing roles other than passive markers in active sentences like (34).

3.1.4 Summary

The case of *gei* with unaccusative verbs that only have intransitive forms, as shown in the previous section, provides further evidence for a potential answer for the question brought up in section 3.1.2. Since *gei* has the option to be a functional word in active sentences with unaccusative verbs, it seems that the “Short Passives” with *gei* (28) and (32) in section 3.1.2 may not be passive sentences, but in fact are active sentences with unaccusative verbs in their intransitive forms and *gei* performing some function other than a passive marker. If this is the case, then the general pattern that only *bei*, but none of *gei*, *jiao*, and *rang* can occur in Short Passives would still hold true. However, what function does *gei* perform in these active sentences and how is the change in meanings from those without *gei* to their counterparts with *gei* derived still need further investigation.

3.2 Verb types

Besides the structural difference discussed above, another obvious difference among the four functional markers *bei*, *jiao*, *rang* and *gei* in passive sentences lies in the semantics of the root verb. As shown in the two sets of examples below, *bei* can be followed by transitive verbs with either positive or negative meanings, while *gei*, *jiao*, and *rang* are not grammatical to occur with verbs with positive meanings.

- (37) a. [Zhangsan] bei/jiao/rang/gei [Lisi] [bi-zhe he-jiu].
 Zhangsan BEI/JIAO/RANG/GEI Lisi force-ASP. drink-alcohol
 ‘Zhangsan was forced by Lisi to drink wine.’

- b. [Zhangsan] bei/*jiao/*rang/*gei [Lisi] [yunxu he-jiu].
 Zhangsan BEI/JIAO/RANG/GEI Lisi allow drink-wine
 ‘Zhangsan was allowed by Lisi to drink wine.’

The root verbs in (a) sentences in (37) and (38)—*bi* ‘force’ and *jujue* ‘reject’ have negative meanings, while those in (b) sentences, *yunxu* ‘allow’ and *huanying* ‘welcome’ are positive verbs. According to my consultant’s judgements, sentence (37b) with any one of *gei*, *jiao*, and *rang* is unable to be understood. Sentence (38b) with either *rang* or *jiao* is more intuitively interpreted as a causative sentence—the subject NP *Zhangsan* causes the second NP *wo-men* ‘us’ to furiously welcome something or someone else, while with *gei*, this sentence is completely unacceptable to her. In those sentences expressing negative meanings, on the other hand, it is grammatical to have all four of the functional words (private communication).

Furthermore, even though it is grammatical to have all of *bei*, *jiao*, *rang*, and *gei* in passive sentences with positive root verbs, the sentences with *gei*, *jiao*, and *rang* as the passive markers still express relatively negative meanings.

- (39) NP_{Patient} NP_{Agent} VP_{negative}

a. [Zhangsan] bei/jiao/rang/gei [Laoshi] [piping] le.
 Zhangsan BEI/JIAO/RANG/GEI teacher criticize ASP.
 'Zhangsan was criticized by (a/the) teacher.'

NP_{Patient} NP_{Agent} VP_{positive}

b. [Zhangsan] bei/rang/?jiao/gei [Laoshi] [biaoyang] le.
 Zhangsan BEI/JIAO/RANG/GEI teacher praise ASP.
 'Zhangsan was praised by (a/the) teacher.'

With the negative verb *piping* ‘criticize’, all of the four functional words are grammatical to occur. With the root verb expressing positive meaning, such as *biaoyang* ‘praise’ in (39b), the occurrence of *rang*, *jiao*, and *gei* becomes complicated. According to my consultant, *rang*, *jiao*, and *gei* can occur in this sentence, but the sentence then has an underlying implication that getting praises from the teacher is not a good thing or that Zhangsan usually does not behave well enough to get praises from the teacher and thus the praise from the teacher is unexpected.

Therefore, it seems to be a general pattern that *bei* can appear in any semantic environments, while *gei*, *jiao*, and *rang* are more likely to occur in passive sentences expressing negative meanings—either the root verb itself is negative or the sentence with a positive verb as a whole emphasizes on the negative aspects of the seemingly positive event. The distinction in their preferences of words comes from their different behaviors.

3.2.1 *Gei, Jiao* and *Rang* in Active sentences

An obvious distinction between *bei* and the other three functional words *gei*, *jiao*, and *rang* is that *gei*, *jiao*, and *rang* are all used as functional words in active sentences, while *bei* is an exclusive passive marker.

Gei can replace *ba* in disposal constructions. A disposal construction is a special structure in Mandarin Chinese signified by the preposition of the object from its canonical post-verbal position to a preverbal position. This process usually happens with the presence of a functional word between the subject and the presupposed object, and the famous *ba* is the prototypical one. Sentence (40a) is a disposal construction in S+BA+O+V word order, and (40b) is its non-disposal counterpart in the unmarked SVO word.

- (40) NP_{subject} NP_{object} VP
 a. [Lao Wang] **ba** [che] [xiu hao le]. (disposal construction)
 Lao Wang BA car repair RESULT. ASP.
 ‘Lao Wang got the car repaired.’
- NP_{subject} VP NP_{object}
 b. [Lao Wang] [xiu hao le [che]]. (non-disposal construction)
 Lao Wang repair RESULT. ASP. car
 ‘Lao Wang repaired the car.’

The object argument of the verb *xiu* ‘repair’ locates in a post-verbal position in a regular SVO sentence as shown in (40b), and is presupposed to the front of the verb in a disposal construction (40a). Between the subject NP and the object NP stands the functional word for a disposal construction *ba*. The theta roles of the two NPs stay the same regardless of their positions in a sentence—the subject NP *Lao Wang* is the agent of the action *repair* and the object NP *che* ‘car’ is the patient.

Xu (1994) observes that *gei* also occurs in disposal constructions in the same location as *ba*, shown in (41).

- (41) NP_{subject} NP_{object} VP
 [Lao Wang] **gei** [che] [xiu hao le].
 Lao Wang GEI car repair RESULT. ASP.
 ‘Lao Wang got the car repaired.’ (adapted from Xu 1994)

Replacing *ba* in (40a) with *gei* and remaining the rest of the structures unchanged, we thus have the sentence in (41), which also has almost identical meanings. Therefore, *ba* and *gei* are interchangeable in most disposal constructions. However, none of *bei*, *jiao*, or *rang* shares this property. Applying *bei*, *jiao* and *rang* to the same structure respectively results in the following ungrammatical sentences.

- (42) NP_{subject} NP_{object} VP
 a.*[Lao Wang] **bei** [che] [xiu hao le].
 Lao Wang BEI car repair RESULT. ASP.
- NP_{subject} NP_{object} VP
 b.*[Lao Wang] **jiao** [che] [xiu hao le].
 Lao Wang JIAO car repair RESULT. ASP.

- NP_{subject} NP_{object} VP
c.*[Lao Wang] rang [che] [xiu hao le].
Lao Wang RANG car repair RESULT. ASP.

Therefore, comparing sentences (40a), (41), and (42) suggests that only *gei*, but not *bei*, *jiao*, or *rang*, can stand in disposal constructions.

Though *jiao* and *rang* are not allowed in disposal constructions, they can function as causative or imperative markers. Causative sentences in Chinese usually takes a structure similar to that of disposal construction—NP₁ + causative marker + NP₂ + VP, but in fact, NP₂ is not a preposed object from VP to the front; rather, it is the subject argument of the action verb and also the agent, under the causation of NP₁, of the predicate of the caused event. Similarly, in imperative sentences, NP₂ is the agent of caused action, under the causation of an unpronounced second person pronoun. An example of a causative sentence and an imperative sentence with *jiao* and *rang* as functional markers is shown in (43).

- (43) NP_{Causer} NP_{Agent} VP
a. [Lao Wang] jiao/rang [che] [kai-dong le].
Lao Wang JIAO/RANG car move ASP.
‘Lao Wang made the car start to move.’

- b. jiao/rang [ta de zui] [he shang].
JIAO/RANG 3SG. POSS. mouth close up
‘Make her/his/its mouth close.’

In sentence (43a), the sentence-initial NP *Lao Wang* causes the event that the car started to move to happen, while the second NP *che* ‘car’, under the causation of the first NP, is the real agent of the action *kai-dong* ‘move’. Similarly, sentence (43b) is an imperative sentence, in which NP₂, *ta de zui* ‘her/his/its mouth’, is the agent of the action *he* ‘close’ under the causation of an unpronounced NP.

Causative and imperative sentences containing transitive verbs are presented below as additional examples.

- (44) NP_{Causer} NP_{Agent} VP NP_{Patient}
a. [Lin] jiao/rang [Ming] [na-zou le [zhe-xie shu]].
Lin JIAO/RANG Ming take-away ASP this-PL book
‘Lin asked/let Ming to take away these books. (and Ming did take them away.)’

- b. jiao/rang [Ming] [na-zou [zhe-xie shu]].
JIAO/RANG Ming take-away this-PL book
‘Ask/let Ming to take away these books.’

The last NP in sentences above is a P (Patient or Patient-like argument), and also the object argument of the transitive verb *na-zou* ‘take away’, standing in its canonical post-verbal position. The unmoved object indicates the distinction between causative/imperative sentences and disposal constructions discussed above.

As expected, *bei* does not function as a causative or imperative marker, as seen in the ungrammatical sentences in (45).

- (45) NP_{Patient} NP_{Agent} VP
 a.*[Lao Wang] bei [che] [kai-dong le]. (variation of (43a))
 Lao Wang BEI car move ASP.
 (Intended) ‘Lao Wang was moved by the car.’

- NP VP
 b.*bei [ta de zui] [he shang]. (variation of (43b))
 BEI 3SG. POSS. mouth close up
 (Intended) ‘(You) are closed by his mouth.’

However, as seen below, though it is grammatical for *gei* to appear in the same location as *jiao* and *rang* in sentences (43a) and (43b), the sentence meanings no longer stay the same. They cannot be interpreted as causative sentences at, but only disposal constructions, where the second NP is the preposed object and only the first NP is the Agent of the actions denoted by the verbs.

- (46) NP_{Agent} NP_{Patient} VP
 a.#[Lao Wang] gei(/ba) [che] [kai-dong le]. (variation of (43a))
 Lao Wang GEI(/BA) car move ASP.
 ‘Lao Wang started and moved the car.’

- NP_{Patient} VP
 d.#gei(/ba) [ta de zui] [he shang]. (variation of (43b))
 GEI(/BA) 3SG. POSS. mouth close up
 ‘Close his mouth.’

3.2.2 Summary and Implication

	Disposal Construction	Causative/Imperative
BEI	No	No
JIAO	No	Yes
RANG	No	Yes
GEI	Yes	No

As shown in section 3.2.1 and summarized in the table above, *gei*, *jiao* and *rang* are all able to occur in active sentences, either disposal constructions or causative/imperative sentences, while *bei* is exclusive to passive sentences. In fact, from the examples above, it is easy to see that both the disposal construction and the causative/imperative sentences have a structure similar to that of passive sentences—[NP + BEI/JIAO/RANG/GEI + NP + VP]. Since Chinese does not have inflections to distinguish cases on NPs and some passive sentences such as indirect passives in Chinese are not sure to have a corresponding hole in the object position of the root verb, ambiguities between active and passive interpretations might arise sometimes, as shown in a few examples below.

- (47) NP₁ NP₂ VP
 a. [da xiang] jiao/rang [hou-zi] [tou-zou le shi-wu].
 big elephant JIAO/RANG monkey steal-away ASP. food
 ‘The elephant’s food was stolen by the monkey. (The elephant underwent its food being stolen by the monkey.)’
 OR ‘The elephant made the monkey to steal the food (maybe somebody else’ food).’

- NP₁ NP₂ VP
- b. [Zhangsan] *gei* [Lisi] [ban-dao le].
 Zhangsan GEI Lisi stumble-fall ASP.
 ‘Zhangsan was stumbled by Lisi.’
 OR ‘Zhangsan stumbled Lisi.’

The two sentences in (47) are ambiguous. Sentence (47a) can either be interpreted as an indirect passive, where the first NP, *da xiang* ‘elephant’, is the P (Experiencer) and the second NP *houzi* ‘monkey’ is the A (Agent) of the root predicate *tou* ‘steal’, or as a causative sentence, in which the first NP causes the second NP to initiate the action of stealing. Similarly, sentence (47b) can be a Long Passive sentence, with *Zhangsan* as the Patient of the action, or a disposal sentence, where *Zhangsan* is the Agent of the stumbling action and *Lisi* is the object argument preposed from the VP.

Gei, jiao, and rang’s property of being able to stand in active sentences as well as the potential ambiguities suggest a clue to answer our initial question: Why do *gei, jiao, and rang* prefer verbs with negative meanings? As functional words in both passive and causative sentences which have similar surface structures, *jiao* and *rang*, in order to avoid ambiguities as much as possible, prefer to take negative verbs when they are used in passive sentences, since it is human nature that the subjects, especially when they are animate, human figures, wouldn’t want to cause undesirable or negative events for themselves to experience or suffer. Hence, if the verbs are those describing negative events, then it is more likely to interpret the sentences as passives, in which the subjects do not have any control over the event happening. However, this account does not work on the preference of *gei* with negative verbs, since *gei* is not a causative marker; moreover, the cases where the subjects are not human figures, such as abstract concept or inanimate object, are also not included in this account. Therefore, a better account for this distinction or more data to show that the distinction found above are attributed to factors other than the negative/positive meanings of the verbs is still needed.

4 Cross-linguistic patterns

None of the differences found between *gei, jiao, rang* and *bei* are unique or rare; in fact, they all have cross-linguistic patterns and are found in many other related or even less related languages. This section will present some typological evidence of the features that *gei, jiao, and rang* possess yet *bei* does not.

4.1 Agent-less passives

As mentioned in section 3.1, *gei, jiao, and rang*, different from *bei*, do not allow Agent-less passive sentences (Short Passives). This is not unique to these three words. In fact, Cantonese and Taishanese, two related but distinct dialects of Yue Chinese, also show the disallowance of Short Passives (Hashimoto 1985).

- (48) Cantonese:
- a. *pei*^{2a} *yan*^{1b} *ta*^{2a}
 by man hit
 ‘to get hit by a man.’ (Hashimoto 1988)

The (b) sentences in (48) and (49) are missing the Agent NP, and are both ungrammatical. In addition, as cited in Hashimoto (1985), Zhan Bo-hui (1981) also points out several other related languages, such as the Shangyu dialect of Zhejiang, the Chouzhou dialect of Guangdong, and the Meixian dialect of Hakka language, also show the same phenomenon of the impossibility to eliminate the Agent NP as seen *bei*-sentences.

4.2 Vietnamese *bi* and “Intransitive Passives”

In section 3.1.2, a special case of *gei* is discussed. *Gei*, as a functional word that can be passive marker, is able to take unaccusative verbs, even those unaccusative verbs that can only be intransitive but do not have corresponding causative forms in Modern Chinese. This phenomenon is not unique to *gei*, either. As observed by Simpson (2013), Vietnamese passive marker *bị* can also take intransitive verbs in the same structure as regular, transitive passive sentences. A few examples are shown below in (50).

- (50) a. Nga **bị** óm/bệnh.
Nga BI sick/ill
'Nga got sick.' (Simpson 2013)

b. Nam **bị** mù.
Nam BI blind
'Nam is/became blind.' (Simpson 2013)

c. Nam **bị** ói.
Nam BI vomit
'Nam vomited.' (Simpson 2013)

The verbs in the sentences above can stand by themselves without the presence of *bi* in active sentences (Simpson 2013). Moreover, according to Simpson (2013), the meanings of these sentences without *bi* are also different from these with *bi*.

Simpson (2013) regards this type of sentences as intransitive passives and proposes a reconsideration of the definition of passive sentences based on this pattern. Though there is neither Agent promotion nor Patient demotion—the two prominent characteristics of passives, in the Vietnamese *bị*-sentences with intransitive verbs, the presence of the passive morpheme *bị* still functions to emphasize the negative effect of the event on the subject NP (Simpson 2013). Therefore, the definition of passives based on Roman languages may need to be broaden or adjusted for East

Asian languages, and one of the suggestions is to characterize passives as a dependency relation between the subject of the passive sentence with some syntactic argument, not just object but also subject, inside the embedded predicate or clause (Simpson 2013). Huang's (1999) A'-movement analysis on Chinese long passives as well as the null operator extraction from the object position of the root verb are taken as the framework for the analysis of *bì* in Vietnamese as well. Since *bì* in Vietnamese is less grammaticalized than *bei* in Chinese, it still remains the ability of a lexical verb to license the extraction of an operator from the subject position; thus, it allows intransitive passives, which has a gap in the subject position (SpecIP) of the embedded clause. As for Chinese *bei*, on the other hand, since it is fully grammaticalized, it behaves more like a complementizer (like *that* in English), which loses the ability to license the null operator extraction from the subject position and thus does not allow intransitive passives (Simpson 2013).

This analysis seems to be applicable to *gei*-sentences with intransitive verbs in Chinese, since *gei*, like the Vietnamese *bì*, is less grammaticalized—frequently used as lexical verbs with the meanings ‘give’, as the preposition ‘for’, or as functional markers in disposal constructions. Then it should be similar to *bì*, still remaining the ability to license the extraction of a null operator from the subject position and the validity of an intransitive passive. However, several distinctions between *gei* and *bì* still need to be addressed before drawing any conclusion.

First, as discussed above, *gei* can take intransitive verbs in sentences with passive meanings, but only unaccusative verbs. It is unclear so far whether the Vietnamese *bì* only takes unaccusative verbs as well or any intransitive verbs, since from the current data, the intransitive verbs all seem to be unaccusative and no grammatical or ungrammatical sentences with *bì* and other intransitive verbs are presented. Besides, as argued in Simpson (2013), *bì* with intransitive verbs have to be the same morpheme as the *bì* in regular passive sentences, since *bì* is highly specialized to denote the adversative effect exerted on the subject by the event. Since *gei* does not have such specialized semantic function embedded, it is not as convincing to state that the *gei* in transitive passive sentences and *gei* with unaccusative verbs cannot be different morphemes with the same form.

4.3 Preference of Negative Verbs

The preference of staying in sentence expressing negative meanings is even more universal. Vietnamese, Italian, Japanese, and etc. all see some of their passive markers can only or are more natural to stay in passive sentences with negative root verbs or denoting negative meanings as a whole. The following sentences show a few examples of such preference.

- (51) a. Nam bị thầy giáo phạt.
Nam BI teacher punish
'Nam was punished by the teacher.' (Simpson 2013)
- b. Nam được thầy giáo khen.
Nam DUOC teacher praise
'Nam was praised by the teacher.' (Simpson 2013)

In Vietnamese, as mentioned by Simpson (2013), *bị* is usually used with verbs depicting negative, unpleasant events, while the other marker *dược* is more often used with positive events. Even when *bị* occurs with positive verbs, such ‘praise’, the meaning of the entire passive sentence is still understood as being negative in the context, and similarly for *dược*, if it is used with negative verbs, the sentence is still interpreted as being contextually positive and desirable. (Simpson 2013).

Similarly, the *vedersi*-construction in Italian, as discussed by Ramat (2017), also exhibits the pattern that the subject of the construction is affected in an unpleasant or undesirable way. From the corpus Ramat (2017) uses, *vedersi*-construction is more frequently found associated with verbs describing negative events, such as ‘abandon’, ‘force’, ‘imprison’, ‘prevent’, and etc. The most relevant typological evidence is from the preference of verb types in Japanese passives.

4.3.1 Japanese Passive Markers *Rare-* & *Mora-*

As observed by Deguchi (2013), the two passive markers in Japanese—*rare-* and *morau-* have different preferences of verb types. *Rare-*passive sentences are generally adversative in meanings, while *morau-*passive sentences usually denote pleasant or positive events. A minimal pair of them is shown below in (52).

The only difference between these two sentences is the passive markers used. According to Deguchi (2013), besides “effect”, “causation” is also embedded in the semantics of the passive marker *morau-*. The subject *Mary* in sentence (52b) is not only affected by the event, but also causes the Agent of the action, *John*, to affect her in that way. Since it is unnatural for the subject *Mary* to put energy to cause negative or unpleasant events to happen on her, the passive sentence with *morau-* as the passive marker then expresses a relatively positive meaning. Such “causation” component is missing from the semantics of *rare-*; thus, the subject NP in passive sentences with *rare-* does not involve in the causation of the event and therefore, the passive sentences with *rare-* does not denote a positive event.

4.4 Causative/Passive ambiguity

As mentioned in the last part of section 3.2.2, ambiguities between causative and passive exist in sentences with *rang* and *jiao*, as they can be both passive markers and causative markers and both structures look similar on surface. In fact, this phenomenon is not unique to *rang* and *jiao* either; it is found cross-linguistically, in languages such as French, English, Japanese, Korean and etc (Washio 1993). An example from English is presented below to illustrate such ambiguity more clearly.

- (53) John had his watch stolen by Mary. (Washio 1993)

According to Washio (1993), the sentence (53) can be interpreted either as passive—that John’s watch was stolen by Mary and John is just passively affected by this event, or as causative—that John made Mary to steal his watch and though John is still affected by the stealing action, he is also the causer of the event. This example is very similar to the causative-passive alternation seen in sentence (47a). Therefore, investigating more into the causative-passive ambiguity cross-linguistically in future study may provide clearer clues for understanding why the same forms of *jiao* and *rang* are used in both causative and passive sentences, two structures that seem to be completely opposite.

5 Conclusion

In this paper, new data on three non-canonical passive markers—*gei*, *jiao*, and *rang* is presented and analysed in detail. By doing this, we have shown that the three non-canonical functional words—*gei*, *jiao*, and *rang* are true passive markers like the canonical *bei* and share some special features of passives in Chinese and cross-linguistically, including the compliance of the sentences in the structure [NP +GEI/JIAO/RANG + NP + VP] with the definition of passive clauses, the three words’ acceptability of indirect passives, long-distance passives, and the four syntactic properties shared by *bei*-passive sentences and passive sentences with the other three. At the same time, they have been shown to be not identical in several ways.

First, only *bei*, but not *gei*, *jiao*, and *rang* can occur in Agent-less passive sentences. *Gei* seems to be able to stand in short passives occasionally, when the root verbs are unaccusative verbs, such as *hui* ‘ruin’; moreover, *gei* can even take unaccusative verbs that cannot be used as transitive verbs at all, such as (*sheng*)-*bing* ‘get ill’. However, whether these are true passive sentences or just accusative sentences with an additional *gei* playing some functional roles is not conclusive yet.

Besides, *gei*, *jiao*, and *rang* are more frequently used in passive sentences expressing negative meanings. There are even several verbs with positive meanings, such as *yunxu* ‘allow’, that can only follow *bei* and are ungrammatical with *gei*, *jiao*, and *rang* in passive sentences. *Gei*, *jiao*, and *rang*’s preference of negative verbs over positive verbs is related to the ambiguities brought by the fact that they are also functional words in active sentences—disposal construction for *gei* and causative sentences for *jiao* and *rang*.

The properties distinguishing *gei*, *jiao*, and *rang* from *bei* are also found in other related languages. Cantonese passive marker, *bi*, is similar to *gei*, *jiao*, and *rang*, but contrastive to *bei*, in that it does not allow short passives. One of the passive markers in Vietnamese, *bị*, also takes intransitive verbs in the structure of passive sentences. Moreover, many languages, such as French, English, Japanese and Korean also have passive-causative ambiguities. Therefore, not only the variations in passive markers, but also the behaviours of *gei*, *jiao*, and *rang* are not unique or special. From this perspective, it is *bei*, the canonical passive marker in Chinese that seems to be the irregular one and need more attention and analysis on its status and grammaticalization.

With current data and literature, several questions still remain. First, why can the same word, such *rang* and *jiao*, mark both passive and causative sentences, two different or even opposite sentence structures? Did the two functions—causative marker and passive marker—develop independently or one evolve out of the other? In addition, it is also seen in other languages that causative and passive markers are the same (Hashimoto 1988). Why and how are these two types of sentence structures related? In order to have a better understanding of these languages, a diachronic investigation including data from Ancient Chinese may be necessary.

Another puzzle also stems from a cross-linguistic comparison on the original meanings of the passive markers as verbs. As mentioned by Ramat (2017), Italian passive marker *vedersi* in the [*vedersi* + past participle] construction has the meaning of ‘see’, which is describing a relatively non-active and non-volitional action. Similarly, the passive marker in Japanese, *bei* in Chinese, as well as passive markers in some isolating languages in South East Asia—are all related to inactive verbs meaning ‘suffer’, ‘receive’, or ‘undergo’ (Ramat 2017). This consistent, cross-linguistic pattern further explain where the Subject Affectedness, one of the primary characteristics of passive sentences, stems from (Ramat 2017). However, *gei* ‘give’, *jiao* ‘ask’, and *rang* ‘let, allow’ are obviously active, volitional verbs, which are discrepant from the general pattern. Then how could these active verbs be grammaticalized as functional markers in passive sentences and how is the Subject Affectedness derived in passive sentences with these three functional words? More typological evidences, either showing that it is indeed a universal feature for the passive morpheme to be derived from an inactive, non-volitional verb or showing the possibilities of active, volitional verbs functioning as passive markers in other languages, will help make this puzzle clearer.

In addition to the diachronic research and more typologies across languages, a larger data source is also an improvement for further research. Grammaticality judgements from a more diverse group of native speakers of Chinese, but not just me and my consultant, or even data points from linguistic corpus may make the results more solid and the differences among the four functional words in passive sentences more consistent and obvious. For example, due to the limit of time and data, the distribution of *bei*, *jiao*, *rang* and *gei* in passive sentences in different aspects and with Agents and Patients in different animacies have not been fully examined. With more diverse data source, this may be a direction to dig further into in the future.

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