A unified analysis of Mandarin long and short bei-passives
25th August, 2020
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1 Introduction

Many scholars, such as Feng (1997/2012), Huang (1999; 2013), Huang et al. (2009), Lin (2009; 2015), Liu (2012; 2016), Liu and Huang (2013; 2016), Tang (2001) and Ting (1993; 1998) have assumed that long and short bei-passives in Mandarin have distinct syntactic structures. For them, one crucial distinction is that while short bei-passives involve A-movement of PRO, long bei-passives involve A’-movement of a null operator (NOP) (see section 2 for more details). In this paper, I expand upon Her’s (2009) original proposal arguing that both long and short passives involve A’-movement and thus should have a unified account2 and I present new evidence showing that in both passives, the complement to bei must at least be as large as Asp, contra Bruening and Tran’s (2015) suggestion that it can only be as large as (passive) Voice (Kratzer 1996). My account requires that both constructions have VoicePass, also contra Bruening and Tran (2015), which accounts for a range of novel data: both long and short bei-passives can license a unique class of verbal compounds that are also grammatical in the gei (‘give’), jiao (‘ask’) and rang (‘allow’) passives, and in passives embedded in ba-constructions, but importantly are ungrammatical in active constructions, which have VoiceAct.

1.1 The proposed structures of long and short bei-passives

Broadly speaking, while a short bei-passive does not have an overt initiator argument, a long passive does. Example (1) is a short bei-passive, and my proposed syntactic structure is shown in (2); (3) is a long bei-passive, and its structure is (4):1

1) zhangsan bei sheng-zhi-le
   Zhangsan BEI4 raise-position-ASP5
   ‘Zhangsan was promoted.’

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1 I would like to thank Heidi Harley, Simin Karimi, Andrew Carnie and Robert Henderson for their invaluable help in the development of the ideas in this paper. I would also like to thank Ryan Walter Smith, Jianrong Yu, Othman Alshehri and the audience of MoMOT-4 for their feedback on earlier versions of this paper. Finally, I am immensely grateful to my consultant, Yiyun Zhao, for providing grammatical judgments for my examples. All mistakes are my own.

2 Her (2009) provides strong empirical evidence to show that the two passives are amenable to a unified account, proposing a formal analysis in a Lexical Functional Grammar framework. I also draw from Her’s evidence in this paper.

3 For purposes of presentation, Asp is not shown in its surface position for now.

4 Due to space constraints, I will remain agnostic on the semantic contribution of the bei morpheme itself, and hence it will be glossed simply as BEI.

5 The following glossing abbreviations are used in this paper: ASP-aspect; INCH-inchoative; PERF-perfective; 1-1st person; 3-3rd person; SG-singular. In section 4, I will further distinguish between the perfective and inchoative reading that -le provides, but ASP will usually suffice.
Thus, my analysis proposes that both long and short passives have the same syntactic structure except that an overt initiator is present in the long passive.

1.2 **Bei and theta-role assignment**

Before delving any deeper, it is important to note, following Bruening and Tran (2015) and contra Huang (1999), that *bei* does not necessarily assign an experiencer theta-role to the logical object (equivalently, the grammatical subject):

(5) nei-feng-xin bei lisi dai-hui ziji de jia qu le
   that-CL-letter BEI Lisi bring-back self DE home go PERF
   ‘That letter was brought back to self’ s (Lisi’s) home by Lisi.’
   (Huang 1999; 7)

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6 Readers will immediately notice that the overt initiator is a complement to a null P head. At this stage in my analysis, the null head is simply a stipulation, although I note that because Mandarin has very little overt morphology, it is not unreasonable to claim that there could be a null head.
Since *nei-feng-xin* (‘that letter’) is inanimate in (5), it cannot be assigned an experiencer theta-role by *bei*. In fact, my analysis will assume that *bei* does not assign a theta-role at all. Section 3 will show that this buys us the flexibility needed to capture the empirical facts seen in *bei*-passives.

### 1.3 Roadmap of the paper

In section 2, I very briefly introduce previous accounts that have held that long and short *bei*-passives are distinct syntactic constructions before providing three pieces of empirical evidence\(^7\) to support my unified A’-movement analysis: (i) the presence of long-distance dependencies; (ii) the grammaticality of resumptive pronouns in the presence of subject-oriented adverbs; (iii) the presence of resumptive pronouns in syntactic islands. In section 3, I lay out my formal analysis of the syntactic structure of *bei*-passives. I argue that the A’-movement can be represented as λ-abstraction (Heim & Kratzer 1998) (see examples (2) and (4) above), which has to occur in order for the internal argument to be saturated by an argument that *bei* introduces, and this argument ends up being identified as the logical object by predication. In section 4, I argue that the availability of the perfective reading with -le in *bei*-passives that are modified by the sentence-final adverb *liangci* (‘twice’) shows that the complement to *bei* must be at least as large as AspP. In section 5, I present a class of verbal compounds that are ungrammatical in active constructions but are licensed by *bei-, gei-, jiao-, rang-* passives and passives embedded in *ba-*constructions, which is straightforwardly predicted by my unified analysis. Section 6 concludes.

### 2 Bei-passives and A’-movement

Much of the previous literature (see especially Feng (1997/2012), Huang (1999) and Ting (1993; 1998)) has claimed that long and short *bei*-passives have distinct syntactic structures\(^8\). Short *bei*-passives, which do not have an overt initiator argument, have been argued to involve A-movement of PRO from the the logical object position (represented in example (6a)) while long *bei*-passives, which have an overt initiator, have been argued to involve A’-movement of a null operator (NOP) from object position (represented in example (6b)):

\[(6) \quad \text{a. A-movement: } [\text{iP } \text{zhangsan}_1 [\text{VP } \text{bei } [\text{VP } \text{PRO}_1 \text{ sheng-zhi-le } t_i ]]] \\
\text{ b. A’-movement: } [\text{iP } \text{zhangsan}_1 [\text{VP } \text{bei } [\text{iP } \text{Op}_1 [\text{iP lisi } \text{sheng-zhi-le } t_i ]]]]
\]

Examples (6a) and (6b) above are based on examples (1) and (3) respectively. Under their approach, only long *bei*-passives are expected to exhibit A’-effects. In the next 3 subsections, I present empirical evidence contrary to such predictions.

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\(^7\) For all my original examples, I consulted my own intuitions as a Singaporean Mandarin speaker, but I have also consulted Yiyun Zhao, who speaks Mainland Mandarin.

\(^8\) Due to space constraints, I will not go into the details of their syntactic analysis. Interested readers can refer to Huang (1999) and Ting (1998) and the arguments therein.
2.1 Long-distance dependencies

Example (7) below is an example of a long-distance dependency present in both long and short passives, which is unexpected under the previous accounts:

(7) tongdao, dou yijing bei (jiangjun) [pai bing [bashou x;]]
    passage all already BEI general send troop guard
    Lit: ‘All passages have been “sent-troops-to-guard” (by the general).’
    ‘(Someone/the general) has sent troops to guard all passages.’
    (Her 2009; 431, with modifications)

In example (7), there is a long-distance dependency such that the grammatical subject tongdao (‘passage’) can be understood to be the logical object of bashou (‘guard’) in the most deeply-embedded clause. Note that the grammaticality of (the short passive version of) (7) is only expected if tongdao undergoes A’-movement and not A-movement since bing (‘troops’) is in an A-position and it would not be possible for tongdao to undergo successive-cyclic A-movement while bing occupies an intermediate A-position that it would need to pass through or cross. Of course, if we instead assume A’-movement of tongdao, the possibility of long-distance dependency also falls out. Thus, both the long and short passive uniformly show an A’-effect, supporting my proposed analysis.

Huang (1999) and Ting (1998) argue that examples such as (8) show that long-distance dependencies are ungrammatical in short passives, apparently necessitating two distinct syntactic structures, but I observe that (8) becomes grammatical when the (subject-oriented) adverb10 xunsude (‘rapidly’) is added:

(8) [di chuan], bei *(xunsude) [pai haijun [ji-chen-le x;]]
    enemy ship BEI rapidly send navy attack-sink-ASP
    ‘The enemy ship was rapidly sent-navy-to-sink.’
    ‘(Someone) has rapidly sent the navy to sink the enemy ship.’

Cases such as (8), where a subject-oriented adverb is added to a short passive, are not discussed by Huang (1999) or Ting (1998). Nonetheless, (8) shows again that short passives can exhibit an A’-effect in the form of long-distance dependencies.

The data above are a challenge for approaches that assume two distinct syntactic structures, for they show that such approaches have inadequate empirical coverage, or that they under-generate the data. In contrast, my proposed unified analysis correctly predicts that both the long and short bei-passives are amenable to a A’-movement account.

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9 If both tongdao and bing were in A-positions, bing would be the closer goal that is attracted by the relevant probe, hence A-movement of tongdao would be a locality violation.
10 Though Bruening and Tran (2015) use the term “deliberately-type adverbs”, I invoke the term “subject-oriented adverbs” to reflect the fact that such adverbs diagnose for derived subject positions (or that it modifies the structurally highest argument in the predicate). See Bruening and Tran (2015) for evidence supporting their claim.
2.2 (Subject-oriented) adverbs and resumptive pronouns

Huang (1999) and Ting (1998) argue that in long passives, the presence of a sentence-final adverb such as ji-ci (‘a few times’) licenses the resumptive pronoun ta (‘she/he/it’), which is a characteristic A’-effect and thus indicates the presence of A’-movement in long passives. They further claim that short passives do not allow for the presence of resumptive pronouns even with the sentence-final adverb, which they take as evidence that short passives should instead involve A-movement. However, similar to example (8), the addition of a subject-oriented adverb henhende (‘viciously’) makes the short passive in example (9) grammatical. Notably, the resumptive pronoun is present in both passives:

(9) Zhangsan_i bei (Lisi) henhende ma-le ta_i ji-ci
    Zhangsan BEI Lisi viciously scold-ASP 3.SG few-instance
    ‘Zhangsan_i was viciously scolded him_i a few times (by Lisi).’

Examples such as (9) are not explained by accounts assuming that there are two distinct syntactic structures in long and short bei-passives. I contend that (9) shows that A’-effects, this time the presence of resumptive pronouns, can be detected in short passives, again motivating the unified approach I propose.

2.3 Islands and resumptive pronouns

Example (10) below shows that both long and short bei-passives can host a resumptive pronoun within a syntactic island:

(10) kongzi_i bei [ (baojun) she-fa [shao-diao
    Confucius BEI tyrant come.up.with-idea burn-away
    [CNPI zanmei *(ta_i) de^{13} shu ]]]
    praise 3.SG DE book
    ‘The burning of books that praised Confucius was planned (by a tyrant).’
    Lit: ‘Confucius has been come-up-with-the-idea to burn away
    [CNPI the books that praised him_i] (by a tyrant).’

The base position of the internal argument of zanmei (‘praise’) is within a complex noun phrase island (Ross 1967) or CNPI, indicated by the resumptive pronoun ta. Crucially, extraction of Kongzi from the CNPI is only grammatical if ta is present, regardless of whether it is a long or short passive. The presence of the resumptive

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11 Like Huang (1999) and Ting (1998), I merely note that the resumptive pronoun is licensed, which provides strong evidence for the involvement of A’-movement in both passives, and I will have to leave an account for why ji-ci licenses the resumptive pronoun for another time.
12 I note that Ting (1998) disagrees with the judgments I give in (9), as seen in her example (19).
13 Since a discussion of de goes beyond the scope of this paper, I simply gloss it as DE. The reader should note that de has a variety of functions, which Li and Thompson (1981) discuss in detail.
pronoun in (10) thus straightforwardly shows that both passives exhibit A’-effects. With this, we have the third piece of evidence supporting my unified approach.

3 The proposed syntactic structure of bei-passives

Now that we have seen three pieces of empirical evidence for the involvement of A’-movement in both long and short passives, a few brief notes are in order before we turn to my proposed syntactic analysis.

3.1 Mandarin bei-passives and derived subject positions

I follow Bruening and Tran (2015) in claiming that the crucial defining characteristic of a passive construction should be that the external argument is suppressed, and that the syntactic role of Voice_Pass is to uniformly existentially quantify it. One can easily see that it is suppressed in (2), but this is apparently not so for (4). I hypothesize that in (4), the initiator Lisi is a sister to a null head that forms an adjunct PP and thus is not the external argument. This is akin to the by-phrase in English passive constructions (Bruening 2013). A full discussion of PP-adjunction to Voice_Pass takes us too far afield, but I adopt Legate’s (2014) proposal in which the by-phrase (an adjunct which contains Lisi) functions to semantically restrict the existentially bound external argument, allowing me to maintain that both long and short passives involve Voice_Pass.

The above point also means that in short passives, there should be evidence of the presence of an implicit initiator. Since subject-oriented adverbs (or ‘deliberately’-type adverbs) can diagnose for derived subject positions (Bruening and Tran 2015), we can apply Mandarin guyi (‘deliberately’) to passive constructions to see that the Mandarin passive is a bi-clausal structure:

(11) a. zhangsan_i guyi_i/*j bei lisi_j da-le
Zhangsan deliberately BEI Lisi hit-ASP
‘Zhangsan deliberately got beaten by Lisi (only Zhangsan can be deliberate).’

b. zhangsan_i bei lisi_j guyi_i/*j da-le
Zhangsan BEI Lisi deliberately hit-ASP
‘Zhangsan was deliberately beaten by Lisi (only Lisi can be deliberate).’

(12) a. zhangsan_i guyi_i/*j bei da-le
Zhangsan deliberately BEI hit-ASP
‘Zhangsan deliberately got beaten (only Zhangsan can be deliberate).’

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14 Another option is Bruening’s (2013) proposal, which still achieves the overall effect of having the long passive as a passive construction as well as still allowing for the optionality of PP.
(12) b. zhangsan\textsubscript{i} bei guyi\textsubscript{sj} da-le
Zhangsan BEI deliberately hit-ASP
‘Zhangsan was deliberately beaten (only the implicit argument can be deliberate).’

Importantly, examples (11) and (12) pattern the same, in that when guyi precedes bei in (11a) and (12a), it can only be construed with Zhangsan, and when guyi follows bei in (11b) and (12b), it can only be construed with the embedded external argument; in (12b) the implicit external argument, and in (11b), with the overt initiator Lisi. In the by-phrase treatment of Lisi proposed here, following Legate (2014), we can think of \([P \ Lisi]\) as a kind of subject-oriented adverbial that acts as a restrictor on the implicit argument\textsuperscript{15}. Examples (11) and (12) thus show that bei is a primary predicate (whose highest argument is Zhangsan) that takes a secondary predicate (whose highest argument is the implicit argument) (Bruening and Tran 2015). The tree in (13) illustrates this:

(13)\[
\begin{array}{c}
\text{beiP} \\
\text{Zhangsan} \\
\lambda x \text{ bei'} \\
\text{guyi} \text{ bei'} \rightarrow \text{pre-bei guyi is construed with Zhangsan} \\
\text{AspP} \\
\text{Asp Voice\textsubscript{Pass}P} \rightarrow \text{PP adjunct, if present,} \\
\text{-le adjoins to Voice\textsubscript{Pass}P} \\
(P) \\
\emptyset \text{ Lisi guyi Voice\textsubscript{Pass}'} \rightarrow \text{post-bei guyi is} \\
\text{Voice\textsubscript{Pass} VP} \rightarrow \text{post-bei guyi is} \\
V x \text{ implicit argument} \\
da
\end{array}
\]

Assuming that bei is the primary predicate in (13), Zhangsan is then its structurally highest argument, and is introduced by bei. The secondary predicate, which contains Voice\textsubscript{Pass}, instead has the existentially quantified external argument as its highest argument. The structure in (13) thus straightforwardly accounts for why it is that pre-bei guyi can only be construed with Zhangsan while post-bei guyi can only be construed with the implicit argument. It is also desirable that the structure in (13) is applicable to both the long and short passive since we have seen in the previous section that both should involve A’-movement.

\textsuperscript{15} I thank Heidi Harley for the suggestion.
3.2 \( \lambda \)-abstraction and the argument \( bei \) introduces

One key point of (13) is that the logical object of the \( bei \)-passive construction is not base-generated in the internal argument position of V. I propose that the internal argument position hosts a \( \lambda \)-operator represented by \( x \). The \( \lambda \)-abstraction (or the A’-movement) is thus due to the probe \( bei \) attracting \( x \) to it. I contend that \( \lambda \)-abstraction must occur for the internal argument to be saturated, and what saturates it is the argument introduced by \( bei \), which is identified as \( x \), the logical object, by predication\(^{16}\).

Given (13), we can make the following two related predictions: (i) the \( \lambda \)-operator can be in any internal argument position, so long as it is within the complement of \( bei \); (ii) there should only be one instance of \( \lambda \)-abstraction since \( bei \) only introduces one argument. Both predictions are borne out:

(14) a. John\(_i\) \( bei \) laoshi pai \( x_i \) qu
John BEI teacher send \( x_i \) go
zhao ren sào jiaoshi le
find person sweep classroom ASP\(^{17}\)
‘John has been sent to find someone to clean the classroom by the teacher.’

b. ren\(_i\) \( bei \) laoshi pai John zhao
person BEI teacher send John find
\( x_i \) qu sào jiaoshi le
\( x_i \) go sweep classroom ASP
‘Someone has been sent-John-to-find-to-clean the classroom by the teacher.’

c. jiaoshi\(_i\) \( bei \) laoshi pai John zhao
classroom BEI teacher send John find
ren qu sào \( x_i \) le
person go sweep classroom ASP
‘The classroom has been sent-John-to-find-someone-to-clean by the teacher.’

d. *jiaoshi\(_i\) \( bei \) laoshi pai John zhao
classroom BEI teacher send John find
\( y_j \) qu sào \( x_i \) le
\( y_j \) go sweep classroom ASP
‘Intended: *The classroom has been sent-John-to-find-\( e \)-to-clean by the teacher.’ (where \( e \) is an empty category represented by \( y \))
(Feng 2012; 131, with modifications)

\(^{16}\) Huang’s (1999) account assumes that the logical object is coindexed with the NOP via a predication relation, which achieves the same effect.

\(^{17}\) Feng (2012) did not include a full gloss, so I have chosen to gloss \( le \) as ASP for simplicity but nothing here hinges on my choice as far as I can tell.
The ungrammatical (14d) is expected because there is a second λ-operator that occupies the internal argument position of zhao (‘find’), and this internal argument remains unsaturated since bei only introduces one argument. Crucially, although the λ-operators in (14a-c) are base-generated in different internal argument positions, they are all grammatical, as we would expect given (13).\textsuperscript{18} Recall from subsection 1.2 that I assume that bei does not assign a theta-role to the argument it introduces. Taken together, my analysis thus allows for any argument to be introduced by bei without affecting the theta-role interpretations of the various sentences, successfully capturing the grammaticality of (14a-c).

3.3 Excluding Voice\textsubscript{Act} in bei-constructions

Given that I assume that both long and short passives have a suppressed external argument, my account must be able to ensure that the complement of bei can only contain Voice\textsubscript{Pass}. That said, in principle, Asp should be able to select either Voice\textsubscript{Act} or Voice\textsubscript{Pass}, and it is desirable for Asp to be able to do so or we would need to posit two distinct functional heads for active constructions and bei-passives respectively.

I propose a simple solution – bei can only select an Asp that has selected Voice\textsubscript{Pass}. We only require a two-step feature-driven process (in the sense of Adger (2003)) to achieve the above. Referring again to (13), Asp takes Voice\textsubscript{Pass}P, which has the feature [Passive] (due to Voice\textsubscript{Pass}), as its complement and now also has [Passive]. If bei has the uninterpretable feature [uPassive], it must then select an Asp that has taken Voice\textsubscript{Pass}P as its complement in order to check [uPassive]. If Asp takes Voice\textsubscript{Act} as its complement instead, bei cannot check [uPassive], and the derivation crashes. This is a simple process that requires no further machinery but will ensure that bei-passives only involve Voice\textsubscript{Pass}.

In section 5, I show that my unified structure involving Voice\textsubscript{Pass} predicts that both long and short bei-passives can license a special class of verbal compounds, and that this is borne out in the data. Before that, I discuss the evidence supporting the claim that bei takes Asp as its complement in the next section.

4 Determining the size of the complement to bei

Although Bruening and Tran (2015) claim that the size of the complement to bei should only be as large as VoiceP, I argue that the morpheme -le tells us that

\textsuperscript{18} In principle, my analysis would predict that it is also possible to lambda-abstract over the object of a preposition in a bei-passive, and this seems to be borne out:

(i) zhangsan [p dui lisi] pokoudama
    Zhangsan to/at Lisi scold.viciously
    Lit: ‘Zhangsan scolded viciously to/at Lisi.’

(ii) ?lisi, bei zhangsan [p dui ta ] pokoudama
    Lisi BEI Zhangsan to/at 3.SG scold.viciously
    Lit: ‘Lisi was scolded viciously to/at him, by Zhangsan.’ However, I find it difficult to come up with felicitous examples.
the complement to *bei* must at least be as large as AspP, which I have posited to contain Voice\_{Pass,P}.

### 4.1 The perfective vs. inchoative reading of -le

Whether the morpheme -le appears verb-adjacently (perfective reading only) or sentence-finally (perfective or inchoative reading (Li and Thompson 1981; Bao 2005; Soh 2009)), the perfective reading is available, as seen in example (15):

(15) a. ta chi-le rou  
   3.SG eat-PERF meat

   Perfective reading ((15a) and (15b)): ‘She/he/it ate the meat.’

   Inchoative reading ((15b) only): ‘She/he/it eats meat now (when they did not eat meat before).’

When -le is verb-adjacent, as in (15a), only the perfective reading is available. When -le is sentence-final, as in (15b), both the perfective and inchoative readings are available. That is, we can still get the perfective reading. For our purposes, the crucial point to bear in mind is that the perfective reading is available whether -le is sentence-final or not, as we will see in the next subsection.

### 4.2 Perfective -le in bei-passives

Although one might suspect that -le in bei-passives would always end up being sentence-final since the verb occurs sentence-finally, it is possible to replicate what we have seen in (15) using the adverb liangci (‘twice’):

(16) a. zhangsan bei (lisi) chengzan-le liangci
   Zhangsan BEI Lisi praise-PERF twice

   Perfective reading ((16a) and (16b)): ‘Zhangsan was praised (by Lisi) twice.’

   Inchoative reading ((16b) only): ‘Zhangsan has now been praised (by Lisi) twice (when Zhangsan was not praised (by Lisi) before).’

With the addition of liangci in (16), we can infer that the presence of the perfective reading of -le in both the verb-adjacent and sentence-final positions indicates that the functional head Asp must be available in the complement to *bei* to be able to host the perfective -le, which is unexpected given Bruening and Tran’s (2015) analysis where Voice rather than Asp is the complement. However, example (16) supports my analysis in which the complement to *bei* must be at least as large as AspP. The simplified (17) shows how the perfective -le reading is
available when *liangci* attaches high, to *bei'*, and the simplified (18) shows how the perfective reading is available when *liangci* attaches low, to *V'*:

(17) perfective reading when *liangci* attaches higher

```
beiP
  Zhangsan  bei'
    bei'  liangci
      bei  AspP  → *bei* takes Asp as its complement
    VoicePassP  Asp
      -le  → verb-adjacent *-le* comes before *liangci*
(Lisi)  VoicePass'
  VoicePass  VP
  chengzan
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(18) perfective reading when *liangci* attaches lower

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beiP
  Zhangsan  bei'
    bei  AspP  → *bei* takes Asp as its complement
    VoicePassP  Asp
      -le  → sentence-final *-le* comes after *liangci*
(Lisi)  VoicePass'
  VoicePass  VP
  V'
  liangci
  chengzan
```

Note that whether *-le* occurs verb-adjacently or sentence-finally due to the addition of *liangci*, *bei* is still able to (and, in fact, must be able to) take AspP as its complement in order to derive the perfective readings. We now see how it is that Bruening and Tran’s (2015) claim that the complement to *bei* can only be as large as VoiceP is not supported by the data. Conversely, my account can easily accommodate the fact that the size of the complement to *bei* must be as large as AspP.

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19 I do not claim to provide an analysis of *-le* in this paper, which would be tangential to the point I am making. Since the task at hand is to show how *bei* can take Asp as its complement given the empirical facts in example (16), the position of *-le* is merely meant to reflect its surface position.

20 Note that not all verbs are compatible with the perfective reading, but (15-18) clearly show that should the perfective reading be available, it can be derived.
5 **Bei-passives can only involve \(\text{Voice}_{\text{pass}}\), not \(\text{Voice}_{\text{Act}}\)**

Bruening and Tran (2015) claim that *bei*-constructions can involve either \(\text{Voice}_{\text{Act}}\) or \(\text{Voice}_{\text{pass}}\) – as far as I can tell, for them, a long *bei*-construction does not have an existentially quantified external argument since they do not treat the overt initiator as being in a PP adjunct like I do, hence it involves \(\text{Voice}_{\text{Act}}\), while a short *bei*-construction has an existentially quantified external argument and hence must involve \(\text{Voice}_{\text{Pass}}\). However, the evidence in this section shows that, in accordance with my claim (see subsection 3.3), \(\text{Voice}_{\text{Act}}\) should be excluded from both long and short *bei*-passives (or that both *bei*-passives should uniformly only involve \(\text{Voice}_{\text{Pass}}\)) as there is a special class of verbal compounds\(^{21}\) that are apparently ungrammatical in active constructions but are grammatical in passive environments – other than *bei*-passives, they are also grammatical in *gei*-, *jiao*-, *rang* -passives and passives embedded in *ba*-constructions.

5.1 ‘Deficient’ verbal compounds in active constructions vs. in *bei*-passives

There is a peculiar class of verbal compounds in Mandarin, which I term ‘deficient’ verbal compounds, that seem to be transitive in that they require the subject and object arguments, but are ungrammatical in active transitive constructions. Compare the active (19) and the passive (20):

\[
\begin{align*}
(19) & \quad \text{*lisi \ sheng-zhi-le \ zhangsan} \\
& \quad \text{Lisi \ raise-position-ASP \ Zangsan} \\
& \quad \text{Intended: ‘Lisi promoted Zhangsan.’}
\end{align*}
\]

\[
\begin{align*}
(20) & \quad \text{zhangsan \ bei \ (lisi) \ sheng-zhi-le} \\
& \quad \text{Zhangsan \ BEI \ Lisi \ raise-position-ASP} \\
& \quad \text{‘Zhangsan was promoted (by Lisi).’}
\end{align*}
\]

In example (20), we observe that *sheng-zhi* (‘promote’) in the *bei*-passive requires an internal argument as well as an (existentially quantified) external argument, as per the analysis so far. Then, we should expect that it is similarly grammatical in the transitive active construction (19), but this is not the case. That is, example (19), which involves \(\text{Voice}_{\text{Act}}\), apparently cannot license *sheng-zhi* despite the construction having the requisite arguments. Given Bruening and Tran’s (2015) analysis, which assumes that long *bei*-constructions should involve \(\text{Voice}_{\text{Act}}\), *sheng-zhi* should hence be ungrammatical in the long *bei*-passive of (20), contrary to fact. My analysis, which assumes that both long and short *bei*-passives uniformly involve \(\text{Voice}_{\text{Pass}}\), correctly predicts that both versions of (20) should be grammatical while (19) should be ruled out as \(\text{Voice}_{\text{Act}}\) cannot license *sheng-zhi*. Why these ‘deficient’ verbal compounds behave the way they do is an interesting question as well, but will have to be left for further research. The fact remains that they cannot be licensed by \(\text{Voice}_{\text{Act}}\) and thus turn out to be a good

\[^{21}\text{Due to space constraints, I will not include the list of 21 verbal compounds that I find to belong to this special class in this paper. Instead, I only use a select few to bring the point across.}\]
diagnostic for whether *bei*-constructions involve $\text{Voice}_{\text{Act}}$ or not. In fact, as we see in the next two subsections, they seem to be licensed by environments that involve $\text{Voice}_{\text{Pass}}$.

5.2 ‘Deficient’ verbal compounds and *gei-, jiao- and rang*-passives

Though Li and Thompson (1981) and Tang (2001) note that there are some asymmetries compared to *bei*-passives, *gei-, jiao- and rang*-constructions have all been claimed to be passive constructions. As expected, ‘deficient’ verbal compounds are also licensed in these passive environments:

(21) zhangsan gei/jiao/rang lisi tui-xue-le $x_i$
Zhangsan give/ask/allow Lisi back.away-school-ASP
‘Zhangsan got Lisi expelled.’

Although a detailed discussion of *gei-, jiao- and rang*-passives is beyond the scope of this paper, note that *Lisi* is the logical object, or the internal argument, of the ‘deficient’ verbal compound in (21), and that it occupies a pre-verbal position, presumably due to movement. I propose that the observed object movement is object promotion to the subject position of the embedded clause. I further posit that since the constructions in (21) all have passive readings, such object movement indicates that $\text{Voice}_{\text{Pass}}$ is involved. If so, then it is unsurprising that *gei-, jiao- and rang*-passives can license ‘deficient’ verbal compounds.

5.3 Passives embedded in *ba*-constructions

*Ba*-constructions have been noted by Li and Thompson (1981) to mark affectedness\(^{22}\). Generally, the logical object immediately follows *ba* and also precedes the verb. Example (22) illustrates how a passive reading can be embedded in a *ba*-construction\(^{23}\):

(22) zhangsan ba lisi jiang-zhi-le $x_i$
Zhangsan BA Lisi lower-position-ASP
‘Zhangsan got Lisi demoted.’

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\(^{22}\) The description of *ba* is still hotly debated in the literature. Since *ba*-constructions are not a main concern here, I choose to remain agnostic on its exact syntactic or semantic function and mainly note that it can have an embedded passive reading.

\(^{23}\) It is important to note, however, that a *bei*-passive cannot be embedded under a *ba*-construction, as seen in (i), adapted from Cole and Wang’s (1996) example (13):

(i) a. juzi bei wo ba pi bo-le
orange BEI 1.SG BA skin peel-ASP
‘The orange’s skin was peeled by me.’

b. *juzi ba pi bei wo bo-le
orange BA skin BEI 1.SG peel-ASP
Intended: ‘The orange’s skin was peeled by me.’
Our observations in (21) thus apply again to (22), in that there possibly is object promotion due to the involvement of Voice\textsubscript{Pass}, which is what licenses ‘deficient’ verbal compounds\textsuperscript{24}.

6 Conclusion

I have presented three pieces of empirical evidence to support my claim that both long and short bei-passives involve A’-movement and hence should be amenable to a unified analysis: (i) long-distance dependencies; (ii) resumptive pronouns licensed by adverbs; (iii) resumptive pronouns within islands. I have proposed that the unified bei-passive structure is bi-clausal, with bei as the primary predicate that also introduces an argument that saturates the internal argument via predication without assigning any theta role to it. Additionally, the structurally highest argument of the secondary predicate is uniformly the implicit argument.

Under my proposed formal syntactic structure, bei takes as its complement an AspP which contains Voice\textsubscript{Pass}. I argued that the size of said complement cannot only be Voice due to the availability of the perfective reading of -le. Finally, my unified analysis straightforwardly predicts that both long and short bei-passives can license ‘deficient’ verbal compounds since they only include Voice\textsubscript{Pass}, and Voice\textsubscript{Act} must thus be excluded in the bei-passive structure.

A variety of other Asian languages including Cantonese, Zhuji Dialect (Tang 2001), Taiwanese, Korean, Japanese (Huang 1999), Vietnamese and Thai (Bruening and Tran 2015) seem to also have similar passive structures, at least on the surface. My analysis then adds to the typology of passive constructions cross-linguistically, and also raises an important theoretical question – what exactly is the size of the complements in these languages? If they are different from Mandarin, why would they be different, and what would this mean for the purposes of syntactic and semantic interpretation? If they are the same, does it speak to an existing systematicity due to the faculty of language? These are important questions that will bear on our broader understanding of the nature of the language faculty.

References

Bruening, Benjamin and Thuan Tran. 2015. The nature of the passive, with an analysis of Vietnamese. Lingua 165. 133–172.

\textsuperscript{24}At this point, it is not clear if the constraint is such that ‘deficient’ verbal compounds can only appear in constructions with Voice\textsubscript{Pass} or if they simply cannot be licensed by Voice\textsubscript{Act}. The two proposals should make different predictions that I have yet to explore.


